

Revised May 2012

System Control # 0001	System Control description – Competent Maintenance Personnel		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Frictional Heating eg, Conveyors	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that maintenance personnel involved in inspection and repair of Mine Plant Items are competent in the basic trade skills for which they are employed.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Personnel inspecting and maintaining plant are competent trade's people.	Training records for skilled personnel.	Compare current competencies to the EBA matrix for the position. (more than 80% of required skills have been acquired)	Training Officer/ Supervisor	Regularly.
Induction to work on site	Induction records	Completion of interactive videos level 2 induction, working at height & confined space	Training officer	Permanents IPR, 2 years, Casual yearly
JSA's competently written	Training records	Satisfactory completion JSA Competency test – view office records	Training officer	3 yearly refresher required
	JSA's signed on	Field audit of completed JSA's	Mine HSO	During normal routine work & various outages
Evaluation of contractors	Compliance to regulatory & IPR H&S Procedures etc	Paradigm Check sheets SM 1, 2 & 3	Mine HSO, Contract Mgr, Supervisor	Weekly
Related Controls –				

Revised May 2012

System Control # 0005	System Control description – Emergency Response Plan 2895		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Mine Fire Hazard – Incident Mitigating Control	Control Type : Critical System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – The business has Emergency Response Plans in place for the Mine and Power Station. These plans detail the business response to a number of possible situations. The plan covers major fire in the mine. The plans are required by a number of different legislative and regulatory documents.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Plan is in place	Current version is in business document management system	Inspect Paradigm for current document date	Mining Director	Annual
Plan is reviewed regularly	Time between reviews	Check document history in management system	Mining Director	Annual
Plan is tested regularly	Frequency of test events	Review test reports for last two years	Emergency Manager	Annual
Plan is communicated to external Emergency Services	External Emergency Organisations sent copies of the plan	Inspect letters in Document registration system	Emergency Manager	Annual
Related Controls –				

Revised May 2012

System Control # 0006	System Control description – First Aiders on all Shifts		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Mine Fire Hazard – Incident Mitigating Control	Control Type : System Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective – – The business wishes to have a minimum number of first aiders present within each crew. The company policy requires a minimum of 1:12 qualified Level 2 First Aiders in the work force. The company actively encourages all personnel to obtain a Level 2 First Aid Certificate by paying normal wage rates and reimbursing course costs for successful completion of recognised courses.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Sufficient trained first aiders in the business	Ratio of paid first aiders in the business	Payrolls to check numbers of paid first aiders ratio	H&S Manager	Annual
Sufficient trained first aiders in the business	Percentage of unpaid first aiders	Training officer to maintain list	H&S Manager	Annual
Related Controls –				

Revised May 2012

System Control # 0007	System Control description – PPE		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Mine Fire Hazard – Incident Mitigating Control	Control Type : System Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective – To ensure that all personnel responding to a Mine Fire wear the appropriate Personal Protective Equipment (PPE).			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Availability of PPE.	Numbers of PPE Items readily available in Mine Office.	Observation.	Safety Officer/Mine Admin.	Ongoing.
Wearing of PPE.	Compliance.	Inspections, including 'Fresh Eyes'.	Mine Staff.	Random.
Wearing of PPE.	Compliance with JSA.	Observation.	Response Team Leader.	Ongoing.
Wearing of PPE.	Knowledge of IPRH PPE requirements.	Level-2 HS&E Induction Assessment.	Computer-based Training.	Two-yearly.
Related Controls –				

Revised May 2012

System Control # 0008	System Control description – Onsite Emergency Response Provider		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Mine Fire Hazard – Incident Mitigating Control	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – The business provides a 24 hour staffing arrangement, (minimum of 3 ESO'S per shift) by suitably trained and qualified personnel by the emergency services provider Diamond Protection, at the HP First Aid Centre. These personnel are suitably trained in the initial response to accidents/incidents and rescue situations, that can occur within the business, in a timely manner			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
24 hour manning	First Aid Centre personnel are at the centre or contactable at all hours	Random inspections	Security Manager	Annual
Initial response capability	Level of ability of ERP personnel	Review of performance at annual exercise	DP & Security Manager	Annual
Suitable regular training updates of DP personnel is carried out	DP Monthly training schedule IPR Monthly H&S report	Check DP records,	H&S Manager	Monthly
Emergency Response Provider Contract (Currently Diamond Protection).	Currency of Contract.	Peruse Contract Conditions.	Emergency Manager/Contracts Manager.	Annual
Emergency Response Provider Contract (Currently Diamond Protection).	Request for Response Team (back-up resource).	Emergency Records.	Emergency Manager	As required.
Related Controls –				

Revised May 2012

System Control # 0009	System Control description – First Aid Room on Site		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Mine Fire Hazard – Incident Mitigating Control	Control Type : System Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective – To have a facility on site set up for the treatment of minor injuries and able to stabilise/control major injuries until medical help arrives.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
First Aid treatment room at a central location known to all personnel	Incorporation of First Aid location into induction program and documentation	Regular review of Induction Video and documentation	H&S Manager	Annual
First Aid facilities suitable for site needs	Number of minor treatments and major injuries have not increased over time	H&S stats	H&S Manager	Annual
Related Controls --				

Revised May 2012

System Control # 0014	System Control description – Mine Site Induction		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Plant Vehicles/Exhaust Brakes Fires	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
<p>Function/Objective – To ensure that all personnel undertake a Level-2 HS&E induction prior to coming on site. This induction covers the requirement that all 4 wheel drive Motor vehicles are not permitted to travel on coal surfaces unless they are fitted with an approved exhaust system and that they must carry a "Fire Suppression Pack" It also cover the No smoking below grass level policy</p> <p>When operating on coal, vehicle engine and exhaust systems must be inspected at two-hourly intervals and washed down where necessary. Regular cleaning of the vehicles under body must be maintained as the major control to eliminate vehicle initiated fires, the mine has several under body washing facilities located around the mine.</p>			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Company Policy requires all New Starters to undergo a 'Level-2 HS&E Induction.	Possession of Photo I.D. and Current Level-2 Induction.	Random checks.	Corporate/Security.	Regularly.
Company Policy requires all Mine Personnel to undergo a 'Level-2 HS&E Re-Induction every 2 years.	Current 'Level-2' HS&E induction.	Business objects Records.	Supervisor/Manager.	Two-yearly.
Does current Level 2 Induction covers above scenario	Current version includes information on above scenario	Visual –view video check current script	Mine HSO	Ongoing
Two hourly inspection and regular cleaning of under body carried out.	That inspection and cleaning is carried out	Visual field audit/fresh eyes	Supervisor/Mine HSO	Two hourly
Related Controls –				

Reviewed September 2012

System Control # 0019	System Control description – Electrical Drawings (Mine drawing system & 2 controlled hard copies)		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Incorrect wiring of devices MMH - Electricity	Control Type :	SMS Location
		Risk Control	SMS Ref No.
		Critical System Control System Control	Responsible Officer :
Function/Objective – To allow electrical personnel access to suitable wiring information to allow fault finding and repair work to be completed safely			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
On line drawing system accessible to electrical personnel	System available to network connected PC's	Visual check	Auditor	As required
Controlled copies of drawings are completed and are up to date.	Check drawings are correct revision	Regular review and update	Drawing Office	As required,
Related Controls –				

Reviewed July 2012

System Control # 0049	System Control description – Equipment – Control Devices (limit switches/sensors etc)		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Worn/Damaged Equipment	Control Type : System Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective – Electrical field devices have electrical protection to limit the likelihood of them starting a fire if they fail. Control devices also detect mechanical failures/wear before these conditions cause fire.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Routine checking of electrical field devices.	That routines are completed and devices found to work	Review of routines	Electrical Superintendent /Auditor.	Various
Related Controls –				

Revised May 2012

System Control # 0052	System Control description – Standard – Works Management System		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Frictional Heating eg, Conveyors <ul style="list-style-type: none"> - Seized Idlers - Bearing Failures 		SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – A works management system (Maximo) records defects by location and criticality, it schedules work, alerts to work not being done, records completion of maintenance, ensures that routine inspection and maintenance programs are carried out			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Is outstanding Work Order requests backlog tracked	Existence of work order backlog list	Number of outstanding work orders	Works management analyst/ HSO	Weekly
Is there a planned work schedule for routines, outage work etc	Check Maximo for inclusion of routines in system	Visual check	Works management analyst/ HSO	Weekly
Is the works management system effective	Have repair etc of item been _ approved, parts ordered, work scheduled, completed and signed off	Audit works management system from input to completion	Mine HSO	Quarterly
Related Controls –				

Reviewed July 2012

System Control # 0057	System Control description – Standard – Site design standard for plant		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Frictional Heating eg Tools/Pumps/Plant	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – Plant, tools and equipment are only purchased that comply with the appropriate AS design standards and which recognises and limits the potential to limit the start of fire			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Specifications for purchasing plant, tools & equipment on site calls up appropriate Australian design Standard	Tender documents and specifications for plant, tools & equipment lists relevant AS.	Review tender documentation	Auditor	Ad Hoc
Related Controls –				

