

Subject: Release of water from Kogan Creek Coal Mine

Date: 10 March 2010

File Name: CS Energy Aberdare Collieries Pty Ltd located in Toowoomba office

Subject (Detail): Discussion about the water management at Kogan Creek Coal Mine with respect to the possible release of contaminated water into the Condamine River system

On the 4 March Golding Contractors (the operators of Kogan Creek Coal Mine) asked to release contaminated water from East Dam into East Billabong within the Condamine floodplain due to the excessive rainfall experienced during the previous week. Following various telephone and email conversations held between DERM South-west Region office staff Chris Hill, Ruth Brown and Rob Spalding and Kogan Creek Coal Mine staff Tim Mortimer (Mining Manager - CS Energy) and Ian Kemp (Project Manager – Golding Contractors), Tim Mortimer met with Ruth Brown and Rob Spalding on March 10 to discuss the current situation.

Referring to drawing KCM-95 Rev 3 taken from the yet to be released updated version of the Water Management Plan for Kogan Creek Coal Mine, Tim Mortimer stated that all water storages on site were full. Even “The Billabong” to the north of the Out of Pit (OOP) Dump which had been dry, filled after it received 120mm of rain. Kogan Creek Coal Mine requested to move water from East Dam to East Billabong as East Billabong always has some water in it and they believed it was the best option. East Dam has a combination of water from various areas around the site. Consequently the suspended solids levels were much higher than those required by the release limits in their environmental authority.

DERM questioned why water can't be released from Topsoil Dam (Dam 6) into the environment and then move the water from East Dam (Dam 4) into Topsoil Dam as an interim measure. Tim said that Topsoil Dam is basically a shallow dam that doesn't have a large capacity. Consequently there wouldn't be any benefit in doing this as it would only move a small amount of water. Tim confirmed that he would ensure that the transfer of water from Topsoil Dam to East Dam (a strategy implemented to collect as much water as possible during drought) has stopped and that the water from Topsoil Dam is now flowing offsite.

The other problem the Mine has is the removal of water from within the Pit and from within the OOP Dump which is to become the Out of Pit Ash Cell (OOPAC). Water in the OOPAC occupies $\frac{3}{4}$ of the floor area and is about 3 metres deep in places. Installation of the ash pipes is planned for April – June. The floor of the ash cell needs to be lined at the same time but none of this work can occur until the water is removed from the floor of the OOPAC which needs to happen within the next two months. This water will be high in suspended solids and will probably be dirtier than the water in East Dam. Likewise the water in the Pit needs to be removed to allow mining to continue at full capacity. At present the pit water is going into the ROM Pond (dam 1) however all ponds to the north and west of the pit are basically full and water cannot be released from these ponds as they are all poor quality (ie above release limits).

OPTIONS

- Investigate methods of improving the water quality so that it meets release limits.
- Measure quality in the receiving waters to ensure water being released is of similar quality to that already existing in the environment.
- Release only specified amounts of water when required ie in a very controlled manner and stop pumping the water when it starts raining.
- No further action is required in the next few days as Tim expects evaporation to occur due to the finer weather predicted.
- In the meantime, Tim will discuss with Golding Contractors water management strategies for the mine site.

RECOMMENDATIONS

- An ecological assessment of the area to the east of the mining lease will be conducted by a consultant to determine the effects of releasing water on the environmental values of the area.
- Golding Contractors/CS Energy are currently revising the Water Management Plan because as the mine expands, they are generating too much “dirty” water to store on site.
- During very wet weather the Mine may need to revise the release limits and mechanisms to allow releases above the current water quality release limits. This is to be discussed further with DERM once the revised Water Management Plan has been reviewed and the ecological assessment has been conducted.

Signature

Date

Author: Ruth Brown
Position: Principal Environmental Officer
Unit/Office: Environmental Services
Phone: 4699 4304

Emergency Direction

Section 468 *Environmental Protection Act 1994*

This Emergency Direction is given in accordance with section 468 of the Environmental Protection Act 1994.

Under the provisions of the *Environmental Protection Act 1994* an Emergency Direction is given:

To: **Aberdare Collieries Pty Ltd (A.B.N 64 009 659 367)**

of: **Banana Bridge Road, Brigalow QLD 4412**

TAKE NOTICE that on this date, ?? March 2010 under the provisions of the *Environmental Protection Act 1994*, an Emergency Direction is given to you by Ruth Brown an authorised person appointed under the provisions of the *Environmental Protection Act 1994*.

This Emergency Direction is given in respect of the activities of Aberdare Collieries Pty Ltd at premises/place on land described as Kogan Creek Coal Mine (ML50074) situated at Banana Bridge Road, Brigalow QLD 4412 (the "said premises") to authorise the release of contaminants to the environment, namely mine site water with water quality characteristics exceeding maximum release limits, from East Dam at Kogan Creek Coal Mine to East Billabong on the Condamine River floodplain, to enable them to remove excess water from inside the flood levee and allow extra capacity for future rainfall events on site subject to the requirements listed in section B of this Notice.

A. Grounds

This emergency direction is issued on the following grounds:

- The current volume of water in East Dam at Kogan Creek Coal Mine is at a level that if it is not significantly reduced, then there is a potential risk that during the next significant rainfall event the dam may overtop and flow into East Billabong which could then flow into the Condamine River when the river is in flood. A release of mine site water may result in environmental harm due to the quality of water.
- Kogan Creek Coal Mine does not have available space in any other water storage facility on site to accommodate the water, as all dams are at capacity.
- The quality of water from East Dam is not compliant with environmental authority release conditions.

On these grounds I believe that environmental harm is likely to be caused to the Condamine River system if the current volume of water is not reduced to prevent East Dam from overtopping.

B. Requirements

Pursuant to this Emergency Direction Killarney Abattoir Pty Ltd (A.B.N 97 009 937 713) is required to:

1. No more than 20ML (or less) of water may be released from East Dam (dam 4) on ML50074 to East Billabong, a billabong of the Condamine River floodplain system (refer to attached map).
2. This emergency direction is given until **19 March 2010**.

And also **TAKE NOTICE** that:

1. The requirements of this Emergency Direction take effect immediately upon service of this Direction.
2. Failure to comply with this Emergency Direction is an offence under the *Environmental Protection Act 1994 (Qld)*.
3. This Emergency Direction remains in force until the above mentioned date unless further notice is given from the administering authority.

.....
(Signed)

.....
(Date)

Ruth Brown

Principal Environmental Officer

Authorised Person appointed under the provisions of the *Environmental Protection Act 1994*

EHP RTI DL Release

Request to: Direct emergency release of contaminant.

Subject: Kogan Creek Coal Mine

File: TWB3277 vol.6

1.0 Background

During the week of the 26 February – 5 March 2010, south east and south west Queensland experienced torrential rain resulting in flooding in many areas. Consequently, Tim Mortimer (Mine Manager at Kogan Creek Coal Mine) rang Ruth Brown (DERM South-west Region office) on 3 March 2010 requesting that the mine be allowed to pump contaminated water from the mining activities into East Billabong part of the Condamine River floodplain, due to the large amounts of rain experienced during the preceding days. Whilst Kogan Creek Coal Mine or the surrounding area has not experienced flooding, the quantity of rain falling on the site has been very large resulting in dams on the mine site nearing capacity.

Tim Mortimer was asked to send an email to DERM outlining the details of the request including the reason for the release, estimated amount to be released, current monitoring results and expected monitoring results (pH, electrical conductivity and suspended solids). A letter from Ian Kemp (Project Manager) was received via email on 4 March 2010 (see attached) which stated that the water to be released would exceed the release limits for suspended solids.

Numerous telephone conversations and emails occurred between DERM officers and Mine management staff throughout the following days (4 - 10 March) to discuss how the situation occurred and alternative solutions or strategies. These discussions culminated in a meeting on Wednesday 10 March between Ruth Brown and Rob Spalding of the Toowoomba DERM office and Tim Mortimer. Emails and file notes are located on file TWB3277 (vol. 6).

2.0 Issues

Kogan Creek Coal Mine's environmental authority allows them to release water from the mine site offsite according to conditions (C1-2) and (C2-1) as defined below;

(C1-2) Contaminants must not be directly or indirectly released from any source on the mine to any waters at any location other than at the locations listed in (i) below:

- (i) to waters of Eastern Branch Creek or Kogan Creek at the point(s) defined in the Water Management Plan.*

(C2-1) The release of contaminants to waters from the mine must comply, with each of the limits specified in Schedule C Table 1 for each quality characteristic.

SCHEDULE C - TABLE 1
RELEASE QUALITY CHARACTERISTIC LIMITS

QUALITY CHARACTERISTICS	RELEASE LIMIT
<i>Oil and grease</i>	<i>10 mg/L (maximum)</i>
<i>pH</i>	<i>6.5 – 9.0 (as a range)</i>
<i>Electrical conductivity (EC)</i>	<i>950 µs/cm (maximum)</i>
<i>Suspended solids</i>	<i>285 mg/L (maximum)</i>

Currently East Dam is nearing capacity with approximately 600mm freeboard left. East Billabong has a capacity of approximately 136ML and is currently only holding approximately 92ML. The mine proposes to pump about 20ML from East Dam to East Billabong which will enable them to remove excess water from inside the flood levee and allow extra capacity for any future rainfall events on site.

The billabong is part of the mining lease (refer to attached map) and therefore the water is not being released offsite. However if the Condamine River floods it will back up into the billabong resulting in contaminants entering the Condamine River. If this happens the resulting water quality of the Condamine River may have suspended solids exceeding the maximum allowed to be released.

Mine management have concluded that this release is the preferred option as the water quality in East Dam is a better quality than most other dams on the mining lease. Water cannot be moved from East Dam to any other dam, as all dams on site are at or near capacity. However they will investigate methods to improve the water quality before release.

3.0 Recommendation

It is recommended that Kogan Creek Coal Mine be given written direction (an **emergency direction**) under section 468 of the *Environmental Protection Act 1994* to release a contaminant to waters, that being East Billabong located on ML50074.

DERM is satisfied that under the present conditions it is necessary and reasonable to release the water from East Dam to the East Billabong to prevent the potential environmental harm to Condamine River as a result of the East Dam over flowing.

