



VULCAN MINE

Trigger Action Response Plan Lightning

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Trigger Action Response Plan – Lightning

Conditions / Positions	Normal State (Low)	Level 1 Response (Moderate)	Level 2 Response (High)	Level 3 Response (Very High)
Trigger / Conditions	Normal Conditions No lightning activity occurred within 60km of the mine in the last 30 minutes.	Trigger 1 Conditions Lightning activity occurred within 30 – 60km of the mine in the last 30 minutes.	Trigger 2 Conditions Lightning activity occurred within 15 - 30km of the mine in the last 30 minutes.	Trigger 3 Conditions Lightning activity occurred within 15km of the mine in the last 30 minutes.
OCE	Daily monitoring of BOM (and/or equivalent websites e.g. weather zone) for storms and extreme weather which may instigate lightning.	In the event a Level 1 Respond by making a radio call to the effect of (and repeat): <i>YELLOW LEVEL 1 LIGHTNING ALERT: Lightning has occurred within 30 – 60 km of operations.</i> Confirm, shot firers(s) and supervisors have been notified to develop/review blast and explosive compounds exclusion zones and contingencies plans. Monitor storm with lightning detector application. Continue monitoring weather websites and site radio channel.	In the event a Level 2 Respond by making a radio call to the effect of (and repeat): <i>ORANGE LEVEL 2 LIGHTNING ALERT: Lightning has occurred within 15 – 30 km of operations.</i> Confirm, shot firer(s) and supervisors have been notified to commence implementing blast and explosive compounds exclusion zones and contingencies plans. monitor storm with lightning detector application. Continue monitoring weather websites and site radio channel.	In the event a Level 3 Respond by making a radio call to the effect of (and repeat): <i>RED LEVEL 3 LIGHTNING ALERT: Lightning has occurred within 15 km of operations and is now local. Persons must confirm they are lightning safe.</i> Confirm, shot firer(s) and supervisors have been notified to confirm blast exclusion zones and contingencies plans are properly implemented. monitor storm with lightning detector application Continue monitoring weather websites and site radio channel.
	- Continuously monitor lightning detector application. - Be aware of loaded shots and existing misfires and their relevant exclusion zones as advised by shotfirer. - Be aware of current drill and blast contingency and action plans at the start of shift.	- After alert has been issued, communicate over the site radio: - Review blast exclusion zones and drilling and crane operations. - Monitor storm and maintain communication with operations manager where required.	After alert has been issued, communicate over the site radio: - exclusion zones (including blast); - no go zones; - at risk activities; and - further actions/plans. - size, direction and severity of storm; and - pit, blast and other operational information/contingency plans - Assist supervisors and drill and blast crews with implementation of contingency plans or blast zones. - Monitor storm and maintain communication with operations manager. - Monitor action implementation.	- After alert has been issued, communicate over the site radio relevant information, for example: - Move to safe area and monitor situation. - Monitor storm and maintain communication with workgroup supervisors to confirm CMWs are in a safe location. - Monitor action implementation.



Conditions / Positions	Normal State (Low)	Level 1 Response (Moderate)	Level 2 Response (High)	Level 3 Response (Very High)
Supervisors	- Be aware of loaded shots and existing misfires and their relevant exclusion zones as advised by shot firer / OCE. - Be aware of current drill and blast contingency and action plans at the start of shift. - Be aware of what operations are being conducted by crews under supervision.	- Maintain communication with OCE. - Review and identify risks in work area, vulnerable equipment and develop contingency plans to control risk/protect assets. - Confirm work areas or safe locations are outside of blast exclusion zones. - Identify safe locations for workers and how long it takes to mobilise to safety.	- Implement all appropriate contingency plans. - Prepare crew for Red Level 3 Alert and confirm At Risk operations have ceased and crews are preparing for Level 3. - Consult with OCE and instruct operators to mobilise outside of exclusion zones. - Confirm outside work groups are preparing for Level 3 and monitor site radio channel. - Move vulnerable equipment to a safe/designated location.	- Move to a safe area and monitor situation. - Monitor storm and maintain communication with OCE. - Account for personnel and confirm they have been relocated to a place of safe refuge
Drill and Blast Crews	Shot firer to remain aware of loaded shots and existing misfires, blast compound, magazine and their relevant exclusion zones.	- Determine with OCE if loading will continue in blast exclusion zone (primed holes only, tie-in not completed). - Plan the transportation of explosives vehicles to the compound and unused detonators and boosters to the magazine. - Review exclusion zones and communicate to OCE.	- Consult with OCE and evacuate all loaded shots. - Return unused detonators and boosters to magazines. Return all explosives vehicles to the compound and notify OCE. - Secure shot. - Enforce exclusion zones and confirm entrances are demarcated. - Review and check exclusion zones and communicate to OCE.	- Seek shelter in place of safe refuge - Monitor situation by site radio or email.
Outdoor Workers	Normal observation and reporting procedure.	- Normal observation and reporting procedure. - Monitor site radio channel. - If no vehicle present, contact supervisor to advise that pick up maybe required if situation escalates. - Confirm work being undertaken is not in a blast exclusion zone,	- Monitor situation and confirm that a safe area is available close by. - If required, commence mobilising back to crib hut/office area. - If in blast exclusion zone evacuate the area.	- Stop outdoor work. - Seek shelter in a place of safe refuge



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Indoor / Office Workers / Stores	Normal observation and reporting procedure.	- Normal observation and reporting procedure. - Monitor site radio channel and emails.	- Monitor the situation and confirm that a safe area is available close by. - If required, commence mobilising to a place of safe refuge.	Seek shelter in place of safe refuge
Workshop / Drill Rigs / Cranes / Plant with boom or masts Steel-tracked plant or plant with GET Rubber-tyred plant Service truck or bulk tank transporting hazardous chemicals or dangerous goods	Normal observation and reporting procedure.	- Normal observation and reporting procedure. - Monitor site radio channel. - Identify vulnerable equipment and plan to protect the asset.	- Prepare for Red Level 3 Alert. - Monitor situation and confirm that a safe area is available close by. - If required, commence mobilising back to a place of safe refuge. - Move vulnerable equipment to safer location (if possible). - Monitor situation on site radio channel. - Lower masts/booms, minimise operations on equipment, move plant and park in safe location outside exclusion zones. - Cease refueling and service operations	- Stop outdoor work. - Seek shelter in place of safe refuge