Reviewed July 2012

System Control # 0058	System Control description – Standard – Site engineering standard required for introduction, modification or removal of plant		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Frictional Heating eg Tools/Pumps/Plant	Control Type : System Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective – To ensure that there is a site engineering standard for introduction modification or removal of plant.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Procedure for plant modifications - AG15	That Paradigm Procedure is current and AG 15 complied with	Visual check of Paradigm & AG 15 documentation	Eng/ Mine HSO	As per Paradigm review date As required
Procedural	That a Risk assessment of the effect modifications to plant will have maintenance, operations etc has been completed and actions item logged	Visual check RA document Check Action items completed	Mine HSO/HSR/ Sup/ Eng etc	As required
Procedural	Checklist for new or modified plant is completed	Visual check of checklist	Plant owner	As required
Modification recorded in register	Modification captured in register	Visual check of register	Plant owner	As required
Related Controls –				

Revised May 2012

System Control # 0061	System Control description – Inspection – Safety Walks		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Coal Build Up/Coal Spill - Bunker Fires	Control Type : System Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective – To ensure that regular scheduled monthly Safety Walks Inspections (SWI's) are undertaken focussing on coal build-up on and around plant and conveyors to minimise fire risk.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Safety Walk Inspections.	Inspections undertaken.	Peruse SWI Annual Schedule.	Mine Safety Officer.	Ongoing.
Safety Walk Procedure.	Paradigm Document # 914.	Review Document.	Mine Safety Officer.	Regularly.
Safety Walk schedule	Compliance of personnel to schedule	Review completed inspection sheets	Mine Safety Officer	Monthly
Ensure that Safety Walk Actions items relating to any coal build up on and around plant are completed.	E Mails, Maximo safety work orders, Paradigm OFI's.	Review Document.	Mine Safety Officer.	Regularly.
Related Controls –				

Revised May 2012

System Control # 0062	System Control description – Maintenance – Daily cleaning or on request (hose down/shovel clean)		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Coal Build Up - Bearing Failure - Bunker Fires	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that Mine Operations personnel clean Major Machines/Plant for safe Maintenance access as per cleaning and permit list for the next day.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Ensure cleaning for daily maintenance requirements is listed on shift changeover sheet	Cleaning requests for maintenance on shift changeover sheet	Check information on sheet	Maintenance Manager /Production Manager	daily
Shift Manager/Team Leader undertake a Shift Changeover meeting.	Items for discussion. Include cleaning	Coal & O/B Shift Instructions	Production Manager.	Regularly.
Shift Manager/Team Leader/Maint. undertake a Shift Changeover meeting (Day Shift only).	Items for discussion.	6:20 am Maint/Ops Discussion Notes.	Maintenance Manager.	Start of Day Shift.
Cleaning of Mine Plant for Maintenance access.	Specific cleaning requirements (hosing down/shovel clean).	6:20 am Maint/Ops Discussion Notes.	Shift Manager/Team Leader.	Start of Day Shift.
Cleaning of Mine Plant for Maintenance access.	Specific cleaning requirements (hosing down/shovel clean).	Daily maintenance meeting.	Maintenance (Mech/Elec/Bellebanne) personnel.	Daily.
Related Controls –				

Reviewed June 2012

System Control # 0063	System Control description – Design – Design to prevent spillage					
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Coal Spill/ Build Up	Control Type : System Control	<table border="1"> <tr> <td data-bbox="1382 351 2051 422">SMS Location</td> </tr> <tr> <td data-bbox="1382 426 2051 481">SMS Ref No.</td> </tr> <tr> <td data-bbox="1382 485 2051 528">Responsible Officer :</td> </tr> </table>	SMS Location	SMS Ref No.	Responsible Officer :
SMS Location						
SMS Ref No.						
Responsible Officer :						
Function/Objective – The design of mine coal carrying equipment/plant/structures must be adequate and suitable for normal life and conditions such as normal loading, it should also be designed such as to minimise coal spill and subsequent coal build up which could result in fires.						
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc						

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Coal conveyor Attendant duties	Shift report log: Reports to Control Centre/Ops Shift Manager on builds up	Visual inspection	CCA	Ongoing
Conduct Safe work Inspections of conveyors	Coal spillage/build up	SWI/Field audit	Nominated person as per safety walk schedule	Monthly
Are the reported defects found during inspections actioned and tracked	Work orders In Maximo	Look at outstanding defect work orders in Maximo	Mine HSO	Weekly report (on outstanding maximo w/o)
Related Controls –				

Revised May 2012

System Control # 0064	System Control description – Procedure – Permit System (Hot Work) – Fire Training Manual		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Hot Works <ul style="list-style-type: none"> - Boiler making - Grinding/Cutting - Power Tools - Petrol Driven Equipment - Cable Repairs 	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that all 'Hot Work' proposed to be undertaken in the Mine is done in accordance with the Hot works Permit conditions. A numbered three copy permit book is used – original to worksite, yellow to shift ops, pink stays in book			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Training of Firemen.	Theoretical and Practical competence based on Fire Training Manual.	Competency-based Assessment Test.	Fire Services Supervisor.	As required.
Fire Training Manual	Check that version of manual is current	Paradigm Document # 43136.	Fire Services Supervisor.	Ongoing.
Hot Work Permit.	Category A – Hazelwood Slot Bunker. Category B – Mine Area.	Paradigm Document # 43136.	Fire Services Supervisor.	Ongoing.
Hot work documentation correct	Original is at worksite Yellow copy to shift ops Pink copy in book	Visual/ field audit	Mine HSO/Supervisor	Periodic checks
Related Controls –				

Revised May 2012

System Control # 0065	System Control description – Inspection – Follow-up Inspections					
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Hot Works <ul style="list-style-type: none"> - Boiler making - Grinding/Cutting - Power Tools - Petrol Driven Equipment - Cable Repairs 	Control Type : System Control	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td data-bbox="1395 357 2047 419">SMS Location</td> </tr> <tr> <td data-bbox="1395 422 2047 485">SMS Ref No.</td> </tr> <tr> <td data-bbox="1395 488 2047 708">Responsible Officer :</td> </tr> </table>	SMS Location	SMS Ref No.	Responsible Officer :
SMS Location						
SMS Ref No.						
Responsible Officer :						
Function/Objective – To ensure that all 'Hot Work' sites in the Mine have a 'follow-up' inspection. As per instructions						
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc						

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Training of Firemen.	Theoretical and Practical competence based on Fire Training Manual.	Competency-based Assessment Test.	Fire Services Supervisor.	As required.
Compliance with Hot work permit requirements.	Check site being monitored and that final inspection has been carried out	Field check	Supervisor	Ongoing
Related Controls –				

Revised May 2012

<p>System Control # 0066</p>	<p>System Control description – Procedure – Fireman/Spotter for Hot Work (Fire Training Manual)</p>		
<p>MMH Group</p>	<p>MMH Group- Mine Fire (MMH No 7) Scenario - Hot Works- Boiler making - Grinding/Cutting - Power Tools - Petrol Driven Equipment - Cable Repairs</p>	<p>Control Type : System Control</p>	<p>SMS Location</p> <hr/> <p>SMS Ref No.</p> <hr/> <p>Responsible Officer :</p>
<p>Function/Objective – To ensure that all 'Hot Work' proposed to be undertaken in the Mine or HSB is done in accordance with the Hot Work Permit conditions, specifically that all Hot Works within the Mine or the Hazelwood Slot Bunker, is not to be undertaken unless a suitably trained and qualified Fire Person is in attendance;</p>			
<p>Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc</p>			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Training of Firemen.	Theoretical and Practical competence based on Fire Training Manual.	Competency-based Assessment Test.	Fire Services Supervisor.	As required.
Fireman's Procedure prior to commencement of burning and welding.	Knowledge.	Competency-based Assessment Test.	Fire Services Supervisor.	As required.
Fireman's Responsibilities during burning and welding.	Knowledge.	Competency-based Assessment Test.	Fire Services Supervisor.	As required.
Monitoring of weather conditions during Hot Work.	Deteriorating weather conditions.	Observation.	Fireman.	Ongoing.
Hot Work Permit.	Category A – Hazelwood Slot Bunker. Category B – Mine Area.	Paradigm Document # 43136.	Fire Services Supervisor.	Ongoing.
Hot work permit	Compliance with HWP	Field audit	Mine HSO	Ongoing
Related Controls –				

Reviewed June 2012

System Control # 0068	System Control description – Policy – Prohibited items on site		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Smoking/Lighters/Matches	Control Type : System Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective – The IPRH H&S Smoking Policy states that all personnel in and around the mine are to comply with the Mine smoking policy and that the carrying of cigarettes into the mine below grass level will be grounds for probable cause of a smoking offence by the individual and treated as a breach of policy.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Smoking prohibited in mine	Compliance with Policy	Visual/ field audit	Supervisor/ Mine HSO	Ongoing
Carrying of cigarettes in mine prohibited	Compliance with Policy	Visual/ field audit	Supervisor/ Mine HSO	Ongoing
Related Controls –				

Reviewed June 2012

System Control # 0069	System Control description – Procedure – Mine Fire Reporting (Fire Instructions)		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Escalation Scenario	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that ALL Fires in the Mine Area are reported to the Mine Control Centre.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Reporting of ALL Fires in the Mine Area.	Shift Reports.	Perusing.	Production Manager.	Ongoing.
Request CFA response if initial response > 30 minutes.	Duration of Fire emergency.	Dial Telstra 000.	Incident Controller/Fire Services Officer.	As required.
Reporting of ALL Fires in the Mine Area to the CFA.	IPRH Standard Fire Report.	Perusing.	Fire Services Officer.	Monthly.
Related Controls –				

