



Licence

Environmental Protection Act 1986, Part V

Licensee: Gemec Remediation Services Pty Ltd

Licence: L8520/2011/1

Registered office: 1/25 Foss Street,
Palmyra, WA 6157

ACN: 142 227 692

Premises address: Cataby Bioremediation Facility
Crown Reserve 27994, Brand Highway
YATHROO WA 6507
Being Lot 3836 on Plan 209670 as depicted in Schedule 1.

Issue date: Thursday, 30 June 2011

Commencement date: Monday, 4 July 2011

Expiry date: Tuesday, 3 July 2029

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 |
|-----------------|---|--|---|
| 61A | Solid waste facility: premises (other than premises within category 67A) on which solid waste produced on other premises is stored, reprocessed, treated, or discharged to land | 1 000 tonnes or more per year | 5 000 tonnes per annual period |

Conditions

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

Date signed: 5 May 2016

.....
Steve Checker
MANAGER LICENSING (WASTE INDUSTRIES)
Officer delegated under section 20
of the *Environmental Protection Act 1986*



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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 advise on and implement strategies for a healthy environment for the benefit of all current and future Western Australians.

DER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DER regulates to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DER also monitors and audits compliance with works approvals and licence conditions, takes enforcement action as appropriate and develops and implements 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 Environment. You are required to comply with any conditions imposed by the Minister.

Premises description and Licence summary

The Cataby Bioremediation Facility (facility) is operated by Gemec Remediation Services Pty Ltd, environmental consultants specialising in investigation, assessment and remediation of soil and groundwater contamination.

The facility is located on Lot 3836, Brand Highway Yathroo, approximately 20 km south west of the town of Dandaragan in the Shire of Dandaragan. Lot 3836 is a disused Main Roads WA gravel pit, surrounded by cleared farmland. The site was previously used for the bioremediation of a 2,000 tonne historical onsite stockpile of hydrocarbon contaminated soils by Gemec Remediation Services. The proponent has since obtained approval from Main Roads WA to use the site for ongoing bioremediation.

Bioremediation occurs on a clay pad which drains into a 22,000 L drainage sump. Both the pad and the drainage sump are existing and have been constructed from in situ heavy laterite clays which are several meters deep. Hydraulic conductivity of the clay liner has been tested by Soil Water Solutions (consultants) to be less than 1×10^{-9} m/s. Due to this and the depth of the clay soil, the low leachability of the (largely diesel contaminated) soil, the overdesign of the sump and the high evaporation/low rainfall rates in the Cataby area, impacts from leaching are expected to be negligible.

The bioremediation process involves spreading the soil over the pad and turning it using a tilling machine or similar mechanical device on a regular basis as required to remediate the soil. Bioremediation will be achieved via natural attenuation and moisture control. No chemical additives are proposed for the bioremediation process. Other methods such phytoremediation may also be employed. The site is unmanned, but will be visited by Gemec staff on a regular basis.

Moisture is introduced to the soil by a commercial water carrier on an as needs be basis. Generally rainfall provides sufficient moisture for the bioremediation process.

Soils onsite consist of a thin layer of gravel over heavy laterite clays, with depth to ground water being approximately 40 m. Lot 3836 is approximately 3 km from the nearest residence and 4.5 km from the Caltex roadhouse at Cataby, which contains accommodation units.

There are no environmentally sensitive areas or threatened ecological communities in the vicinity of the proposal, although a salt lake located approximately 7 km south of the site is classified as an environmentally sensitive area for the purposes of clearing of native vegetation. The lake system is not expected to be impacted by activities onsite.

There are no public drinking water source areas or heritage sites in the vicinity of the proposal.

This Licence is the result of an amendment sought by the Licensee to remove the testing requirements relating to Phenols and Styrene for all incoming waste. As a result of this amendment, the Licence has been converted into DER's new licence template. Administrative changes have also been incorporated in accordance with DER protocol.

