

11 Nov, 2011

Alan Klein
Mine Manager,
Centennial Mannering
PO Box 1000
Toronto NSW 2283

Our ref: 10.123.135
Your ref:

Dear Alan,

Centennial Mannering's application to mine beneath the Mannering Creek Ash Dam within the Mannering Creek Notification Area: Mannering-4

Please find attached a copy of a letter to the Chief Inspector of Coal Mines which includes the Committee's recommendations on your application to conduct first workings within the Fassifern Seam and Great Northern Seam beneath the Mannering Creek Ash Dam.

If you have any queries in this regard please contact Heather Middleton on 9895 7353.

Yours faithfully,



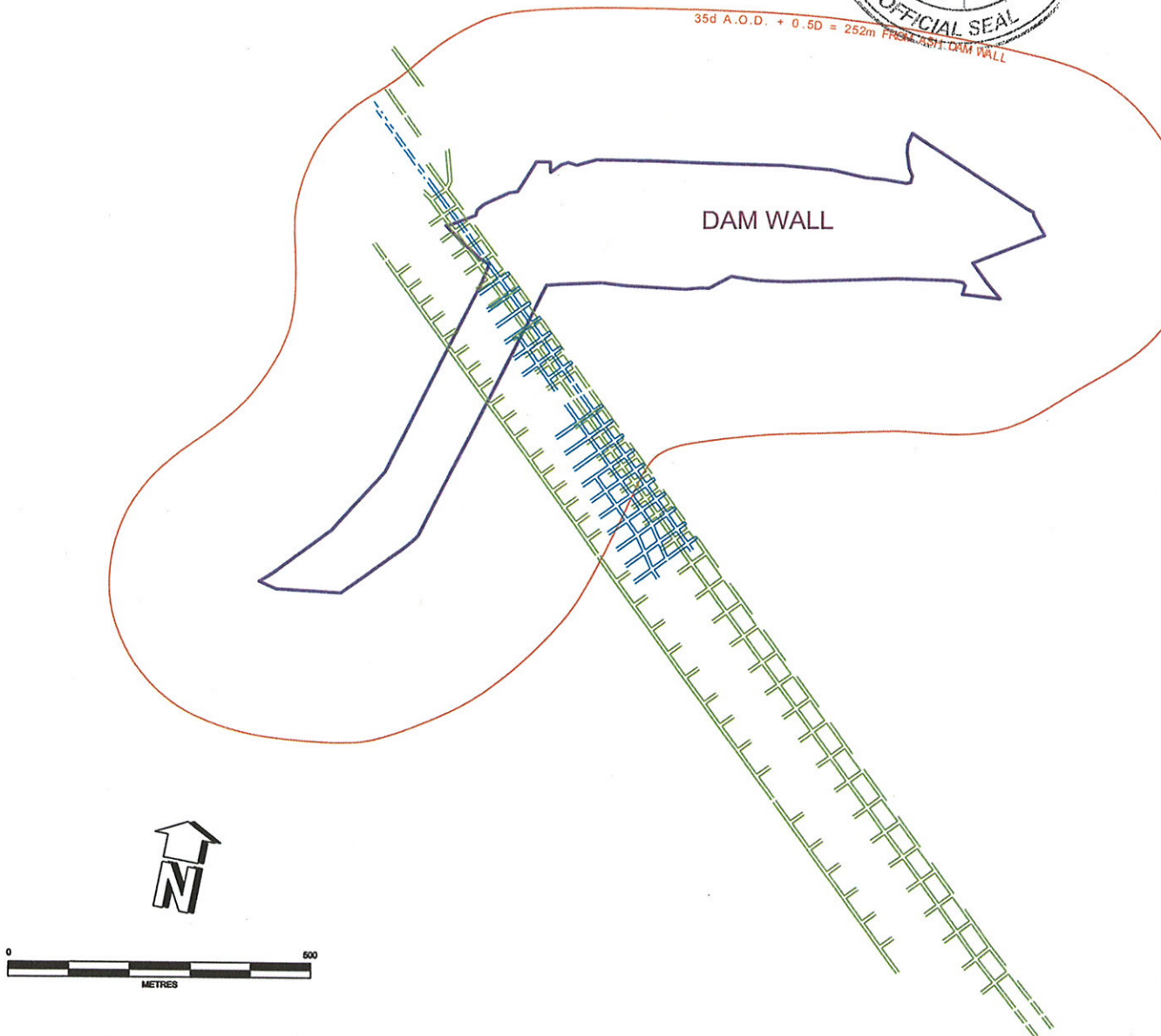
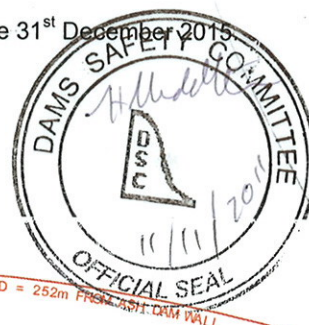
William Ziegler
A/Executive Engineer