Reviewed June 2012

System Control # 0070	System Control description – Maintenance – Grass Cutting (Fire Services Policy & Code of Practice)		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Bush Fire	Control Type : System Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective –To reduce the hazard from a fire external to the Hazelwood Mine, provision of appropriate fire breaks and control of grassed and forested areas within the "zone of responsibility" is to be monitored continually. There is a need to ensure that Grass is not to exceed 100 millimetres in height;			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Monitoring of grass fuel levels	Height of grass	Grass not to exceed 100 millimetres in height;	Mine Production Superintendent	Ongoing
Related Controls –				

Reviewed June 2012

System Control # 0071	System Control description – Design – Fire Breaks (Fire Services Policy & Code of Practice)		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Bush Fire	Control Type : System Control	SMS Location SMS Ref No. Responsible Officer :
<p>Function/Objective – To reduce the hazard from a fire external to the Hazelwood Mine, IPR need to ensure that there is provision of appropriate fire breaks and control of grassed and forested areas within the "zone of responsibility". A continuous 50 metre wide and permanently maintained fire break corridor around the perimeter of the Hazelwood Mine is to exist all year round. The fire break can include roads and may consist of the following:</p> <ul style="list-style-type: none"> • Grass not to exceed 100 millimetres in height; • No trees, shrubs, scrub are permissible in this area; and • Constant monitoring of the fire break corridor is required to ensure the above protection is maintained. 			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Continuous fire break maintained	Grass not to exceed 100mm height, no trees shrubs in fire break area	Visual check	Operations Superintendent.	Ongoing all year
Related Controls –				

Reviewed June 2012

System Control # 0072	System Control description – Designated Fuel Storage Area		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario –Lightning Scenario – Electrical Faults Scenario – Wom/Damaged Equipment Scenario – Frictional Heating eg, Conveyors Scenario – Frictional Heating eg Tools/Pumps/Plant Scenario – Coal Build Up Scenario – Hot Works Scenario – Smoking/Lighters/Matches Scenario – Bush Fire Scenario – Incorrect Storage of Flammable Materials	Control Type : System Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective – To ensure that flammable liquids used in the Mine are only stored in designated Fuel Storage Facilities.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Designated Fuel Storage Facilities	Facilities and signage as per manifest drawing	Field Audit.	Dangerous Goods Officer.	Annually.
Bunded Bulk Storages.	Integrity of Bunds.	Field Audit.	Environmental Officer.	Annually.
Compliance with AS 1940-2004 "The Storage of Flammable & Combustible Liquids.	Signage/Extinguishers.	Field Audit.	Dangerous Goods Officer.	Annually.
Designated Fuel Storage Facilities.	Compliance.	SWI's.	Mine Staff.	Regularly.
Designated Fuel Storage Facilities.	Compliance.	Random inspections, including 'Fresh Eyes'.	Mine Staff.	Random.
Related Controls –				

Revised May 2012

System Control # 0073	System Control description – Procedure – Weather monitoring fire hazard (Fire Services Policy & Code of Practice)		
MMH Group	MMH Group- Mine Fire (MMH No.7) Scenario - Coal Build Up Scenario - Hot Works Scenario – Bush Fire Scenario – Spontaneous Combustion	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that there is ongoing monitoring of weather conditions with respects to fire risk. The recommended conditions that a fire alert be called at are when the temperature exceeds 32°C, the humidity is below 25% and the wind speed is above 30km/hr and/or gusting above 40km/hr.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Weather Monitoring.	Environmental conditions.	BOM website.	Director Mining/Production Manager/Production Superintendent/1X7 Team Leaser.	Ongoing.
Weather Monitoring.	Temperature/Humidity/Wind Speed.	Weather Station.	CITECT System.	Continuous.
Extreme Fire Risk.	Worsening Environmental conditions: <ul style="list-style-type: none"> • Temperature > 32°C • Humidity < 25% • Wind Speed > 30 kph 	Weather Station Alarm.	CITECT System.	Continuous.
Declaration of a Mine 'Fire Alert'.	Extreme Fire Risk scenario.	Alarm + Observation.	Director Mining/Production Manager/Production Superintendent/1X7 Team Leaser.	As required in Extreme conditions.
Related Controls –				

Revised May 2012

System Control # 0073	System Control description – Procedure – Weather monitoring fire hazard (Fire Services Policy & Code of Practice)		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Coal Build Up Scenario - Hot Works Scenario – Bush Fire Scenario – Spontaneous Combustion	Control Type : System Control	SMS Location <hr/> SMS Ref No. <hr/> Responsible Officer :
Function/Objective – To ensure that there is ongoing monitoring of weather conditions with respects to fire risk. The recommended conditions that a fire alert be called at are when the temperature exceeds 32°C, the humidity is below 25% and the wind speed is above 30km/hr and/or gusting above 40km/hr.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Weather Monitoring.	Environmental conditions.	BOM website.	Director Mining/Production Manager/Production Superintendent/1X7 Team Leaser.	Ongoing.
Weather Monitoring.	Temperature/Humidity/Wind Speed.	Weather Station.	CITECT System.	Continuous.
Extreme Fire Risk.	Worsening Environmental conditions: <ul style="list-style-type: none"> • Temperature > 32⁰C • Humidity < 25% • Wind Speed > 30 kph 	Weather Station Alarm.	CITECT System.	Continuous.
Declaration of a Mine 'Fire Alert'.	Extreme Fire Risk scenario.	Alarm + Observation.	Director Mining/Production Manager/Production Superintendent/1X7 Team Leaser.	As required in Extreme conditions.
Related Controls –				

Reviewed June 2012

System Control # 0074	System Control description – Maintenance – Housekeeping Audit Program		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Spontaneous Combustion	Control Type : System Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective – Ensure that the Mine Fire Instructions are promulgated and kept up to date as per program eg HSB washdowns -. Regular planned Hazelwood Slot Bunker wash downs are to be carried out every 6 to 8 weeks. This will ensure that good housekeeping is undertaken in the Hazelwood Slot Bunker and minimise the risk of fire from spontaneous combustion.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Mine Fire Instructions.	Paradigm Document # 40686.	Peruse.	Director Mining.	Annually.
Mine Fire Instructions.	Paradigm Document # 40686.	Review.	Mine Planning Superintendent.	Annually.
Safety walk Inspections	Checklist covers housekeeping in area	Visual	Various	Monthly
Good Housekeeping in HSB.	Coal build-up.	Site Inspection	Fire Service Officer and/or Production Manager	Regularly.
Bunker Washdown.	Coal build-up.	Site Inspection.	Operations Personnel.	Every 6-8 weeks.
Bunker Washdown.	Compliance with Audit Checklist.	Paradigm Document # 39540.	Production Manager.	As required.
Related Controls –				

Reviewed June 2012

System Control # 0075	System Control description – Procedure – Covering of waste coal on the overburden dump		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Spontaneous Combustion	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that waste coal at worked out batters/ mine floors and overburden dump is to be covered with clay.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Compliance with Mine fire service policy and code of practice	That all waste coal has clay cover	Visual. Field	Operations Superintendent	Ongoing
Related Controls –				

Reviewed July 2012

System Control # 0079	System Control description – Compliance with Standard – Australian Standards and Codes for Storage/Handling of Flammables		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Incorrect Storage of Flammable Materials	Control Type : System Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective – To comply with AS & codes of storage there is a requirement to ensure that both Environmental and Dangerous goods audits are carried out on a regular basis to ensure that correct storage and signage of flammable materials is undertaken on site.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Designated Fuel Storage Facilities	Facilities and signage as per manifest drawing	Field Audit.	Dangerous Goods Officer.	Annually.
Bunded Bulk Storages.	Integrity of Bunds.	Field Audit.	Environmental Officer.	Annually.
Related Controls –				

Revised June 2012 .

System Control # 0080	System Control description – Guideline – Material Safety Data Sheets		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Incorrect Storage of Flammable Materials	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
<p>Function/Objective – To ensure that flammable materials are correctly stored, all Dangerous goods/hazardous substances or product used on site must have a current Material Safety Data Sheet (MSDS), The MSDS indicates the safe storage, handling, use, the possible health effects and disposal requirements for that particular substance/product.. The MSDS also contains information on the flammability of the substance and gives fire fighting measures.</p>			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Current Material Safety Data Sheets available for substances	That MSDS for substance is current	Visual perusal of MSDS	Mine HSO	Ongoing
MSDS stipulates storage requirements for substance	Compliance with storage requirements	Field Audit	Mine HSO	Initially and ongoing
MSDS gives fire fighting measures for substances	MSDS contains relevant Fire Fighting measures	Visual perusal of MSDS	Mine HSO	As required
Emergency Procedures	That MSDS contains information on how to handle spills/releases	Visual perusal of MSDS	Mine HSO	As required
Related Controls –				

Reviewed July 2012

System Control # 0082	System Control description – Design – Earthing Systems		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Lightning Scenario – Electrical Faults	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
<p>Function/Objective – The Mine Earthing system is designed with a negative earth resistor (NER) to limit fault currents to a max of 50 amps, this limits the amount of energy available to start fires. An earthing network is installed throughout the plant(s) to provide for safe dissipation of energy to earth.</p>			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Earth continuity is maintained to all plant items	Earth resistance is correct when plant is connected to supply	Review of electrical certificate	Electrical auditor/ electrical Supervisor/ Inspector	All certificates
Earth grids at overhead line switches needs to be in good condition	Testing is conducted annually and all results filed	Review of results	Electrical Operating Authority	Annual
Related Controls –				