The licences and works approvals issued for the Premises since 30/06/2011 are:



| Instrument log | | |
|-----------------------|---------------|--|
| Instrument | Issued | Description |
| L8520/2011/1 | 30/06/2011 | Licence issue |
| L8520/2011/1 | 5/05/2016 | Proposed amendment to remove phenol and styrene testing requirements |

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 July to 30 June in the following year;

'AS 4482.1' means the Australian Standard AS 4482.1-2005 *Guide to the sampling and investigation of potentially contaminated soil – Non-volatile and semi-volatile substances*;

'AS 4482.2' means the Australian Standard AS 4482.2-1999 *Guide to the sampling and investigation of potentially contaminated soil - Volatile substances*;

'CEO' means Chief Executive Officer of the Department of Environment Regulation;

'CEO' for the purpose of correspondence means;

Chief Executive Officer
Department Administering the Environmental Protection Act 1986
Locked Bag 33
CLOISTERS SQUARE WA 6850
Email: info@der.wa.gov.au

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

'hardstand' means a surface with a permeability of 10^{-9} metres/second or less;

'hydrocarbon contaminated soil' means soil that contains hydrocarbons at concentrations that present, or have the potential to present, a risk of harm to human health or the environment;

'Licence' means this Licence numbered L8520/2011/1 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;

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

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

'Contaminated sites guideline' means the *Guideline: Assessment and management of contaminated sites*, DER 30 December 2014.



- 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 The Licensee shall immediately recover, or remove and dispose of spills of contaminated soil outside an engineered containment system.

1.3 Premises operation

- 1.3.1 The Licensee shall only accept waste on to the Premises if:
 - (a) it is of a type listed in Table 1.3.1; and
 - (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 | Specification¹ | |
| Contaminated soil | 5,000 tonnes per annual period | Contaminating substance shall only consist of petroleum type hydrocarbons with the following concentration limits (in mg/kg): | |
| | | C ₆ -C ₉ petroleum hydrocarbons | 28,000 |
| | | C ₁₆ -C ₃₅ petroleum hydrocarbons (aromatics) | 4,500 |
| | | C ₁₀ ->C ₃₅ petroleum hydrocarbons (aliphatics) | 280,000 |
| | | PAHs (total) | 1,000 |
| | | Benzo(a)pyrene | 50 |
| | | Toluene | 5,180 |
| Xylenes (total) | 18,000 | | |

Note 1: Additional requirements for the acceptance of controlled waste are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

- 1.3.2 The Licensee shall ensure that where waste does not meet the waste acceptance criteria set out in conditions 1.3.1 it is removed from the Premises by the delivery vehicle or, where that is not possible, the Licensee shall contact the CEO to agree a course of action in relation to the waste.
- 1.3.3 The Licensee shall ensure that wastes accepted onto the Premises are only subjected to the process(es) 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 | Process | Process limits |
| Contaminated soil | Receipt, handling and treatment | <ul style="list-style-type: none"> • Contaminated soils are only to be unloaded within the bioremediation cell (as shown in Schedule 1); • Contaminated soil is to be tilled as required to facilitate the bioremediation process; • Wetting of contaminated soil to occur as required to facilitate the bioremediation process; and • Contaminated soil windrows are to have a maximum height of 600 mm |



1.3.4 The Licensee shall ensure that material is only stored within areas with the relevant infrastructure requirements and at the locations specified in Table 1.3.3 and identified in Schedule 1.

| Table 1.3.3: Containment infrastructure | | |
|--|-------------------|--|
| Containment point reference | Material | Infrastructure requirements |
| Bioremediation cell | Contaminated soil | <ul style="list-style-type: none"> Lined with insitu clay material with a permeability of 10^{-9} metres per second or less Bunded and graded to a capture sump to prevent the discharge of contaminated stormwater or leachate to the environment. |

1.3.5 The Licensee shall ensure that:

- (a) Bioremediated soils are sampled and tested to determine their suitability for reuse or disposal to landfill; and
- (b) The suitability of bioremediated soils for reuse as a resource is assessed in accordance with the requirements of the National Environmental Protection (Assessment of Site Contamination) Measure 1999.

2 Monitoring

2.1 General monitoring

2.1.1 The licensee shall ensure that:

- (a) all soil sampling is conducted in accordance with AS 4482.1 and AS 4482.2 as relevant; and
- (b) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured.

2.2 **Monitoring of inputs and outputs**

2.2.1 The Licensee shall undertake the monitoring in Table 2.2.1 according to the specifications in that table.

| Table 2.2.1: Monitoring of inputs and outputs | | | | |
|--|---|----------------|-------------------------|---|
| Input/Output | Parameter | Units | Averaging period | Frequency |
| Waste Inputs | Contaminated soil | m ³ | N/A | Each load arriving at the Premises |
| Waste Outputs | Waste type as defined in the Landfill Definitions | | | Each load leaving or rejected from the Premises |