Therefore, as an authorised person, it is recommended that the following conditions for the direction are imposed:

1. This emergency direction is given until **19 March 2010**.

It is recommended that Emergency Direction is given in accordance with section 468 of the *Environmental Protection Act 1994* in respect of the activities of Aberdare Collieries Pty Ltd in relation to Kogan Creek Coal Mine at mining lease (ML) 50075 situated at Banana Bridge Rd, Brigalow QLD 4412 (the “said premises”) to authorise the release of contaminants to the environment, namely water from East Dam to East Billabong.

Ruth Brown
Principal Environmental Officer

Rob Spalding
Manager, Environmental Services
South-West Region

EHP RTI DL Release



Enquiries Ruth Brown
Telephone (07) 4699 4304
Your reference ENCD00281405
Our reference TWB4258 vol. 2

Department of
**Environment and Resource
Management**

23 February 2010

Ivan Mapp
Site Manager Kogan Creek Power Station
CS Energy
PO Box 41
BRIGALOW QLD 4412

Dear Mr Mapp

I refer to the document CS Energy Ltd provided to the Department of Environment and Resource Management (DERM) on 15 February 2010 titled *Kogan Creek Power Station Annual Return Monitoring Results*. The provision of these monitoring results is in compliance with Kogan Creek Power Station's development approval ENCD00281405.

Monitoring results provided in the report show that Kogan Creek Power Station is complying with conditions of the development authority namely;

- condition B5 which sets a limit for concentrations of solid particles in the effluent gas which is not to exceed 80mg in each normal cubic metre of effluent gas corrected to 12% by volume of carbon dioxide.
- condition B7 which sets a limit for concentration of oxides of nitrogen in the effluent gas which is not to exceed 800mg in each normal cubic metre of effluent gas calculated as NO₂ at a 7% oxygen reference level.
- condition H5 which states you must monitor the mass emission rate and concentration of total suspended particulates (TSP), nitrogen oxides (NO_x) and sulphur dioxide (SO₂).

Some monitoring parameters as detailed in Schedule H Table 3 of your development approval have not been included in the report. For example total nitrogen and total phosphorus have not been included in Figure 9: Quarterly surface water monitoring for the Northern Stormwater Dam. Total nitrogen has also been omitted from figures 15, 21 and 28 of the monitoring results. Also a number of graphs for dissolved metals (figures 10, 16 and 29) have not included mercury as one of the monitoring parameters. According to condition H8 monitoring of total hydrocarbons should also be conducted at all stormwater holding ponds (including "Northern", "Southern" and "Drains reclaim pond").

As stated in the covering letter, "the Power Station's groundwater monitoring bores have all

reported **dry** throughout the year ...(and) new bores have been drilled and results from the new bores will **be** incorporated into future annual returns." Please ensure that this information is provided **in future** to ensure compliance with condition H8 of your environmental authority.

Condition **H2** of the development approval states that a study of the ambient air quality of the neighbouring environment should be undertaken. A report on the study was received by this office on **12 June 2009**. DERM responded to the author of this report, David Falconer, on **24 September 2009** by raising issues found in the report and requesting an amended report be submitted **by 30 October 2009**. DERM has not yet received an amended report and requires this report **to** be submitted immediately.

Should **you** have any questions about this matter please contact Ruth Brown on 4699 4304.

Yours sincerely

sch4 - Personal information

Rob Spalding
Manager, Environmental Services
South-West Region
Department of Environment and Resource Management

Ruth Brown

From: Ruth Brown
Sent: Wednesday, 24 February 2010 2:53 PM
To: Gary Hargraves
Subject: Kogan Creek haz dam report

Attachments: 20100224 signed copy of memo to Russ re haz dam report for IADA.pdf; 091224 IADA Annual Certification Report PB.PDF

Hi Gary,

Rob Spalding asked me to email you a copy of the documents we sent to Russ today (via post) regarding Kogan Creek Coal Mine's annual hazardous dam inspection report for their Initial Ash Disposal Area. Please let me know if you also require the design report for their Out of Pit Ash Cell which was forwarded to Russ via email and post in December.

Thanks. Ruth



20100224 signed
copy of memo t...



091224 IADA
Annual Certificati...

Ruth Brown
Principal Environmental Officer
Environmental Services, South West Region
Department of Environment & Resource Management
PO Box 731
Toowoomba QLD 4350
Ph: (07) 4699 4304
Fax: (07) 4699 4399

EHP RTI DL Release

Memorandum

Enquiries
Telephone
Your reference
Our reference

Ruth Brown
(07) 4699 4304
IPDE00173405A11
TWB3277 vol. 5

24 February 2010

To: Russ McConnell, Manager Project Support, Technical Operations Branch,
Environmental Services

Through: Rob Spalding, Manager, Environmental Services, South West Region

From: Ruth Brown, Principal Environmental Officer, Environmental Services, South
West Region

Subject: Yearly assessment of Kogan Creek Coal Mine's ash disposal dam

*Noted.
24/2/10*

Kogan Creek Coal Mine and Power Station is an operation licensed by DERM and is located west of Dalby. Since the commissioning of the Power Station in 2007, ash from the combustion of the coal has been disposed in an initial ash disposal area (IADA). As this is considered a hazardous dam, it is a condition of their development approval (IPDE00173405A11) that it be inspected on an annual basis.

Attached please find the report submitted by CS Energy as provided to them by their qualified engineer. Could you please review the report and provide comments to me by 19 March 2010.

As stated in the report, no urgent actions are considered necessary to ensure compliance with the conditions of the Environmental Authority. The report does recommend that the capping process resume for areas of the IADA that have reached the final surface level. As the use of the IADA is nearing completion, approval and development of Kogan Creek's Out of Pit Ash Cell (OOPAC) must be completed before the IADA can be closed. Consequently your assessment of the *Engineering Design Report for the Out of Pit Ash Cell* submitted to you in December 2009 is also required.

sch4 - Personal information

Ruth Brown
Principal Environmental Officer

*Russ,
Could you please provide us with an
update on the progress that you have made in
receiving/assessing the out of pit ash cell so that
Ruth can advise Kogan Creek operators about when they
can expect to hear from us.*

Thanks

*sch4 - Personal information
sch4 - Personal information
24/2/10*



Queensland Government
Environmental Protection Agency
Queensland Parks and Wildlife Service

RECEIVED

South-West District Office (Toowoomba) 2 AUG 2005
PO Box 731 TOOWOOMBA QLD 4350
Phone: (07) 4639 4599 Fax: (07) 4639 4524
www.env.qld.gov.au ABN: 87221158786

Notice of negotiated development application decision

Sections 3.5.17 Integrated Planning Act 1997

This notice is issued by the administering authority pursuant to sections 3.5.17 of the Integrated Planning Act 1997, to advise you of a decision or action.

Enquiries to : Amanda Cleary
Telephone : (07) 4699 4313
Your reference :
Our reference : 260990

KCPP	
Received:	21/8/05
Scanned:	☒ Y ☐ N
Distribution:	T.M.
File No:	638,217,0002
Folio	Y/N No:

Aberdare Collieries Pty Ltd
Level 3, 66 Eagle Street
Brisbane QLD 4000

Attention: Tim Mortimer,

Re: Application (No. IPDE00173405A11) for development approval by Aberdare Collieries Pty Ltd for the environmental relevant activity to be carried out at a place situated at Kogan Creek Mine BRIGALOW QLD 4412.

Pursuant to the following parts of Schedule 8a Table 3 Item 1(a) of the *Integrated Planning Act 1998*, the Environmental Protection Agency is the assessment manager for the development application.

The Environmental Protection Agency, acting as assessment manager under the *Integrated Planning Act 1997* for your application, advises that the negotiated development application decision notice about development prescribed under a regulation under the *Environmental Protection Act 1994* for Schedule 8 Part 1 Table 2 Item 1 of the *Integrated Planning Act 1997* is attached.

Assessment Manager information

Assessment Manager office: Environmental Protection Agency
South-West District Office (Toowoomba)
Postal address: PO Box 731 TOOWOOMBA QLD 4350
Telephone: (07) 4699 4313
Fax: (07) 4699 4399



Should you require any further information please do not hesitate to contact Amanda Cleary on either phone (07) 4699 4313 or e-mail: Amanda.Cleary@epa.qld.gov.au

sch4 - Personal information

27 July 2005

Signed

Date

Sarah Fenaughty
District Manager
Delegate of Administering Authority
Environmental Protection Act 1994

EHP RTI DL Release

Negotiated Decision Notice - Approval

Section 3.5.17 Integrated Planning Act 1997

This notice replaces the notice issued on 01-JUL-05

Applicant:	Aberdare Collieries Pty Ltd
EPA Development Application number:	IPDE00173405A11
Date application received by EPA:	15 July 2005
Date of decision:	27 July 2005
Relevant Laws and Policies:	<i>Environmental Protection Act 1994</i> and subordinate legislation
Jurisdiction:	Schedule 8a Table 3 Item 1(a) of the <i>Integrated Planning Act 1998</i>

Development Description:

Carrying out of Environmentally Relevant Activity (ERA):

75(b)(iv) Waste disposal - Operating a facility for disposing of regulated waste (other than limited regulated waste) whether alone or in combination with any waste mentioned in paragraph (a), if the facility is designed to receive waste at the rate of 200 000 t or more per year

at the following place(s):

Lot/Plan - Lot 1 & 2 Plan DY187, Lot 11 Plan DY61, Lot 26 Plan DY374, Lot 28 Plan DY275, Lot 34 Plan DY604, Lot 7 Plan RP176345

located at:

Kogan Creek Mine BRIGALOW QLD 4412

Decision on Development Application

In deciding the application, the Environmental Protection Agency, as assessment manager approves all of the application subject to conditions decided by the assessment manager as a development permit.

Referral agencies

Concurrence Agencies: Nil
Advice Agencies: Nil
Referral Agencies: Nil

Additional information for applicants

This approval pursuant to the *Environmental Protection Act 1994* does not remove the need to obtain any further approval for this development which might be required by other State and/or Commonwealth legislation. Applicants are advised to check with all relevant statutory authorities. Applicants also should comply with all relevant legislation.

It is a requirement of the *Environmental Protection Act 1994* that if the owner or occupier of this site becomes aware a Notifiable Activity (as defined under schedule 2 of the *Environmental Protection Act 1994*) is being carried out on this land or that the land has been affected by a hazardous contaminant, they must, within 30 days after becoming aware the activity is being carried out, give notice to the Environmental Protection Agency. A list of Notifiable Activities is provided within Schedule 2 of the *Environmental Protection Act 1994*.

