

QUEENSLAND FLOODS
COMMISSION OF INQUIRY

STATEMENT OF ANDREW STUART BRIER
ABANDONED MINES

I, ANDREW STUART BRIER of c/- 400 George Street Brisbane in the State of Queensland, General Manager Strategic Implementation, Coal & CSG Operations, Regional Service Delivery, Operations and Environmental Regulator, Department of Environment and Resource Management (DERM), solemnly and sincerely affirm and declare:

Requirement from Queensland Floods Commission of Inquiry

1. I have seen a copy of a letter dated 26 October 2011, which is attachment ASB-01, from the Commissioner, Queensland Floods Commission of Inquiry to me requiring a written statement under oath or affirmation, and which details the topics my statement should cover.

Role

2. I am currently the General Manager Strategic Implementation, Coal and Coal Seam Gas Operations within the Regional Service Delivery Division in the Department of Environment and Resource Management. I have held this position since 21 February 2011 although I was involved in the management of flood related issues surrounding coal mines from the 10 January 2011 onwards
3. Between 2010 and 2011 my roles were as follows:
 - 25/12/2009 to 05/08/2010 - Regional Manager GABSI & Major Projects
 - 06/08/2010 to 02/01/2011 - Regional Manager CSG Activities
 - 03/01/2011 to 20/02/2011 - Director LNG Enforcement Unit
 - 21/02/2011 onwards - General Manager Coal & CSG Operations

Item 1: The Department of Environment and Resource Management's ('DERM') knowledge of the location and condition of abandoned mines in Queensland and the source of that knowledge

4. DERM is the administering authority for the assessment and environmental regulation of mining activities. DERM, which is an amalgamation of the former Environmental Protection Agency (EPA) and Department of Natural Resources and Water (NRW), has held this responsibility since changes to the *Environmental Protection Act 1994* (EP Act) in the year 2000 caused the environmental regulation of mines to transition from the former Department of Mines and Energy (now a component of the Department of Employment, Economic Development and Innovation) to the EPA.

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QFCI Date: Exhibit Number:

5. The Department of Employment, Economic Development and Innovation (DEEDI) manages the Abandoned Mine Lands Program (AMLP) that coordinates the management of abandoned mine sites in Queensland.
6. As the environmental regulator of mining in Queensland DERM has access to DEEDI's Merlin database that contains a range of information about mining tenures, including whether a mining lease is current or non-current. DEEDI provides notification to DERM where leases are cancelled or abandoned, which in turn triggers DERM's regulatory process of exercising its powers under the *Environmental Protection Act 1994* (EP Act) to pursue the operator to complete any required rehabilitation. If such actions are unsuccessful, DERM corresponds with DEEDI and requests transfer of the site into the AMLP.
7. In this sense, through its role as environmental regulator, DERM holds specific file based information relevant to circumstances around the abandonment of mines that has occurred since 2001 and the condition of such mines.
8. DERM is also aware that DEEDI, through the AMLP, has prioritised all known abandoned mines, including those abandoned prior to 2001, by developing a geographic information system site prioritisation model and continues to develop a data management system, incorporating a risk assessment module, for managing abandoned mines throughout the state.
9. In addition to inter-agency consultation, section 320 of the EP Act creates an obligation upon DEEDI, as the entity responsible for the AMLP, to notify DERM once it becomes aware of serious or material environmental harm occurring as a result of an abandoned mine site [see Exhibit ASB-01-01]. This statutory obligation extends to all other persons, meaning it is also possible that DERM can be made aware of an issue about an abandoned mine through notification from a member of the public.
10. DERM participates on working groups established by DEEDI with the objective of developing and coordinating effective strategies for minimising environmental risk based on the specific condition of individual abandoned mine sites, such as Mt Oxide and Mt Morgan (discussed further in response to items 3, 4 and 10 of this statement).

Item 2: DERM's understanding of whether any of those abandoned mines pose a risk to the environment during flooding at or around the abandoned mine and the basis of that understanding

11. Like all mining operations, abandoned mines can present a risk to the environment during flood events. This is typically as a result of flood waters penetrating disturbed areas and transporting naturally occurring minerals or sediments into waterways as contaminants.
12. The management of abandoned mines is overseen by DEEDI and, through the ALMP, DERM is aware of abandoned mine sites that require ongoing management by DEEDI to minimise significant environmental risks from flooding, including Mt Oxide and Mt Morgan.

13. DERM is aware that the AMLP has developed a risk assessment framework and methodology to reduce the liability to the State for the management of these sites. The broad aims of the project are; a) removing the risk to public health and safety, b) stabilising sites by reducing the impact of contamination and erosion, minimising impacts to biological diversity, removal or ameliorate sources of contamination, c) achieving an acceptable land use for the site and d) improving the visual amenity of the site and surrounds and preserving the cultural and indigenous values associated with the site. The diversity of hazards, risks and potential liability varies significantly between sites.
14. Any relevant consultation undertaken by DEEDI with DERM to identify, qualify and quantify environmental risks as a consequence of flooding or any information or concerns provided by the public to the department forms the basis of DERM's understanding in these situations.

Item 3: Actions, if any, taken by DERM in response to any risk posed by any abandoned mine to its environment during flooding

15. **Mount Morgan abandoned mine site:** A Contingency Plan for this site was developed by DEEDI to address the potential overflow from the open cut pit as well as DEEDI's monitoring requirement and communication procedures to stakeholders regarding acid mine drainage which enters the Dee River during the wet season. This plan has been developed in consultation with DERM and outlines procedures for managing the water level in the open cut pit during each wet season.
16. In addition, a multi agency Dee River Working Group has been formed and DERM representatives from Water Services and Environmental Services are members of this working group. DERM's participation, and role, in this working group primarily relates to the provision of advice in the context that DERM is potentially a regulator of DEEDI in relation to potential impacts on water quality from its management of the abandoned mine.
17. In addition, DERM dam safety engineers recently inspected the Mundic Wall, and reached the conclusion that there is no threat to the stability of the pit wall.
18. **Mt Oxide:** DERM has continued to monitor the status of the Mt Oxide mine liaising with both the landowner and DEEDI.
19. DERM has made available technical experts to attend the expert panel meetings convened by DEEDI to provide advice and recommendations on how best to manage the abandoned mine. DERM has also made staff available to attend stakeholder information sessions facilitated by DEEDI to update stakeholders on proposed actions planned to occur at the abandoned mine.

Item 4: DERM's understanding of the environmental effect of flooding at the following abandoned mines:

a) Helidon Sandstone

20. There are many sandstone mines in the Helidon / Grantham area, mostly in the Helidon Hills area (the name "Helidon Sandstone" featuring either as part of the company name or trading name").
21. To my knowledge, Helidon Sandstone Australia Pty Ltd and Helidon Sandstone Industries Pty Ltd are both operational, but at last contact reported a downturn in output.
22. JH Wagner & Sons Pty Ltd holds a current environmental authority, and is (to my knowledge) operational.
23. It is improbable that there would be environmental effects of flooding at any of these sites owing to the elevation of the lease area (so no capturing of flood waters), although any water captured in the mining pits (i.e. water not successfully diverted away from the mining voids – such as immediate rainfall) may have to be pumped off site.
24. Given sandstone is high in suspended solids (i.e. contaminants that fall out of suspension), it is improbable that there would be any observable off-site impacts with basic controls in place at the site.

b) Limevale Quarry

25. ML50089 is a limestone quarry and mine located 10km north of Texas. The lease was granted to David Mitchell Limited in April 1995 and is 31.7ha in area. There is a current environmental authority (M3523) associated with ML50089 held in the name of Sibelco Lime (NSW) Pty Ltd.
26. Subsidiary companies of David Mitchell Limited (DML) manufacture a variety of crushed and ground limestone/marble products at several operations in south eastern Queensland and north eastern NSW. Most of the raw material comes from quarries at Riverton and Elbow Valley (near Warwick) and is used for the production of glass, lime, agricultural lime and crushed limestone. The small quarry on ML50089 is only worked intermittently (approximately 2 days per year) over short periods to provide small quantities of high value marble used for terrazzo chips and tile manufacture because of its distinctive dove grey colour.
27. On 22 November 2002 David Mitchell Limited and its wholly owned subsidiaries was acquired by Unimin Australia Limited. In 2011 Unimin Australia was acquired by Sibelco.
28. According to DEEDI's database Merlin, ML50089 is not abandoned and DERM has no information on file to indicate otherwise.

29. According to their latest Plan of Operations for the period 2002-2008 they are operating as a code compliant level 2 environmental authority and as such have no releases from the mine to the environment. In December 2007 correspondence from Unimin Australia Limited stated that they would not be lodging a new plan of operations as they were not currently mining the lease nor intended to do so in the immediate future.
30. According to their 1997 Environmental Management Overview Strategy, ML50089 is situated on gently rolling, generally low-lying, largely cleared land that is used principally for cattle grazing with small patches under crops. It belongs to Class IV land use category. The lease is traversed by a perennial stream that flows along a shallow gully in a north westerly direction for about 1km to Oakey Creek. This stream flows in a southerly direction to its confluence with the Dumaresq River near Texas.
31. Flood information for the 2010-2011 wet season gained from a larger mine east of Texas indicated that although the Dumaresq River and its tributaries flowed in January 2011, the amount of flooding was not as severe as experienced in other parts of south east Queensland.
32. An inspection of the site will be undertaken by DERM in November 2011 to determine if there are any environmental issues arising from the mining operation.

c) Limestone Hills

33. 'Limestone Hills' is mining lease ML50145 located 12.5km north east of Texas. The DEEDI database Merlin refers to ML50145 as the Oakleigh Lime Project 500101 in the Brisbane mining district, and shows that the mineral code for the activity is Lime/Limestone.
34. According to available data sources (Merlin and Ecotrack) mining lease ML50145 is not abandoned – Mr Charles Alexander MUNRO is shown to be the holder of tenement ML50145 and of environmental authority M3566, issued by the then EPA on 4 October 2001. The conditions of the environmental authority show that the mining activity is a code compliant level 2. This is confirmed by Mr Munro in his 2011 annual return declaration for the mining activity, received by DERM on 29 September 2011.
35. Merlin indicates the mining lease was granted 25 March 1999 and will expire 31 March 2019.
36. In Mr Munro's 2011 annual return Mr Munro indicated there was 1.4 hectares of disturbed land at the mine site.
37. The Plan of Operations submitted to DERM (14 December 2010) indicates that the pit is to be left as a water resource for the landowner.
38. Flood information for the 2010-2011 wet season gained from a larger mine east of Texas indicated that although the Dumaresq River and its tributaries flowed in

January 2011, the amount of flooding was not as severe as experienced in other parts of south east Queensland.