Recommendations to the Minister in respect of Mining in the Mannering Creek Notification Area

Mannering-4

- This approval is for the first workings outlined in green and blue.
- This approval is until the 31st December 2015.



LEGEND

- PROPOSED GREAT NORTHERN SEAM WORKINGS
 PROPOSED FASSIFERN SEAM WORKINGS
 MANNERING CREEK ASH DAM WALL
 35d + 0.5 D ANGLE OF DRAW FROM DAM WALL
 NOTIFICATION AREA



Centennial Mannering

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LOCATION -	MANNERING
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SEAM - Great Northern & Fassifern

DRAWN -

14

DATE - 28-09-2011

MANNERING COLLIERY

PROPOSED WORKINGS (BOTH SEAMS) INSIDE THE
MANNERING CREEK ASH DAM NOTIFICATION AREA

PDF FILE

MG 1560

PLAN No. _____

MG 1560

11 Nov, 2011

Rob Regan
Chief Inspector of Coal Mines
Department of Primary Industries
PO Box 344,
Hunter Region Mail Centre NSW 2310

Our ref: 10.121.134

Your ref:

Dear Rob,

Manning Colliery's application to mine within the Manning Creek Notification Area: DSC designation MANNERING-4

The Dams Safety Committee (DSC) has endorsed Manning Colliery's applications to mine first workings within the Manning Creek Notification Area since 2004. The current application involves the development of first workings within both the Fassifern Seam and Great Northern Seam directly beneath the embankment of the Manning Creek Ash Dam, the Committee has designated the application Manning-4.

This letter contains the Dam Safety Committee's recommendations in respect of the Manning-4 application. The application is for first workings directly beneath the Manning Creek Ash Dam embankment with an anticipated combined subsidence of no more than 20 mm. No secondary extraction is proposed in the project area and the conceptual mine plan has been designed to avoid surface impacts, including avoiding mining the Fassifern Seam below existing workings in the Great Northern Seam.

Recommendations

These, then, are the Committee's recommendation to the Minister in respect to extraction of first workings within the Manning-4 approved plan;

1. That approval to conduct first workings within the notification area as depicted on the attached plan, MG1560 dated 28/9/2011 and outlined in green and blue, be approved subject to conditions 1, 2, 3, 4, 5, 8, 10, 11, 12, 13, 15, 19, 20, 22, 23 and 24 of the attached Annexure D, and condition 1, of Annexure D1.

Annexures B & E (attached) are referenced by various conditions in Annexure D.

If you have further enquiries regarding this matter please contact Heather Middleton on 9895 7353.

Yours faithfully,



William Ziegler
A/Executive Engineer

COPY



New South Wales Government
Dams Safety Committee



Annexure "D"

STANDARD MINING CONDITIONS

Section I. GENERAL REQUIREMENTS

The following general conditions apply to the **Mannering-4** application.