Reviewed July 2012

System Control # 0086	System Control description – Design – IP rated electrical equipment		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Electrical Faults	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To limit the ingress of dust and water into electrical equipment by selecting the equipment with the appropriate IP rating			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
New equipment purchased has an IP rating of "Dust Proof" or better if installed outdoors in mine	Check the IP rating on new equipment	Inspect documentation	Electrician – person using equipment	Ad Hoc
Related Controls –				

Reviewed July 2012

System Control # 0087	System Control description – Standard – Australian Standards/Regulation		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Electrical Faults	Control Type : System Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective; IPR Hazelwood Mine needs to ensure that it complies with the following: AS 3000, Safety Management scheme, HV Blue Book, Bushfire Mitigation, Electrical Safety Act & Its associated regulations, in regard to minimising the risk of fire from electrical faults			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Safety Management System	That equipment is tested on installation	Check test certificate	Elect Sup/ Elect	Ongoing
Bushfire Mitigation Plan	That scheme submitted to ESV	Confirmation of documentation (response & approval)	EMS Manager	Annual
Blue Book –HV Permits	Procedure for issuing and cancelling HV Permit (minimise risk of plant being switched live)	Peruse Paradigm document	Elect Operating Authority	Ad Hoc
Related Controls –				

Reviewed July 2012

System Control # 0088	System Control description – Standard – Site Standard for Cable Handling		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Worn/Damaged Equipment	Control Type : Risk Control	SMS Location. SMS Ref No.. Responsible Officer :
Function/Objective – To ensure that all persons who handle HV cables are competent in the methods of handling, relocating and crossing cables.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
HV Cable handling Course Notes Paradigm #42957	Course notes current	Visual check Paradigm	HR	Three years
HV Cable handling Assessment form Paradigm #42666	Assessment form current	Visual check Paradigm	HR	Three years
List/register of employees trained and assessed to handle HV Cable	That personnel who handle HV Trailing cable are trained	Visual check of Training records	HR	On going
Compliance with training package procedure	That vehicles are not being driven over electrical cables and cable crossing are used	Field Audit	Mine HSO/ Shift Ops Manager/Electrical personnel	Ongoing
For minor relocations	That Take 5 completed	Field Audit	Mine HSO/	As required
For major relocations	That JSA Completed & Electrical operating authority notified	Field Audit	Mine HSO/ Electrical Operating Authority	As required
To ensure that the cable is safe to use	That routine inspection and testing is carried out on cables	Maximo work order and SDT sheets	Shift ops/Electrical	As per SDT PROGRAM & ROUTINE FREQUENCY
Related Controls –				

Reviewed July 2012

System Control # 0089	System Control description – Standard – Site design standard for electrical equipment		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Electrical Faults Scenario – Worn/Damaged Equipment	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective –Low Voltage Electrical equipment used in the mine is to be to appropriate Australian design standard. .			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Specifications for work & equipment on site calls up appropriate Australian Standard	Tender documents and specifications for work/ equipment lists relevant AS.	Review documentation	Auditor	Ad Hoc
Related Controls –				

Reviewed June 2012

System Control # 0099	System Control description – Pre start Checks & Recording		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Plant Vehicles/Exhaust Brakes Fires	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – Prior to driving or operating vehicles or mobile plant in the mine a pre start check must be made and logged in the appropriate log book.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Mobile Plant Pre-start Check undertaken.	Check Whether Pre-start inspection undertaken.	Inspect Plant Records /Log.	Plant Manager/. Supervisor.	Random
Pre-start Check of vehicle undertaken.	Whether Pre-start Check(s) undertaken.	Question Driver(s).	Driver's Supervisor	Random

Related Controls –

Reviewed June 2012

System Control # 0124	System Control description – Contractor Management Process		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Plant Vehicles/Exhaust Brakes Fires	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that the Health and Safety of site contractors and service providers is considered and that they have an appropriate safety management system in place to manage their work in the mine.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
IPR SM 1,2 & 3 Checklists	Compliance to individual sections on check sheet	Use Checksheet (Paradigm) to assess compliance	Contract Manager	Weekly
Verify that the following are occurring Pre-start briefings Toolbox meetings Workgroup meetings (with a Health and Safety report incorporated in it) Take 5 Job Safety Analysis,/ Risk Assessment, Safe Walk Inspections Fresh Eyes	Existence of Minutes, attendance sheets, pre start & toolbox topics	Minuted IPR –GDF SUEZ Attendance at meeting, Sighting visual evidence/ minutes	Mine HSO, Contract Manager	Weekly
	Documented evidence these being carried out	Sighting visual evidence, Field Audits	Mine HSO, Contract Manager	Weekly
Contractor compliance with IPR Mine Fire Instructions, Policy and code of practice	Hot work permits, modified vehicle exhausts, Fire training	Sighting visual evidence, Field Audits	Mine HSO, Contract Manager	Ongoing
Related Controls –				

Reviewed June 2012

System Control # 0129	System Control description – Maintenance – Plant Preventative Maintenance Program		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Electrical Faults Scenario – Worn/Damaged Equipment Scenario – Frictional Heating eg, Conveyors <ul style="list-style-type: none"> - Coal spill/Build Up - Bearing Failure - Brakes o/heating - Bunker Fires Scenario - Frictional Heating eg Tools/Pumps/Plant -	Control Type : System Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective – To inspect and repair machinery at routine intervals such that the machines safety and operational performance are maintained			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Check the completion of scheduled routines against maintenance plan	Percentage of scheduled routines completed	Maximo reporting data	Mine Statistician	Monthly
Related Controls –				

Reviewed September 2012

System Control # 0132	System Control description – Procedure Lubrication		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Friction fires Bearing Failures	Control Type : Risk Control Critical System Control System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To maintain appropriate lubrication of wearing/moving components so as to prevent components from failing and potentially causing fires.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Lube schedules are documented for all major machines and conveyors	Lube schedules for all machines are in Paradigm & current	Check in Paradigm	Asset Mgr	3 yearly
Completion of lube routines is monitored	Completion of routines	Graphs of % completed to current date.	Mine Statistician	Monthly
Faults from routines are acted upon	W/O's are raised for faults from lube reports	Inspection of completed routines	Maintenance Manager	Annual
Related Controls –				

Reviewed May 2012

System Control # 0151	System Control description – Shiftly Fault Inspections		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Frictional Heating eg, Conveyors <ul style="list-style-type: none"> - Seized Idlers - Belt rubbing on guard on coupling - Bearing Failure Scenario – Coal spill/Build Up <ul style="list-style-type: none"> - Bunker Fires 	Control Type : Critical System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that all plant faults in the Mine that are discovered that could potentially lead to a fire hazard are reported via the Control centre for maintenance.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Duties of Control Centre Attendant (Paradigm Document # 350).	Fault Reports	Shift Log	Shift Manager.	Each Shift.
Duties of Coal Systems Operator (Paradigm Document # 357).	Fault Reports	Shift Log	Shift Manager.	Each Shift.
Duties of Road Runner (Paradigm Document # 482).	Fault Reports	Shift Log	Shift Manager.	Each Shift.
Related Controls –				

Reviewed May 2012

System Control # 0167	System Control description – Fire Suppression Systems		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Mine Fire Hazard – Incident Mitigating Control	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that Mine Fire Suppression Systems are always in a state of readiness. FFE audits need to be carried out.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Preliminary FFE Audit (Stage 1).	Equipment, systems and procedures	Inspection.	Production Manager.	Annually in July.
Ensure equipment/system defects are rectified prior to September.	Defects rectified.	Paradigm OFI's.	Production Manager	Annually.
Final Pre-fire season FFE Safety Audit (Stage 2).	Equipment, systems and procedures	Inspection as per checklist.	Production Manager.	Annually in September.
Shiftly Fault Reporting.	Fault Reports.	Shift Log.	Shift Manager.	Each Shift.
Related Controls –				

Reviewed September 2012

System Control # 0184	System Control description – Design – Conveyor Systems		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Seized idlers Bearing Failure MMH Fixed structure failure Overloading Corrosion	Control Type : Risk Control Critical System Control System Control	SMS Location SMS Ref No. Responsible Officer :
<p>Function/Objective – The design of the conveyors must be adequate and suitable for normal life and conditions such as normal loading, and overload situations it should be designed to minimise corrosion, spill and risk of fire The existing conveyor structures were built to the standards appropriate at the time of design. Regular scheduled Plant condition inspections should be carried out. Plant design must also comply with the requirements of OHS Hazard Regulations (Plant) 2007</p>			
<p>Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc</p>			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Are Documented Risk Assessment carried out	Evidence of documented risk assessments	Audit of control measures effectiveness	Mine HSO	Weekly
Are Scheduled structural inspections carried out for elevated structures	Evidence of scheduled inspections being carried out – reports from independent consultants etc	Check for existing routines inspections in Maximo and for defects raised from inspections	Mine HSO	4 yearly & 8 yearly
Are the reported defects found during inspections actioned and tracked	Work orders In Maximo	Look at outstanding defect work orders in Maximo	Mine HSO	Weekly report on outstanding maximo w/o
Conduct Safe work Inspections of conveyors	As per SWI check sheet	Field audit	Nominated person as per safety walk schedule	Monthly
Conveyors systems have overload detection and trips and warning devices	Overload/malfunction detection and trips tested periodically to confirm functionality and if not functional repaired. That these safety Devices tested on scheduled basis (as per maximo routines)	Confirm settings and correct operation by functional test	Tech Electrician	As per W/O
Emergency stop system are working	Emergency stop wires & buttons tested on a scheduled basis (as per maximo routines)	Electrical routine - Functional test	Electrical Group	As per various schedules
Related Controls –				