2.3 **Process monitoring**

2.3.1 The Licensee shall undertake process monitoring according to the specifications in Table 2.3.1.



Table 2.3.1: Process monitoring

| Monitoring point reference | Parameter | Units | Frequency | Method |
|---|--|-------|--|-----------|
| Contaminated soil stockpiles contained within the bioremediation cell | BTEX and TRH C6-C9 petroleum hydrocarbons C16-C35 petroleum hydrocarbons (aromatics) C10->C35 petroleum hydrocarbons (aliphatics) PAHs (total) Benzo(a)pyrene Toluene Xylenes (total) | mg/Kg | Prior to disposal or removal from site | AS 4482.2 |

3 Information

3.1 Records

3.1.1 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 3.1.1(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;
 - (ii) matters which affect the condition of the land or waters;
 - (iii) record the proposed destination of the bioremediated soils; and
 - (iv) record details of the source of each batch of soils to be bioremediated.

3.1.2 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.

3.1.3 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.

3.2 Reporting

3.2.1 The Licensee shall submit to the CEO an Annual Environmental Report by 30 September each year. The report shall contain the information listed in Table 3.2.1 in the format or form specified in that table.



| Table 3.2.1: Annual Environmental Report | | |
|---|---|---------------------------------------|
| Condition or table (if relevant) | Parameter | Format or form¹ |
| - | 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 |
| 2.2.1 and 3.1.1 | Summary of inputs and outputs, including records identified in 3.1.1(d)(iii) – (iv) | None specified |
| 1.3.5 | Summary of results of final testing of bioremediated soils | None specified |
| 2.3.1 | Process monitoring results | None specified |
| 3.1.2 | Compliance | Annual Audit Compliance Report (AACR) |
| 3.1.3 | Complaints summary | None specified |

Note 1: Forms are in Schedule 2

3.3 Notifications

3.3.1 The Licensee shall ensure that the parameters listed in Table 3.3.1 are notified to the CEO in accordance with the notification requirements of the table.

| Table 3.3.1: Notification requirements | | | |
|---|--|---|-----------------------------------|
| Condition or table (if relevant) | Parameter | Notification requirement¹ | Format or form² |
| 1.3.1; 1.3.2 | Limit exceedance where management action taken | As soon as practicable but no later than 5pm of the next usual working day. | None specified |
| 1.3.1; 1.3.3 | Breach of any limit specified in the Licence | As soon as practicable but no later than 5pm of the next usual working day. | N1 |

Note 1: Notification requirements in the Licence shall not negate the requirement to comply with s72 of the Act