Appeal

When issuing a decision notice under the *Integrated Planning Act 1997*, the assessment manager must state the rights of appeal for the applicant (section 3.5.15(2)(j)). The rights of appeal are attached to the back of this notice.

sch4 - Personal information

27 July 2005

Signed

Date

Sarah Fenaughty
District Manager
Delegate of Administering Authority
Environmental Protection Act 1994

¹ Permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation administered by the Environmental Protection Agency and the Queensland Parks and Wildlife Service



Conditions of the development approval

This development approval consists of the following schedules of conditions relevant to various issues:

The aforementioned description of the environmentally relevant activity (ERA) for which this development approval is issued is simply a restatement of the activity as prescribed in the legislation at the time of issuing this development approval. Where there is any conflict between the above description of the ERA for which this development approval is issued and the conditions as specified in this development approval as to the scale, intensity or manner of carrying out of the ERA, then such conditions prevail to the extent of the inconsistency.

This development approval authorises the ERA. It does not authorise environmental harm unless a concurrence agency condition within this development approval explicitly authorises that harm. Where there is no condition or the development approval is silent on a matter, the lack of a condition or silence shall not be construed as authorising harm.

This Development Approval incorporates the following schedules:

- Schedule A - General
- Schedule B - Air
- Schedule C - Water
- Schedule D - Noise and vibration
- Schedule E - Waste
- Schedule F - Land
- Schedule G - Community
- Schedule H - Definitions

Schedule A - General

Financial assurance

- (A1-1) Provide a financial assurance in the amount and form required by the administering authority prior to the commencement of activities proposed under this authority, unless financial assurance has already been provided pursuant to the Environmental Authority for ML 50074.

NOTE: Subject to the above, the calculation of financial assurance for condition (A1-1) must be in accordance with Guideline 17 and may include a performance discount. The amount is defined as the maximum total rehabilitation cost for complete rehabilitation of all disturbed areas of the ash cells, which may vary on an annual basis due to progressive rehabilitation. The amount required for the financial assurance must be the highest Total Rehabilitation Cost calculated for any year and calculated using the formula: (Financial Assurance = Highest Total Annual Rehabilitation Cost x Percentage Required)

- (A1-2) The financial assurance is to remain in force until the administering authority is satisfied that no claim on the assurance is likely.

NOTE: Where progressive rehabilitation is completed and acceptable to the administering authority, progressive reductions to the amount of financial assurance will be applicable where rehabilitation has been completed in accordance with the acceptance criteria defined within this environmental authority.

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Maintenance of measures, plant and equipment

(A2-1) The holder must:

- a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this approval; and
- b) maintain such measures, plant and equipment in a proper condition; and
- c) operate such measures, plant and equipment in a proper manner.

Monitoring

- (A3-1) Record, compile and keep for a minimum of five years all monitoring results required by this development approval and make available for inspection all or any of these records upon request by the administering authority.
- (A3-2) Where monitoring is a requirement of this development approval, ensure that an appropriately qualified person conducts all monitoring.

Storage and handling of flammable and combustible liquids

- (A4-1) Spillage of all flammable and combustible liquids must be contained within an on-site containment system and controlled in a manner that prevents environmental harm (other than trivial harm) and maintained in accordance with section 5.9 of Australian Standard 1940:2004.

END OF CONDITIONS FOR SCHEDULE A**Schedule B - Air****Dust nuisance**

- (B1-1) Subject to Conditions (B1-2) and (B1-3) the release of dust or particulate matter or both resulting from the ash disposal activity must not cause an environmental nuisance, at any sensitive place.
- (B1-2) When requested by the Administering Authority, dust and particulate monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (B1-3) If evidence can be provided through monitoring that the following limits are not being exceeded by emissions from the ash disposal activity then the holder is not in breach of (B1-1):
- a) Dust deposition of 120 milligrams per square metre per day, averaged over one month, when monitored in accordance with AS 3580.10.1 Methods for sampling and analysis of ambient air - Determination of particulates - Deposited matter - Gravimetric method of 1991; and
 - b) A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (μm) (PM10) suspended in the atmosphere of 150 micrograms per cubic metre over a 24 hour averaging time, at a sensitive place downwind of the operational land, when monitored in accordance with:
 - Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet - Gravimetric method, when monitored in accordance with AS 3580.9.6 Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM (sub) 10 high volume sampler with size-selective inlet - Gravimetric method of 1990; or
 - Any alternative method of monitoring PM10 which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority.

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NOTE: You must propose which monitoring method is appropriate in accordance with condition (B1-3) (a) or (b) or both.

- (B1-4) If monitoring indicates exceedence of the relevant limits in Condition (B1-3), then dust abatement measures must be implemented immediately so that emissions of dust from the activity do not result in environmental nuisance; or if considered appropriate by the administering authority, undertake appropriate dispute resolution.

Odour nuisance

- (B2-1) Subject to condition (B2-2), the release of noxious or offensive odour(s) or any other noxious or offensive airborne contaminant(s) resulting from the ash disposal activity must not cause an environmental nuisance at any sensitive place.
- (B2-2) When requested by the Administering Authority, odour monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (B2-3) If monitoring indicates Condition (B2-1) is not being met then the odour abatement measures must be implemented immediately so that emissions of odour from the activity do not result in further environmental nuisance; or if considered appropriate by the administering authority, undertake appropriate dispute resolution.

END OF CONDITIONS FOR SCHEDULE B

Schedule C - Water

- (C1-1) Contaminants must not be directly or indirectly released from the licensed place and as a result of the ash disposal activity to any waters or the bed and banks of any waters except as detailed in Schedule C Table 3.

Tailings and process water dams

- (C2-1) The design storage allowance on 1st November of each year for any high hazard dam containing hazardous waste constructed or operated within the operational land must comply with Schedule C - Table 1.

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Schedule C - Table 1 (Storage design for high hazard dams containing hazardous waste)

Name of Dam ¹	Design Storage Allowance ¹	Spillway Critical Design Storm ¹	Mandatory Reporting Level ¹
Ash Cells	1: 10> Year ARI 4 month wet season plus process inputs for the 4 month wet season	1: 100 year ARI	1: 10 year ARI

NOTE: ARI means annual recurrence interval.

Note. ** Applies to dams with contents with high hazard only.

Note ⁽⁵⁾: The design storage allowance on 1st November of each year for any high hazard dam containing hazardous waste constructed within the operational land must be equivalent to the run-off from a 1 in 10 year ARI 4 month wet season plus process inputs for the equivalent wet season. Process inputs refers to hazardous mineral process waste and water, which is being disposed of in the storage facility.

Note ⁽⁶⁾: The critical design storm has a duration that produces the peak discharge for the catchments.

Note ⁽⁷⁾: The mandatory reporting level refers to the volume below the spillway crest, either the 10 ARI 72 hour storm or the 10 ARI wave allowance, whichever is lower.

- (C2-2) The spillway and associated waterways for any high hazard dam containing hazardous waste, constructed or operated within the operational land must be designed and maintained to withstand the peak flow for the spillway critical design storm defined in Schedule C - Table 1.
- (C2-3) The holder of the development approval must mark the mandatory reporting level defined in Schedule C - Table 1 on the upstream side of the spillway of all high hazard dams containing hazardous waste within the operational land.
- (C2-4) The holder of the development approval must notify the administering authority when the pondage level of the high hazard dam containing hazardous waste, reaches the mandatory reporting level defined in Schedule C - Table 1.

Groundwater

- (C3-1) Groundwater levels must be monitored and groundwater draw down fluctuations in excess of 2m per year, not resulting from the pumping of licensed bores, must be notified within 14 days to the administering authority following completion of monitoring.
- (C3-2) The method of sampling of groundwater must comply with that set out in the latest edition of the Environmental Protection Agency's Water Quality Sampling Manual.
- (C3-3) Groundwater monitoring must commence at locations defined in Schedule C – Table 2 twelve months prior to any waste disposal commencing.

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Schedule C - Table 2 (Groundwater monitoring locations)

Monitoring Point	Easting	Northing	Aquifer	Surface RL (m)	Total Depth (m)
MB1 : North	280 500	7 020 250	Alluvials	311	~25m
MB2 : North East	281 350	7 019 700	Alluvials	310	~25m
MB3 : Kogan Creek Bridge	279 500	7 019 750	Alluvials	310	~25m
MB4 : Kogan Creek Upper	278 650	7 018 100	Alluvials	313	~25m
MB5 : East	281 500	7 019 000	Alluvials	310	~25m
MB6 : South	280 000	7 018 000	Coal Seams	325	~100m
MB7 : South East	281 000	7 018 000	Coal Seams	313	~100m
MB8 : North West	279 500	7 020 400	Alluvials	310	~25m
MB9 : Initial Ash (1)	275 950	7 018 350	Alluvials	317	~25m
MB10 : Initial Ash (2)	276 300	7 018 350	Alluvials	317	~25m

(C3-4) Conduct monitoring and keep records of groundwater quality for the relevant bores listed in Schedule C Table 2. All determinations of groundwater quality must be;

- (i) conducted for the water quality characteristics and at the minimum frequency stated in Schedule C- Table 3;
- (ii) taken from sufficient monitoring points and /or well to obtain representative samples of groundwater both up-gradient and down-gradient of the potential influence;
- (iii) carried out with sufficient regularity, spatial and temporal replication to make reasonably valid conclusions about the presence or absence of contamination or other impact;
- (iv) carried out with sufficient number of sampling events to determine ambient groundwater quality and level twelve months prior to any waste disposal commencing;

NOTE (ii),(iii) and (iv) are duplicated or specified elsewhere (Tables) and are thus not needed – Request Deletion.

- (v) followed by an assessment of whether or not there has been any significant adverse change compared to background values at locations hydraulically down gradient of the potential sources of contamination for each quality characteristic in Schedule C- Table 3.

(C3-5) A record of the results of baseline monitoring must be kept and forwarded to the administering authority on request.

(C3-6) Subject to condition (C3-3), groundwater quality characteristics resulting from the ash disposal activity must not exceed contamination limits specified in Schedule C – Table 3.