39. An inspection of the site will be undertaken by DERM in November 2011 to determine if there are any environmental issues arising from the mining operation.

d) Mt Morgan

40. The Mt Morgan abandoned mine site is located west of the town of Mt Morgan, which is approximately 40km south-west of Rockhampton. This abandoned mine is currently managed by DEEDI under the AMLP. Mining and reprocessing works at this site ceased in the early 1990s. There are 30 mining leases on the site at Mt Morgan, covering an area of 677.5 hectares.
41. As a result of the significant 2010/2011 rains, the water level reached the open cut pit discharge valves and DEEDI conducted two controlled releases of pit water from the abandoned mine in accordance with the Contingency Plan. The initial release of nine megalitres was carried out on 6 March 2011 and on 20 March 2011 there was a further release of forty megalitres. The releases were conducted with river conditions that provided the necessary dilution rates, as specified within the Contingency Plan, to ensure maximum assimilation of contaminants. The releases were necessary to reduce the volume of the water in the pit in readiness for potential additional significant rain events. The monitoring undertaken following the releases did not indicate any adverse impacts on the environment.
42. The open cut pit water quality is acidic and contains various dissolved metals, however the water quality is not unlike runoff or seepage that leaves the mine site during a storm event.

e) Mt Etna

43. My understanding is that the Environmental Authorities for this mine were surrendered some time prior to 2009 and that part of the old mine site (predominantly the old plant area) are now under management by the Queensland Parks and Wildlife Service and they have reported limited impacts from recent flooding events with the major issues being some track erosion caused by runoff and subsequent weed management concerns
44. The old pit and haul road are privately owned structures that were signed off as rehabilitated to a satisfactory land use at the time of the EA surrender. I am not aware of any environmental effects or impacts associated with flooding on these structures
45. I don't believe that the Mt Etna site is classified as an abandoned mine

Item 5: DERM's ability to regulate the management of abandoned mines by the Department of Employment, Economic Development and Innovation (DEEDI) through legislative mechanisms, including the *Environmental Protection Act 1994 (Qld)*;

and

Item 6: The differences, if any, between DERM's ability to regulate an operational mine and its ability to regulate an abandoned mine

46. To answer items 5 and 6 together: There are no approvals required under the EP Act for abandoned mines. The EP Act does however bind all persons including the State and places a responsibility on persons carrying out an activity to take all reasonable and practical measures to prevent or minimise environmental harm. This is referred to as the General Environmental Duty defined in Chapter 7 section 319 of the Environmental Protection Act 1994 (refer exhibit ASB-05_06-01).
47. The EP Act also contains wide ranging environmental management provisions in Chapter 7 which empower DERM to initiate a statutory response to address environmental issues irrespective of whether an authorisation is required under the EP Act.
48. DERM regulates operational mines through environmental authorities which are conditioned to regulate the on site activities of the mining companies and authorise a certain level of environmental harm.
49. The environmental management provisions in chapter 7 are the same provisions that DERM uses to manage environmental issues arising from operational mines.

Item 7: The positive environmental outcomes, if any, that could be achieved if DERM were able to regulate DEEDI's management of abandoned mines in the same way that it regulates operational mines

50. DERM is able to regulate DEEDI's management of abandoned mines through Chapter 7 of the EP Act. There would be no positive environmental outcome in requiring environmental authorities to be held for abandoned mines,. There would however be a significant administrative burden placed on DEEDI if it was required to hold an environmental authority for every abandoned mine and this would potentially take resources away from on ground management of the abandoned mines.

Item 8: Any agreement or informal understanding between DERM and DEEDI about how DEEDI will manage any abandoned mine in terms of its effect on the environment

51. Generally, agreement and understanding on the management of environmental impacts associated with abandoned mines are discussed and agreed to on a case by case basis. This reflects the widely varying nature of mine sites and the individual circumstances which apply to managing environmental impacts at individual sites
52. DEEDI has established an Expert Panel to identify environmental impacts associated with the Mt Oxide mine and to formulate recommendations on the management of the mine to mitigate environmental impacts. This panel includes DERM officers.

53. DEEDI has also established a multi-agency Dee River Working Group to assess potential risks and ensure appropriate water quality monitoring. DERM is represented on this working group and also contributes to the annual update of the site Contingency Plan and ensures any action by DEEDI is in accordance with this plan.

Item 9: The standards DERM considers appropriate to the environmental management of abandoned mines

54. As the environmental regulator for mines in Queensland, DERM expects a high standard of environmental performance from mine operators. Through conditions of environmental authorities DERM imposes requirements on mine operators to rehabilitate mine sites. In this way, following cessation of a mining activity, DERM expects sites to be restored to a point where residual environmental risk associated with former mining activities is negligible.

55. In cases where a mine operator attempts to abandon a mine site, DERM will exercise its powers under the EP Act to pursue the environmental authority holder to finalise and complete any required rehabilitation. If such actions are unsuccessful, DERM corresponds with DEEDI and requests transfer of the site into the AMLP.

56. In such cases a key consideration relates to the amount of financial assurance held for a particular mining project. A financial assurance may be required under section 364 of the EP Act to ensure that the government holds sufficient money to cover any costs that it may incur to achieve compliance with an environmental authority (mining activities) should the holder be unable to meet the conditions or fail to rehabilitate or restore the environment. DERM has published comprehensive guidance material about financial assurance for mining projects [refer exhibits ASB-09-01 and ASB-09-02]. DEEDI holds the total amount of financial assurance on behalf of the government.

57. Where abandoned mines on the AMLP have a relevant financial assurance held by DEEDI, that money can be used to rehabilitate the abandoned mine site and DERM holds an expectation that rehabilitation standards are commensurate with the level of financial assurance held and based on minimising residual environmental risk as far as practicable.

58. In circumstances where mine sites were historically abandoned and inadequate financial assurance exists for effective or efficient rehabilitation, the risk assessment process currently undertaken by DEEDI is a prudent means of prioritising actions based on public safety, environmental, heritage, economic and social grounds. While acknowledging that case specific priorities exist, DERM has indicated to DEEDI its willingness and availability to assist on expert management panels and interdepartmental committees to assist with strategies for rehabilitation and site stabilisation activities.

Item 10: The expectations DERM holds for DEEDI's management of abandoned mines, by particular reference to the following abandoned mines:

a) Mt Oxide

59. DERM expects DEEDI to take reasonable and practical measures to prevent or minimise environmental harm including the steps as described by the Director-General of DEEDI in a letter to the Director-General of DERM dated 18 October 2011. The letter was written in response to a DERM letter about the management of environmental issues downstream of the mine. (ASB 10-01).

b) Helidon Sandstone

60. As outlined in response to item 4, to DERM's knowledge this mine is not abandoned.

c) Limevale Quarry

61. As outlined in response to item 4, to DERM's knowledge this mine is not abandoned.

d) Limestone Hills

62. As outlined in response to item 4, to DERM's knowledge this mine is not abandoned.

e) Mt Morgan

63. DERM will continue to be represented at the multi-agency Dee River Working Group, established by DEEDI in response to public concern, to assess potential risks and conduct extensive water quality monitoring.
64. In addition, DERM will continue to contribute to updating the Contingency Plan annually and ensure any action by DEEDI is in accordance with this plan.

f) Mt Etna

65. As outlined in response to item 4, to DERM's knowledge this mine is not abandoned

Item 11: How DERM will ensure its expectations set out in answer to 10, above, will be met

66. DERM will continue to maintain an open dialogue with DEEDI to ensure that as an advisory agency its views are considered in the formulation of strategies to manage high risk abandoned mine sites. As a regulator, DERM will continue to ensure that abandoned mine remediation projects progress in accordance with the strategies developed. This may include consideration of the use of statutory enforcement tools in future situations, if warranted, to secure necessary actions to minimise the risk of environmental harm.

Item 12: DERM's role in assisting DEEDI to manage any abandoned mine

67. DERM's role in assisting DEEDI to manage abandoned mines begins with the department carrying out its obligations under the EP Act in the regulation of mining activities. This involves a full life cycle of environmental impact assessment and administration of environmental authorities, including compliance, auditing, and monitoring relating to environmental management. Through this role DERM aims to ensure mining developments are carried out in an ecologically sustainable way and that all statutory options have been exhausted to compel mine operators to rehabilitate sites to a point where residual environmental risk is negligible. In doing so DERM assists DEEDI by reducing the number of mine sites that may become a liability to the State.
68. In circumstance where this outcome is not achieved DERM's role in assisting DEEDI in the management of abandoned mines involves securing financial assurance for sites, which can be utilised by the AMLP for rehabilitation and site stabilisation works. DERM has also consistently informed DEEDI of its willingness to provide ongoing support through participation by technical experts and operational staff on working groups, expert panels or interdepartmental committees as established by DEEDI to support to objectives of the ALMP. In this capacity DERM staff assist by providing advice on historical site management issues, best practice environmental management and effective site remediation strategies to minimise environmental risk and comply with the general environmental duty.
69. The ongoing provision of support by DERM aims to ensure that DEEDI's management of abandoned mines includes the identification of high risk environmental issues as well as workable and cost effective solutions for reducing the State's liability.

I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the *Oaths Act 1867*.