Annexure D Condition 1.1: The details of the monitoring outlined below will be as determined by the Dams Safety Committee ("the Committee" or "the DSC") from time to time. In order to simplify the approval process the registered holder/colliery/company ("the company") shall prepare a proposed program for each of the conditions 4 through 23 outlined below (where applicable) and submit this to the Committee for its approval. DSC staff will be available to comment on proposed monitoring programs informally, prior to a formal lodgement of the program.

Annexure D Condition 1.2: The company shall arrange for DSC staff to inspect the workings and the surface above the workings from time to time when required by the Committee, and in particular any significant geological features. Opportunities shall be provided during the inspections for the company to discuss the results of monitoring with the Committee and/or its staff.

Section II. CORRESPONDENCE WITH THE DSC

Annexure D Condition 2.1: All correspondence with the Committee in regard to this approval shall be clearly labelled **Mannering-4**

Annexure D Condition 2.2: Correspondence shall be sent to:

The Executive Engineer
N.S.W. Dams Safety Committee
Floor 3, Macquarie Tower,
10 Valentine Avenue,
Parramatta N.S.W. 2150

P.O. Box 3720
Parramatta N.S.W. 2124

Fax: (02) 9895 7354
Phone: (02) 9895 7363

email: dsc@damsafety.nsw.gov.au

Annexure D Condition 2.3: Copies of any reports or plans required to be provided to the Committee shall also be provided to the Senior Inspector of Coal Mines, Newcastle.



Section III. NOTIFICATION OF COMMENCEMENT OF MINING

Annexure D Condition 3.1: So that the DSC is aware that mining in an approved area has commenced (and can therefore expect to receive reports of monitoring) the company shall notify the DSC that mining has commenced in the notification area within seven days of the commencement of mining.

Section IV. INSPECTION OF WORKINGS

It is essential that the Committee is aware of any factors that could:

- influence the magnitude of surface subsidence as predicted
- indicate that pillars are performing as expected
- indicate an increase in permeability of the strata.

Information to be presented on these matters will vary depending on the type of mining system, but generally a copy of a plan, (of, say, the district being worked) showing the extraction/development for the period coloured, should be included, with comments (either on the plan or written on an attached sheet). These comments should include notes on such items as:

(a) Pillar performance-

spalling or general deterioration should be noted.

(b) Roof conditions-

guttering, roof falls, pillar punching, whether the roof is caving easily or if it is hanging up, etc. should be noted.

(c) Floor conditions-

is there any floor heave or pillar punching.

(d) Water inflows-

any areas where drippers occur, seepage, wet joints, etc. should be noted.

The report should try to quantify these features as much as possible.

Annexure D Condition 4.1:

- (a) The company shall carry out Weekly visual inspections of the workings whenever mining in the notification area, or within 6 months of mining in the notification area.
- (b) Reports of these inspections shall be forwarded to the DSC at intervals determined by the Committee from time-to-time.



Section V. SEAM LEVEL GEOLOGICAL FEATURES

In-Seam records of geological features are used by the Committee to determine if through-going structural defects (such as faults or dykes) are present prior to pillar extraction or longwall mining. The information can also be useful in interpreting subsidence anomalies.

It is expected that this seam level mapping will provide more detailed information than the visual inspections in condition 4.

Annexure D Condition 5.1: Seam level geological plans shall be prepared during first workings in the notification area or within 300 m of the notification area. The features that should be reported include faults (as defined and described on Annexure "B", hereto), dykes and any joints which are slickensided. This record shall be maintained on a plan of scale as specified by the Committee from time-to-time, and shall show traces of the features and their angles of dip measured from the horizontal. The positions, dates of observations and estimated rates of inflow in litres/hour of all water inflows and seepages shall also be recorded on the plan.

Annexure D Condition 5.2: The company shall submit two copies of the updated plans to the DSC together with brief reports describing any new geological feature encountered at intervals determined by the Committee from time-to-time.

Annexure D Condition 5.3: At the completion of development work, at the completion of an area of bord and pillar work, or when requested by the Committee from time-to-time, the company shall submit a transparency of the plan(s) together with two copies to the DSC.