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Schedule C - Table 3 (Groundwater contaminant trigger levels)

Quality Characteristic	Units	Contaminant limits	Monitoring Frequency
Na	mg/L	+/- 10% of background	Twice yearly
SO ₄	mg/L	+/- 10% of background	Twice yearly
Al	mg/L	+/- 10% of background	Twice yearly
Zn	mg/L	+/- 10% of background	Twice yearly
EC	uS/cm	+/- 10% of background	Twice yearly
pH	unit	+/- 1.0 of background	Twice yearly
Standing Water Level	cm	N/A	Quarterly

- (C3-7) If the groundwater contaminant trigger levels defined in Schedule C - Table 3 are exceeded then you must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

Erosion and Sediment Control

- (C4-1) All reasonable and practicable measures must be implemented and maintained to minimise erosion and the release of sediment.
- (C4-2) Erosion protection measures and sediment controls must be provided and maintained to effectively minimise any likelihood of erosion and release of sediments from the approved place and be maintained during site clearing, construction, mining operations and rehabilitation. Such measures should include diversion drainage works and sedimentation traps and dams.
- (C4-3) Erosion control and sediment control structures must be maintained at all times and repaired or replaced as required after each rainfall event.

END OF CONDITIONS FOR SCHEDULE C

Schedule D - Noise

Noise nuisance

- (D1-1) Subject to Conditions (D1-2) and (D1-3) noise from the ash disposal activity must not cause an environmental nuisance, at any sensitive place.
- (D1-2) When requested by the Administering Authority, noise monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive place, and the results must be notified

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within 14 days to the administering authority following completion of monitoring.

- (D1-3) If the development approval holder can provide evidence through monitoring that the limits defined in the table in Schedule D - Table 1,2 and 3 inclusive are not being exceeded by noise from the ash disposal activity then the holder is not in breach of Condition (D1-1). Monitoring must include:
- a) L_A , max adj, T and $L_{A, 1 \text{ hour}}$ and $L_{A10, \text{adj}, 10 \text{ mins}}$
 - b) the level and frequency of occurrence of impulsive or tonal noise;
 - c) atmospheric conditions including wind speed and direction; and
 - d) location, date and time of recording.
- (D1-4) If monitoring indicates exceedence of the limits in Schedule D - Table 1, then the development approval holder must immediately implement noise abatement measures so that emissions of noise from the activity do not result in environmental nuisance or if considered appropriate by the administering authority, undertake appropriate dispute resolution.
- (D1-5) The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement Manual.

Schedule D - Table 1 (Noise limits)

Noise level dB(A) measured as	Monday to Saturday			Sundays and public holidays		
	7am - 6pm	6pm - 10pm	10pm - 7am	9am - 6pm	6pm - 10pm	10pm - 9am
Noise measured at a Noise sensitive place ¹						
$L_{A, 1 \text{ hour}}$	50	45	40	50	45	40
Noise measured at a Commercial place ¹						
$L_{A10, \text{adj}, 10 \text{ mins}}$	55	50	45	55	50	45

END OF CONDITIONS FOR SCHEDULE D

Schedule E – Waste

Destination of Waste

- (E1-1) The holder of this approval must take all reasonable and practicable measures to prevent the release or likelihood of release of contaminants to land except the following wastes emanating from the Kogan Creek Power Station:
- (i) Collected fly ash, economiser ash and boiler bottom ash material removed from the boilers, economisers, fabric filter dust collectors (FFDC) released to any ash cell in a manner that will ensure the stability of the dam and in accordance with the conditions of this development approval; and
 - (ii) pulverised fuel (PF) and other coal material either as a solid or in a slurry form; released to the ash cells in a manner that will ensure the stability of the ash dam and in accordance with the conditions of this development approval; and
 - (iii) other power station waste products that include the ash fabric filter bags, waste ion exchange resins, coal laboratory waste, sediment dam waste, cooling tower sludges, drain sediments, effluent from chemical cleans, boiler blowdown and other water mixed with the ash slurry,

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sch4 - Personal information



quantities of oils and hydrocarbons that will not cause environmental harm, and other solid or liquid wastes that will not cause environmental harm released to any ash cell in a manner that will ensure the stability of the dam and in accordance with the conditions of this development approval.

Ash Disposal Management Plan

- (E2-1) Within twelve months of the date of this approval in conjunction with the Plan of Operations for ML50074 the holder of this approval must prepare and submit an Ash Disposal Management Plan (ADMP) detailing practices and measures necessary to minimise the likelihood of environmental harm being caused by disposal of ash.

The ADMP must include a strategy detailing the future method/s for disposal of ash to the ash cells. The strategy must include –

- (i) expected life of each ash cell and remaining ash storage capacity of the ash cell;
- (ii) location of ash cells, including any staged relocation of the ash deposition to maintain the stability of bund walls;
- (iii) longer term strategy for the disposal of ash and other wastes and alternative disposal methods to minimise the amount of waste water and conserve ash cell space;
- (iv) Groundwater monitoring and assessment – the ADMP must include monitoring of groundwater quality and interpretation of the results and conclusions by an expert in the field of groundwater monitoring as to whether there is any contamination and if so, the level of environmental harm caused as a result of such contamination. Assessment of groundwater monitoring must be undertaken at least every three years to assess the impact of any release of contaminants from the ash cells to groundwater.

Ash Handling

- (E3-1) All reasonable and practicable measures must be implemented to limit dust emissions which emanate from activities associated with fly ash and bottom ash collection, transportation and disposal. For the purpose of this condition, an example of a reasonable and practicable measure for the control of dust emissions include but not limited to the conditioning of ash with water.

Inspection of Dams

- (E4-1) Dams containing hazardous waste shall be inspected by a suitably qualified and experienced Engineer on or about 1st October but definitely before 1st November each year, or at any time if disturbing, unusual or otherwise unsatisfactory conditions or changes to dams are observed or as directed by the administering authority.
- (E4-2) For each inspection, the engineer shall assess the condition of each dam and its foundations, determine the hydraulic adequacy of the dam and assess the adequacy of the works with respect to dam safety and containment of waste.
- (E4-3) For each inspection, the engineer shall review the risk evaluation criteria and monitoring results for the dam.
- (E4-4) For each inspection, two copies of the engineer's report and any recommendations as to measures to be taken to ensure the integrity of the dam shall be furnished to the administering authority within 28 days of the inspection.

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Standards and Criteria

- (E5-1) The holder of the development approval must comply with the standard environmental conditions in the "Code of Environmental Compliance for Environmental Authorities for High Hazard Dams Containing Hazardous Waste".

Dams containing hazardous waste

- (E6-1) The construction or operation of any dam containing hazardous waste within the operational land must comply with Schedule E - Table 1.

Schedule E — Table 1 (Size and purpose of high hazard dams containing hazardous waste)

<i>Name of dam containing hazardous waste</i>	<i>Maximum surface area of cell (ha)</i>	<i>Maximum capacity of cell (million m³)</i>	<i>Purpose of cell</i>
Initial Ash Cell	80	5	Power station waste disposal
Out of Pit Ash Cell	72	7	Power station waste disposal
InPit West Ash Cell(s) each	40	5	Power station waste disposal
InPit East Ash Cell(s) each	40	5	Power station waste disposal

- (E6-2) Any high hazard dam containing hazardous waste constructed or operated within the operational land must be located at approximately the control points defined in Schedule E - Table 2.

Schedule E — Table 2 (Location of high hazard dam containing hazardous waste)

<i>Name of cells containing hazardous waste</i>	<i>Latitude (GDA 94)</i>	<i>Longitude (GDA 94)</i>
Initial Ash	26° 55' 00"	150° 44' 00"
Out of Pit	26° 55' 40"	150° 47' 30"
InPit West(1 st)	26° 56' 00"	150° 46' 30"
InPit West(2 nd)	26° 56' 15"	150° 46' 30"
InPit West(3 rd)	26° 56' 30"	150° 46' 30"
InPit East(1 st)	26° 56' 10"	150° 47' 15"
InPit East(2 nd)	26° 56' 25"	150° 47' 15"
Other In Pit cells	Holder of DA to advise prior to construction	Holder of DA to advise prior to construction

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Decommissioning

(E7-1) The development approval holder must, 6 months prior to the cessation of operation of any dam containing hazardous waste, develop:

- (a) a rehabilitation plan for decommissioning the dam such that, amongst other things, water will no longer be stored in the dam, the dam and its contents will be structurally stable and resistant to erosion and seepage and any other emissions will not cause environmental harm or nuisance; or
- (b) a management strategy for the continued existence of the dam wherein the dam will be maintained such that it will not cause environmental harm or nuisance.

(E7-2) The rehabilitation plan must include, but shall not be limited to:

- (a) maintenance of the integrity and effectiveness of final cover systems; and
- (b) the continuation of any monitoring program required as a condition of this development approval.

(E7-3) The rehabilitation plans or management strategies described in condition E7-1 are to be considered design plans and must be implemented in accordance with the Code of Environmental Compliance for Environmental Authorities for High Hazard Dams Containing Hazardous Waste.

END OF CONDITIONS FOR SCHEDULE E

Schedule F – Land

Rehabilitation landform criteria

(F1-1) All areas significantly disturbed by ash disposal activities must be rehabilitated to the final land description as defined in Schedule F - Table 1.

Schedule F - Table 1 (Final land use and rehabilitation approval schedule)

Disturbance type	Projected Disturbance area (ha)	Pre-mine land description	Post-mine land description	Pre-mine land classification	Post-mine land classification	Slope Criteria
Initial Ash Cell	80	Light grazing and fauna habitat	Light grazing and fauna habitat / Water Storage	3/5	4/5	<10° Erosion Protection, Accepted design plan for water storage.
Out of Pit Ash Cell	72	Light grazing and fauna habitat	Light grazing and fauna habitat	3/5	4/5	<10° Erosion Protection
In Pit Ash Cells	40 each	Light grazing and fauna habitat	Light grazing and fauna habitat	3/5	4/5	<10° Erosion Protection

(F1-2) Progressive rehabilitation must be implemented for ash cells not required for the ongoing conduct of ash disposal activities.

Grazing pasture outcome

(F2-1) Areas that are to be progressively rehabilitated to grazing pasture must comply with the following rehabilitation outcomes:

- a) generate a self sustaining vegetation with projective cover, species composition and species

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- distribution planting locally occurring native species of grass and shrubs. These vegetation species must be listed in the final land use and rehabilitation report; and
- b) all areas disturbed by ash disposal activities must be rehabilitated to the landform design criteria defined in Schedule F - Table 1.

END OF CONDITIONS FOR SCHEDULE F

Schedule G - Community

Complaint response

- (G1-1) All complaints received must be recorded including details of complainant, reasons for the complaint, investigations undertaken, conclusions formed and actions taken. This information must be made available for inspection by the administering authority on request.