Signed [REDACTED]
Andrew Stuart Brier

Taken and declared before me, at Toowoomba this 2nd day of November 2011



[REDACTED]
Solicitor/Barrister/Justice of the
Peace/Commissioner for Declarations

Our ref: Doc 1757472

26 October 2011

Mr Andrew Brier
General Manager, Strategic Implementation, Coal & CSG Operations,
Regional Service Delivery, Operations and Environmental Regulator
Department of Environment and Resource Management
Level 13, 400 George Street
BRISBANE QLD 4001

REQUIREMENT TO PROVIDE STATEMENT TO COMMISSION OF INQUIRY

I, Justice Catherine E Holmes, Commissioner of Inquiry, pursuant to section 5(1)(d) of the *Commissions of Inquiry Act 1950 (Qld)*, require Mr Andrew Brier to provide a written statement, under oath or affirmation, to the Queensland Floods Commission of Inquiry, in which the said Mr Brier gives an account of:

1. the Department of Environment and Resource Management's ('DERM') knowledge of the location and condition of abandoned mines in Queensland and the source of that knowledge
2. DERM's understanding of whether any of those abandoned mines pose a risk to the environment during flooding at or around the abandoned mine and the basis of that understanding
3. actions, if any, taken by DERM in response to any risk posed by any abandoned mine to its environment during flooding
4. DERM's understanding of the environmental effect of flooding at the following abandoned mines:
 - a. Helidon Sandstone
 - b. Limevale Quarry
 - c. Limestone Hills
 - d. Mt Morgan
 - e. Mt Etna

5. DERM's ability to regulate the management of abandoned mines by the Department of Employment, Economic Development and Innovation (DEEDI) through legislative mechanisms, including the *Environmental Protection Act 1994* (Qld)
6. the differences, if any, between DERM's ability to regulate an operational mine and its ability to regulate an abandoned mine
7. the positive environmental outcomes, if any, that could be achieved if DERM were able to regulate DEEDI's management of abandoned mines in the same way that it regulates operational mines
8. any agreement or informal understanding between DERM and DEEDI about how DEEDI will manage any abandoned mine in terms of its effect on the environment
9. the standards DERM considers appropriate to the environmental management of abandoned mines
10. the expectations DERM holds for DEEDI's management of abandoned mines, by particular reference to the following abandoned mines:
 - a. Mt Oxide
 - b. Helidon Sandstone
 - c. Limevale Quarry
 - d. Limestone Hills
 - e. Mt Morgan
 - f. Mt Etna
11. how DERM will ensure its expectations set out in answer to 10, above, will be met
12. DERM's role in assisting DEEDI to manage any abandoned mine

In addressing these matters, Mr Brier is to:

- provide all information in his possession and identify the source or sources of that information;
- make commentary and provide opinions he is qualified to give as to the appropriateness of particular actions or decisions and the basis of that commentary or opinion.

Mr Brier may also address other topics relevant to the Terms of Reference of the Commission in the statement, if he wishes.

The statement is to be provided to the Queensland Floods Commission of Inquiry by 12 pm, Wednesday 2 November 2011.

The statement can be provided by post, email or by arranging delivery to the Commission by emailing info@floodcommission.qld.gov.au.

A black rectangular redaction box covering the signature of the Commissioner.

Commissioner
Justice C E Holmes

EXHIBIT ASB-01-01: Extract from *Environmental Protection Act 1994*

320 Duty to notify environmental harm

(1) This section applies to a person who, while carrying out an activity (the *primary activity*), becomes aware that serious or material environmental harm is caused or threatened by the person's or someone else's act or omission in carrying out the primary activity or another activity being carried out in association with the primary activity.

(2) However, this section does not apply if the harm is authorised to be caused under—

- (a) an environmental protection policy; or
- (b) a transitional environmental program; or
- (c) an environmental protection order; or
- (d) an environmental authority; or
- (e) a development condition of a development approval; or
- (ea) a standard environmental condition of a code of environmental compliance for a chapter 4 activity; or
- (f) an emergency direction; or
- (g) an accredited ERMP.

(3) As soon as reasonably practicable after becoming aware of the event involving the harm, the person must—

- (a) if the person is carrying out the primary activity during the person's employment or engagement by, or as the agent of, someone else (the *employer*)—
 - (i) tell the employer of the event, its nature and the circumstances in which it happened; or
 - (ii) if the employer cannot be contacted—give written notice to the administering authority of the event, its nature and the circumstances in which it happened; or
- (b) if paragraph (a) does not apply to the person—give written notice to the administering authority of the event, its nature and the circumstances in which it happened.

(4) If subsection (3)(a)(i) applies, the employer must immediately give written notice to the administering authority of the event, its nature and the circumstances in which it happened.

(5) A person must not, without reasonable excuse, fail to comply with subsection (3) or (4).

Maximum penalty—100 penalty units.

(6) It is not a reasonable excuse for a person to fail to give notice to the administering authority of the circumstances involving the harm on the ground that the notice, or the giving of the notice, might tend to incriminate the person.

(7) A notice given by a person is not admissible in evidence against the person (or, if subsection (3)(a) applies, the person or employer) in a prosecution for an offence

[s 318C]

318C Death of environmental authority holder or registered operator

If the holder of an environmental authority or a registered operator dies, the personal representative of the holder or operator's estate is taken to be the holder of the environmental authority or the registered operator.

Chapter 7 Environmental management

Part 1 Environmental duties

319 General environmental duty

- (1) A person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm (the *general environmental duty*).

Editor's note—

See section 24(3) (Effect of Act on other rights, civil remedies etc.).

- (2) In deciding the measures required to be taken under subsection (1), regard must be had to, for example—
- (a) the nature of the harm or potential harm; and
 - (b) the sensitivity of the receiving environment; and
 - (c) the current state of technical knowledge for the activity; and
 - (d) the likelihood of successful application of the different measures that might be taken; and
 - (e) the financial implications of the different measures as they would relate to the type of activity.

Information sheet

Mining

Financial assurance

This document provides information about financial assurances for mining activities, including when they are required and how they are calculated, reviewed and discharged.

What is financial assurance?

Financial assurance is a security held to ensure compliance with the conditions of an environmental authority (mining activities) and to meet any costs or expenses (or likely costs or expenses) incurred by the administering authority¹ in taking action to prevent or minimise environmental harm or rehabilitate or restore the environment in relation to the activity for which financial assurance has been given.

The administering authority may require financial assurance to be lodged as a condition of an environmental authority. The administering authority may also require financial assurance as a condition of a transitional environmental program or site management plan.

Financial assurance for mining activities

Financial assurance is not required for environmental authorities (prospecting).

The applicant for an environmental authority (mining activities) must lodge the required security with Queensland Mines and Energy, Department of Employment, Economic Development and Innovation (DEEDI). A single lodgement may be used to cover any security deposit required under the *Mineral Resources Act 1989* and the financial assurance required under the *Environmental Protection Act 1994*.

What form of financial assurance is appropriate?

The administering authority decides what form of financial assurance is considered appropriate. For example, a financial assurance may be lodged in the form of cash or a bank guarantee.

When is financial assurance required?

Holders of an environmental authority (mining lease) may lodge the financial assurance after the grant of the environmental authority and the mining tenement, generally with the plan of operations, but definitely prior to carrying out any activities on site.

For other environmental authorities (mining activities), financial assurance may be lodged after the grant of the environmental authority, but before the mining tenement is granted.

Applicants for code or non-code compliant level 2 mining activities may decide to lodge the financial assurance with their application for the environmental authority for code or non-code compliant level 2 mining projects.

¹ The Department of Environment and Resource Management is the administering authority under the *Environmental Protection Act 1994*.

How is financial assurance calculated?

The financial assurance for environmental authorities (mining claims) is a pre-set amount determined by the administering authority.

Financial assurance for mining lease projects and non-code compliant level 1 exploration and mineral development projects is determined by the administering authority on a site by site basis and is based on third party costs to rehabilitate land that is disturbed as a result of the mining project as described in the plan of operations or environmental management plan.

Financial assurance for environmental authorities (exploration and mineral development) for code or non-code compliant level 2 mining projects is calculated in accordance with a schedule of disturbance and risk attached to the relevant code of environmental compliance. Refer to the guideline 'Financial assurance for mining activities' (the Guideline).

What is an environmental performance discount?

An environmental performance discount is available to holders of environmental authorities (mining leases) who have established a good environmental record and can demonstrate a decreased risk of environmental harm for a mining lease project.

The amount of the discount is based on the holder's past performance, at the site as measured against certain criteria listed in the Guideline. For example, the establishment of a monitoring system, implementation of all environmental controls (erosion and sedimentation etc.), compliance with the conditions of their environmental authority for the previous two years and an environmental management system based on ISO 14 000 are some of the necessary conditions to receive a discount.

Can financial assurance be reviewed?

The holder of an environmental authority (mining activities) may apply to amend the financial assurance when a new or revised plan of operations or environmental management plan is lodged. The administering authority may amend the financial assurance at any time, although usually when a new plan of operations is lodged, or following an audit of the mining activity.

When can a financial assurance be discharged?

The holder of an environmental authority may apply to have the financial assurance discharged at any time. The administering authority assesses the application to discharge financial assurance and considers the extent to which activities carried out under each relevant mining tenement have complied with the conditions of the environmental authority (i.e. whether the holder of the environmental authority has completed rehabilitation to the satisfaction of the administering authority) and whether there is likely to be any future claim against the financial assurance.

Audit statements

The administering authority may require an audit statement to be lodged as part of the assessment of the application for amendment or discharge of financial assurance. The audit statement will state the extent to which activities carried out under each relevant mining tenement have complied with the conditions of the environmental authority.

Further information

Advice and support are available:

- through a statewide network of regional offices of the administering authority and DEEDI;
- on the administering authority's website at www.derm.qld.gov.au;
- alternatively telephone Permit and Licence Management (within the administering authority) on 1300 130 372.

Approved by:

Jon Womersley
Director, Regulatory Support and Practice
Department of Environment and Resource Management

Enquiries:

Permit and Licence Management
Ph: **1300 130 372**
Fax: (07) 3896 3342
Email: palm@derm.qld.gov.au

Date: 17 September, 2010

Guideline

Mining

Calculating financial assurance for mining projects

This guideline describes how financial assurance for mining projects is to be calculated in order to comply with s. 364 of the Environmental Protection Act 1994 and is the guideline referred to in s. 364(4). The guideline explains the discount system for mining lease projects and how the discount is to be calculated.