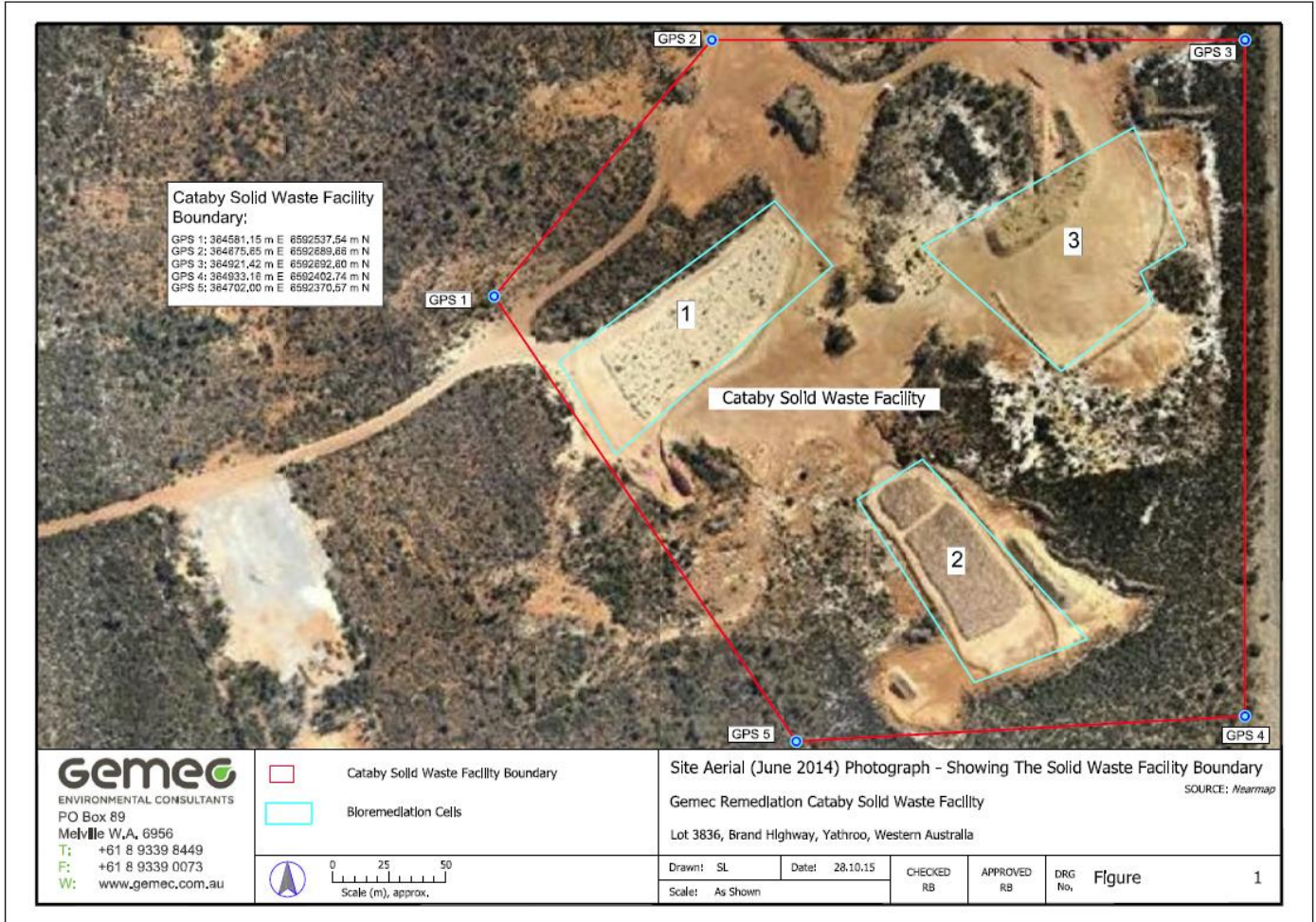
Note 2: Forms are in Schedule 2



Schedule 1: Maps

Premises map

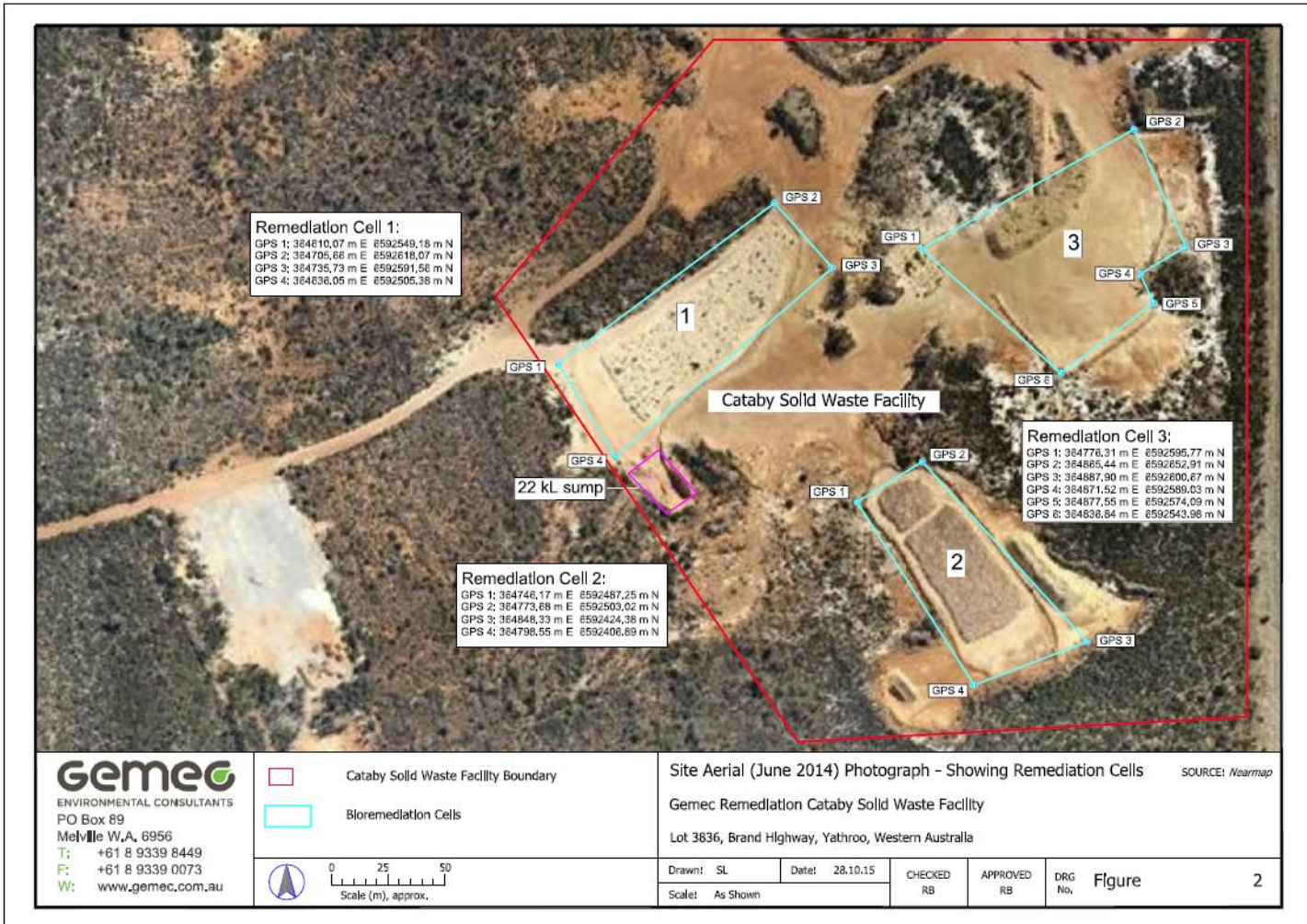
The Premises is shown in the map[s] below. The red line depicts the Premises boundary.