Notification of Emergencies and Incidents

- (G2-1) As soon as practicable after becoming aware of any emergency or incident which results in the release of contaminants not in accordance, or reasonably expected to be not in accordance with the conditions of this development approval, the holder of this development approval must notify the administering authority as soon as possible.

- (G2-2) The notification of emergencies or incidents as required by condition number G1-1 must include but not be limited to the following:

- i) the holder of the development approval;
- ii) the location of the emergency or incident;
- iii) the number of the development approval;
- iv) the name and telephone number of the designated contact person;
- v) the time of the release;
- vi) the time the holder of the development approval became aware of the release;
- vii) the suspected cause of the release;
- viii) the environmental harm and or environmental nuisance caused, threatened, or suspected to be caused by the release; and
- ix) actions taken to prevent any further release and mitigate any environmental harm and or environmental nuisance caused by the release.

- (G2-3) Not more than fourteen (14) days following the initial notification of an emergency or incident, the holder of the development approval must provide written advice of the information supplied in accordance with condition number G2-2 in addition to:

- i) proposed actions to prevent a recurrence of the emergency or incident;
- ii) outcomes of actions taken at the time to prevent or minimise environmental harm and or environmental nuisance; and
- iii) the results of any environmental monitoring performed.

Any notification given under Section 320 or Section 350 of the *Environmental Protection Act* that contains the information described in Condition G2-2 is also a notification under this condition.

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Exception Reporting

- (G3-1) The holder of this development approval must notify the administering authority in writing of any monitoring result that indicates an exceedance of or non-compliance with any development approval limit within twenty-eight (28) days of completion of analysis.
- (G3-2) The written notification required by condition number G3-1 above must include:
- i) the full analysis results;
 - ii) details of investigation or corrective actions taken; and
 - iii) any subsequent analysis.

Any notification given under Section 320 or Section 350 of the *Environmental Protection Act* that contains the information described in Condition G3-1 is also a notification under this condition.

END OF CONDITIONS FOR SCHEDULE G

Schedule H - Definitions

Words and phrases used throughout this approval are defined below except where identified in the EP Act or subordinate legislation. Where a word or term is not defined, the ordinary English meaning applies, and regard should be given to the Macquarie Dictionary.

Word definitions

"acceptance criteria" means the measures by which the actions implemented to rehabilitate the land are deemed to be complete (same as completion criteria).

"ambient (or total) noise" at a place, means the level of noise at the place from all sources (near and far), measured as the Leq for an appropriate time interval.

"appropriately qualified person" means any person who conforms to the EPA operational policy for an 'appropriately qualified person (analyst)' in accordance with Section 490(7) of the Environmental Protection Act 1994.

"ash cell" includes initial ash storage cell, in pit ash cells and out of pit ash cells; defined as an area underlain by a low permeability layer where powerstation ash, ash leachate and other waste is deposited for permanent storage; part of the ash cell where the leachate collects is a dam.

"commercial place" means a place used as an office or for business or commercial purposes, other than the Kogan Creek Power Station or a place within the boundaries of the operational land.

"construction" includes building a new dam and modifying or lifting an existing dam.

"dam" - means a containment or proposed containment whether permanent or temporary, which is designed to contain, divert or control flowable substances. However this does not include a fabricated or manufactured tank or container designed to a recognised standard.

"design plan" - in the context of a dam design is the documentation required under the "Code of Environmental Compliance for High Hazard Dams Containing Hazardous Waste" to describe the physical dimensions of the dam, the materials and standards to be used for construction of the dam, the procedures and criteria to be used for operating the dam and the decommissioning and rehabilitation objectives in terms procedures, works and outcomes at the end of dam life. The documents can include design and investigation reports, drawings, specifications and certifications.

"flowable substance" means matter or mixture of materials which can be forced to or otherwise flow under any conditions possible in a situation. It includes water, other liquids or a mixture that includes water or any other liquid or suspended solids.

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"**L_{Ar, 1hour}**" means the rating level measured over any one hour period, defined as:

$$L_{Ar, 1hour} = L_{Aeq, 1hour} + K_1 + K_2 \text{ where}$$

"**K₁**" means the tone adjustment applicable to any one hour measurement period, and

"**K₂**" means the impulse adjustment applicable to any one hour measurement period.

"**L_{Aeq, 1hour}**" means the time-average A weighted sound pressure level over any one hour measurement period.

"**L_{A 10, adj, 10 mins}**" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 10% of any 10 minute measurement period, using Fast response.

"**land**" in the 'land schedule' of this document means land excluding waters and the atmosphere "noise sensitive place" or a "commercial place"

"**land capability**" as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

"**land suitability**" as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

"**land use**" term to describe the selected post mining use of the land, which is planned to occur after the cessation of mining operations.

"**leachate**" means a liquid that has passed through or emerged from, or is likely to have passed through or emerged from, a material stored, processed or disposed of at the operational land which contains soluble, suspended or miscible contaminants likely to have been derived from the said material.

"**noxious**" means harmful or injurious to health or physical well being, other than trivial harm.

"**offensive**" means causing reasonable offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive, other than trivial harm.

"**progressive rehabilitation**" means rehabilitation (defined below) undertaken progressively OR a staged approach to rehabilitation as mining operations are ongoing.

"**rehabilitation**" the process of reshaping and revegetating land to restore it to a stable landform and in accordance with the acceptance criteria set out in this development approval and, where relevant, includes remediation of contaminated land.

"**representative**" means a sample set which covers the variance in monitoring or other data either due to natural changes or operational phases of the mining activities.

"**residual void**" means an open pit resulting from the removal of ore and/or waste rock which will remain following the cessation of all mining activities and completion of rehabilitation processes.

"**self sustaining**" means an area of land which has been rehabilitated and has maintained the required acceptance criteria without human intervention for a period nominated by the administering authority.

"**sensitive place**" means:

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- an educational institution; or
- a medical centre or hospital; or
- a protected area under the Nature Conservation Act 1992, the Marine Parks Act 1992 or a World Heritage Area; or
- a public park or gardens; or
- a place used as a workplace, an office or for business or commercial purposes which is not part of the mining activity, the operational land or Kogan Creek Power Station and does not include employees accommodation or public roads.

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"stable" means land form dimensions are or will be stable within tolerable limits now and in the foreseeable future. Stability includes consideration of geotechnical stability, settlement and consolidation allowances, bearing capacity (traffic ability), erosion resistance and geochemical stability with respect to seepage and contaminant generation.

"suitably qualified and experienced person" means a person who is a Registered Professional Engineer of Queensland under the provisions of the *Professional Engineers Act 1988* or a Corporate Member of the Institution of Engineers Australia or holds equivalent professional qualifications and has the following:

- (a) knowledge of engineering principles related to the structures, geomechanics, hydrology, hydraulics, chemistry and environmental impact of dams; and
- (b) at least a total of five years of suitable experience and demonstrated expertise in at least four of the following areas:
 - investigation, design or construction of dams;
 - operation and maintenance of dams;
 - geomechanics with particular emphasis stability, geology and geochemistry;
 - hydrology with particular reference to flooding, estimation of extreme storms, water management or meteorology;
 - hydraulics with particular reference to sediment transport and deposition, erosion control, beach processes; and
 - hydrogeology with particular reference to seepage, groundwater, solute transport processes and monitoring thereof; and
 - dam safety.

"tolerable limits" means that a range of values could be accepted to achieve an overall environmental management objective (eg a range of settlement of a tailing capping could still meet the objective of draining the cap quickly, preventing pondage and limiting infiltration and percolation).

"waters" includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), and any under groundwater, any part thereof.

"waste" includes anything that is –

- (a) left over, or an un-wanted by-product, from an industrial, commercial, domestic or other activity; or
- (b) surplus to the industrial, commercial, domestic, or other activity generating the waste.

END OF DEFINITIONS IN SCHEDULE H

END OF NEGOTIATED DEVELOPMENT APPROVAL

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Extract from the Integrated Planning Act 1997

Division 8—Appeals to court relating to development applications

Appeals by applicants

- 4.1.27 (1) An applicant for a development application may appeal to the court against any of the following -
- (a) the refusal, or the refusal in part, of a development application;
 - (b) a matter stated in a development approval, including any condition applying to the development, and the identification of a code under section 3.1.6;
 - (c) the decision to give a preliminary approval when a development permit was applied for;
 - (d) the length of a currency period;
 - (e) a deemed refusal.
- (2) An appeal under subsection (1)(a) to (d) must be started within 20 business days (the “**applicant’s appeal period**”) after the day the decision notice or negotiated decision notice is given to the applicant.
- (3) An appeal under subsection (1)(e) may be started at any time after the last day a decision on the matter should have been made.

Appeals by submitters

- 4.1.28 (1) A submitter for a development application may appeal to the court about -
- (a) the giving of a development approval, including any conditions (or lack of conditions) or other provisions of the approval; or
 - (b) the length of a currency period for the approval.
- (2) The appeal must be started within 20 business days (the “**submitter’s appeal period**”) after the day the decision notice or negotiated decision notice is given to the submitter.
- (3) If a person withdraws a submission before the application is decided, the person may not appeal the decision.
- (4) If an application involves both impact assessment and code assessment, appeal rights for submitters are available only for the part of the application involving impact assessment.

Appeals by advice agency submitters

- 4.1.29 (1) An advice agency may, within the limits of its jurisdiction, appeal to the court about the giving of a development approval for a development application if -
- (a) the development application involves impact assessment; and
 - (b) the advice agency told the applicant and the assessment manager to treat its response to the application as a submission for an appeal.
- (2) The appeal must be started within 20 business days after the day the decision notice or negotiated notice is given to the advice agency as a submitter.

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Appeals for matters arising after approval given (co-respondents)

- 4.1.30 (1) For a development approval given for a development application, a person to whom any of the following notices have been given may appeal to the court against the decision in the notice -
- (a) a notice giving a decision on a request for an extension of the currency period for an approval;
 - (b) a notice giving a decision on a request to make a minor change to an approval.
- (2) The appeal must be started within 20 business days after the day the notice of the decision is given to the person.
- (3) Subsection (1)(a) does not apply if the approval resulted from a development application (superseded planning scheme) that was assessed as if it were an application made under a superseded planning scheme.

Division 9 - Appeals to court about other matters**Appeals for matters arising after approval given (no co-respondents)**

- 4.1.31 (1) A person to whom any of the following notices have been given may appeal to the court against the decision in the notice -
- (a) a notice giving a decision on a request to change or cancel a condition of a development approval;
 - (b) a notice under section 6.1.44 giving a decision to change or cancel a condition of a development approval.
- (2) The appeal must be started within 20 business days after the day the notice of the decision is given to the person.