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1 Introduction

This guideline sets out the approved methodology for calculating the financial assurance required under the *Environmental Protection Act 1994* (EP Act) for exploration permits, mineral development licences and mining lease projects. Its objective is to provide a description of the financial assurance requirements when applying for a new environmental authority, and when applying to amend, transfer or surrender an environmental authority. This is the guideline referred to in s. 364(4) of the EP Act.

Financial assurance for mining claims and prospecting permits is dealt with in the application form for the relevant code compliant environmental authority.

This guideline does not deal with the calculation of residual risk payments. Residual risk payments may be associated with both progressively certified rehabilitation areas and areas finally rehabilitated and surrendered. The EP Act provides for residual risk payments associated with progressively certified rehabilitation areas to be held as part of the total financial assurance for a mining project. Residual risk payments will not be subject to the discount system set out in this guideline, and will be required to be provided at their full value in the form determined by the administering authority¹.

Queensland Mines and Energy (QME), a business unit in the Department of Employment, Economic Development and Innovation (DEEDI), may request a security under the *Mineral Resources Act 1989* (MR Act) in addition to the financial assurance required by the administering authority under the EP Act. While QME receives, and holds on behalf of the government, the total amount of financial assurance and security, this guideline does not deal with security requirements under the MR Act.

2 Legislative requirements

2.1 Setting the financial assurance

A financial assurance may be required under s. 364 of the EP Act to ensure that the government holds sufficient money to cover any costs that it may incur to achieve compliance with an environmental authority (mining activities) should the holder be unable to meet the conditions or fail to rehabilitate or restore the environment. Financial assurance may also be required for a transitional environmental program or site management plan. In requiring a financial assurance the administering authority is required to consider the degree of risk that environmental harm will be caused; the likelihood that action will be required to rehabilitate or restore or protect the environment; and the environmental record of the holder.

The administering authority has adopted the policy that all environmental authorities for mineral exploration, mineral development and mining will pay a financial assurance to ensure that sufficient funds are available to the administering authority should an exploration or mining company default on environmental requirements, prematurely cease operations or become bankrupt, and the administering authority is required to arrange the rehabilitation of the land disturbed by mining activities.

The amount of financial assurance is proposed by the applicant for, or holder of, an environmental authority in a plan of operations for a mining lease project, or in the relevant application form for environmental authorities for prospecting and mineral development tenements. A detailed explanation of the proposed rehabilitation works and justification of all of the unit costs used in the calculation of the quantum of financial assurance proposed for mining lease projects must be submitted as part of the plan of operations.

Section 364(4) of the EP Act states that the administering authority may decide the form and amount of financial assurance on the basis of a published guideline. The amount of financial assurance may not exceed the total or likely costs to rehabilitate or restore and protect the environment. These costs can include monitoring and

¹ The Department of Environment and Resource Management is the administering authority under the *Environmental Protection Act 1994*.

maintenance costs (s. 364(8) of the EP Act).

The quantum of financial assurance may vary with the scope of the works documented in a plan of operations. Section 364(5) states that the form of the financial assurance may allow the amount of financial assurance to be changed without amending the environmental authority.

The administering authority may determine the form of the financial assurance and any residual risk payment for progressively certified rehabilitation areas under ss. 364(3) and 266P of the EP Act respectively. It must do so in accordance with the 'Financial and Performance Standard 2009' under the *Financial Accountability Act 2009* which requires management of risks that may expose the administering authority or the State to unacceptable costs or losses. Acceptable forms of financial assurance include:

- cash; or
- financial institution's undertaking - this must be an unconditional, irrevocable and on demand guarantee (proforma provided in Appendix A) and be from an acceptable financial institution.

2.2 Changing the financial assurance

The holder of an environmental authority, transitional environmental program or site management plan, which has a condition requiring financial assurance, may apply to amend or discharge the financial assurance under s. 366.

While financial assurance can be reviewed at any time by the administering authority, it must be reviewed when an application to amend or discharge the financial assurance is received under s366 of the EP Act; and will be reviewed:

- when the holder is amending or replacing:
 - a plan of operations and/or environmental authority for mining lease projects (EP Act s234(2)); or
 - an environmental management plan and/or environmental authority for level 1 exploration or mineral development projects (EP Act s253); or
 - an environmental authority for level 2 exploration or mineral development projects (EP Act s238);
- or when the administering authority is assessing:
 - a final rehabilitation report with an application for surrender (EP Act s277); or
 - a progressive rehabilitation report with an application for progressive certification (EP Act s266J); or
 - a transitional environmental program (EP Act s367(1)(a)); or
 - a site management plan (EP Act s367(1)(b));
- or when the administering authority receives:
 - an audit statement during a transfer or partial surrender process;
 - a report from a compliance inspection or environmental audit of the project; or
 - information that has identified materially false or misleading declarations were made.

An application to amend or discharge a financial assurance must be supported by enough information for the administering authority to decide the application. For an application relating to an environmental authority (mining activities), the administering authority can require an audit statement under s. 366(4) of the EP Act before deciding the application.

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2.3 Claims on the financial assurance by the administering authority

Section 367 of the EP Act allows the administering authority to use all or part of a financial assurance to meet costs incurred, or reasonably likely to be incurred, by the administering authority to:

- prevent or minimise environmental harm or to rehabilitate or restore the environment in relation to an activity carried out under an environmental authority or transitional environmental program approval for which financial assurance has been given; or
- carry out work to remediate land managed under a site management plan approval for which financial assurance has been given; or
- secure compliance with an environmental authority, transitional environmental program or a site management plan for which the financial assurance has been given.

The administering authority must inform the holder about the action to be taken and the amount of financial assurance to be claimed. If the administering authority decides to claim part or all of the financial assurance, the holder has review and appeal rights and an opportunity to make written representations to show why the financial assurance should not be claimed as proposed.

No tax invoice is issued by the administering authority when the financial assurance is lodged. However, if the administering authority makes a claim on the financial assurance, the environmental authority holder is issued with a tax invoice. The holder will then be entitled to claim an input tax credit for the GST component of the financial assurance claimed.

3 Calculation of financial assurance

3.1 Level 2 environmental authorities for exploration and mineral development projects

The amount of financial assurance for level 2 exploration permits and mineral development licences is specified in the 'Code of environmental compliance for exploration and mineral development projects'.

The amount of financial assurance is based on the total area of significant disturbance. The total area of significant disturbance for the life of the project may initially be calculated on the basis of the work program for the proposed mining activities submitted to QME.

Where a change to proposed activities is expected to cause the area of significant disturbance to exceed the area proposed in the original work program, it is the responsibility of the holder of the environmental authority to apply to the administering authority to increase the amount of financial assurance and pay any increased amount to the QME.

A reduction in the amount of financial assurance can only be obtained by the submission and approval of an application to amend the financial assurance.

3.2 Level 1 exploration and mineral development and level 1 and level 2 mining lease projects

3.2.1 Calculation of rehabilitation costs

The proposed amount of financial assurance for mining lease projects and level 1 exploration and mineral development projects must:

- include the cost to:
 - i) rehabilitate all areas which have been, or are proposed to be, significantly disturbed; and

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- ii) remove all infrastructure constructed by or for the environmental authority holder, except where agreed in writing by the post mining land owner / holder that it will be used and maintained for a lawful activity (Leaving infrastructure also needs the written permission of the Minister for Mines and Energy under ss. 141, 194 and 276 of the *Mineral Resources Act 1989*); and
- iii) remediate any contaminated land and site investigations;
- be based on the full extent of work necessary to meet the conditions of the environmental authority;
- be calculated on a project basis (i.e. may cover several tenements with varied ownership);
- be based on cost estimates for the work to be completed by third party contractors (this will ensure that the total cost of rehabilitation is specific to the site and is a realistic estimate of the cost expected to be incurred by the government should it be required to rehabilitate the site including the costs of establishment at a site and GST); and
- be estimated using a schedule of disturbance and rehabilitation in the format for level 1 projects presented in Appendix B of this guideline, and for level 2 mining lease projects Appendix D of the 'Code of environmental compliance for mining lease projects', and take account of annual changes due to progressive rehabilitation and new disturbance. The schedule is a required component of the:
 - i) environmental management plan (EM plan) for level 1 exploration and mineral development projects; and
 - ii) plan of operations for both level 1 and level 2 mining lease projects (EP Act s234(1)(e)).

A general description of the proposed rehabilitation work and the rehabilitation objectives should be supplied in the EM plan, and for mining lease projects each plan of operations must contain details of the rehabilitation work proposed in the current planning period, sufficient to allow verification of the proposed financial assurance by the administering authority.

A plan of operations must be accompanied by an audit statement that states whether or not the amount of the financial assurance has been calculated in the way decided by the administering authority under s. 364(3). The administering authority may also require an audit statement to verify the proposed amount of financial assurance before deciding an application to transfer an environmental authority or to amend or discharge financial assurance (EP Act s366(4)).

The schedule of disturbance and rehabilitation allows the calculation of an annual rehabilitation cost for each year of the planning period based on:

- the predicted rehabilitation cost [R] - which is the sum of the rehabilitation costs for each domain or type of disturbance (including costs to complete rehabilitation of partially rehabilitated areas) calculated for each year using the formula below, where:
 - i) the unit rehabilitation cost [C] is the cost per unit area to complete rehabilitation for each type of disturbed or partially rehabilitated area based on current costs and expressed in current dollars;
 - ii) the area [A] is the maximum area of each type of disturbance (such as infrastructure, tailings, pit) or partially rehabilitated land expected during the year; and

$$\text{Predicted rehabilitation cost [R]} = [\text{C1}] \times [\text{A1}] + [\text{C2}] \times [\text{A2}] + [\text{C3}] \times [\text{A3}] + \text{for all domains}$$

- the cost of infrastructure decommissioning and removal; and

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- if the project produces hazardous contaminants or includes notifiable activities (in relation to contaminated land), the cost of completing a site investigation report to verify that the conditions of the environmental authority have been met; and
- goods and services tax (GST) - a rate of 10 percent on all taxable supplies listed above that do not include GST in them; and
- maintenance and monitoring costs - calculated from the rates shown in Table 1.