Section VI. SURFACE GEOLOGY/TOPOGRAPHY

This condition does not apply to the Mannering-4 approval

Section VII. WATER MONITORING

This condition does not apply to the Mannering-4 approval

Section VIII. EMERGENCY WATER CONDITIONS

"Significant" in relation groundwater flows into the workings is defined in this document as meeting any of the following criteria:

- The volume or rate of flow, or the change in the volume or rate of flow, or the location causes surprise among persons familiar with the workings;
- The volume or rate of flow doubles over a few days;
- The volume or rate of flow is more than 3 standard deviations away from the mean value (i.e. larger or smaller than about 99% of recent readings, or in the top or bottom one percentile)

Annexure D Condition 8.1: The DSC shall be notified immediately if:

- (a) water monitoring indicates that total outflow is significantly greater than total inflow;



- (b) a significant groundwater flow into any of the subject workings or within 300 metres of them is observed;
- (c) Significantly increasing water flows are encountered at any time during the development of workings; or
- (d) any visible flow is discoloured by the presence of clay, sand or silt;

Annexure D Condition 8.2: If a significant change in the groundwater inflows or discolouration of water flows is noted, the Committee may require chemical, biological, nuclear or other testing to be carried out.

Section IX. SUBSIDENCE AND STRAIN MONITORING

This condition does not apply to the Mannering-4 approval

Section X. PLANS SUPPLIED TO THE DSC

Annexure D Condition 10.1: Several conditions require the company to submit plans to the DSC. Apart from the district plans that may be required under condition 4 and the position of the face required under condition 23, these plans shall share the same base map to facilitate the comparison and correlation between different factors.

Section XI. VARIATIONS

Annexure D Condition 11.1: From time to time the company may desire to alter the approved mining within the notification area in a minor way (termed a "minor variation"). It may wish to add an extra cutthrough, increase or decrease the width of a panel/longwall, etc. Applications for minor variations to approvals shall be made to the Chief Inspector of Coal Mines, who will refer the application to the DSC.

Annexure D Condition 11.2: The Committee requires all proposed variations, even small variations, be referred to it (via the Chief Inspector) for its consideration. To expedite the approval process where the proposed variation is urgent and very minor, DSC staff will give a decision by 'phone or fax to the company, and inform the Chief Inspector of their decision. The company will then approach the Chief Inspector for formal approval or otherwise, with both parties aware of the Committee's decision. This procedure should only be followed in urgent situations.

Annexure D Condition 11.3: The usual procedure is to submit a written application, with appropriate supporting documentation, to the Chief Inspector of Coal Mines, who will then forward this to the DSC for its consideration. The company should also send a copy of the application to the DSC so that it may begin processing it. This will allow for a quick reply.

Where the variation is sufficiently extensive (as determined by the DSC) the company will be required to submit a full application to mine within the restricted zone.

Annexure D Condition 11.4: The Chief Inspector of Coal Mines shall not approve any minor variation unless an endorsement by the DSC has been received.



Section XII. COMPLETION OF MONITORING

Annexure D Condition 12.1: Regardless of the status of mining or location of the active face, all monitoring and reporting shall continue as specified until the Committee considers that it is no longer required, or that the frequency of the monitoring can be altered. The company may apply to the Committee for modification to the frequency of monitoring, or for the discontinuance of monitoring.

Section XIII. COMMITTEE'S EMERGENCY POWERS

Annexure D Condition 13.1: The Minister, on notice from the Committee, may at any time or times suspend for a period of time, cancel, alter, omit from or add to this consent or the conditions of this consent.

Section XIV. VIBRATION MONITORING

This condition does not apply to the Mannering-4 approval

SECTION XV Repair of damage to Prescribed Dams

The aim of this condition is to ensure that mining induced damage which results in an unacceptable reduction in the safety of the dam is repaired within an acceptable period. Generally, the DSC will require written confirmation from the dam owner that an agreement has been made.