Map of storage locations

The location of the storage areas defined in Table 1.3.3 are shown below.





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: L8520/2011/1 | Licence File Number: 2011/000913 |
| Company Name: Gemec Remediation Services Pty Ltd 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?: | |
| <input type="checkbox"/> Yes <input type="checkbox"/> Reported to DER verbally Date _____ <input type="checkbox"/> Reported to DER in writing Date _____ | <input type="checkbox"/> 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 | <input type="checkbox"/> <input type="checkbox"/> | 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 | <input type="checkbox"/> <input type="checkbox"/> | 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 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | by affixing the common seal of the licensee in accordance with the <i>Corporations Act 2001</i> ; 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) | <input type="checkbox"/> <input type="checkbox"/> | 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 | <input type="checkbox"/> <input type="checkbox"/> | 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: _____

SIGNATURE: _____

NAME:
(printed) _____

NAME:
(printed) _____

POSITION: _____

POSITION: _____

DATE: ____/____/____

DATE: ____/____/____

SEAL (if signing under seal)



Licence: L8520/2011/1
 Form: N1

Licensee: Gemec Remediation Services Pty Ltd
 Date of breach:

Notification of detection of the breach of a limit.

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 | |



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 Gemec Remediation Services Pty Ltd | |
| Date | |



Decision Document

Environmental Protection Act 1986, Part V

Licensee: Gemec Remediation Services Pty Ltd

Licence: L8520/2011/1

Registered office: 1/25 Foss Street,
Palmyra, WA 6157

ACN: 142 227 692

Premises address: Cataby Bioremediation Facility
Lot 3836 Brand Highway
YATHROO WA 6507
Being Lot 3836 on Plan 209670 as depicted in Schedule 1.

Issue date: Thursday, 30 June 2011

Commencement date: Monday, 4 July 2011

Expiry date: Tuesday, 3 July 2029

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER), has decided to issue an amended licence. DER considers that in reaching this decision, it has taken into account all relevant considerations.

Decision Document prepared by:

Abnesh Chetty
Licensing Officer

Decision Document authorised by:

Steve Checker
Delegated Officer



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1 Purpose of this Document

This decision document explains how DER has assessed and determined the application and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER's assessment and decision making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.



2 Administrative summary

| Administrative details | | |
|--|---|---|
| Application type | Works Approval <input type="checkbox"/> | <input type="checkbox"/> |
| | New Licence <input type="checkbox"/> | <input type="checkbox"/> |
| | Licence amendment <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | Works Approval amendment <input type="checkbox"/> | <input type="checkbox"/> |
| Activities that cause the premises to become prescribed premises | Category number(s) | Assessed design capacity |
| | 61A | 5,000 tonnes per annual period |
| Application verified | Date: N/A | |
| Application fee paid | Date: N/A | |
| Works Approval has been complied with | Yes <input type="checkbox"/> | No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> |
| Compliance Certificate received | Yes <input type="checkbox"/> | No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> |
| Commercial-in-confidence claim | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Commercial-in-confidence claim outcome | | |
| Is the proposal a Major Resource Project? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Is the proposal subject to Ministerial Conditions? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| | | |
| Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i>)? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| | | |
| Is the Premises within an Environmental Protection Policy (EPP) Area | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| If Yes include details of which EPP(s) here. | | |
| Is the Premises subject to any EPP requirements? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| If Yes, include details here, eg Site is subject to SO ₂ requirements of Kwinana EPP. | | |



3 Executive summary of proposal and assessment

The Cataby Bioremediation Facility (facility) is operated by Gemec Remediation Services Pty Ltd, environmental consultants specialising in investigation, assessment and remediation of soil and groundwater contamination.