Note: These costs are to be re-evaluated, based on the cost of a third party setting up and undertaking the required rehabilitation work, each time there is a review of the level of financial assurance to be provided. The holder of an environmental authority must keep adequate records to demonstrate, if required, the basis on which the cost per unit area has been calculated. Simply increasing these costs by a factor for inflation will not be considered an adequate re-evaluation.

Table 1: Maintenance and monitoring rates

Mining activity	Maintenance and monitoring rates
Level 1 mining lease	2% of total of current and prior rehabilitation costs for areas not covered by progressive certification with an allowance for inflation of rehabilitation costs between the time the costs were incurred and the present, based on the change in the consumer price index (CPI)
Level 1 exploration permit or mineral development licence	10% of total rehabilitation cost
Level 2 exploration permit, mineral development licence or mining lease	10% of total rehabilitation cost

The annual rehabilitation cost for each year is the sum of the cost of rehabilitating all areas of significant disturbance, completion of all partially rehabilitated areas, and the cost of maintenance, all calculated in present day dollar values.

The gross financial assurance liability is based on the highest annual rehabilitation cost with an allowance for inflation calculated at the rate of 3% per year for the number of years covered by the term of the plan of operations. This escalation applies equally to each cost element of the annual rehabilitation, including the maintenance and monitoring component. This escalation factor is not to be used as the basis for adjusting per unit area costs of rehabilitation to present day dollar values.

3.2.2 Discount system for level 1 mining lease projects

A discount on the financial assurance required for mining lease projects is available only in particular circumstances. The discount system does not apply to any requirement for a residual risk payment in relation to progressively rehabilitated areas that may be included in the total financial assurance held for a mining project.

A discount will apply to the gross financial assurance liability for a mining lease or a mining lease project if the holder of the relevant environmental authority meets or can adequately demonstrate that it has arrangements in place that will ensure that it will meet the following prerequisites:

- The holder must demonstrate a commitment to progressive rehabilitation of the mine site, by including in an initial EM plan or an amended EM plan, a program for the progressive rehabilitation of the site

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with clearly defined rehabilitation objectives and criteria including triggers for determining when an area will become available for progressive rehabilitation and when that rehabilitation will be commenced.

Without such documented commitments the administering authority will not allow access to the discount system.

- The implementation of progressive rehabilitation must be demonstrated on a continuing basis by including in each plan of operations the details of the progressive rehabilitation that has been undertaken prior to the commencement of the plan, and a description of the nature and areal dimensions of the rehabilitation that is to be conducted during the period of the plan of operations.

The administering authority will not allow access to the discount system unless the plan of operations demonstrates that progressive rehabilitation is to be and is being implemented.

The administering authority may withdraw access to the discount system where commitments to rehabilitation made in each plan of operations are not met.

Note: In recognition of the operational constraints faced by some single-pit open-cut mines and most underground mines, such mines may be accepted into the discount system if they have minimised the risks associated with un-rehabilitated land through alternative measures such as a detailed mine closure plan supported by extensive rehabilitation trials that demonstrate that the rehabilitation proposed in their EM plan will be effective for the site; or through minimisation of the surface disturbance such as by using waste rock or tailings for paste fill of underground voids.

- The holder must provide the most recent annual financial statements for all the entities that are holders of the environmental authority, and for any of these that are to contribute funds to the rehabilitation of the relevant mining tenements, the financial statements must be accompanied by a certificate signed by the entity's financial auditors indicating / attaching:
 - i) that allowance has been made in the entity's accounts for the third party costs of rehabilitating the relevant mine site(s); and
 - ii) that there are no imminent financial risks faced by the entity which would preclude the entity from providing funds to meet the estimated current cost of rehabilitation at the time of certification (It would be desirable for this certificate to be accompanied by the most recent credit rating review of the holder by a reputable credit rating agency.); and
 - iii) if the funds identified in (i) depend on other entities such as a joint venture partner, a parent company or another entity that are not the holders of the environmental authority, a statutory declaration by the auditor for the other entities that there is an agreement in place, that it is unconditional and a copy of the financial statement of the other entities accompanied by a certificate as described in (ii) above.

Note: The administering authority is only willing to allow the holders of an environmental authority to enter into the system for discounted financial assurances, where the holders of the environmental authority include a joint venture arrangement, if the holders can demonstrate that governance arrangements exist with any joint venture partners that recognise and secure the provision of the required financial assurance until such time as the environmental authority is surrendered.

The holders of an environmental authority may enter into joint venture arrangements to provide technical or financial resources for a mining project with entities that are not the holders of the

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relevant mining tenements. As these other entities are not holders of the environmental authority, the administering authority cannot require them to provide financial assurance yet they may be a key source of financial capacity for the project. Such joint ventures may dissolve as soon as a mine ceases operation (or some other milestone is reached) and the parties that are not holders of the environmental authority will be under no statutory obligation to provide financial resources to finalise the project or provide the financial assurance that enables the government to do so if the project is abandoned.

The administering authority will not allow access to the discount system until the required financial statements accompanied by the certificate of the entities' financial auditors have been submitted.

For mining projects where the holders of the environmental authority have demonstrated to the administering authority, that the project meets these prerequisites, the amount of discount is calculated in accordance with the criteria in Table 2.

The discount system does not apply to financial assurance for rehabilitation costs associated with any exploration permits or mineral development licences within a mining project. The liability for these costs must be included in the financial assurance calculation at its full value.

The discount rates available for each of the four discount categories are shown in Table 2.

Table 2: Discount criteria and rates

Discount category	Criteria	Discount Rate
4	The criteria for category 3 are not all met	Nil
3	The holder(s) is able to demonstrate: <ul style="list-style-type: none"> two years of good environmental performance at the site at the beginning of the plan of operations (e.g. during the preceding two years, audits² have shown compliance with EA conditions; no transitional environmental programs were in place; and no prosecutions for environmental offences occurred). 	10 percent
2	All requirements in category 3 are met and <ul style="list-style-type: none"> progressive rehabilitation has been undertaken on the site to the extent that is feasible 	20 percent
1	All requirements in categories 3 and 2 are met and <ul style="list-style-type: none"> progressive rehabilitation successfully achieves best practice expectations (e.g. granted certification), and progressive rehabilitation continues to be undertaken to the maximum extent that is feasible 	30 percent

The discount rate should be applied to the gross financial assurance liability calculated within the period covered by the plan of operations (see Appendix B) and is calculated using the formula:

$$\text{Financial assurance required} = \text{gross financial assurance liability} \times (100 - \text{discount rate}) / 100$$

The gross financial assurance liability and the discount rate proposed by the holder must be verified in the audit statement that accompanies a new, amended or replacement plan of operations.

² The reference to an audit is a reference to any formal inspection of the site by the administering authority to determine compliance with the whole or part of the conditions of the applicable environmental authority.

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3.2.3 Discount system for level 2 mining lease projects

The discount arrangements for level 2 mining lease projects are contained in the 'Code of Environmental Compliance for Mining Lease Projects'.

4 Lodgement of financial assurance

Mining activities cannot commence until the appropriate financial assurance in the required form has been lodged with QME.

4.1 Lodgement for level 2 exploration and mineral development projects

Complete and submit the appropriate application form:

- Application for environmental authority (exploration); or
- Application for environmental authority (mineral development).

The applicant proposes the relevant amount of financial assurance from Appendix B Form 3 of the 'Code of Environmental Compliance for Exploration and Mineral Development Projects'. QME will notify the applicant (after receiving advice from the administering authority) of the total amount of financial assurance required and the form in which it must be provided when making a tenement offer.

The applicant must lodge the total amount of financial assurance with QME Brisbane office within the timeframe specified in the notice of tenement offer before the tenement can be granted or mining activities can be commenced.

4.2 Lodgement for level 1 exploration and mineral development projects

Complete and submit the appropriate application form:

- Application for environmental authority (exploration); or
- Application for environmental authority (mineral development).

Develop an EM plan for the exploration/mineral development activities. The plan must be lodged with the QME mining registrar with the application form or lodged later at the appropriate regional office of the administering authority, where a decision is made that the project requires an EIS.

The plan must include:

- a rehabilitation plan for land proposed to be disturbed under each relevant mining tenement; and
- a proposed level of financial assurance.

The QME will notify the applicant (after receiving advice from the administering authority) of the amount of financial assurance required and the form in which it must be provided when making a tenement offer.

The applicant must lodge the total amount of financial assurance with QME Brisbane office within the timeframe specified in the notice of tenement offer before the tenement can be granted or mining activities can be commenced.

4.3 Lodgement for mining lease projects

After the mining lease is granted, develop and submit a plan of operations consistent with s. 234 of the EP Act. The plan must contain:

- a schedule of disturbance and rehabilitation for land disturbed or proposed to be disturbed under each relevant mining lease; and

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- details of the land that has been progressively rehabilitated in the previous period and commitments about the land to be rehabilitated in the new period; and
- the costs of rehabilitation works calculated on present day values for third party contractor rates; and
- a proposed level of financial assurance; and
- an audit statement.

The audit statement must state whether or not the amount of the financial assurance for the environmental authority has been calculated in accordance with this guideline.

The EA holder must submit the plan of operations containing the calculation of financial assurance to the administering authority at least 28 days (or agreed shorter period) before commencing operations covered by the plan. Where the plan of operations is being renewed, a new schedule of disturbance and rehabilitation with a calculation of financial assurance must be submitted at least 28 days prior to the expiry of the existing plan.

The QME will notify the applicant (after receiving advice from the administering authority) of the total amount of financial assurance required and the form in which it must be provided. The applicant must lodge the financial assurance, when requested, at the QME Mining Registrar's office.

Note: For level 2 environmental authority holders, QME will accept and receipt the lodgement of financial assurance when the plan of operations is lodged. Should QME/the administering authority need to adjust the amount lodged, a notice will be sent to the holder of the environmental authority.

5 Application to amend the financial assurance

The financial assurance may be amended with or without an amendment to an environmental authority. Where the proposed changes to a mining project will require an amendment to the environmental authority, an amendment application form must be submitted, and the environmental authority conditions will have to be decided before a new plan of operations containing the calculations for the new financial assurance can be submitted.

