

# **2006 Mine Fire**

## **Action Plans**

## IPRH Mine

### 2006 Fire Investigation Action Planning Sheet

<p><b>Recommendation # 1 :</b> In July of each year, a plan should be developed for the upcoming fire season based on weather predictions and mine conditions. Note that with the current conditions, a fire season may need to be designated from October to March.</p>				
No:	Action Plan Steps	Responsibility	By When	Date Completed
1	Fire Instructions to have a section designated to Fire Preparedness.	R.Prezioso	30-4-07	
2	By July 31 each year, the Fire Services Officer is to obtain weather predictions for the up coming fire season and to designate the start of the season.	R.Prezioso	31-7-07	
3	Develop a “ <i>season specific plan</i> ” for up coming fire season based on weather previous, current and predicted condition. To be implemented before nominated fire season.	R. Prezioso	31-7-07	
4	Each month until the end of the declared fire season, the “ <i>season specific plan</i> ” is to be formally reviewed and updated for the current conditions by the Fire Services Officer. A written report with	R. Prezioso	Monthly from 31-8-07	

5	recommendations is to be submitted to the Mining Director and Production Manager for approval.  All the above items are to included in the IPRH Mine Fire Instructions	R.Prezioso	30-4-07	
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**Recommendation # 2:** An annual audit of the fire system should be undertaken prior to the start of the fire season in accordance with the fire season plan (Refer to Recommendation 1). The audit should review all aspects of the fire service facilities, systems and procedures. This should include hardware, documentation (eg. emergency response plans), fire pumps and electrical supply, spray coverage of coal levels and fire fighting training, etc.

No:	Action Plan Steps	Responsibility	By When	Date Completed
1	Develop an audit checklist including hardware, documentation (eg. emergency response plans), fire pumps and electrical supply, spray coverage of coal levels and fire fighting training, etc.	R.Prezioso	30-4-2007	
2	A minimum of two audits will be carried out before October 1 each year. The first audit will be carried out as part of the development of the “ <i>Season Specific Plan</i> ” and be completed by July 31 each year.	R.Prezioso	31-7-2007	
3	The second audit will be carried out by September 30 each year and a written report to the Mining Director and Production Manager outlining plans to recover any shortfalls.	R.Prezioso	30-9-2007	

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4	All the above items are to included in the IPRH Mine Fire Instructions	R.Prezioso	30-4-2007	
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<b>Recommendation # 3 :</b> Predefined conditions should be identified to assist in determining whether a Fire Alert should be declared. The criteria should not be based solely on CFA Total Fire Bans as the CFA criteria includes factors relating to conditions that are not applicable to an open-cut coal mine. These conditions should include ranges in temperature, humidity, wind direction or speed that can define ‘severe weather conditions’.				
<b>No:</b>	<b>Action Plan Steps</b>	<b>Responsibility</b>	<b>By When</b>	<b>Date Completed</b>
1	Set up to three weather stations, one on Southern batters, one on the Mine floor and the other on Northern batters, to collect real time data to assist with input into the declaration of a fire alert.	R.Prezioso/S.Dargan	30-09-2007	
2	Set up an algorithm or graph to take into account temperature, humidity, wind speed and wind direction to assist in the declaration of a Mine Fire Alert.	R.Polmear	31-07-2007	
3	Investigate the linkage of the warning system to the CITEC system.	S.Dargan	30-04-2007	
4	Develop a set of rules which define conditions for which a “ <i>Period specific fire preparedness and mitigation plan</i> ” is to be prepared.	R.Polmear	30-04-2007	

5	Develop a process for preparation and circulation and communication of the “ <i>Period specific fire preparedness and mitigation plan</i> ” at least 24 hours in advance.	R.Prezioso	30-04-2007	
6	The above actions are to be included into the IPRH Mine Fire instructions.	R.Prezioso	30-04-2007	

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**Recommendation # 4 :** Fire Alert processes are understood but are not always fully complied with. As the Fire Alert is a critical control to prevent fires, the procedures including roles and responsibilities should be reviewed, updated, reiterated and enforced for mine personnel.

No:	Action Plan Steps	Responsibility	By When	Date Completed
1	Review roles and responsibilities when a fire alert is declared and update in the IPRH Fire Instructions.	R.Prezioso/I.Quail	30-4-2007	
2	Upon declaration of a Mine Fire Alert when a " <i>Period specific fire preparedness and mitigation plan</i> " is not already in place, develop and issue a situation specific " <i>Fire Alert Plan</i> " from the generic " <i>Period specific fire preparedness and mitigation plan</i> "	R.Prezioso/I.Quail	30-4-2007	
3	Carry out annual Mine Fire training for all Mine employees and contractors <ul style="list-style-type: none"> <li>• which include procedures for a fire alert.</li> <li>• IPRH Mine Fire Instructions to be issued to all</li> </ul>	R.Prezioso	To be completed start of declared fire season	