Annexure D Condition 15.1: Prior to mining commencing the company is to satisfy the Committee that the safety (as determined by the Committee) of the dam will be restored by the owner if, in the opinion of the Committee, it has been compromised by the effects of mining. Such restoration by the owner is to be within a time acceptable to the Committee.

SECTION XVI Contingency Plans

This condition does not apply to the Mannering-4 approval

SECTION XVII Monitoring Management Plans

This condition does not apply to the Mannering-4 approval

SECTION XVIII Closure Requirements

This condition does not apply to the Mannering-4 approval

SECTION IXX Statistical Reports

Annexure D Condition 19.1: The company shall report in writing to the DSC statistics related to the approval as specified by the Committee from time-to-time for the 12 months to 30 June each year, by 31 July of that year.

SECTION XX COMPLIANCE REPORTS

Where several monitoring programs are required under an approval it is difficult and time consuming, to check compliance with the conditions. As it is the company's responsibility to



maintain compliance with the conditions the Committee believes that the company is the appropriate organisation to undertake the bulk of this role.

Annexure D Condition 20: The company shall submit a statement of its compliance with the required conditions in each monthly report.

SECTION XXI Monitoring, Reporting and Extraction Schedule

This condition does not apply to the Mannering-4 approval

SECTION XXII Liaison Officer

Effective coordination and management of the monitoring programs is essential. To this end the Committee believes that a person should be nominated as a "liaison officer". Their responsibilities will include:

- Providing a point of contact for the Committee,
- Ensuring compliance with the monitoring conditions,
- Coordinating the supply of monitoring data to the Committee, and
- Ensuring that the Committee is kept up to date of the progress of mining.

Annexure D Condition 22.1: The company shall appoint a suitably qualified and experienced person, acceptable to the Committee, as a liaison officer for the period when there is active mining in the notification area and for an additional period afterwards as determined by the Committee.

SECTION XXIII Reports on the location of the face

Annexure D Condition 23.1: The company shall provide a plan to the DSC showing the location of any active faces, to the satisfaction of the Committee, at intervals as specified by the Committee from time-to-time. These reports are to continue until such time as the Committee agrees that it should cease, regardless of whether there is active mining in the notification area.

SECTION XXIV Cessation of approval to mine

Annexure D Condition 24.1: No mining shall be undertaken in the approved area after 31/12/2015 unless such date is extended by the Committee, or unless as part of a ministerial approval to mine within the notification area.

END OF ANNEXURE D

COPY





Annexure "D1"

SPECIAL MINING CONDITIONS

Section I. SUBSIDENCE AND STRAIN MONITORING

The Committee bases many of its decisions on the results of subsidence and strain predictions. In order to verify these predictions, to provide a data base of previous survey results on which to base further decisions, to indicate developing anomalies as extraction occurs, and to provide an indication of the movements occurring in the overlying strata, the Committee generally requires that extensive survey lines be established and monitored until negligible subsidence and strain are recorded by successive surveys. "Negligible" subsidence is determined by the Committee and, typically, it may take several years after the completion of mining for this state to occur.

Annexure D1 Condition 1.1:

- (a) Subsidence and strain survey points shall be established and monitored over and adjacent to the Mannering Creek Ash Dam wall, to the satisfaction of the Committee.

Annexure D1 Condition 1.2: The lines shall be established as soon as possible and vertical subsidence and horizontal strains shall be measured at least annually during the period of active mining in the notification area, and thereafter annually until successive measurements indicate negligible differences in strains and subsidence, as determined by the Committee.

Annexure D1 Condition 1.3: The results of these surveys shall be submitted to the DSC within one (1) month of the completion of the survey. Brief comments on the results of the survey, and a plan showing the extent of workings at the time of the survey, shall be included with each of the surveys submitted to the DSC. The results shall be provided in a format and on media as approved by the Committee from time-to-time.

Annexure D1 Condition 1.4: A plan of scale as specified by the Committee from time-to-time shall be prepared showing the locations of the survey points. A transparency of such plan(s) together with two prints shall be forwarded to the DSC at the same time as the first survey results.