5.1 Amendment for level 2 exploration and mineral development projects

Complete and submit the appropriate application form:

- Application for amendment or discharge of financial assurance (mining activities).

Identify the relevant amount of financial assurance from the 'Code of Environmental Compliance for Exploration and Mineral Development Projects'.

Submit the application to the administering authority regional office. After assessment, the administering authority will advise QME of the amended amount of financial assurance.

The QME will notify the applicant (after receiving advice from the administering authority) of the any new amount of financial assurance that is required. If a refund is agreed to by the administering authority, the funds will be paid to the holder or guarantor by QME.

The QME will notify the applicant of the total amount of financial assurance. The applicant must lodge the financial assurance when requested with the QME Brisbane office. If additional financial assurance is required, the applicant will have to lodge the financial assurance with QME before it can lawfully commence the new activities to which the increase relates.

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5.2 Amendment for level 1 exploration and mineral development projects

Complete and submit the application forms;

- Application for amendment or discharge of financial assurance (mining activities); and
- Notice of amendment or replacement of environmental management plan (EM plan amendment notice).

Develop an EM plan for the exploration/mineral development activities. The plan must be lodged with the QME mining registrar with the application form or lodged later at the appropriate regional office of the administering authority where a decision is made that the project requires an EIS.

The plan must include:

- a rehabilitation plan for land proposed to be disturbed under each relevant mining tenement; and
- a proposed level of financial assurance.

The QME will notify the applicant (after receiving advice from the administering authority) of the any new amount of financial assurance that is required. If a refund is agreed to by the administering authority, the funds will be paid to the holder or guarantor by QME.

The applicant must lodge the financial assurance when requested with the QME Brisbane office. If additional financial assurance is required, the applicant will have to lodge the financial assurance with QME before it can lawfully commence the new activities to which the increase relates.

5.3 Amendment for mining lease projects

Complete and submit the application forms:

- Application for amendment or discharge of financial assurance (mining activities); or
- Notice of amendment or replacement of plan of operations.

Review, and if necessary amend, the plan of operations for the project to ensure that all current and proposed mining activities are included in:

- the schedule of disturbance and rehabilitation; and
- the costs of rehabilitation works are based on present day values for third party contractor rates.

The plan must contain:

- a rehabilitation program for land disturbed or proposed to be disturbed under each relevant mining lease; and
- details of the land that has been progressively rehabilitated in the previous period and commitments about the land to be rehabilitated in the new period; and
- a proposed level of financial assurance; and
- an audit statement.

The audit statement must state whether or not the amount of the financial assurance for the environmental authority has been calculated in accordance with this guideline.

Submit the application form and the amended plan of operations to the administering authority regional office. After assessment, the administering authority will advise QME of the amount of financial assurance that the administering authority requires. QME will then notify the holder of the amount of financial assurance required and the form in which it must be provided.

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The applicant must lodge the financial assurance when requested at the QME Mining Registrar's office. The applicant must lodge the financial assurance with QME before any mining activities are conducted on a new tenement or before new activities not covered by an existing financial assurance are commenced.

If a refund is agreed to by the administering authority, the funds will be paid to the holder or guarantor by QME.

Note: If an amendment to the environmental authority is necessary, a new or amended EM plan (and notice for submission of the EM plan) will be required with the application for amendment of environmental authority (mining activities).

6 Financial assurance at transfer of an environmental authority

The transfer process is used to transfer the responsibility for an environmental authority and the financial assurance on the sale of a project or an interest in a project (at the same time as the assignment of the relevant tenement).

The current EA holder (transferor) and future holder (transferee) must complete the following forms and submit them with the mining tenement assignment forms to QME:

- Application for transfer of environmental authority (mining activities); and
- Application for amendment or discharge of financial assurance.

An 'Application for amendment of environmental authority (mining activities)' may also be required if the new holder is proposing to seek an amendment to the conditions of the environmental authority. This application may require an amended EM plan. The application to amend the environmental authority may be made together with the application to transfer (EP Act s. 260(2)). For a mining lease, a new or amended plan of operations may be required to calculate the financial assurance, or to reflect a change in the amount to be lodged, for example if the transferee is not eligible for participation in the discount system or is subject to a different performance category to that of the previous holder.

The performance discount will not change if the holders who are responsible for the financial assurance remain unchanged but the rate could be affected by the inclusion of a holder who does not meet either the prerequisite or discount criteria.

After assessment, the administering authority will advise QME of the amount of financial assurance that the administering authority requires and QME will notify the holder of the amount of financial assurance required and the form in which it must be provided.

Generally, QME will not grant the assignment of the mining tenement until the transferee has lodged the specified amount of financial assurance. The transferred environmental authority would normally take effect when the mining tenement is assigned (and the holders of the mining tenement are the same as the holders of the environmental authority – see s. 303 of the EP Act).

QME will then discharge the amount of financial assurance owing to the transferor and the administering authority will cancel any environmental authority or transitional authority that is no longer required.

7 Surrender of an environmental authority

7.1 Surrender of level 2 exploration, mineral development and mining lease projects

Complete and submit the form:

- Application for surrender or partial surrender of environmental authority (exploration)
- Application for surrender or partial surrender of environmental authority (mineral development)
- Application for surrender or partial surrender of code or non-code compliant level 2 mining project

Attach to the application a final rehabilitation report consistent with s. 274 of the EP Act.

Submit the application and final rehabilitation report to the relevant administering authority regional office. Once assessed and approved the administering authority will notify QME to discharge the agreed amount of financial assurance (in full or part) including the GST component of the amount discharged

The surrender takes effect when the administering authority approves the surrender application.

7.2 Surrender of level 1 exploration, mineral development and mining lease projects

Complete and submit the form:

- Surrender or partial surrender of an environmental authority (mining activities) level 1 mining project.

Develop a final rehabilitation report and audit statement for the project, identifying whether there is any outstanding liability with regard to financial assurance. This should be done in accordance with the administering authority guidelines:

- 'Final and progressive rehabilitation reports and audit statements for level 1 mining lease projects'
- 'Final rehabilitation report and audit statement for level 1 exploration and mineral development projects'

Submit the application and final rehabilitation report to the relevant administering authority regional office. Once assessed and approved, the administering authority will notify QME to discharge the agreed amount of financial assurance (in full or part) including the GST component of the amount discharged.

The surrender takes effect when the administering authority approves the surrender application.

8 Transitional arrangements

A mining project that had paid a security deposit under the MR Act before 1 January 2001 is deemed to satisfy the requirements of both the MR Act and the financial assurance requirement of the EP Act. As a result, after any environmental requirements under the EP Act are met, the remainder of the financial assurance is available to meet any requirements under ss. 144, 190, 277 or 324 of the MR Act.

9 Glossary

Active pit*	Area of open pit including ramps (excluding any areas being backfilled).
Action program	Describes location and timing of actions to be carried to implement conditions of the EA.

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Care/maintenance*	Area of land that has been partially rehabilitated, requires limited re-working but does not meet the successful rehabilitation standards set in the EA.
Cleared area*	Area that has been cleared of trees and shrubs in front of the advancing pit or elsewhere and not yet excavated or further disturbed. This area is not included as part of the disturbance area provided that topsoil and root material has not been removed.
Contaminated land	Area of land no longer actively used and requiring contaminated land
Remediation *	remediation prior to rehabilitation.
Established*	Area of land that has been recontoured, ripped and topsoiled and seeded, and vegetation has successfully established. The area may still require some re-working (e.g., erosion gullies) which excludes it from the successfully rehabilitated category.
Financial assurance	Cash or a financial institution's undertaking provided by or on behalf of the holder of an environmental authority to cover likely costs that may be incurred taking action to rehabilitate or restore the environment* because of environmental harm.
Gross financial assurance liability	The maximum predicted rehabilitation cost in any year for the period of the plan of operations.
Infrastructure*	Area of land disturbed for such things as haul roads, hardstand areas, buildings, easements, transmission lines, dams and landfill. Different areas of infrastructure disturbance will probably vary in cost for rehabilitation. Therefore, this category of disturbance may be expanded into sub-categories for more accurate cost estimates for rehabilitation.
Level 2 mining project	A group of mining activities, managed as a single integrated operation that has a low risk of serious environmental harm, is allowed under an environmental authority and either concerns a prospecting permit or mining claim, or can meet criteria prescribed under the Environmental Protection Regulation 1998.
Mining lease	A form of mining tenure granted under the <i>Mineral Resources Act 1989</i> .
Operational land	The land on which the project is to be carried out.
Recontoured*	Area of land no longer actively used and recontoured to final grade ready for either ripping and seeding or for placement of topsoil. Areas of acidic material or saline material that require encapsulation or covering with inert material before recontouring should not be included in this category until encapsulating is completed.
Rejects*	Out-of-pit areas used for rejects storage and does not include in-pit reject storage areas.
Seeded*	Area of land that has been ripped and seeded (all rehabilitation processes have been carried out). All areas should be included whether or not seeding has been successful.

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Stripped topsoil*	Area that has been stripped of topsoil but not included in any other category (e.g. in front of active pit or from where waste rock is to be placed). Land drilled for blasting is to be included in this category.
Successfully rehabilitated*	Area of rehabilitated land that meets the successful rehabilitation standards set in the environmental authority.
Tailings*	Area covered by tailings or disturbed as part of the tailings management system (including the tailings dam wall).
Topsoiled*	Area of land no longer actively used, currently undergoing rehabilitation, and which has had a sufficient depth of topsoil covering placed on it.
Total area of significant disturbance*	The sum of all areas on which mining activity has or will have occurred by the stated date (i.e. sum of all the categories listed under this heading in the schedule). Significantly disturbed land includes land which has been contaminated or it has been disturbed and human intervention is needed to rehabilitate it (see 'Code of Environmental Compliance for Mining Lease Projects', January 2001).
Total lease area*	Total area for all mining leases in the mining project.
Undisturbed area*	Area that has not been affected by mining operations by the stated date (i.e. land not included in C and D).
Waste rock*	Out of pit areas used for waste rock dumping. If both out of pit dumping and backfilling of the open pit is occurring, both areas should be reported separately under this category. The area of open pit backfilling should not be included in the area reported under the active pit category.