Revised May 2012

System Control # 0218	System Control description – Access to Emergency Services		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Mine Fire Hazard – Incident Mitigating Control	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that appropriate access to all Emergency Services is achieved in a controlled manner and that access to site to the correct location for the emergency is achieved as expeditiously as possible.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Fire brigade are able to access site	Incorporated in Emergency Services Plan with contact details	Review of Emergency Response Plan	Mine Planning Superintendent	Annual
Cooperative planning between CFA and Electricity Generators	Agreement between CFA and Electricity Generating Companies	Check Standard Operating Procedure is current	Mine Planning Superintendent	3 yearly
Ambulance service are able to access site	Incorporated in Emergency Services Plan with contact details	Review of Emergency Response Plan	Mine Planning Superintendent	Annual
Police are able to access site	Incorporated in Emergency Services Plan with contact details	Review of Emergency Response Plan	Mine Planning Superintendent	Annual
SES are able to access site	Incorporated in Emergency Services Plan with contact details	Review of Emergency Response Plan	Mine Planning Superintendent	Annual
Related Controls –				

Revised May 2012

System Control # 0232	System Control description – Safety Device Testing Program		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Plant Brake Overheating	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that Safety Device Testing Program for Major Mine Machine is conducted to as per SDT procedures and as schedule by SD Accredited Testers.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Safety Device Testing Schedule.	Existence of Schedule.	Perusal.	Asset Manager/Mine Admin.	As required.
Safety Device Testing Schedule.	Completion of SD tests.	Perusal of records.	/Mine Admin.	As required.
Testing and Inspection of Safety Devices.	Paradigm Document # 2565.	Perusal.	Asset Manager.	As required.
Safety Device Testing Fault Rectification.	Close-out of Faults.	Perusal of SDT Sheets.	Production Manager.	As required.
Mine Safety Device Testers	Existence of List/register of accredited SDT's	Perusal	HR/Auditor	As required
Related Controls –				

Reviewed July 2012

System Control # 0270	System Control description – Electrical Protection Systems		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Electrical Faults Scenario – Worn/Damaged Equipment	Control Type : Risk Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective – The Mine Electrical Protection System is designed to isolate plant from its supply when the plant becomes overloaded			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Thermal overloads are checked and tested	Routine testing of thermal overloads is part of electrical protection routine	Review of completed protection routines	Auditor	Ad Hoc
All devices are protected against electrical overload by design	That equipment has electrical overload protection	Check electrical drawings	Auditor	Ad Hoc
Related Controls –				

Reviewed May 2012

System Control # 0283	System Control description – Fire Kits In all Vehicles/Plant		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Mine Fire Hazard – Incident Mitigating Control	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
<p>Function/Objective – To ensure that all Mine Vehicles and Mobile Plant are protected from fire and eliminated as a source of fire a Standard Vehicle Fire Suppression Pack.is fitted.</p> <p>The Fire Suppression Pack comprises:</p> <ul style="list-style-type: none"> • 2-off 30 metre x 38 mm high percolation Fire hose with C.F.A. couplings; and • Hose director and a 16 mm open ended nozzle; and • Knapsack Spray with the container fully charged with water ready for use on small Fires 			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Routine Cleaning including exhaust systems.	Vehicle Housekeeping.	Random Inspection, including "Fresh Eyes".	Mine Staff.	Random.
Mine-approved exhaust system (vehicles).	Vehicle has "HeatSafe" exhaust insulation.	Visual Inspection.	Fire Services Supervisor.	When each vehicle arrives on site.
Standard Vehicle Fire Suppression Pack.	Contents of suppression pack.	Annual pre-fire season audit.	Managers/Supervisors.	Annually & ongoing
Related Controls –				

Revised May 2012

System Control # 0284	System Control description – Fire Hydrants/Sprays located near all plant		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Mine Fire Hazard – Incident Mitigating Control	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that operating sprays and fire hydrants are located as per the Mine Fire Service Policy & code of Practice.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Standard 65 mm Fire Hydrants located at 55 m max. spacing on pipelines.	Compliance with Code.	Annual FFE Audit	Production Manager.	July & September each year.
Standard 18 mm Nozzle Circular/Sector Fire Sprays located at 55 m max. spacing (Bauer) or 100 m max. spacing (Lanzoni) on pipelines.	Compliance with Code.	Annual FFE Audit	Production Manager.	July & September each year.
Fire Service Spray Coverage.	Annual Wet Test.	Aerial Survey including photographs.	Production Manager.	Annually.
Related Controls –				

Reviewed May 2012

System Control # 0285	System Control description – SDT of machine fire system		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Mine Fire Hazard – Incident Mitigating Control	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that Safety Device Testing of Major Machine Fire Systems is undertaken by Accredited Testers using a rostered schedule			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Accredited SD Testers (Fire Prevention).	Accreditation Register (Paradigm Document # 38068).	Perusal.	SDT Manager.	As required.
Training of Accredited SD Testers (Fire Prevention).	Training course.	Aptitude Test.	SDT Manager.	As required.
Fire Fighting Equipment SDT (Paradigm Document # 38520).	Fire Fighting Equipment Certificate.	Perusal.	Production Manager.	Each Test.
Rectification of Fire Fighting Equipment Faults.	Fire Fighting Equipment Certificate (including Work Orders).	Perusal.	Production Manager.	Each Test.
Safety Device Testing Schedule.	Existence of Schedule.	Perusal.	Asset Manager/Mine Admin.	As required.
Related Controls –				

Reviewed June 2012

System Control # 0287	System Control description – CITEC Fire Alert System		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Mine Fire Hazard – Incident Mitigating Control	Control Type : System Control	SMS Location SMS Ref No. Responsible Officer :
<p>Function/Objective – Weather monitoring is carried out on an ongoing basis and condition values are set in CITECT to set off an EXTREME fire danger warning. Communication to Personnel of Fire Alert - When a Fire Alert has been declared, the following communication procedure will be initiated to warn all personnel entering or working near the Hazelwood Mine - The Fire Alert button is activated on CITECT, which enacts an SMS alert to designated staff and alerts those using CITECT</p>			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Weather Monitoring.	Temperature/Humidity/Wind Speed.	Weather Station.	CITECT System.	Continuous.
Extreme Fire Risk.	Worsening Environmental conditions: <ul style="list-style-type: none"> • Temperature > 32°C • Humidity < 25% • Wind Speed > 30 kph 	Weather Station Alarm.	CITECT System.	Continuous.
Declaration of a Mine 'Fire Alert'.	Extreme Fire Risk scenario.	Alarm + Observation.	Director Mining/Production Manager/Production Superintendent/1X7 Team Leaser.	As required in Extreme conditions.
Related Controls –				

Reviewed June 2012

System Control # 0288	System Control description – Annual Fire Safety Audits		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Escalation Scenario	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that pre-fire season Safety Audits of Fire Fighting Equipment (FFE) are undertaken annually in two stages.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Preliminary FFE Audit (Stage 1).	Equipment, systems and procedures	Inspection.	Production Manager.	Annually in July.
Ensure equipment/system defects are rectified prior to September.	Defects rectified.	Paradigm OFI's.	Production Manager	Annually.
Final Pre-fire season FFE Safety Audit (Stage 2).	Equipment, systems and procedures	Inspection as per checklist.	Production Manager.	Annually in September.
Related Controls –				

Reviewed June 2012

System Control # 0289	System Control description – Fire Preparedness Plan		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Escalation Scenario	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that an Annual Season-specific Fire Preparedness Plan is complied in September.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Ensure equipment/system defects are rectified prior to September.	Defects Rectified.	Paradigm OFI's.	Production Manager	Annually.
Compile Annual Season-specific Fire Preparedness Plan	Predicted Fire Season weather conditions.	BOM/CFA.	Production Manager.	Annually in September.
Annual Fire Preparedness Plan.	Plan Promulgated.	Read Email.	Mine Personnel.	Ongoing during CFA Declared Fire season,
Related Controls –				

Revised May 2012

System Control # 0290	System Control description – Daily Preparedness Plan		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Escalation Scenario	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure, that when required, Daily Fire Preparedness Plans are prepared and promulgated.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Fire Risk.	Forecast Temperature, Humidity and wind Speed.	BOM/CFA	Production Manager.	Ongoing during CFA Declared Fire season,
Compile Daily Fire Preparedness Plan(s).	Forecast Temperature, Humidity and wind Speed.	BOM/CFA	Production Manager.	Ongoing during CFA Declared Fire season,
Daily Fire Preparedness Plan(s).	Plan Promulgated.	Read Email.	Mine Personnel.	Ongoing during CFA Declared Fire season,
Related Controls –				