The facility is located on Lot 3836, Brand Highway Yathroo, approximately 20 km south west of the town of Dandaragan in the Shire of Dandaragan. Lot 3836 is a disused Main Roads WA gravel pit, surrounded by cleared farmland. The site was previously used for the bioremediation of a 2,000 tonne historical onsite stockpile of hydrocarbon contaminated soils by Gemec Remediation Services. The proponent has since obtained approval from Main Roads WA to use the site for bioremediation.

Bioremediation occurs on a clay pad which drains into a 22,000 L drainage sump. Both the pad and the drainage sump are existing and have been constructed from in situ heavy laterite clays which are several meters deep. Hydraulic conductivity of the clay liner has been tested by Soil Water Solutions (consultants) to be less than 1×10^{-9} m/s. Due to this and the depth of the clay soil, the low leachability of the (largely diesel contaminated) soil, the overdesign of the sump and the high evaporation/low rainfall rates in the Cataby area, impacts from leaching are expected to be negligible.

The bioremediation process involves spreading the soil over the pad and turning it using a tilling machine or similar mechanical device on a regular basis as required to remediate the soil. Bioremediation will be achieved via natural attenuation and moisture control. No chemical additives are proposed for the bioremediation process. Other methods such as phytoremediation may also be employed. The site is unmanned, but will be visited by Gemec staff on a regular basis.

Moisture is introduced to the soil by a commercial water carrier on an as needs be basis. Generally rainfall provides sufficient moisture for the bioremediation process.

Soils onsite consist of a thin layer of gravel over heavy laterite clays, with depth to ground water being approximately 40 m. Lot 3836 is approximately 3 km from the nearest residence and 4.5 km from the Caltex roadhouse at Cataby, which contains accommodation units.

There are no environmentally sensitive areas or threatened ecological communities in the vicinity of the proposal, although a salt lake located approximately 7 km south of the site is classified as an environmentally sensitive area for the purposes of clearing of native vegetation. The lake system is not expected to be impacted by activities onsite.

There are no public drinking water source areas or heritage sites in the vicinity of the proposal.

This Decision Document relates to an amendment request by the Licensee to remove the testing requirements relating to Phenols and Styrene for all incoming waste. As a result of this amendment this Licence has been converted into the new DER format. Administrative changes have also been incorporated in accordance with DER protocol.

There are no discharges to air, surface water, groundwater or land associated with the activities on the prescribed premises. Dust and odour are considered to be insignificant.

On 2 May 2016, the Shire of Dandaragan advised DER that planning approval has been given to Gemec Remediation Services Pty Ltd for the continuation of a bioremediation facility provided the bioremediation of hydrocarbon impacted soils are carried out in accordance with the licence issued by DER and for the applicant to advise the Council should there be any changes to the Licence at any time during the lifespan of the project.



4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision they are detailed in the decision document.

| DECISION TABLE | | | |
|----------------------------------|---|---|---|
| Works Approval / Licence section | Condition number W = Works Approval L = Licence | Justification (including risk description & decision methodology where relevant) | Reference documents |
| General conditions | L1.2.1 | <p>Operation</p> <p><u>Emission Description</u> <i>Emission:</i> Stormwater contaminated with leachate from bioremediation operations. <i>Impact:</i> Contamination of surrounding land and surface water drainage systems. Potential impacts on surface water from the addition of hydrocarbons and BTEX. <i>Controls:</i> The proponent proposes to divert stormwater away from the bioremediation pads through strategic bunding. The facility has a 22,000L sump to collect any contaminated stormwater. All contaminated stormwater is retained on site. No environmentally hazardous chemicals are stored on the premises.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u> Condition 1.2.1 has been added to the Licence to recover, or remove or dispose of spills outside an engineered containment system.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p> | <p>General provisions of the <i>Environmental Protection Act 1986</i></p> <p><i>Environmental Protection (Unauthorised Discharges) 2004</i></p> |