Annexure D Condition 1.5: During the survey any surface cracking observed in the vicinity of the survey lines shall be recorded on the plan referred to in condition 1.4, and a copy of this plan submitted with each survey. If no cracking is observed, or there has been no change since the previous survey, then a short written note to this effect is to be included with the survey.

END OF ANNEXURE D1





New South Wales Government

Dams Safety Committee



ANNEXURE "B"

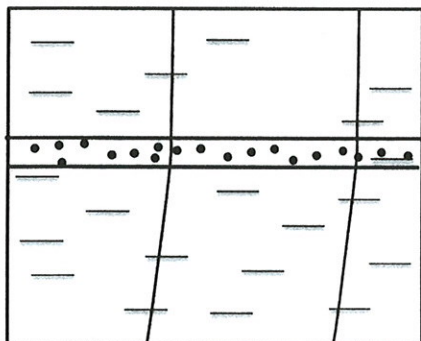
FAULTS & DYKES: DEFINITIONS & DESCRIPTIONS NEEDED ON MINE RECORDS

A. FAULTS

From the geological point of view a fault is defined in terms of origin, i.e. as a plane or zone across which observable displacement has occurred in the rock mass.

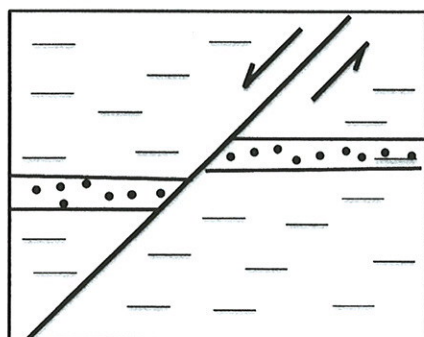
From the geotechnical engineering point of view we are concerned not only with origin, but also with the engineering properties (e.g. Width, shape, strength, permeability and moisture content) of the defect or defect zone produced by the fault movements. The types of defect which may be found are defined below. Most faults are either SHEARED ZONES or CRUSHED SEAMS, in the engineering sense, but some faults with quite large displacements are merely continuous JOINTS, as defined.

"FAULTS" IN THE ENGINEERING SENSE, OR DEFECTS WHICH CAN BE FORMED BY FAULTING



JOINT

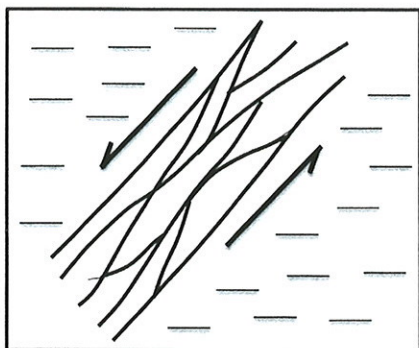
Almost planar surface or crack across which there is no discernable movement and little tensile strength. May be open, or filled with water, or a rock/clay substance which acts as cement. The joint would be continuous for at least tens of metres.



FAULT LINE

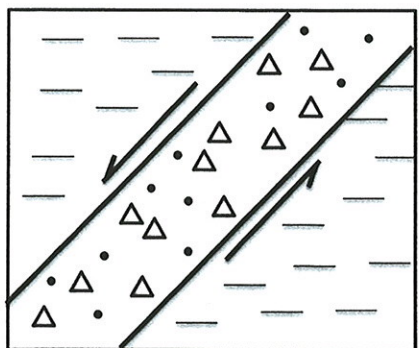
A fault line is a planar/subplanar fracture in a rock across which the rock on one side of the fracture has moved with respect to the rock on the other side of the fracture. The surface of the fracture is usually slickensided (striated) in the direction of movement.

COPY



SHEARED ZONE

Zone with roughly parallel almost planar boundaries, of rock substance cut by closely spaced (often < 50 mm) joints and or cleavage planes. The joints are usually smooth or slickensided and curved, intersecting to divide the mass into lenticular or wedge shaped blocks.