Reviewed May 2012

System Control # 0291	System Control description – Training – Annual Fire		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Lightning Scenario – Electrical Faults Scenario – Worn/Damaged Equipment Scenario – Frictional Heating eg, Conveyors Scenario – Frictional Heating, eg Tools/Pumps/Pump Scenario – Coal Build-up Scenario – Hot Works Scenario – Smoking/Lighters/Matches Scenario – Bush Fire Scenario – Incorrect Storage of Flammable Materials Scenario – Spontaneous Combustion	Control Type : System Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective – To ensure that all personnel who work in the Mine, including Contractors, undergo an Annual Fire Training course, including an assessment.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Existence of a formal Annual Fire Training Course.	Course notes/assessment.	Reading.	Director Mining.	Annually.
Delivery of a formal Annual Fire Training course.	Programmed dates of training courses.	Posters/Email.	Services Supervisor(s).	Annually, pre Fire Season Declaration.
Attendance at Annual Fire Training course.	Attendance list from training sessions.	Reading.	Training Officer/Mine Admin.	Annually.
Related Controls –				

Reviewed July 2012

System Control # 0294	System Control description – Fire Suppression in cubicles		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Electrical Faults	Control Type : System Control	SMS Location SMS Ref No. Responsible Officer :
<p>Function/Objective –A Pyrogen fire detection and protection system is used on specified mine electrical cubicles for dredges and conveyors, because of the nature and the remote location of some of the electrical equipment in the mine. The system consists of a Pyrogen canister and thermal cord, once these are activated an alarm will be transmitted to the SOCC & either Fire Services or Diamond Protection as well as the shift electrician should be notified.</p>			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Compliance with Pyrogen Fire Detection & suppression system procedure for mine electrical cubicles	Cubicles fitted with Pyrogen system meet procedure criteria	Inspection	Auditors	Ad Hoc
Pyrogen canisters are within their 10 year use by date	Check dates on canisters	Visual inspection	Electricians/ electrical personnel	As per mine plant HV and LV routines
Related Controls –				

Reviewed July 2012

System Control # 0301	System Control description – Environmental & Dangerous Goods Audits		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Incorrect Storage of Flammable Materials	Control Type : Risk Control Critical System Control System Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective – There is a requirement to ensure that both Environmental and Dangerous goods audits are carried out on a regular basis to ensure that correct storage and signage of flammable materials is undertaken on site.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Designated Fuel Storage Facilities	Facilities and signage as per manifest drawing	Field Audit.	Dangerous Goods Officer.	Annually.
Bunded Bulk Storages.	Integrity of Bunds.	Field Audit.	Environmental Officer.	Annually.
Related Controls –				

Revised May 2012

System Control # 0302	System Control description – Thermal Imaging		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Frictional Heating e.g., Conveyors. <ul style="list-style-type: none"> - Seized Idlers - Bearing Failures 	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
<p>Function/Objective – To ensure that where applicable, thermal Imaging is undertaken to monitor heat build-up in idlers, bearings, etc. . The use of thermal imaging viewers can assist in the detection of hot spots to either assist with the fire fighting efforts, or to enable personnel to have the awareness of areas of high heat and potentially fire to keep away from. Thermal Imaging equipment can also assist the user to better fight the potential of a brown coal fire.</p>			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Thermal Imaging Procedure (Belle Banne).	Existence of Procedure.	Perusal.	Production Manager.	As required.
Thermal Imaging Inspection Register (HZR005a).	Contents of Register.	Perusal.	Maintenance Manager.	As required.
'Faulty Idler Component' ID including adhesive labelling.	Faulty Idlers.	Shift Reports.	Shift Manager/Maintenance Manager.	As required.
Related Controls –				

Reviewed June 2012

System Control # 0303	System Control description – Visual Hot Spot Monitoring		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Spontaneous Combustion	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – There are several known “hot spots” on various coal faces in the mine. These have been repaired/ remediated but they still require ongoing inspection/ monitoring on a regular basis due to possible spontaneous combustion eruptions			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Monitoring of "Hot Spots"	Check of known hot spot areas	Visual (smoke haze) Smell (carbon)	Fire Services	Tri weekly
Monitoring of coal faces and Hot Spots	Check of coal faces and hot spot areas	Visual (smoke haze)	Shift Ops 2 x12	Shiftly
Related Controls –				

Reviewed June 2012

System Control # 0305	System Control description – Modified Exhaust Policy		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Plant Vehicles/Exhaust Brakes Fires	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective –It is Mine requirement that all 4 wheel drive Motor vehicles and mobile plant must be fitted with an approved exhaust system and that they must carry a "Fire Suppression Pack". Otherwise they are not permitted to travel on coal surfaces.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Vehicle has approved exhaust system fitted	Register of Mine approved vehicle	Visual	Mine HSO/Operations Superintendent	Ongoing
Vehicle/ Mobile plant has Fire suppression pack	Knapsack is fully charged. Condition of hoses	Field check that pack complete, functional & in good condition	Mine HSO/Operations Superintendent	Ongoing
Inspection of engine and exhaust system	Check for Coal/coal dust deposits on exhaust & engine	Visual	Driver	Every two hours
Related Controls –				

Reviewed June 2012

System Control # 0306	System Control description – Water Washers & Underbody Wash		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Plant Vehicles/Exhaust Brakes Fires	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – When operating on coal, engine and exhaust systems must be inspected at two-hourly intervals and washed down where necessary, to achieve this there a various water washers/ underbody washers situated in the mine area. Washing the under body of a vehicle that has travelled on exposed brown coal is the best way to minimise the build up of coal on hot vehicle exhaust systems			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Inspection of engine and exhaust system	Check for Coal/coal dust deposits on exhaust & engine	Visual	Driver	Every two hours
Related Controls –				

Reviewed June 2012

System Control # 0307	System Control description – Policy – Mine Smoking		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Smoking/Lighters/Matches	Control Type : System Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective – Smoking is prohibited on the entire IPRH mine site, including IPRH vehicles, except in the designated areas All personnel in and around the mine are to comply with the Mine smoking policy.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Smoking prohibited in mine	Compliance with Policy	Visual/ field audit	Supervisor/ Mine HSO	Ongoing
Related Controls –				

Reviewed May 2012

System Control # 0308	System Control description – Procedure – Bunker Wash		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Coal Build Up	Control Type : System Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective – . Regular planned Hazelwood Slot Bunker wash downs are to be carried out every 6 to 8 weeks. This will ensure that good housekeeping is undertaken in the Hazelwood Slot Bunker and minimise the risk of fire			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Good Housekeeping in HSB.	Coal build-up.	Site Inspection.	Fire Service Officer and/or Production Manager.	Regularly.
Bunker Washdown.	Coal build-up.	Site Inspection.	Operations Personnel.	Every 6-8 weeks.
Bunker Washdown.	Compliance with Audit Checklist.	Paradigm Document # 39540.	Production Manager.	As required.
Related Controls –				

Reviewed July 2012

System Control # 0309	System Control description – Temperature Monitoring/Trips of Critical Components		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Frictional Heating eg Pumps/Plant	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – Critical mine system components that have a risk of overheating, have their temperature monitored with trip levels set to stop the plant when the temperature gets too high			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
List of critical components of system monitored available	That there is a list of critical components of system that have their temperature monitored.	Visual check of list	Asset Manager	As required
Evidence of temperature monitoring of critical plant components	That CITECT critical component monitoring screen display is available	Electronically & Visual	Shift Production Manager/ CCA	Ongoing system
Trip levels are appropriate for the device equipment	Technical information from manufacture is on file	Review of document against trip value	Asset Manager	On design as required after
Prove that the temperature trip functions correctly	Proof - Monitoring device is working and trip at temperature works	Function test	Technical/ electrical	As specified in protection routines - Maximo
Related Controls –				

Reviewed July 2012

System Control # 0312	System Control description – Steel Structures Electrical Isolated		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Lightning	Control Type :	SMS Location
		System Control	SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that any lightning strikes to plant are effectively controlled with minimal risk to personnel or plant			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Plant Steel Structures are effectively earthed	For continuity of earth system	Electrical testing	Electricians	As required by electrical regulations
Related Controls –				

Reviewed July 2012

System Control # 0313	System Control description – Surge Diverters/Lightning arrestors on plant		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Lightning	Control Type : System Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective – This equipment is designed to divert the lightning strikes directly into the earthing system to reduce or limit to reduce the risk of components catching fire due to lightning strikes			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Surge diverters are incorporated into the design of the electrical system	That Surge diverters are shown in electrical drawings	Check that surge diverters are installed as designed.	Electricians	Ad Hoc
Related Controls –				

Reviewed June 2012

System Control # 0314	System Control description – Electricians on site 24/7 for defect repair/isolation		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Worn/Damaged Equipment	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that there is always an electrician on site for 24/7 availability. Each leg of the shift roster has an electrician rostered onto it			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Electrician(s) available on site.	2 X 12 Shift Roster.	Roll Call.	Shift Manager.	Each oncoming Shift.
Shift Manager/Team Leader undertake a Shift Changeover meeting.	Minimum manning numbers.	Roll Call.	Shift Manager/Team Leader.	At commencement of each shift.
Shift Manager/Team Leader call-in or retain personnel to ensure minimum manning.	Minimum manning numbers.	Shift Records.	Shift Manager/Team Leader.	At commencement of each shift.
Related Controls –				