* definitions relating to Appendix B

Disclaimer

While this document has been prepared with care it contains general information and does not profess to offer legal, professional or commercial advice. The Queensland Government accepts no liability for any external decisions or actions taken on the basis of this document. Persons external to the Department of Environment and Resource Management should satisfy themselves independently and by consulting their own professional advisors before embarking on any proposed course of action.

Approved by:

Director
Regulatory Support and Practice Branch
Department of Environment and Resource Management

Enquires:

Permit and Licence Management
Ph: 1300 130 372
Fax: (07) 3896 3342
Email: palm@derm.qld.gov.au

Date: 29 March 2011

Calculating financial assurance for mining projects

Appendix A - Proforma for financial institution's undertaking

Template 1

FINANCIAL INSTITUTION'S UNDERTAKING
IN RESPECT OF
MINING TENURE(S) AND TENURE NUMBER(S)

TO: The State of Queensland

WHEREAS: [COMPANY/BUSINESS NAME] [ACN/ABN] of [COMPANY/BUSINESS ADDRESS] (hereinafter called the "Holder") has been granted [Mining Tenure(s) and Tenure Number(s)] over and in respect of the Mining Operation Area known as [Project No. or Project or Deposit Name] and an Environmental Authority (Environmental Authority No. []).

AND WHEREAS pursuant to Section 364 of the *Environmental Protection Act 1994* ("the EP Act") the State of Queensland ("the State") may require such Holder to deposit with the State an amount nominated by the State or a bond, guarantee or indemnity in such amount and so conditioned as to be acceptable to the State, to be held by the State for security for -

- a) compliance with the environmental authority, environmental management program or site management plan or plan of operations and any conditions of the environmental authority or program or plan; and
- b) costs or expenses, or likely costs or expenses, mentioned in Section 367 of the EP Act i.e. where the administering authority incurs or might reasonably incur costs or expenses in taking action to:
 - i) prevent or minimise environmental harm or rehabilitate or restore the environment, in relation to the carrying out of an activity under an environmental authority or an environmental management program approval for which the financial assurance has been given; or
 - ii) carry out work to remediate land managed under a site management plan approval for which financial assurance has been given: or
 - iii) secure compliance with an environmental authority, environmental management program approval or site management plan approval or any conditions of the authority or approval, for which financial assurance has been given.

AND WHEREAS the State at the request of the Holder(s) is prepared to accept the Bond of [FINANCIAL INSTITUTION NAME] [ACN] of [FINANCIAL INSTITUTION ADDRESS] ("the Financial Institution") hereinafter given in compliance with the requirements of the EP Act, the Financial Institution hereby unconditionally undertakes and agrees as follows:-

1. To arrange to pay to the State on written demand accompanied by a certified copy of this Bond any sum or sums which may from time to time be demanded by the State to a maximum aggregate sum of [Amount in words] ([Amount in figures]) in Australian dollars, payment of which maximum aggregate sum by the Financial Institution to the State will be in exchange for the immediate return by the State of the original Bond to the Financial Institution.
2. Upon the receipt of a written demand from the State for a sum or sums less than the maximum aggregate sum specified in this Bond, the Financial Institution will issue to the State a new Bond for the reduced amount at the same time that payment by the Financial Institution of the amount demanded by the State is made and in exchange for the original Bond.
3. This Bond is not revocable by notice but will remain in full force and effect until the earliest of the following events occurs:
 - payment by the Financial Institution of the whole of the said sum of [Amount in words] ([Amount in figures]) in Australian dollars; or
 - the Financial Institution is notified in writing by the State that the Bond is no longer required; or
 - this Bond is returned to the Financial Institution.

Calculating financial assurance for mining projects

In the events of clause 3(a) and (b), the State will return this Bond to the Financial Institution.

4. This Bond is not to be regarded as a contract of surety and the liability of the Financial Institution is a primary liability, and not a secondary obligation, which will remain in effect notwithstanding any event affecting the relationship between the Holder and the Financial Institution.
5. Any payment or payments demanded by the State in accordance with the terms hereof will be paid forthwith without reference to the said Holder and notwithstanding any notice given by the said Holder or any other person to the Financial Institution not to make such payment or payments.
6. The number of mining tenements in respect to the aforesaid environmental authority may be varied by the addition or deletion of mining leases or other mining tenements, and the terms and conditions of such leases or other tenements may be varied, and time or other indulgence may be granted to the said Holder without affecting this Bond, and the liability of the Financial Institution will not be impaired or discharged thereby.
7. Provided always that the Financial Institution may at any given time without being required to do so pay to the State the said sum less any amounts it may previously have paid under this Bond or such lesser sum as may be required and specified by the State and thereupon the liability of the Financial Institution hereunder shall immediately cease and determine.
8. Return of the original Bond to the Financial Institution by the State will constitute a release of the obligations under this Bond.
9. The benefit of this Bond is not transferable by the State.
10. This Bond shall be governed by the laws of the State of Queensland and all actions between the Financial Institution and the State including any and all payments made by the Financial Institution to the State pursuant to this Bond shall be undertaken in Australia.

DATED at.....this.....day of.....20.....

SIGNED SEALED AND DELIVERED for and on behalf of:

NAME OF FINANCIAL INSTITUTION:

ADDRESS OF FINANCIAL INSTITUTION:

.....
.....
.....

FINANCIAL INSTITUTION'S ACN:.....

Signature of Financial Institution Representative

Name of Financial Institution Representative/Position

Calculating financial assurance for mining projects

Template 2

FINANCIAL INSTITUTION'S UNDERTAKING
IN RESPECT OF
MINING TENURE(S) AND TENURE NUMBER(S)

TO: The State of Queensland

WHEREAS: [COMPANY/BUSINESS NAME] [ACN/ABN] of [COMPANY/BUSINESS ADDRESS] (hereinafter called the "Holder") has been granted [Mining Tenure(s) and Tenure Number(s)] over and in respect of the Mining Operation Area known as [Project No. or Project or Deposit Name] and an Environmental Authority (Environmental Authority No. []).

AND WHEREAS pursuant to Section 364 of the *Environmental Protection Act 1994* ("the EP Act") the State of Queensland ("the State") may require such Holder to deposit with the State an amount nominated by the State or a bond, guarantee or indemnity in such amount and so conditioned as to be acceptable to the State, to be held by the State for security for:-

- a) compliance with the environmental authority, environmental management program or site management plan or plan of operations and any conditions of the environmental authority or program or plan; and
- b) costs or expenses, or likely costs or expenses, mentioned in Section 367 of the EP Act i.e. where the administering authority incurs or might reasonably incur costs or expenses in taking action to:
 - i) prevent or minimise environmental harm or rehabilitate or restore the environment, in relation to the carrying out of an activity under an environmental authority or an environmental management program approval for which the financial assurance has been given; or
 - ii) carry out work to remediate land managed under a site management plan approval for which financial assurance has been given; or
 - iii) secure compliance with an environmental authority, environmental management program approval or site management plan approval or any conditions of the authority or approval, for which financial assurance has been given.

AND WHEREAS the State at the request of the Holder(s) is prepared to accept the Bond of [FINANCIAL INSTITUTION NAME] [ACN] of [FINANCIAL INSTITUTION ADDRESS] ("the Financial Institution") hereinafter given in compliance with the requirements of the EP Act, the Financial Institution hereby unconditionally undertakes and agrees as follows:-

1. To arrange to pay to the State on written demand accompanied by a certified copy of this Bond any sum or sums which may from time to time be demanded by the State to a maximum aggregate sum of [Amount in words] ([Amount in figures]) in Australian dollars, payment of which maximum aggregate sum by the Financial Institution to the State will be in exchange for the immediate return by the State of the original Bond to the Financial Institution.
2. Upon the receipt of a written demand from the State for a sum or sums less than the maximum aggregate sum specified in this Bond, the Financial Institution will issue to the State a new Bond for the reduced amount at the same time that payment by the Financial Institution of the amount demanded by the State is made and in exchange for the original Bond.
3. This Bond is not revocable by notice but will remain in full force and effect until the earliest of the following events occurs:
 - payment by the Financial Institution of the whole of the said sum of [Amount in words] ([Amount in figures]) in Australian dollars; or
 - the Financial Institution is notified in writing by the State that the Bond is no longer required; or
 - this Bond is returned to the Financial Institution.

In the events of clause 3(a) and (b), the State will return this Bond to the Financial Institution.

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4. This Bond is not to be regarded as a contract of surety and the liability of the Financial Institution is a primary liability, and not a secondary obligation, which will remain in effect notwithstanding any event affecting the relationship between the Holder and the Financial Institution.
5. Any payment or payments demanded by the State in accordance with the terms hereof will be paid forthwith without reference to the said Holder and notwithstanding any notice given by the said Holder or any other person to the Financial Institution not to make such payment or payments.
6. The number of mining tenements in respect to the aforesaid environmental authority may be varied by the addition or deletion of mining leases or other mining tenements, and the terms and conditions of such leases or other tenements may be varied, and time or other indulgence may be granted to the said Holder without affecting this Bond, and the liability of the Financial Institution will not be impaired or discharged thereby.
7. Provided always that the Financial Institution may at any given time without being required to do so pay to the State the said sum less any amounts it may previously have paid under this Bond or such lesser sum as may be required and specified by the State and thereupon the liability of the Financial Institution hereunder shall immediately cease and determine.
8. Return of the original Bond to the Financial Institution by the State will constitute a release of the obligations under this Bond.
9. The benefit of this Bond is not transferable by the State.
10. This Bond shall be governed by the laws of the State of Queensland and all actions between the Financial Institution and the State including any and all payments made by the Financial Institution to the State pursuant to this Bond shall be undertaken in Australia.

DATED at.....this.....day of.....20.....