Appeals against enforcement notices

- 4.1.32 (1) A person who is given an enforcement notice may appeal to the court against the giving of the notice.
- (2) The appeal must be started within 20 business days after the day notice is given to the person.

Stay of operation of enforcement notice

- 4.1.33 (1) The lodging of a notice of appeal about an enforcement notice stays the operation of the enforcement notice until -
- (a) the court, on the application of the entity issuing the notice, decides otherwise; or
 - (b) the appeal is withdrawn; or
 - (c) the appeal is dismissed.
- (2) However, subsection (1) does not apply if the enforcement notice is about -
- (a) a work, if the enforcement notice states the entity believes the work is a danger to persons or a risk to public health; or
 - (b) carrying out development that is the demolition of a work.

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Appeals against decisions on compensation claims

- 4.1.34 (1) A person who is dissatisfied with a decision under section 5.4.8 or 5.5.3 for the payment of compensation may appeal to the court against -
- (a) the decision; or
 - (b) a deemed refusal of the claim.
- (2) An appeal under subsection (1)(a) must be started with 20 business days after the day notice of the decision is given to the person.
- (3) An appeal under subsection (1)(b) may be started at any time after the last day a decision on the matter should have been made.

Appeals against decisions on requests to acquire designated land under hardship

- 4.1.35 (1) A person who is dissatisfied with a designator's decision to refuse a request made by the person under section 2.6.19, may appeal to the court against -
- (a) the decision; or
 - (b) a deemed refusal of the request.
- (2) An appeal under subsection (1)(a) must be started within 20 business days after the day notice of the decision is given to the person.
- (3) An appeal under subsection (1)(b) may be started at any time after the last day a decision on the matter should have been made.

Appeals from tribunals

- 4.1.37 (1) A party to a proceeding decided by a tribunal may appeal to the court against the tribunal's decision, but only on the ground -
- (a) of error or mistake in law on the part of the tribunal; or
 - (b) that the tribunal had no jurisdiction to make the decision or exceeded its jurisdiction in making the decision.
- (2) An appeal against a tribunal's decision must be started within 20 business days after the day notice of the tribunal's decision is given to the party.

Court may remit matter to tribunal

- 4.1.38 If an appeal includes a matter within the jurisdiction of a tribunal and the court is satisfied the matter should be dealt with by a tribunal, the court must remit the matter to the tribunal for decision.

Division 10 - Making an appeal to court**How appeals to the court are started**

- 4.1.39 (1) An appeal is started by lodging written notice of appeal with the registrar of the court.
- (2) The notice of appeal must state the grounds of the appeal.
 - (3) The person starting the appeal must also comply with the rules of the court applying to the appeal.
 - (4) However, the court may hear and decide an appeal even if the person has not complied with subsection (3).

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Certain appellants must obtain information about submitters

- 4.1.40 (1) If the applicant or a submitter for a development application appeals about the part of the application involving impact assessment, the appellant must ask the assessment manager to give the appellant the name and address of each principal submitter who made a properly made submission about the application and has not withdrawn the submission.
- (2) The assessment manager must give the information requested under subsection (1) as soon as practicable.

Notice of appeal to other parties (div 8)

- 4.1.41 (1) An appellant under division 8 must, within 10 business days after the day the appeal is started (or if information is requested under section 4.1.40, within 10 business days after the day the appellant is given the information) give written notice of the appeal to -
- (a) if the appellant is an applicant - the assessment manager, any concurrence agency, any principal submitter whose submission has not been withdrawn and any advice agency treated as a submitter whose submission has not been withdrawn; or
 - (b) if the appellant is a submitter or an advice agency whose response to the development application is treated as a submission for an appeal - the assessment manager, the applicant and any concurrence agency; or
 - (c) if the appellant is a person to whom a notice mentioned in section 4.1.30 has been given - the assessment manager and any entity that was a concurrence agency for the development application.
- (2) The notice must state -
- (a) the grounds of the appeal; and
 - (b) if the person given the notice is not the respondent or a co-respondent under section 4.1.43 - that the person, within 10 business days after the day the notice is given, may elect to become a co-respondent to the appeal.

Notice of appeal to other parties (div 9)

- 4.1.42 (1) An appellant under division 9 must, within 10 business days after the day the appeal is started give written notice of the appeal to -
- (a) if the appellant is a person to whom a notice mentioned in section 4.1.31⁷³ has been given - the entity that gave the notice; or
 - (b) if the appellant is a person to whom an enforcement notice is given - the entity that gave the notice and if the entity is not the local government, the local government; or
 - (c) if the appellant is a person dissatisfied with a decision about compensation - the local government that decided the claim; or
 - (d) if the appellant is a person dissatisfied with a decision about acquiring designated land - the designator; or
 - (e) if the appellant is a person who is disqualified as a private certifier - the entity disqualifying the person and if the entity disqualifying the person is not the accrediting body, the accrediting body; or
 - (f) if the appellant is a party to a proceeding decided by a tribunal - the other party to the proceeding.
- (2) The notice must state the grounds of the appeal.

¹ Permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation administered by the Environmental Protection Agency and the Queensland Parks and Wildlife Service



Respondent and co-respondents for appeals under div 8

4.1.43 (1) This section applies to appeals under division 8 for a development application.

- (2) The assessment manager is the respondent for the appeal.
- (3) If the appeal is started by a submitter, the applicant is a co-respondent for the appeal.
- (4) If the appeal is about a concurrence agency response, the concurrence agency is a co-respondent for the appeal.
- (5) If the appeal is only about a concurrence agency response, the assessment manager may apply to the court to withdraw from the appeal.
- (6) The respondent and any co-respondents for an appeal are entitled to be heard in the appeal as a party to the appeal.
- (7) A person to whom a notice of appeal is required to be given under section 4.1.41 and who is not the respondent or a co-respondent for the appeal may elect to be a co-respondent.

Respondent and co-respondents for appeals under div 9

4.1.44 (1) This section applies if an entity is required under section 4.1.42 to be given a notice of an appeal.

- (2) The entity given written notice is the respondent for the appeal.
- (3) However, if under a provision of the section more than 1 entity is required to be given notice, only the first entity mentioned in the provision is the respondent.
- (4) The second entity mentioned in the provision may elect to be a co-respondent.

How a person may elect to be co-respondent

4.1.45 (1) An entity elects to be a co-respondent by lodging in the court, within 10 business days after the day the notice of the appeal is given to the entity, a notice of election under the rules of court.

- (2) If a principal submitter is entitled to elect to become a co-respondent, any other submitter for the submission may also elect to become a co-respondent to the appeal.

Minister entitled to be represented in an appeal involving a State interest

4.1.46 If the Minister is satisfied that an appeal involves a State interest, the Minister is entitled to be represented in the appeal.

Lodging appeal stops certain actions

4.1.47 (1) If an appeal (other than an appeal under section 4.1.30) is started under division 8, the development must not be started until the appeal is decided or withdrawn.

- (2) Despite subsection (1), if the court is satisfied the outcome of the appeal would not be affected if the development or part of the development is started before the appeal is decided, the court may allow the development or part of the development to start before the appeal is decided.

¹ Permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation administered by the Environmental Protection Agency and the Queensland Parks and Wildlife Service



Ruth Brown

From: MORTIMER Tim [TMORTIMER@csenergy.com.au]
Sent: Tuesday, 9 March 2010 3:16 PM
To: Ruth Brown; Chris Hill
Cc: Ian.Kemp@golding.com.au; Brendan Davies
Subject: Kogan - Current Water Qualities

Chris & Ruth,

Below is a summary of the current water qualities on site at Kogan.

The Mine is currently discharging from South EBC into Kogan Creek. This water and discharge is as per EA conditions.

Note that the East dam quality has slightly improved over the past few days in EC while suspended solids are down from 2850 as detailed in Golding's letter of the 4th March requesting to transfer water from the East Dam to the Eastern Billabong to 2120 mg/L as of today.

Whilst we respect your decision to decline Golding's request in the above letter I request DERM review the situation and assist us in management of our excess water.

In addition to the high water level in the East Dam the OPAC (Out of Pit Ash Cell)has an estimated 20 - 30ML of water that is required to be removed prior to the installation of the poly liner in May / June this year. This water I expect to have poor water quality and will need to be transferred to one of the other site water bodies over the next couple of months.

Water quality data provided by Golding below.

Could we please discuss the Kogan water situation at your convenience.

Regards

Tim Mortimer
Mining Manager
CSEnergy
Lv 5 / 82 Eagle St Brisbane

Ph : 07 3222 9511
Fax: 07 3222 9833
Mlch4 - Personal information

Water Quality Summary 9th March 2010

	pH	Suspended Solids mg/l	Conductivity uS/cm
1. ROM Pond	8.17	255	1180
2. Northern Dam	0	0	0
3. Spoil Dam	7.34	1300	350

10/03/2010

Remnant Regional Ecosystems shaded by biodiversity status

No.	Regional Ecosystem	Biodiversity Status	RE Percents	Version Number
1	11.3.2/11.3.17	OC/E	80/20	6.0b
2	11.3.25/11.3.4/11.3.3	OC/OC/OC	80/10/10	6.0b
3	non-rem	-	100	6.0b

Barby Owl
- Ninox
conspicua

Brigalow Belt Priority Species Habitat

No.	REGECode	H Rating	RE	RE Percent	Priority Species Record Buffer	Priority Species Model	Priority Special Area	Acacia maranoensis	Acacia microsperma	Chlamydosaurus kingii	C P
1	237962	MEDIUM	11.3.25/11.3.4/11.3.3	80/10/10		Y					

Grantella picta

Brigalow Belt Threatened Species Habitat

No.	A Rating	Regecode	RE Label	RE Percent	A_FLAG_1	A_FLAG_2	A_FLAG_3	BPA Species Model	BPA Species Record	Anomalopus brevicollis	Acacia curranii	Acacia eremoph
1	HIGH	243879	11.3.2/11.3.17	80/20				Y				

