

## Monongahela Drift Recovery Plan

Star Mine Operations has prepared this plan for the recovery of the Monongahela Drift. The goal is to provide positive ventilation from the intersection of the Revenue Tunnel and the Virginius/Monongahela vein system advancing the ventilation and securing the ground in an orderly fashion always working under stable ground in fresh air to the end of the drift. There are several key activities to complete the process. They are as follows:

- VENTILATION
  - Establish the positive ventilation of the Monongahela Drift by installing a 50HP fan outby the lunch room
  - Hang/rehang ventbag to Blue Lagoon
  - Advance ventilation and ground support
- GROUND CONTROL
  - Scale work area prior to hanging messenger cable, vent bag and communication lines
  - Clean and support old Monongahela Ore chutes
- ACCESS
  - Clean debris from blast off rail
  - Barricade off inactive work areas
  - Un-detonated explosives
  - Address safety issues at Chinaman chute
- STANDARD PROCEDURES
  - Gas Monitoring
  - Communications

Each major section is addressed separately below.

### VENTILATION

We will have the electricians install the necessary wire & switch gear to accommodate the main ventilation fan just past the lunch room in the main line down the track from the switch leading into the Monongahela drift.

We have located a 50-H.P. high pressure ventilation fan with adequate CFM capabilities, to ventilate the Monongahela Drift, as soon as the electricians finish installing the wire & switch gear, we shall install this fan.

Once the fan is installed & operational, we shall connect the installed 24" ventilation bag to this fan.

When the fan is producing sufficient CFMs, to work in the Monongahela Drift, we shall continue installing messenger line & fan bag, progressing towards the heading. Installing messenger line & fan bag in sections as we monitor the gas levels in this area.

We shall install a tee in the vent line at the Chinaman chute area, with a shutter in the tee to control air flow in either work area.

This fan will remain on 24-hours a day, 7-days per week, to keep this area well ventilated.

Once it is safe to work in this area, and we have adequate fresh air moving through the drift, we can begin to construct proper bulkheads in the areas where ventilation air could leak into old mine workings, thereby concentrating the air flow in & back out of the Monongahela Drift, after sweeping the face at the end of the drift.

## **GROUND CONTROL**

All work shall be performed from under supported ground in fresh air. The back and ribs of the Monongahela Drift will be sounded to determine the safety thereof, drummy ground will be removed or supported depending on the nature of each occurrence. The range of options will include but are not limited to scaling, blasting down, timbered support addition bolts and or mesh.

## **ACCESS**

Where the Monongahela Drift has been stoped above, these areas will be evaluated as to the condition of the historic timber sets. Prior to inspection of each stope access, the ground will be washed or blown clean and scaled as required to provide safe access to the timber. Generally, timber “pony sets” will be installed between existing posts and lagging will be extended in a “fore poling” or similar fashion to provide a safe work area for installing the next set.

Flyrock and debris from the explosion will be cleared from the track once the back and ribs have been scaled and or supported. Again this will be done only in a fresh air environment.

Historic dead-end drill stations will be barricaded to prevent future entry.

Prior to the remediation advancing to the location of the historic blasting caps, Star Mine Operations will have made arrangements for the blasting caps to be collected, transported and disposed of by qualified personnel. Any additional blasting caps of un-exploded explosives will be removed and disposed of similarly.

The “Chinaman chute” slusher access will be retrofitted, with a ladder, landing and appropriate railing.

## **STANDARD PROCEDURES**

As with all work being done at this time and in the future the following procedures will be followed and documented:

- Pre-work inspection – Prior to beginning work at the beginning of the shift or upon being re-assigned to a new work area, a shifter or lead-man shall inspect the area to make sure it is safe to work in and that all workers are aware of any potential hazards and actions to correct them.
- Gas Monitoring – The working environment will be monitored as frequently as necessary to determine the adequacy of control measures. Monitors will have valid calibration and be in proper working order.
- Communications will be maintained to this work area by the steady flow of men and materials in and out of the site, periodic shifter checks and radio checks. A permanent Quack Box radio will be installed at the Blue Lagoon.