Reviewed May 2012

System Control # 0330	System Control description – Fault Reporting & Recording System		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Frictional Heating eg, Conveyors	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that all Operators of Mine Plant Items report faults to maintenance for repairs.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Reporting faults.	Shift Report.	Regular/Random checks.	Production Manager.	Regularly.
Plant Condition.	Routine Maintenance Reports.	Read report post maintenance.	Supervisors/Plant Owners.	Following every Scheduled Outage.
Plant Condition.	Outage Report.	Read report post outage.	Supervisors/Plant Owners.	Following Plant Item return from outage.
Related Controls –				

Reviewed June 2012

System Control # 0330	System Control description – Procedure – Fault Reporting & Recording System.		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Electrical Faults Scenario – Worn/Damaged Equipment Scenario – Frictional Heating g, Tools/Pumps/Plant	Control Type : System Control	SMS Location
	SMS Ref No.		
	Responsible Officer :		
Function/Objective – To ensure that there is a system for reporting & recording plant faults			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Reporting faults.	Shift Report.	Regular/Random checks.	Production Manager.	Regularly.
Plant Condition.	Routine Maintenance Reports.	Read report post maintenance.	Supervisors/Plant Owners.	Following every Scheduled Outage.
Plant Condition.	Outage Report.	Read report post outage.	Supervisors/Plant Owners.	Following Plant Item return from outage.
Related Controls –				

Reviewed May 2012

System Control # 0341	System Control description – Competent and/or licensed operators		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Plant Brake Overheating Scenario Human Error – Incorrect wiring of device causing overheating/fire	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that ALL Operators of Mine Plant are Competent and/or Licensed.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Personnel Operating Mine Plant are Competent and/or Licensed.	Possession of appropriate Ticket/License.	Photocopy of current Ticket/License.	Mine Admin.	On commencement with IPRH and when Ticket/Licence is renewed/upgraded.
Personnel Operating Mine Plant are Competent and/or Licensed.	Operator Competency.	Competency Test.	Training Officer.	As required.
Personnel Operating Mine Plant are Competent and/or Licensed.	Operator Competency.	CHRIS records.	Training Officer/Mine Admin.	As required.
Related Controls –				

Reviewed June 2012

System Control # 0351	System Control description – Supervision		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Plant Vehicles/Exhaust Brakes Fires	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective The supervisor is responsible for overseeing the safety of all the workers he is responsible for. His other responsibilities relate to ensure that IPR Policies , Practices and procedures are followed.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Mine approved exhaust system fitted	Check vehicle	Visual	Supervisor	Annual
Fire Suppression Pack fitted to vehicle	Check vehicle	Visual	Driver /Supervisor	Ongoing
Inspection every two hours & washed down where necessary	Check Vehicle	Visual	Mine Authorised Driver/Supervisor	Ongoing
Related Controls –				

Reviewed June 2012

System Control # 0354	System Control description – Plant Modification System		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Electrical Faults Scenario – Plant Brake Overheating	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – When modifying or decommissioning plant there is a need to ensure that the relevant IPR GDF SUEZ procedures are complied with ie AG 15 Plant Mods. A risk assessment on the effect the changes will have on operations and maintenance must be conducted.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
AG 15 Procedure current	AG15 exists in Paradigm	Visual perusal	Mine HSO	As required
Compliance with AG15 requirements	Risk assessment carried out, AG15 Appendix 1 filled in	Visual check of documents	Mine HSO	As required
Has the modification documentation been completed, and all follow-up action implemented	Electrical drawing changes marked up	Visual check of documents	Mine Maintenance Mechanical/ Electrical Engineer	As required
Related Controls –				

Reviewed September 2012

System Control # 0381	System Control description – JSA		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Maintenance Activity Failure Scenario - Incorrect Storage & Handling of flammable materials	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – The function of the Mine JSA (Job Safety Assessment) is to provide a formal method of identifying hazards, associated with a nominated job, quantify the level of risk for each hazard and then specify the controls to be used to reduce the risk for each hazard to an acceptable value.			
Ref. k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Correct proforma is used	Current Version of blank form	Compare to latest version in Paradigm	Supervisor.	Prior to work.
JSA Form is fully filled out	Completion of JSA Process	Review document	Supervisor.	After work completed.
Final risk levels are at or below the levels set as acceptable by the business	Final hazard risks	Compare to business acceptable values	Supervisor	At JSA completion
All work force members have signed on the completed JSA	Completion of JSA Process	Review document	Supervisor.	After work completed.
Control measures have been implemented	Number of control measures implemented	Review completed document	Supervisor	Prior to work start
Personnel trained in JSA preparation	All personnel trained	Check training register	Training Officer	Annual
Check JSA system is operating.	Site checking JSA system elements	Field Audit Physical inspection and question workers	Mine HSO	Random
Related Controls –				

Reviewed September 2012

System Control # 0395	System Control description –Licensed Electricians		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Incorrect wiring of devices MMH Electricity	Control Type : Risk Control Critical System Control System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – Licenced and registered to do electrical work in Victoria as required by the Electrical Safety Act and the IPR-GDF SUEZ Electricity safety management scheme			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Electricians licences are current	List of licence number of electricians and their expiry dates are on record	Systematic check of records	HRO	As required
Related Controls –				

Reviewed May 2012

System Control # 0403	System Control description – Operational Cleaning		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Frictional Heating eg Tools/Pumps/Plant	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that Mine Operations Personnel undertake inspection and cleaning of plant.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Duties of Coal System Operator.	Paradigm Document # 357.	Perusal.	Shift Manager/Team Leader.	Ongoing.
Duties of Road Runner.	Paradigm Document # 482.	Perusal.	Shift Manager/Team Leader.	Ongoing.
Duties of HSB Attendant.	Paradigm Document # 483.	Perusal.	Shift Manager/Team Leader.	Ongoing.
Duties of Dredger Crew.	Paradigm Document # 358.	Perusal.	Shift Manager/Team Leader.	Ongoing.
Duties of Stacker Crew.	Paradigm Document # 487.	Perusal.	Shift Manager/Team Leader.	Ongoing.
Duties of MSC Operator.	Paradigm Document # 481.	Perusal.	Shift Manager/Team Leader.	Ongoing.
Duties of Hopper Operator.	Paradigm Document # 484.	Perusal.	Shift Manager/Team Leader.	Ongoing.
Related Controls –				

Reviewed September 2012

System Control # 0415	System Control description – Condition Monitoring Program		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario –Friction fires Bearing failures	Control Type : Risk Control Critical System Control System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To monitor progressive wear & deterioration of major components & equipment to allow repair/replacement at calculated limit values. The program covers oil sampling, grease sampling, physical measurement & vibration monitoring recording			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Condition monitoring program	Condition monitoring schedule	Visual check	Asset management	Yearly
Oil and grease sampling	Oil sampling analysis report	Work orders for remedial action in maximo	Technician	3 Monthly
Vibration analysis	Vibration analysis	Work orders for remedial action in maximo	Technician	2- monthly
Related Controls –				

Reviewed June 2012

System Control # 0444	System Control description – CO Monitoring (as part of Emergency Response Plan)		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Mine Fire Hazard – Incident Mitigating Control	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that Carbon Monoxide (CO) monitoring is undertaken during a fire emergency in the Mine and to limit personal exposure. CO detectors are a portable device worn by an employee that monitors the presence of the carbon monoxide (CO) gas and give an warning alarm at set levels.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Operational instructions detail CO limits & practices for limiting personal exposure	Procedures are in Paradigm	Audit	Nominated person.	Ad Hoc
Specified number of CO monitors available	Check #'s and calibration date	Visual	Mine HSO	Ongoing
CO Monitors are checked and tested for correct operation	Dates of testing & functionality of device	Before use of monitor	User	Before every use
Related Controls –				

Reviewed May 2012

System Control # 0445	System Control description – Fire Tankers on Site		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Mine Fire Hazard – Incident Mitigating Control	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that Mine on-site Fire Tankers are always in a state of readiness in case of fire.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Presence of Fire Tankers on site.	Mine Fire Emergency Equipment Shed.	Observation.	Fire Services Officer.	Ongoing.
Fit for Purpose/Readiness of Fire Tankers on site.	Mine Fire Emergency Equipment Shed.	Inspection.	Fire Services Officer.	Regularly.
Fit for Purpose/Readiness of Fire Tankers on site.	Mine Alliance Contractor RTL's Water Carts.	Inspection.	Fire Services Officer/RTL supervisor.	Regularly.
Competent personnel to Man/Operate Fire tankers.	Mine Fireman/Operator Training Program.	Aptitude Assessment Test.	Fire Services Officer.	Regularly.
Related Controls –				

Revised June 2012

System Control # 0446	System Control description – Specialised equipment for fighting mine fires on batters (eg Crane Monitors)		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Mine Fire Hazard – Incident Mitigating Control	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
<p>Function/Objective – To ensure that specialised Mine Fire Fighting Equipment (FFE) such as Mobile Crane Water monitors, are always in a state of readiness in case of fire. Inspect and test crane mounted monitors before the oncoming fire season. Inspect and monitor slip on fire tankers on a weekly basis during the fire season.</p>			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Presence of Specialised FFE on site.	Mine Fire Emergency Equipment Shed.	Observation.	Fire Services Officer.	Ongoing.
Fit for Purpose/Readiness of Specialised FFE.	Mine Fire Emergency Equipment Shed.	Inspection.	Fire Services Officer.	Regularly.
Competent personnel to Man/Operate Specialised FFE .	Mine Fireman/Operator Training Program.	Aptitude Assessment Test.	Fire Services Officer.	Regularly.
Related Controls –				