Brigalow Belt Biodiversity Significance

No.	Biodiversity Significance	Diagnostic Criteria	Expert Panel Criteria	Diagnostic Data	Expert Panel Data	View Methodology	Regional Ecosystem or Vegetation Type	Additional Information
1	State	remnant contains at least 1 Vulnerable or Rare species (A)	remnant contains Special Biodiversity Values (view Expert Panel data for further information) (CRITERIA I) & remnant forms part of a bioregional corridor (CRITERIA J)	View Diagnostic Data	View Expert Panel Data	View Documentation	11.3.2/11.3.17	
2	State	remnant contains at least one Of Concern RE (B1)	remnant contains Special Biodiversity Values (view Expert Panel data for further information) (CRITERIA I) & remnant forms part of a bioregional corridor (CRITERIA J)	View Diagnostic Data	View Expert Panel Data	View Documentation	11.3.25/11.3.4/11.3.3	

Condamine Nonriverine Aquatic Conservation Assessment

No.	Spatial Unit ID	AquaScore	Criteria 1 - Naturalness Aquatic	Criteria 2 - Naturalness Catchment	Criteria 3 - Diversity and Richness	Criteria 4 - Threatened Species and Ecosystems	Criteria 5 - Priority Species and Ecosystems	Criteria 6 - Special Features	Criteria 8 - Representativeness	Indicator Information for each Criteria
1	co_w00086	High	High	High	Very High	Low	High	No data	High	View Indicator Information for each Criteria

Condamine Riverine Aquatic Conservation Assessment

No.	Spatial Unit ID	AquaScore	Criteria 1 - Naturalness Aquatic	Criteria 2 - Naturalness Catchment	Criteria 3 - Diversity and Richness	Criteria 4 - Threatened Species and Ecosystems	Criteria 5 - Priority Species and Ecosystems	Criteria 6 - Special Features	Criteria 7 - Connectivity	Indicator Information for each Criteria	Aqu Dep
1	co_00286	High	Very High	High	High	Medium	High	High	Very High	View Indicator Information for each Criteria	0.54

Drainage

No.	Name
1	CONDAMINE RIVER
2	

Rivers

No.	Feature Name
1	CONDAMINE RIVER

Mining Leases

No.	Tenure Number	Tenure Type	Mining District	Status	Principal Holder	All Holders	Lodgement Date	Date Granted	Date Non Current
1	50074	ML	BRIS	GRAN	ABERDARE COLLIERIES PTY LTD	View All Tenure Holders	26-MAR-1993	03-FEB-2000	29-FEB-2020

Queensland

No.	Feature
1	Queensland Mainland

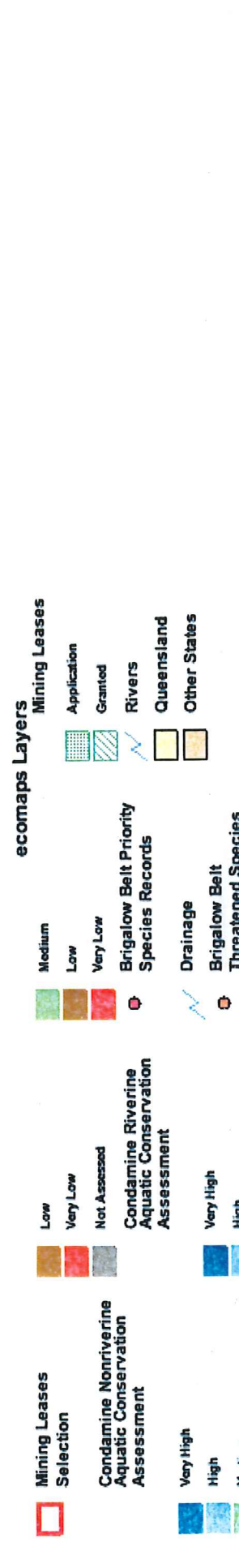
No Features Found in the following layer(s):

- Brigalow Belt Priority Species Records
- Brigalow Belt Threatened Species Records
- Major Towns
- Other States

EHP RTI DL Release



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Ruth Brown

From: Ruth Brown
Sent: Wednesday, 17 March 2010 8:15 AM
To: 'MORTIMER Tim'
Subject: East Dam at Kogan Creek

Hi Tim,

In order to know exactly what is in the water of East Dam prior to any release into the environment (planned or unplanned), can you get a full analysis done by a NATA laboratory of the water in East Dam. The Toowoomba Regional Council laboratory (or any NATA laboratory) can analyse for a whole suite of characteristics including sulphates, heavy metals etc and they can give a 2 day turnaround on results in emergency situations. I think it's best for you and us that we know what is in the water before and if it enters the river floodplain.

Thanks, Ruth

Ruth Brown
Principal Environmental Officer
Environmental Services, South West Region
Department of Environment & Resource Management
PO Box 731
Toowoomba QLD 4350
Ph: (07) 4699 4304
Fax: (07) 4699 4399

EHP RTI DL Release

Subject: Release of water from Kogan Creek Coal Mine

Date: 10 March 2010

File Name: CS Energy Aberdare Collieries Pty Ltd located in Toowoomba office

Subject (Detail): Discussion about the water management at Kogan Creek Coal Mine with respect to the possible release of contaminated water into the Condamine River system

On the 4 March Golding Contractors (the operators of Kogan Creek Coal Mine) asked to release contaminated water from East Dam into East Billabong within the Condamine floodplain due to the excessive rainfall experienced during the previous week. Following various telephone and email conversations held between DERM South-west Region office staff Chris Hill, Ruth Brown and Rob Spalding and Kogan Creek Coal Mine staff Tim Mortimer (Mining Manager - CS Energy) and Ian Kemp (Project Manager – Golding Contractors), Tim Mortimer met with Ruth Brown and Rob Spalding on March 10 to discuss the current situation.

Referring to drawing KCM-95 Rev 3 taken from the yet to be released updated version of the Water Management Plan for Kogan Creek Coal Mine, Tim Mortimer stated that all water storages on site were full. Even "The Billabong" to the north of the Out of Pit (OOP) Dump which had been dry, filled after it received 120mm of rain. Kogan Creek Coal Mine requested to move water from East Dam to East Billabong as East Billabong always has some water in it and they believed it was the best option. East Dam has a combination of water from various areas around the site. Consequently the suspended solids levels were much higher than those required by the release limits in their environmental authority.

DERM questioned why water can't be released from Topsoil Dam (Dam 6) into the environment and then move the water from East Dam (Dam 4) into Topsoil Dam as an interim measure. Tim said that Topsoil Dam is basically a shallow dam that doesn't have a large capacity. Consequently there wouldn't be any benefit in doing this as it would only move a small amount of water. Tim confirmed that he would ensure that the transfer of water from Topsoil Dam to East Dam (a strategy implemented to collect as much water as possible during drought) has stopped and that the water from Topsoil Dam is now flowing offsite.

The other problem the Mine has is the removal of water from within the Pit and from within the OOP Dump which is to become the Out of Pit Ash Cell (OOPAC). Water in the OOPAC occupies $\frac{3}{4}$ of the floor area and is about 3 metres deep in places. Installation of the ash pipes is planned for April – June. The floor of the ash cell needs to be lined at the same time but none of this work can occur until the water is removed from the floor of the OOPAC which needs to happen within the next two months. This water will be high in suspended solids and will probably be dirtier than the water in East Dam. Likewise the water in the Pit needs to be removed to allow mining to continue at full capacity. At present the pit water is going into the ROM Pond (dam 1) however all ponds to the north and west of the pit are basically full and water cannot be released from these ponds as they are all poor quality (ie above release limits).

OPTIONS

- Investigate methods of improving the water quality so that it meets release limits.
- Measure quality in the receiving waters to ensure water being released is of similar quality to that already existing in the environment.
- Release only specified amounts of water when required ie in a very controlled manner and stop pumping the water when it starts raining.
- No further action is required in the next few days as Tim expects evaporation to occur due to the finer weather predicted.
- In the meantime, Tim will discuss with Golding Contractors water management strategies for the mine site.

RECOMMENDATIONS

- An ecological assessment of the area to the east of the mining lease will be conducted by a consultant to determine the effects of releasing water on the environmental values of the area.
- Golding Contractors/CS Energy are currently revising the Water Management Plan because as the mine expands, they are generating too much "dirty" water to store on site.
- During very wet weather the Mine may need to revise the release limits and mechanisms to allow releases above the current water quality release limits. This is to be discussed further with DERM once the revised Water Management Plan has been reviewed and the ecological assessment has been conducted.

sch4 - Personal information

Signature

Date 10/3/10.

Author: Ruth Brown
Position: Principal Environmental Officer
Unit/Office: Environmental Services
Phone: 4699 4304

Ruth Brown

From: MORTIMER Tim [TMORTIMER@csenergy.com.au]
Sent: Tuesday, 9 March 2010 4:29 PM
To: Ruth Brown
Subject: RE: Water levels at Kogan Creek Coal Mine

Ruth,
I will see you & Rob in the morning .

Have requested extra data from Golding at site and my initial comments are below. >>>>

Regards
Tim

From: Ruth Brown [mailto:ruth.brown@derm.qld.gov.au]
Sent: Tuesday, 9 March 2010 4:16 PM
To: MORTIMER Tim
Cc: Chris Hill; Rob Spalding
Subject: RE: Water levels at Kogan Creek Coal Mine

Hi Tim,

Although we have received map KCM-95 Rev 3 taken from the updated water management plan, we haven't received the complete updated version of the plan yet. Consequently it's a bit hard to determine what you plan to do with the water that falls on the site. Can you confirm why you can't pump water from the East Dam (dam 4) into ROM Pond (dam 1) or Northern Pond (dam 2). Is it because you need the capacity in the ROM Pond for the water from the Pit? >>>> YES.

Can you also provide the storage capacity of Dam 1 and 2 and an estimate of how much water each dam is currently holding? >>> TBA

If transferring water from East Dam to Dam 1 and 2 is not possible, why can't water be moved from the Topsoil Dam into East Billabong and then move water from East Dam into Topsoil Dam as an interim measure? >>>> Topsoil dam capacity is low.

Chris has a meeting tomorrow morning but Rob Spalding and I would like to take you up on your offer to meet with us tomorrow morning. Rob and I should be in the office by 8.15am if you can meet with us then.

Thanks. Ruth

Ruth Brown
Principal Environmental Officer
Environmental Services, South West Region
Department of Environment & Resource Management
PO Box 731
Toowoomba QLD 4350
Ph: (07) 4699 4304
Fax: (07) 4699 4399

From: MORTIMER Tim [mailto:TMORTIMER@csenergy.com.au]
Sent: Tuesday, 9 March 2010 3:15 PM
To: Ruth Brown; Ian.Kemp@golding.com.au
Cc: Chris Hill; Rob Spalding

Subject: RE: Water levels at Kogan Creek Coal Mine

Ruth,

See comments below.... >>>

I also have a following email that I was about to send to update you on the site water.