| DECISION TABLE | | | |
|----------------------------------|--|--|---|
| Works Approval / Licence section | Condition number W = Works Approval L= Licence | Justification (including risk description & decision methodology where relevant) | Reference documents |
| Premises operation | | <p>L1.3.1 replaces condition 1 of the previous Licence to ensure that only the specified wastes are received with hydrocarbon contaminated limits. These limits have been derived from the Landfill Waste Classification and Waste Definitions 1996 (As amended December 2009).</p> <p>The Licensee has applied to remove the limits for Styrene and Phenols on the basis that the required testing is excessive since the soils bioremediated at the Premises have values well below the thresholds identified (rarely identified in these contaminated soils). DER Contaminated Sites have advised that the removal of limits relating to Styrene and Phenols is acceptable. These limits have been removed from the Licence.</p> <p>L1.3.2 has been added to the Licence to ensure that any waste that does not meet the requirements of L1.3.1 is removed from the premises, or the CEO is contacted to agree a course of action in relation to the waste.</p> <p>L1.3.3 has been added to the Licence to ensure that all wastes at the premises is subjected to certain processes and limits.</p> <p>L1.3.4 has been added to the Licence to ensure all waste is only stored within areas with relevant infrastructure requirements.</p> <p>Once the soils are removed from the premises there are no effective controls to manage offsite contamination under the previous licence. L1.3.5 therefore has been added to the Licence to ensure all remediated soils are assessed to determine their suitability for reuse or disposal to landfill in accordance with the requirements of the National Environmental Protection (Assessment of Site Contamination) Measure 1999. The NEPM provides guidance on the required sampling densities for soil stockpiles, as well as appropriate assessment levels for different land uses. For the proposed re-use of soils for road verge revegetation, ecological screening levels (ESLs) for public open space would be appropriate assessment levels. These are provided in schedule B1 of</p> | <p>General provisions of the <i>Environmental Protection Act 1986</i></p> |



| DECISION TABLE | | | |
|----------------------------------|--|---|--|
| Works Approval / Licence section | Condition number W = Works Approval L= Licence | Justification (including risk description & decision methodology where relevant) | Reference documents |
| | | the NEPM, Table 1B(6). | |
| Fugitive emissions | | <p><u>Emission Description</u> <i>Emission:</i> Dust may be generated during the delivery of contaminated soils and during the bioremediation process (turning of soils) on a fortnightly basis. The soils are kept moist as part of the bioremediation process. The facility operates on a campaign basis and the activities on the premises are intermittent and of short duration.</p> <p><i>Impact:</i> The facility is located in a depression and isolated in a largely undeveloped area; approximately 3km from the nearest residence. Any dust generated will be of nuisance value while vegetation health may be impacted.</p> <p><i>Controls:</i> Contaminated soils are kept moist and the facility only operates on an intermittent basis. The isolation of the Premises is adequate to prevent dust from being of significant concern.</p> <p><u>Risk Rating</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Rare <i>Risk rating:</i> Low</p> <p><u>Regulatory Controls.</u> Fugitive dust conditions have not been included in the licence in accordance with Departmental reform as published on DER's website under "Administrative changes implemented within the Department of Environment Regulation" www.der.wa.gov.au. Dust emissions can be sufficiently regulated under section 49 of the <i>Environmental Protection Act 1986</i>. Previous licence condition 2 has been removed.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Rare</p> | General provisions of the <i>Environmental Protection Act 1986</i> |



| DECISION TABLE | | | |
|----------------------------------|--|---|--|
| Works Approval / Licence section | Condition number W = Works Approval L= Licence | Justification (including risk description & decision methodology where relevant) | Reference documents |
| | | <i>Risk rating: Low</i> | |
| Odour | | <p><u>Emission Description</u> <i>Emission:</i> Odour from treatment of contaminated soil.</p> <p><i>Impact:</i> Nuisance impacts in the vicinity; no impacts expected at the nearest residence 3km away.</p> <p><i>Controls:</i> Premises is isolated and activity on site will be intermittent.</p> <p><u>Risk Rating</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Rare <i>Risk rating:</i> Low</p> <p><u>Regulatory Controls.</u> Odour conditions have not been included in the licence in accordance with Departmental reform as published on DER's website under "Administrative changes implemented within the Department of Environment Regulation" www.der.wa.gov.au. Odour emissions can be sufficiently regulated under section 49 of the <i>Environmental Protection Act 1986</i>.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Rare <i>Risk rating:</i> Low</p> | General provisions of the <i>Environmental Protection Act 1986</i> |
| Noise | | Noise is not expected to be an issue at the premises. Premises is in an isolated area where the nearest residence is 3km away. The provisions of the <i>Environmental Protection (Noise) Regulations 1997</i> will apply. | General provisions of the <i>Environmental Protection Act</i> |