Reviewed May 2012

System Control # 0447	System Control description – Fire Response Provider		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Mine Fire Hazard – Incident Mitigating Control	Control Type : System Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective – To ensure that if required as a back-up resource during a Mine Fire Emergency, Diamond Protection are called on to respond.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Emergency Response Provider Contract (Currently Diamond Protection).	Currency of Contract.	Peruse Contract Conditions.	Emergency Manager/Contracts Manager.	Annual
Emergency Response Provider Contract (Currently Diamond Protection).	Request Response Team.	Emergency Records.	Emergency Manager	As required.
Knowledge of Diamond Protection (back-up) Emergency Response capabilities.	Fire Fighting Equipment (FFE) provided by Diamond Protection.	Audit.	Emergency Manager	Ongoing.
Related Controls –				

Reviewed June 2012

System Control # 0468	System Control description – Fire Policy & Procedure		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario - Mine Fire Hazard – Incident Mitigating Control	Control Type : System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that the Mine Fire Services Policy & Code of Practice is promulgated to the workforce and reviewed annually.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Existence of Mine Fire Services Policy & Code of Practice document.	'Current' Paradigm document # 2589.	Peruse document.	Director Mining.	Annually.
Contents of Mine Fire Services Policy & Code of Practice document.	Employee understanding of contents.	Aptitude Test.	Fire Services Officer.	Annually.
Updating of Mine Fire Services Policy & Code of Practice.	Updated 'Draft' Version of 'Current' Document.	Review document.	Civil Assets Manager.	Annually.
Related Controls –				

Reviewed June 2012

System Control # 0468	System Control description – Mine Fire Services Policy & Code of Practice		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Hot Works Scenario – Escalation Scenario	Control Type : Critical System Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective – To ensure that the Mine Fire Services Policy & Code of Practice is promulgated to the workforce and reviewed annually.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Existence of Mine Fire Services Policy & Code of Practice document.	'Current' Paradigm document # 2589.	Peruse document.	Director Mining.	Annually.
Contents of Mine Fire Services Policy & Code of Practice document.	Employee understanding of contents.	Aptitude Test.	Fire Services Officer.	Annually.
Updating of Mine Fire Services Policy & Code of Practice.	Updated 'Draft' Version of 'Current' Document.	Review document.	Civil Assets Manager.	Annually.
Related Controls –				

Reviewed May 2012

System Control # 0470	System Control description – Fire Instructions		
MMH Group	MMH Group- Mine Fire (MMH No 7)	Control Type :	SMS Location
	Scenario – Smoking/Lighters/Matches	Critical System Control	SMS Ref No.
	Scenario – Escalation Scenario		Responsible Officer :
Function/Objective – To ensure that the Mine Fire Instructions are promulgated and reviewed annually.			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Mine Fire Instructions.	Paradigm Document # 40686.	Peruse.	Director Mining.	Annually.
Mine Fire Instructions.	Paradigm Document # 40686.	Review.	Mine Planning Superintendent.	Annually.
No Smoking Areas.	Signage.	Observation.	Mine Production Manager.	Ongoing.
No Smoking Policy.	Mine Safety Blimp.	Email to mine All.	Mine H&S Officer.	Annually.
All Fires in the Mine Area to be reported to the Mine Control Centre (ext'n 3333).	Reporting of Fires.	Shift Records.	Mine Production Manager.	Ongoing.
All Fires in the Mine Area to be reported to the CFA Monthly.	Fire Report Form.		Fire Services Officer.	Monthly.
Related Controls –				

Reviewed September 2012

System Control # XXXX	System Control description – Belt alignment & tracking		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Friction Fires – Rubbing on structures Rotating components rubbing on guards	Control Type : Risk Control Critical System Control System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – To ensure that belt tracks centrally and correctly so as to minimise spill and friction damage			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Shiftly inspections	Belt tracking & alignment correct	Inspection	Shift ops	As req
Check of alignment after track shift or belt modifications (extension or shorten)	Check service procedure	Inspection	Supervisor/ auditor	As req
Related Controls –				

Reviewed September 2012

System Control # XXXXX	System Control description – Bunker Mist Sprays		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Bunker Fire	Control Type : Risk Control Critical System Control System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – Overhead mist sprays are fitted to the roof of the HSB to minimise the coal dust generated in the bunker. (Whilst Birds mouth sprays are fitted to M170's (H/E), 180's & 190's conveyor series to provide protection against conveyor belt fires)			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Ensure system is working correctly	Overhead mist sprays are operational and generating mist	Visual inspection / Audit	Operations(bunker attendants) Fire services personnel	Regular daily operational checks & annual audit
	Birds mouths sprays are operational	Visual inspection / Audit	Fire services personnel	Annual Audit
Related Controls –				

Reviewed September 2012

System Control # XXXXX	System Control description – Incorrect wiring of devices		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Electrical Faults – Human Error	Control Type : Risk Control Critical System Control System Control	SMS Location
		SMS Ref No.	
		Responsible Officer :	
Function/Objective – To ensure that electrical devices are correctly wired by a licenced electrician who follows drawings, instruction, information, manuals etc			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
On line drawing system accessible to electrical personnel	System available to network connected PC's	Visual check	Auditor	As required
Controlled copies of drawings are completed and are up to date.	Check drawings are correct revision	Regular review and update	Drawing Office	As required,
Information –drawings, manual, instructions available for device	Information followed	Visual and test	Electrician	Each time
Related Controls –				

Reviewed September 2012

System Control # XXXX	System Control description – Dredger Dig Load Limiter		
MMH Group	MMH Group- Mine Fire (MMH No 7)	Control Type :	SMS Location
	Scenario – Coal spill/ build up	Risk Control	SMS Ref No.
	MMH Fixed structure failure Scenario - Overloading	Critical System Control System Control	Responsible Officer :
<p>Function/Objective – A load limiting feature is used to maximise Dredger output rates without exceeding specified limits in a safe and effective manner, this ensures load limit risk control measures relating to the M170's conveyors remain effective at all times. When the current 2500TPH maximum load limit setting is exceeded, the BWB slow speed is automatically reduced and the cabin buzzer beeps twice. This function when change when M170's structural repairs have increased the structures strength</p>			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Ensure dredger coal load limit is set to required value	Load limit settings on dredge	Screen Panel on dredge, Use Citect Panel in CCB to review graphical representation of loading	Mine Electrical Superintendent	Ongoing when coaling
Paradigm Procedure for use of load limiter in place and used	Available & communicated	Field audit	Mine Shift Manager	Ongoing when coaling
Belt weighers on dredgers are calibrated and are valid readings	Check using calibration procedure for weightometer	Check when calibration last conducted	Technical personnel	Ongoing when coaling
Related Controls –				

Reviewed September 2012

System Control # XXXXX	System Control description – Small petrol engines in mine refuelling procedure		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Petrol driven engines	Control Type : Risk Control Critical System Control System Control	SMS Location SMS Ref No. Responsible Officer :
Function/Objective – To ensure that petrol engines used in the mine are refuelled in a safe manner to minimise the risk of fire to personnel or plant			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Small petrol engines in mine refuelling procedure	That procedure in Paradigm is current	Check Paradigm	Mine HSO	Three yearly
Relevant personnel trained in procedure	That relevant personnel trained in procedure (2x12 ops, 1x 7 Fire service, Electrical)	Check training records	HR	As required
Compliance with procedure	Procedure is being adhered to in the field	Field audit/ Fresh eyes	Supervisor/Mine HSO	Ad hoc
Related Controls –				

Reviewed September 2012

System Control # XXXXX	System Control description – Anchor Points Moving		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Friction Fires –Rubbing on Structure	Control Type : Risk Control Critical System Control System Control	SMS Location
			SMS Ref No.
			Responsible Officer :
Function/Objective – Anchor points for conveyors need to be secure to allow tension to be applied evenly across the belt			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
Appropriate number of anchor posts installed (2,4,6)	Movement of posts	inspection	Shift Ops	As req
Anchor posts are placed in good materials	Measure that post does not move	Measure that tension stays constant	Shift Ops	As Req
Posts are put in to correct depth	Length of anchor posts	Tape measure	Services	As req
Related Controls –				

Reviewed September 2012

System Control # XXXX	System Control description – Fixed monitor at transfer points of high spill areas		
MMH Group	MMH Group- Mine Fire (MMH No 7) Scenario – Friction Fires –Coal spill/build up	Control Type :	SMS Location
		Risk Control	SMS Ref No.
		Critical System Control System Control	Responsible Officer :
Function/Objective – To continuously clean areas where low rates of spill occur continuously			
Ref: k:\major mining hazards\mmh review 2009\20100706 current bowties perf measures and control locations\current performance standards\revised performance measure (master).doc			

Related actions & owners:	Notes:			
	Effectiveness Measures:			
Performance Elements:	What to measure	Method of measuring	By who (role)	Frequency of monitoring
That the installed wash down sprays are operational	Sprays operate when plant is in motion	Inspection	Shift ops	Shiftly
Related Controls –				