4	relevant Mine personnel.  Introduce Mobile Phone message advice to critical persons once a fire alert has been declared.	R.Prezioso	28-2-2007	
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**Recommendation # 5 :** Roles and responsibilities of Fire Services and personnel to support Fire Services during a Fire Alert and in an incident should be reviewed. The review should cover the responsibilities and tasks required by the Fire Services Group including the Fire Services Officer, Supervisor and Operators for the normal daily tasks, during a Fire Alert and during an incident. The review should also cover which mine personnel or contractors would provide a valuable and effective resource to support Fire Services during a Fire Alert and an incident dependent on their roles and responsibilities. For instance, utilising the maintenance crew for additional fire spotting after a Fire Alert has been declared. Refer to Appendix D for Organisational responsibilities in Fire Prevention.

<b>No:</b>	<b>Action Plan Steps</b>	<b>Responsibility</b>	<b>By When</b>	<b>Date Completed</b>
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1	Review entire role of group in upcoming EBA negotiations and negotiate changed working arrangements.	S.Rieniets	31-07-2007	
2	Review Fire instructions in relation to the responsibilities of Fire Services Group, their normal duties during a fire alert and in an incident.	R.Prezioso/I.Quail	30-4-2007	
3	Review the roles of mine personnel during a fire alert and incidents. This will be outlined in the " <i>Situation specific Fire Alert Plan</i> " – refer to action #2 in Recommendation #4.	R.Prezioso	30-04-07	

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<b>Recommendation # 6 :</b> Interface and communications between Operations, Fire Services and Maintenance needs to be reviewed in terms of fire systems, particularly in relation to the power supply for the fire pumps.				
<b>No:</b>	<b>Action Plan Steps</b>	<b>Responsibility</b>	<b>By When</b>	<b>Date Completed</b>
1	Electrical Authority to notify Mining Director, Production Manager and Fire Service Officer of changes to power supply to Fire pumps.	P.Brimblecombe	30-04-07	
2	Develop procedure and introduce higher level sign off for changes to critical fire and flood protection plant e.g feeders, critical pumps, pipelines etc.	I.Quail/P.Brimblecombe	30-04-07	

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<b>Recommendation # 7 :</b> Roles, responsibilities and procedures outlined within the IPRH Emergency Response Plan should be reviewed and rewritten utilising a checklist approach so that each person undertaking an emergency role can confirm that they are undertaking their key activities.				
No:	Action Plan Steps	Responsibility	By When	Date Completed
1	Review and update Emergency Response Plan to include a checklist for each person undertaking an emergency role.	S.Rieniets	30-04-07	

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<b>Recommendation # 8 :</b> In a significant fire, each coal level should be treated as a fire zone and a Zone leader allocated after consultation with the CFA.				
<b>No:</b>	<b>Action Plan Steps</b>	<b>Responsibility</b>	<b>By When</b>	<b>Date Completed</b>
1	Review Emergency Response Plan for Zone Leaders responsibilities to include allocation to the CFA crew/strike team and a designated zone appropriate to the incident.	R.Prezioso/I.Quail	30-04-07	
2	Emergency Commander is to allocate designated zones appropriate to the incident and include in the Mine Fire Instructions.	R.Prezioso/I.Quail	30-04-07	
3	Train and reinforce in annual Mine Fire Training.	R.Prezioso	Annually	

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<b>Recommendation # 9 :</b> Once it has been determined that there is a significant fire, all supervisors should return to the ICP for a briefing and to undertake a role of co-ordinating the fire teams. A co-ordinated approach to fighting fires is more effective than just large numbers of fire fighters.				
<b>No:</b>	<b>Action Plan Steps</b>	<b>Responsibility</b>	<b>By When</b>	<b>Date Completed</b>
1	Determine the point a fire/incident is deemed “significant” e.g outside agencies are required to attend, and the required action of Supervision.	R.Prezioso/I.Quail	30-04-07	
2	Update the IPRH Mine Fire Instructions and Emergency Response Plan to reinforce the role of Mine Supervision in a fire and/or emergency.	R.Prezioso/I.Quail	30-04-07	
3	Supervision to be trained in protocol.	R.Prezioso/I.Quail	Annually	

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<b>Recommendation # 10:</b> The ICP should continue to be established as a special facility separate from normal operations or mine activities. The ICP should have available all essential equipment required for an emergency response, that is easily and quickly accessible; and able to be transported to any onsite facility. This equipment may be available as a mobile 'kit'.				
<b>No:</b>	<b>Action Plan Steps</b>	<b>Responsibility</b>	<b>By When</b>	<b>Date Completed</b>
1	Team to be set up to look at where the ICP should be established and what sort of equipment would be required.	I.Quail	30-04-07	
2	ICP to be established.	TBA	31-12-07	

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**Recommendation # 11 :** IPRH should consider notifying the CFA immediately once a spot fire has been reported and verified on site. The CFA remains on alert for a nominated amount of time (eg. 15 minutes). Within this time frame they must receive further notification from the site that the fire has been extinguished otherwise they will send out an initial response crew in anticipation that the fire has escalated and requires their assistance. This practice is undertaken at other mines in Latrobe Valley.