| DECISION TABLE | | | |
|---|---|--|--|
| Works Approval / Licence section | Condition number W = Works Approval L= Licence | Justification (including risk description & decision methodology where relevant) | Reference documents |
| | | | 1986 <i>Environmental Protection (Noise) Regulations 1997</i> |
| Monitoring general | L2.1.1 | L2.1.1 has been included to ensure sampling undertaken meets appropriate standards. | |
| Monitoring of inputs and outputs | L2.2.1 | L2.2.1 has been included to in the Licence to ensure that each load of contaminated soil received at the premises and any load leaving or rejected from the premises is recorded. | |
| Process monitoring | L2.3.1 | L2.3.1 has been included in the Licence to specify the required parameters and the methods to use for sampling of stockpiles prior to removal from the Premises. This will demonstrate the effectiveness of the bioremediation process. | |
| Ambient quality monitoring | N/A | No specified conditions relating to the ambient quality monitoring are required in the Licence. | |
| Improvements | N/A | No improvement conditions required. | |
| Information | L3.1.1(d)(iii)-(v) L3.3.1 | Condition L3.1.1 relates to record keeping. Condition (d) (iii)-(iv) has been added to require the Licensee to maintain records and reporting annually the proposed destination of the remediated soils and details of the source of each batch of soils to be remediated. Conditions 1.3.2 and 2.3.1 have been included in the licence which require notification therefore condition 3.3.1 which outlines notification requirements has been included in the Licence. | |
| Licence Duration | | The Licence duration will be increased to 13 years as per DER's guidance statement on licence duration (May 2015). Consultation comments in section 5 below. | |



5 Advertisement and consultation table

| Date | Event | Comments received/Notes | How comments were taken into consideration |
|-----------|------------------------|--|--|
| 3/09/2015 | DER Contaminated Sites | The request for amendment is considered reasonable while the soils received are impacted only by petroleum products (petrol, diesel and oils). | Considered as part of the amendment. |
| 3/03/2016 | Main Roads WA | No objection to extension of licence to 20 years. | Noted |
| 3/03/2016 | Shire of Dandaragan | This proposal did not receive planning approval for continuous operation (it was approved informally as a 'one off' operation). Planning approval will be required. | As per DER's 'Guidance Statement: Land Use Planning', October 2015, DER will not issue the instrument until planning approval is obtained. |
| 2/05/2016 | Shire of Dandaragan | <p>That Council grant planning approval to Gemec Remediation Services Pty Ltd for the continuation of a bioremediation site on Main Roads Reserve (27994) at Lot 3836 Brand Highway, Yathroo whilst the subject property has a licence issued by the Department of Environment Regulation and subject to the following conditions;</p> <p>(1) The approval is limited to bioremediation of hydrocarbon impacted soils only in accordance with the licence issued by the Department of Environment Regulation.</p> <p>(2) The applicant is to advise Council if there are any changes to the Department of Environment Regulation Licence at any time</p> | As per DER's 'Guidance Statement: Land Use Planning', October 2015, DER will issue the Licence for the duration of 13 years. |



| Date | Event | Comments received/Notes | How comments were taken into consideration |
|-----------|---|--|---|
| | | during the lifespan of the project. | |
| 3/03/2016 | Proponent sent a copy of draft instrument | Following comments were received: Licence document <ul style="list-style-type: none">• Postal address provided as registered office address.• Minor amendments to Premises description and Licence summary section.• Minor amendments to Process limits section (Table 1.3.2).• Minor amendment to Table 2.3.1 • Minor amendment to condition 3.2.1. Decision Document <ul style="list-style-type: none">• No comments received | <ul style="list-style-type: none">• As per DER policy physical address is required.• Amendments incorporated. • Amendments incorporated.• Amendment incorporated.• Amendment incorporated. • N/A |



6 Risk Assessment

Note: This matrix is taken from the DER Corporate Policy Statement No. 07 - Operational Risk Management

Table 1: Emissions Risk Matrix

| Likelihood | Consequence | | | | |
|----------------|---------------|----------|----------|----------|---------|
| | Insignificant | Minor | Moderate | Major | Severe |
| Almost Certain | Moderate | High | High | Extreme | Extreme |
| Likely | Moderate | Moderate | High | High | Extreme |
| Possible | Low | Moderate | Moderate | High | Extreme |
| Unlikely | Low | Moderate | Moderate | Moderate | High |
| Rare | Low | Low | Moderate | Moderate | High |