CRUSHED SEAM

Seam with roughly parallel almost planar boundaries, composed of disoriented, usually angular fragments of the host rock substance. The fragments may be of clay, silt, sand or gravel sizes or mixtures of these. The seam has soil properties.

Evidence of past displacement of the rock mass may or may not be present. Also the defect produced by faulting may vary in engineering character along its strike or dip. A common form of fault is a sheared zone containing one or more thin crushed seams.

DESCRIPTION REQUIRED FOR FAULTS

1. Displacement, if evident (in metres) and direction and sense of displacement.
2. Width of fault zone in metres.
3. Type of defect, i.e. Slickensided, joints, sheared zone, crushed seam, or sheared zone containing crushed seams.
4. Moisture condition, i.e. whether dry, moist or wet (seeping or flowing water).
5. Strike (usually the direction of the trace in the roof) and dip angle (from horizontal).

A fault line is a planar/subplanar fracture in a rock example Annexure B describes what should be recorded on geological plans.

DESCRIPTION REQUIRED FOR DYKES

As well as any other geological description, the following description is required for dykes:

1. Thickness, in metres.
2. Strike and dip angle (from horizontal).
3. Engineering properties of dyke material:
4. Whether dry, moist, or wet (ie. with seepage or flows)
5. Whether or not there is evidence of any displacement of the coal, at the dyke intersection. Width of fault zone in metres.

END ANNEXURE B

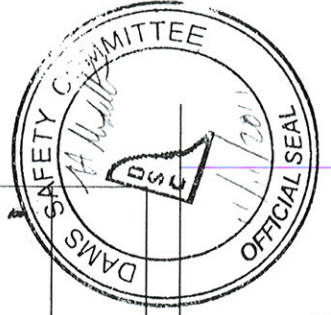
Annexure E

Frequency of Monitoring and Reporting Format Statement Table of deliverables

MANNERING-4 approval

Sorted by frequency of reporting

Frequency of monitoring	Frequency or timing of reporting	Condition	Deliverable description	Due date	Management plan
As required	Immediately	ANN D/8	Notification if "significant" water inflow occurs	Immediately	
One off	Before mining	ANN D/15	Satisfy Committee that safety will be restored by owner	Before mining	All ready provided
One off	Before mining	ANN D/22	Liaison officer appointed	Before mining	Already done
One off	Within seven days of commencement	ANN D/ 3.1	Notice of commencement to mine within NA	Within seven days of commencement	
Weekly	Weekly	ANN D/23	Location of the face	Weekly	
Weekly	Monthly	ANN D/4	Inspection of workings	Monthly	
Monthly	Monthly	ANN D/5	Seam level geotechnical reporting	Monthly	
Monthly	Monthly	ANN D/20	Compliance statement	Monthly	
Annually	For year ended 30 June, by 31 July	ANN D/19	Statistics report	31 July	