Regards

Tim

From: Ruth Brown [mailto:ruth.brown@derm.qld.gov.au]

Sent: Tuesday, 9 March 2010 2:39 PM

To: MORTIMER Tim; Ian.Kemp@golding.com.au

Cc: Chris Hill; Rob Spalding

Subject: Water levels at Kogan Creek Coal Mine

Hi Tim,

We'd like to clarify the location of the "Billabong" and exactly where you wish to pump the water from East Dam to. In the map attached to your email of 5 March "The Billabong" is marked as being north of the Out of Pit Dump. >>>> This is NOT the water body we want to pump the East Dam to, the East BILLABONG is to the East of the OPAC. However the photos provided by email on 8 March shows a photo titled *East Dam #4 looking East* which you say in the email has East Billabong in the background. According to the conversations we have had and the photos provided, I believe that you want to pump the water from East Dam (dam 4) over the levee bank in an easterly direction, to a billabong of the Condamine on the floodplain and not to "The Billabong" located north of the Out of Pit Dump. >>>>> CORRECT> Please advise if this is not the case.

According to Golding Contractors water management plan for Kogan Creek Coal Mine (dated January 2008), page 28 states that the net situation for year 4 water balance is that "water from Dams 4 and 5 are pumped into Dams 1 or 2, water from Dam 6 overflows offsite..." Consequently water from East Dam (Dam 4) and Bunding Dam (Dam 5) should be pumped to ROM Pond (Dam 1) or Northern Dam (Dam 2). Water from East Fresh Dam (Dam 6) which, I presume is what you are calling Topsoil Dam should be overflowing offsite as this is clean water from stormwater runoff. Please clarify if this is happening at present. The Water Management Plan also states that for year 5, the water from Dam 4 continues to be pumped to Dams 1 or 2. So why aren't you moving water from Dam 4 to Dams 1 and 2 as per the Water Management Plan?

>>>>> In general the above describes our water flows for average seasons. The mine plan & dams have since changed slightly and as such we are in the process of updating the Water Management plan so there are some differences. The plan KCM 95 dated 12 th Jan 2010, I sent to you the other day has the updated dams but not the East Billabong. We will update to also include this water body.

Pit water is going to the ROM pond , while other dams are typically near capacity limiting transfer options.

Water from the topsoil dam and natural hillside run-off has not flowed off site (we were short of water) and is has instead gone into the East dam . It is this water we want to pump off site.

Thanks. Ruth

Ruth Brown

Principal Environmental Officer

Environmental Services, South West Region

Department of Environment & Resource Management

PO Box 731

Toowoomba QLD 4350

Ph: (07) 4699 4304

Fax: (07) 4699 4399

As of 26 March 2009 the Department of Natural Resources and Water/Environmental Protection Agency integrated to form the Department of Environment and Resource Management

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Think B4U Print

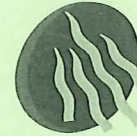
1 ream of paper = 6% of a tree and 5.4kg CO2 in the atmosphere

3 sheets of A4 paper = 1 litre of water

+-----+

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This email and any files transmitted with it are confidential and may be privileged



Enquiries Ruth BRown
Telephone (07) 4699 4304
Your reference ML50074
Our reference TWB3277 vol.6

Department of
Environment and Resource
Management

19 April 2010

Mr Tim Mortimer
Mining Manager
CS Energy Ltd
GPO Box 769
BRISBANE QLD 4001

Dear Mr Mortimer

Re. Kogan Creek Power Station initial ash storage facility inspection report – December 2009

The Department of Environment and Resource Management (DERM) has assessed the Annual Inspection Report (December 2009) for the Initial Ash Disposal Area (IADA) at Kogan Creek Coal Mine, undertaken by Parsons Brinckerhoff Australia Pty Ltd.

The report summarises the characteristics of the IADA and describes the current method of operating the facility. It also highlights issues that require further investigation, namely dust control, erosion control and water levels.

Dust

There is still an issue with dust as noted on page 6 of the report, despite the fact that dust mitigation measures such as capping and travelling irrigators have been implemented during the past 12 months.

Erosion

Page 7 states that there are some concerns regarding the design of the temporary spillway on the evaporation ponds, as the plastic liner does not extend to the toe of the embankment. This will need to be rectified as there is a risk of embankment erosion towards the toe of the embankment.

Page 10 notes the “extensive presence of rills on both the upstream and downstream faces of the embankment.” It is evident that the local material used to construct the main embankment is highly erosive in nature and that the 150mm layer of topsoil shown in the design drawings for the embankment has not been added during construction.

The batters along the spillway channel are also showing signs of rill erosion due to overland flows reporting to the spillway channel. Page 12 of the report states that “during a prolonged heavy rainfall event and/or significant spillway flow event, it is likely that the batters along the spillway channel would be heavily eroded”.

Water levels

Page 10 states that the water level in the main storage area needs to be kept below RL 315.0m which is lower than the ground level downstream of the embankment. This is due to the risk of piping failure through the main embankment if the water level is allowed to remain above RL315.0m in the longer term.

Other issues

Page 11 states that ash has been placed adjacent to the eastern perimeter bund at a level higher than the bund. "It is possible that the ash could erode during a large rainfall event and flow across the bund into the perimeter diversion drain." Ash needs to be removed from this area so that it is lower than the bund.

Recommendations

It is DERM's understanding that the IADA will be maintained as a back-up ash storage facility once the Out of Pit Ash Cell on the mine site becomes operational. Consequently CS Energy will need to implement the recommendations identified on page 20 of the annual report. These recommendations are endorsed by DERM and considered as necessary and desirable to continue good maintenance and management of the facility. In conjunction with these recommendations, DERM also requests additional steps to be taken:

- Erosion control methods are required to rectify the rill problem on the main embankment and the spillway channel. This includes adding the 150mm of topsoil required on the main embankment to allow vegetation to grow which will prevent erosion.

Should you require further information with regard to this matter, please contact Ruth Brown of this office on (07) 4699 4304.

Yours sincerely

sch4 - Personal information

R8b Spalding
Manager, Environmental Services
South-West Region (Regional Services)

Brown Ruth

From: Hargraves Gary
Sent: Tuesday, 14 December 2010 9:23 AM
To: Brown Ruth; Spalding Rob; Webber Lindsay
Cc: McConnell Russ
Subject: RE: Kogan IADA inspection report

Hi Ruth

This report is professional. Sensible recommendations are made - except for the 'possible' option of raising the crest of the main wall.

It is clear that DSA is still not available and MRL is currently exceeded. Note also the elements of damage (erosion and piping) in photos that were clearly current and not repaired on inspection.

Recommend that we seek a commitment from CS Energy that **as soon as possible** they remove water from the main storage so as to provide a nett storage equally DSA (deducting the commitment of waters held in cells above the main storage and that would report on failure of those cell - as was done in the report). This could happen on commissioning of the new ash dam - if not before.

If more emergency storage is considered necessary in the IADA, the option needs to be considered of deepening the main storage - rather than raising the wall. Overall, the IADA should have contributing catchments reduced by capping (as is being done), and only used as emergency ash storage only - not emergency water storage. It would be preferable if it were decommissioned and rehabilitated ASAR.

Kind regards

Gary Hargraves
B.Eng. (Civil); M.Eng.Sc. (Civil)

Principal Engineer
Containment Systems
Office of the Water Supply Regulator
Department of Environment and Resource Management
3RD Floor, Mineral House, 41 George St, Brisbane 4000

Landline: 323 83190

Mobile:
Sch4 - Personal information

From: Brown Ruth
Sent: Friday, 3 December 2010 1:26 PM
To: Hargraves Gary
Subject: FW: Kogan IADA inspection report

Hi Gary,

Attached is the link to the annual hazardous dam inspection report for the Initial Ash Disposal Area at Kogan Creek Coal Mine. I haven't had a chance to look at it yet but will do so in the next week. Could you please have a look over it soon and I'll catch up with you about it after next week.

If you have any problems accessing the file please let me know.

Thanks. Ruth

17/12/2010

Ruth Brown
Principal Environmental Officer
Environmental Services, South West Region
Department of Environment & Resource Management
PO Box 731
Toowoomba QLD 4350
Ph: (07) 4699 4304
Fax: (07) 4699 4399

From: MORTIMER Tim [mailto:TMORTIMER@csenergy.com.au]
Sent: Thursday, 2 December 2010 6:52 PM
To: Brown Ruth
Subject: Kogan IADA inspection report

Ruth,

Please find a link below to download the Kogan Creek IADA inspection report.
As we informed you previously the IADA does not meet the DSA due mainly to the high winter / spring rainfall.

In the report you will see that the DSA method used for calculation by PB is the most conservative of several methods of calculating the required storage allowance as it uses a straight 461mm of 4 month summer rainfall for the facility and this is above other methods of assessing the summer rainfall. The method for the MRL is different and also takes the conservative value that in effect lowers the MRL from the original design value.
Refer to the water balance modelling report sent previously as part of the IADA Spillway Raising proposal for details on the various DSA calculations.

In practical water management terms as previously mentioned we are aiming for ongoing reduction in the pond water level . We are pumping water back to the station for recycling into ash process feedwater (this now goes to the OPAC) and are looking at ways to increase the forced evaporation rate above our sprinkler system rate as conditions allow.

If you, Russ or Gary have any questions please call or email.

I will have two hard copies of the document mailed to yourself.

Regards

Tim Mortimer
Mining Manager
CS Energy.
Level 2
HQ North Tower
540 Wickham Street (CNR Brooke St)
Fortitude Valley Qld 4006
Ph : 07 3854 7511
Fax: 07 3854 7300
Mb: [redacted]
Sch4 - Personal information

From: Morgan, Darren [mailto:DJMorgan@pb.com.au]
Sent: Thursday, 2 December 2010 4:30 PM

To: MORTIMER Tim

Subject: Kogan IADA inspection report - Rev B

Hi Tim.

Please find below an ftp link for downloading Revision B of the inspection report.

<https://ftp.pbworld.com/GetFile.aspx?fn=1754005100.zip>

Cheers,
Darren

Darren Morgan

Civil & Structural Engineer / Project Manager

Structures Team

Energy Mining and Industry Group

Australia Pacific

RPEQ, PB accredited Project Manager

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