Executed on behalf of the [Name of Financial Institution]

by its Attorney

Name of Attorney

Signature of Attorney

who holds the position of Level [x] Attorney by
Power of Attorney [Power of Attorney Number]
dated [Date of PoA]

In the presence of

Signature of Witness

Name of Witness

Appendix B - Example of a schedule of disturbance and rehabilitation

(including hypothetical unit costs used for financial assurance calculation)

Area category	Unit rehab cost (\$/ha) [C]	Actual as at June 2010		Predicted as at June 2011		Predicted as at June 2012	
		Area (ha) [A]	Rehab cost (\$000s) [R]	Area (ha) [A]	Rehab cost (\$000s) [R]	Area (ha) [A]	Rehab cost (\$000s) [R]
A Total lease area (A = B + C + D)		4 500		4 500		4 500	
B Undisturbed area		3 209		3 013		2 613	
C Cleared area		180		200		245	
D Total area of significant disturbance (D = D1 + D2 + D3)		1 111		1 287		1 642	
D1 Disturbance category							
Active pit	33 000	240	7 920	245	8 085	260	8 580
Tailings	28 000	100	2 800	110	3 080	115	3 220
Rejects/low grade ore	22 000	22	484	25	550	28	616
Waste rock	22 000	300	6 600	325	7 150	440	9 680
Infrastructure	8 000	280	2 240	280	2 240	300	2 400
Stripped topsoil	1 000	105	105	120	120	155	155
Contaminated land remediation	5 000	-		2	10	3	15
D2 Rehabilitation category							
Recontoured	4 600	15	69	35	161	80	368
Topsoiled but not seeded	2 000	2	4	23	46	28	56
Seeded	260	12	3.1	65	16.9	140	36.4
Established - Year 0	130	18	2.3	22	2.9	36	4.7
- Year 1	130	15	2	18	2.3	22	2.9
- Year 2	130	2	0.3	15	2.0	18	2.3
Site investigation report costs (if needed)							
D3 Successfully rehabilitated		0		2		17	
T Total cost to complete rehabilitation of D1 & D2	20 230				21 466		25 136
R Cumulative rehab. expenditure (pre-plan)	1 950				1 950	1 950	
Yn Rehab. expenditure this year (Y1 or Y2)	N/A				90	225	
M Maintenance and monitoring (2% of T+R+total Y)	440				470	548	

Guideline
Calculating financial assurance for mining projects

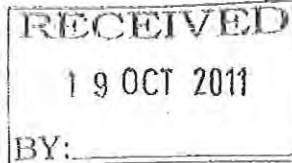
Area category	Unit rehab cost (\$/ha) [C]	Actual as at June 2010		Predicted as at June 2011		Predicted as at June 2012	
		Area (ha) [A]	Rehab cost (\$000s) [R]	Area (ha) [A]	Rehab cost (\$000s) [R]	Area (ha) [A]	Rehab cost (\$000s) [R]
G GST (10% of costs if not included above)	2 023				2 147	2 514	
AR Annual rehabilitation cost in current \$s (T+M+G)	24 643				26 123	30 463 (max)	
CPI Calculated as 3% of annual rehabilitation cost by number of years covered by schedule i.e. x 2	1479				1 567	1 828	
GROSS FINANCIAL ASSURANCE LIABILITY (Corrected for predicted CPI)	26 122 (not max)				27 690 (not max)	32 291 (max)	

Please quote: MN125940 / DG1710
Contact officer: Oskar Kadletz
Contact telephone: 07 38 [REDACTED]



Queensland
Government

18 OCT 2011



Department of
Employment, Economic
Development and Innovation

Mr Jim Reeves
Director-General
Department of Environment and Resource Management
GPO Box 2454
BRISBANE QLD 4001

Dear Jim

Thank you for your letter dated 15 September 2011, reference number CTS 08657/11, concerning management of environmental issues downstream of the abandoned Mount Oxide mine, located on Chidna Station.

DEEDI has done a lot over the past two years to tackle this. Approximately \$1.8 million has been spent on stream clean up, remediation, monitoring and livestock management at Mount Oxide mine in 2009 and 2010.

At the meeting of the Mount Oxide Expert Panel on 26 June 2011, new hydrological information commissioned by DEEDI was presented. This confirms that there are multiple contamination sources and their interaction is complex. There are no quick solutions.

DEEDI is addressing the post-mining issues at the abandoned mine within the Abandoned Mine Lands Program (AMLPL). In 2009/10, in recognition of the concerns raised by the DERM and others, additional funding for rehabilitation at Mount Oxide was made available by reprioritising some of the funding allocated to other abandoned mine projects. Funding contributions were taken from the Mount Morgan and Horn Island projects, as well as from the Charters Towers and Gympie Shaft Repair Programs.

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CTS 18525 / 11

The short term actions recommended by the Expert Panel in June 2010 have been addressed as follows:

- Isolating sources of contamination from incidental rainfall - The four most mineralised stockpile areas were covered with plastic. The covers have a five year design life, which will provide time to develop rehabilitation strategies and procurement processes for the final rehabilitation of this material.
- Implementing clean water diversions - New clean water diversions were installed at the edges of the plastic coverings. An integrated runoff drain was installed with the capping over the eastern stockpile, and a bypass pipe was installed over the side of the stockpile to prevent erosion.
- Finalising a stakeholder communication plan - Advice on improving communications was sought from experts at the Centre for Social Responsibility within the Sustainable Minerals Institute. There has also been ongoing communication with the landholder on site management plans and on site works.

The communications plan was discussed at both the 2011 Expert Panel meeting, and also the Stakeholders Meeting held on 24 August 2011, where the landholder, the Kalkadoon Traditional Owners, and Southern Gulf Catchments (the regional natural resource management group collective), and DERM were present. Amongst the outcomes were commitments by DEEDI to hold quarterly update meetings with the stakeholder group and to review opportunities for partnerships in stakeholder group communications with Southern Gulf Catchments.

- Increasing monitoring in the receiving environment - Recommendations from the 2010 Expert Panel meeting were progressed, including a monitoring contract with an independent organisation, the commissioning of a site hydrological survey, and the installation of a satellite-linked weather station to improve monitoring responses.

The items raised by Mike Birchley, Assistant Director-General Regional Service Delivery at the 20 June 2011 meeting were discussed at the Expert Panel meeting held in July 2011, and also at the stakeholder meeting in August 2011. DERM was represented at both meetings.

DEEDI did not cause the environmental impacts that stem from the Mount Oxide mine. DEEDI will continue to consult and work closely with DERM on site management to ensure that the best outcomes for the mine's rehabilitation are achieved, within the statewide prioritisation for the AMLP.

I am advised that the current status of rehabilitation and management for Mount Oxide is as follows:

- DEEDI is reviewing whether any further clean water diversion drain improvements can be made.
- The recommendations from a site hydrological report commissioned by DEEDI this year were reviewed by the Mount Oxide Expert Panel. The outcomes are being used to improve site monitoring including groundwater monitoring.

- Site observations are that copper containing groundwater discharges occur once a certain groundwater level is reached. This could be due to discharges from the mine pit once the water within it reaches a certain level following rainfall. It could also be from a general rise in mine site groundwater independent of the mine pit, or it could be a combination of the two.
- In order to provide additional wet season storage capacity within the mine pit, and to test the connectedness of the mine pit with other site groundwater aquifers, DEEDI is taking steps to hire and run a large volume evaporator at the mine pit before the wet season.
- Whether electromagnetic methods of monitoring groundwater flow are able to effectively monitor groundwater flow will also be assessed. Initial site trials may be carried out in 2011 if deemed feasible and if suitable contractors are available.
- A surface and groundwater flow model is being developed for the mine site. Initial outcomes are planned to be available by May 2012.
- Before the 2011-12 wet season, DEEDI is planning to expand the seepage catch dam below the eastern waste rock dump next to Caves Creek. DEEDI is also taking steps to install a solar pump back system to the mine pit from this dam.
- DEEDI will seek further advice on whether streamlining the flow in the southern creek would significantly reduce the amount of contact time between rainfall and mineralised material.
- At present, DEEDI does not believe there is a cost effective method of treating contaminated water discharges from the mine site. Instead, it is DEEDI's view that given the remoteness of the site and difficulty of access after rains, government funds are better used to minimise the ongoing generation of contamination.
- Site works planned for 2011/12 include cleaning out catch dams and maintaining diversion drains. The site monitoring network will also be enhanced.
- DEEDI continues to supply lick blocks to the landholder to assist with cattle management and minimizing their attraction to the impacted areas.
- The impact of copper on the landholder's cattle will be reviewed in collaboration with Biosecurity Queensland.

The final remediation of the mineralized stockpiles is likely to take a number of years. The timeframe will depend on what options are found to be feasible, cost, and availability of funding. The broad stages of works are:

- Over the next six months, a tender for the removal or on-site rehabilitation of the stockpiles will be developed in collaboration with DERW and the Expert Panel.
- The aim will be to establish a permanent solution that removes or significantly reduces contamination from the stockpiles. If stockpiles are to remain on site, they may need to be moved and encapsulated to prevent rainfall infiltration for the long term.

- The offers received will be evaluated in collaboration with DERM and the Expert Panel. As you have identified, key considerations for stockpile rehabilitation will be suitability of proposed locations, encapsulation and capping methods, final landform designs, and long term stability of the new landforms.

Final site remediation will take into consideration all significant impacts, including any from the mine pit and probable contaminated groundwater aquifers within the mineralized zone under the mine site. Currently, there is insufficient groundwater understanding for the site to address these matters. Ongoing monitoring will provide information for the model being developed.

Site rehabilitation planning could lead to the possible sterilization of significant mineral resources and make the development of a new mine less likely. Perilya has not yet confirmed the areas of most interest to it, nor its intentions regarding mine development.

Regardless, DEEDI will continue to progress site rehabilitation to minimise downstream contamination. As the cost of site rehabilitation is likely to be tens of millions of dollars, the support of DERM will be imperative.

DEEDI will continue to work with the landholder, the Kalkadoons, Southern Gulf Catchments and DERM to address impacts from the historic Mount Oxide Mine.

If you have any questions about my advice to you, Mr Oskar Kadletz, State Wide Abandoned Mines Coordinator, Department of Employment, Economic Development and Innovation, will be pleased to assist you and can be contacted on telephone 3836 0150.

Y. Oskar



IAN FLETCHER
Director-General