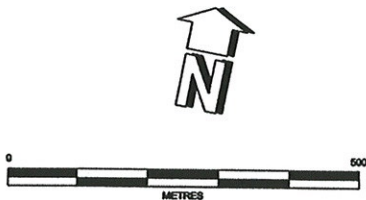
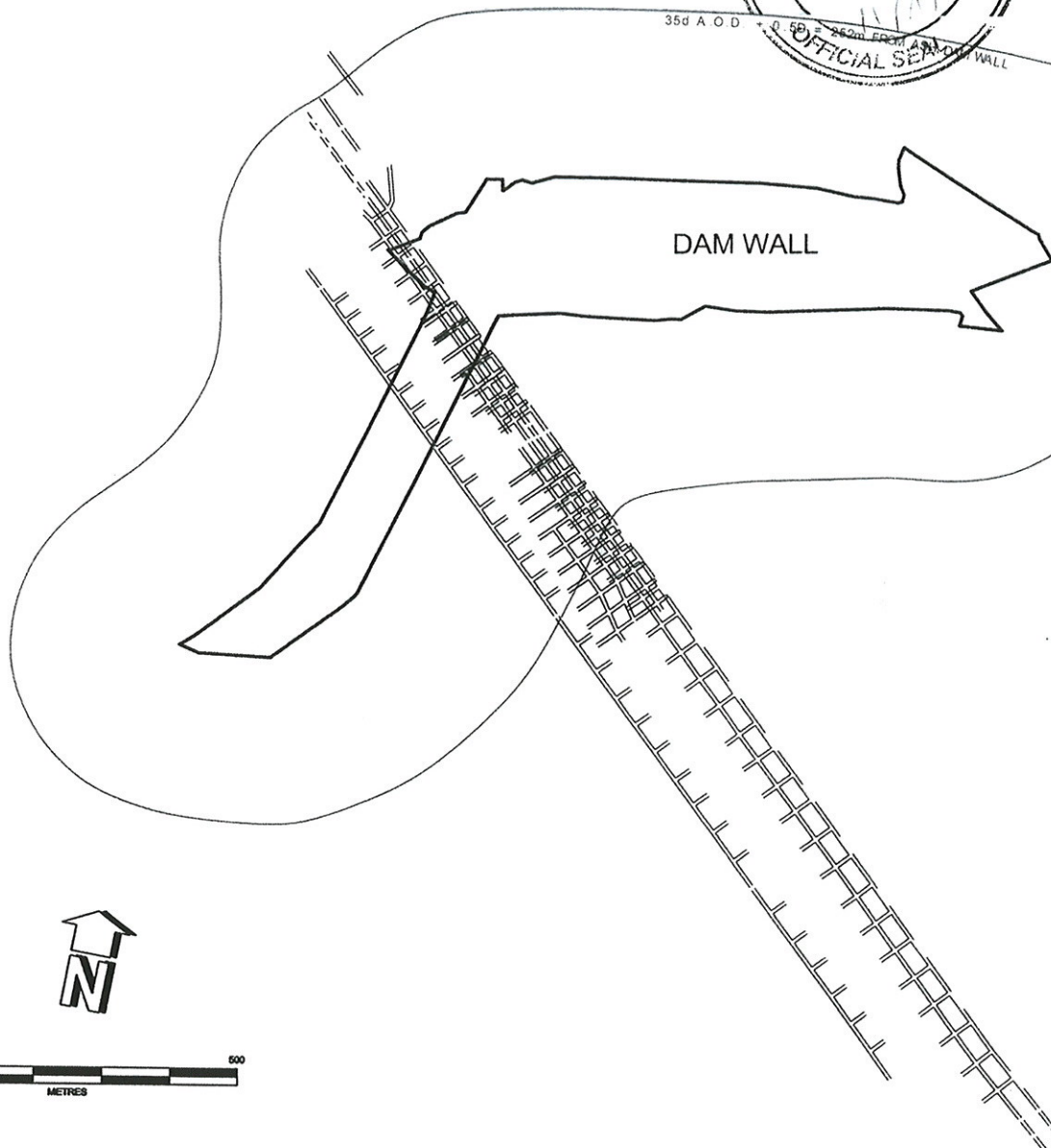
END OF ANNEXURE E

NSW Dams Safety Committee
**Recommendations to the Minister in respect of
Mining in the Mannering Creek Notification Area**

Mannering-4

- This approval is for the first workings outlined in green and blue.

This approval is until the 31st December 2015.



LEGEND

- PROPOSED GREAT NORTHERN SEAM WORKINGS
- PROPOSED FASSIFERN SEAM WORKINGS
- MANNERING CREEK ASH DAM WALL
- 35d + 0.5 D ANGLE OF DRAW FROM DAM WALL
- NOTIFICATION AREA



**Centennial
Mannering**

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LOCATION -	MANNERING
SEAM -	Great Northern & Fassifern
DRAWN -	
DATE -	28-09-2011
SCALE -	1:5000 @ A2

MANNERING COLLIERY
**PROPOSED WORKINGS (BOTH SEAMS) INSIDE THE
MANNERING CREEK ASH DAM NOTIFICATION AREA**

PDF FILE
MG 1560

PLAN No
MG 1560

COPY