No:	Action Plan Steps	Responsibility	By When	Date Completed
1	Discuss and agree protocol with CFA.	R.Prezioso/I.Quail	30-04-07	
2	Document agreed protocol and include in Emergency Response Plan and IPRH Mine Fire Instructions.	R.Prezioso	30-04-07	
3	Train and reinforce in annual Mine Fire Training.	R.Prezioso	Annually	

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<b>Recommendation # 12 :</b> The IPRH Significant Issue Corporate Response Plan and the IP Corporate Serious Incident Procedure should be reviewed and updated to ensure there are no discrepancies and the IPRH Emergency Response Plan should be consistent with the IPRH Significant Issue Corporate Response Plan.				
No:	Action Plan Steps	Responsibility	By When	Date Completed
1	Undertake review of the above plans and ensure linkage and consistency.	S.Rieniets	30-04-07	

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**Recommendation # 13:** Work procedures and practices within the ‘Mine Fire Service Policy and Code of Practice’ and the ‘Fire Instructions’ should be systematically reviewed and updated.

No:	Action Plan Steps	Responsibility	By When	Date Completed
1	As part of the development of the “ <i>Season specific plan</i> ” both documents are to be reviewed and updated if necessary.	R.Prezioso	31-07-07	

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<b>Recommendation # 14 :</b> Whilst it should be recognised that the priority is to ensure that sufficient water is used to control the spread of fires, particularly to ensure no burning coal is transferred to the power station, mine operations should be trained to understand the effects of excessive water transferred to the power station.				
No:	Action Plan Steps	Responsibility	By When	Date Completed
1	Annual Mine Fire Training to include the effect of excessive water on power station operations.	R.Prezioso	31-07-07	

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**Recommendation # 15 :** The use of thermal imaging cameras and other technology in the detection of faulty idlers should be investigated for their application and used where appropriate.

No:	Action Plan Steps	Responsibility	By When	Date Completed
1	Purchase Thermal imaging equipment.	I.Quail		1-12-2006
2	Set up and implement program of inspections.	I.Quail		1-12-2006

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**Recommendation # 16 :** The use of thermal imaging cameras was effective during the fire fighting and should be considered as well as other technology for wider use in spotting fires within the mine.

No:	Action Plan Steps	Responsibility	By When	Date Completed
1	Carry out an investigation into the use and possible purchase of thermal imaging and other technology in the Mine.	R.Prezioso/I.Quail	31-07-07	

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**Recommendation # 17 :** A procedure for dealing with Carbon Monoxide (CO) during fire fighting, including the use of CO monitors, should be developed since personnel safety is a major responsibility and concern in fighting coal fires. .

No:	Action Plan Steps	Responsibility	By When	Date Completed
1	Develop procedure for dealing with CO during fire fighting and insert into the IPRH Emergency Response Plan.	R.Prezioso/I.Quail	30-04-07	
2	Investigate the use and purchase of additional CO monitors and possible back up sources e.g Loy Yang B, Yallourn etc.	D.Froud	31-07-07	

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**Recommendation # 18 :** Whilst the efforts of all mine, contractor and CFA personnel are highly commended in their assistance with the fire fighting, it should be emphasised and reinforced to all personnel that no job is so important that they should take excessive risks.

No:	Action Plan Steps	Responsibility	By When	Date Completed
1	Toolbox Meeting to be carried out outlining the above.	All Section Managers	3 times per year	
2	Annual Fire Training to reinforce the need to “Take 5” and identify risks and take appropriate action.	R Prezioso/I Quail	31-07-07	

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<b>Recommendation # 19 :</b> Allocating IPRH operations staff to CFA strike teams during a fire should be included within IPRH procedures (eg. Emergency Response Plan and/or Fire Instructions) and reinforced so that it becomes normal practice.				
<b>No:</b>	<b>Action Plan Steps</b>	<b>Responsibility</b>	<b>By When</b>	<b>Date Completed</b>
1	Review Zone Leaders responsibilities as this will include working with CFA strike teams and update Emergency Response Plan and IPRH Mine Fire Instructions.	R. Prezioso	30-04-07	
2	Zone Leader training to be provided to Mine Crews.	I.Quail	31-07-07	

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<b>Recommendation # 20 :</b> To ensure that the ongoing efficient operations of the mine are not compromised over the long term as a result of the fire incident, a detailed risk analysis should be carried out to assess the life cycle impact of the fire on maintenance costs and longevity of the mine infrastructure assets.				
<b>No:</b>	<b>Action Plan Steps</b>	<b>Responsibility</b>	<b>By When</b>	<b>Date Completed</b>
1	Asset Manager to carry out a detailed risk analysis to assess the longevity of the mine infrastructure assets.	W.Estrada	31-07-07	

