

Illawarra Coal Appin Mine



Background

BHP Billiton Illawarra Coal lodged Application MP10-0079 to the Department of Planning and Infrastructure (DoPI) on the 25th May 2010 to construct and operate Appin Mine No 6 Vent Shaft (VS#6) near Douglas Park. This application was submitted under Part 3A of the Environmental Planning and Assessment Act 1979. Project approval was granted on the 4th May 2011. The Application, Project Approval and all related documentation are available on the DoPI website at the following link:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=4067.

Schedule 4 Condition 6 of Project Approval MP10-0079 states *“The proponent shall provide regular reporting on the environmental performance of the project on its website, in accordance with the reporting arrangements in the plans or programs approved under the conditions of this approval, and to the satisfaction of the Director General”*.

This report has been prepared in compliance with this Condition and will be placed alongside the other documentation relevant to the Appin Mine No 6 Ventilation Shaft on the BHP Billiton website:

<http://www.bhpbilliton.com/home/aboutus/regulatory/Pages/default.aspx>.

Further Approvals

In addition to the DoPI Part 3A approval referred to above, a number of other approvals are required for the Project:

An approval under the Environmental Protection and Biodiversity Conservation (EPBC) Act was granted by the Department of Sustainability, Environment, Water, Population and Communities on the 1st April 2011. This EPBC Approval grants permission to clear up to 3.5 ha of Cumberland Plains Woodland.

A Section 138 Permit under the Roads Act was granted by Wollondilly Shire Council on 23rd August 2011 to construct an intersection on Menangle Road.

Illawarra Coal has also submitted an application to the NSW Office of Water for the relevant licences to extract water from the Nepean River.

Construction/Operation Update

Mobilisation of equipment and facilities for construction of the VS#6 access road commenced in late August 2011. Initial activities for site establishment included setting up the site compound with temporary office facilities, car parking and a storage area for construction surface mobile equipment.

The sequence of the road construction activities is as follows: locating all buried services identified on the Dial before you Dig Plans; installation of sediment control measures to treat construction site runoff; construction of the clean water diversion drains; followed by the excavation works for the access road construction and Menangle Road Intersection.



Figure 1. The access road Site Compound used to park light vehicles and provide temporary office facilities.

Community & Stakeholder Engagement

A letter was distributed on the 12th August 2011 updating residents on the commencement of construction activities. This was followed by a Community Update information sheet, which addressed the construction of VS#6. This was distributed to Douglas Park residents on the 12th October 2011.

Douglas Park Advisory Panel Meetings were held on 3rd August 2011 and 7th September 2011. Minutes from these meetings are

placed on the Douglas Park noticeboard located out front of the Douglas Park General Store. Plans, drawings and other relevant materials are also placed on the noticeboard for community reference.

The Douglas Park Community Information Spot is held at the Douglas Park Community Centre every 1st Thursday (12pm to 4pm) and every 3rd Saturday (10am to 2pm).

As a result of feedback received during the above community forums, further signage was incorporated into the existing construction traffic signage on Menangle Road to warn drivers of changed traffic conditions.

Traffic

Equipment was first mobilised to site via the Menangle Road entrance in late August to enable initial site establishment works to commence. This included upgrade of the existing entrance while the buried infrastructure investigations and works occurred. Stage 1 controls from the Traffic Management Plan were in place during this time.



Figure 2. Stage 4 traffic management controls included the installation of barriers on the far (eastern) side of the road. Lane markings were adjusted to address the new alignment.

Due to the extent of works required to address buried services on the eastern side of Menangle Road, Stage 4 of the Traffic Management Plan was then implemented to enable works to commence on the western side. To address worker and traffic safety Stage 4 included the installation of concrete barriers along the road edge. Line marking works were undertaken to address the

modified alignment on the 6th September 2011. These activities were undertaken between 8 – 10pm to avoid busy traffic times

and were undertaken in consultation with adjacent property owners.

To address the RTA oversize load requirements a dozer was floated to site early morning on the 21st September 2011. This occurred with the appropriate traffic management measures in place and again the adjacent residences were notified.

Soil & Water



Figure 3. Sediment fences have been installed to filter any runoff from construction activities.

The installation of soil and water controls was one of the first activities to occur for construction of the access road to the VS#6 site. These controls were installed in accordance with the VS#6 Soil and Water Management Plan. The soil and water controls consist of a series of water diversion drains on the high side of the internal access road which divert runoff around the active construction area, into the existing drainage lines on the property. Sedimentation fences and straw bales have been installed in drainage lines and drains, which not only reduce the energy of runoff, but also progressively capture any sediment within the disturbed areas.

Equipment and chemical storage areas have been installed to capture any potential spills or leaks and prevent any mixing with other site runoff.

Sedimentation ponds have been installed to capture construction site runoff. In these ponds solids are able to settle and water can be treated prior to discharge. During early



Figure 4. Construction site runoff is captured in sedimentation ponds where it can be managed.

construction only minor rain events have occurred. The site soil and water controls have successfully captured site runoff from these events. Captured water was treated and tested prior to being irrigated to pasture. No dirty water was discharged from site.

Since October 2010 background water monitoring has been occurring in Harris Creek, immediately downstream of the Ventilation Shaft #6 site. At this location treated water will be controlled discharged into Harris Creek where it meets the prescribed criteria in the Water Management Plan. During initial construction of the Ventilation Shaft access road any runoff has reported to site ponds and dams and there has been no discharge directly into Harris Creek. Baseline results for pH, conductivity and total suspended solids are graphed below. Additional monitoring occurs in the Nepean River both upstream and downstream of the confluence with Harris Creek.

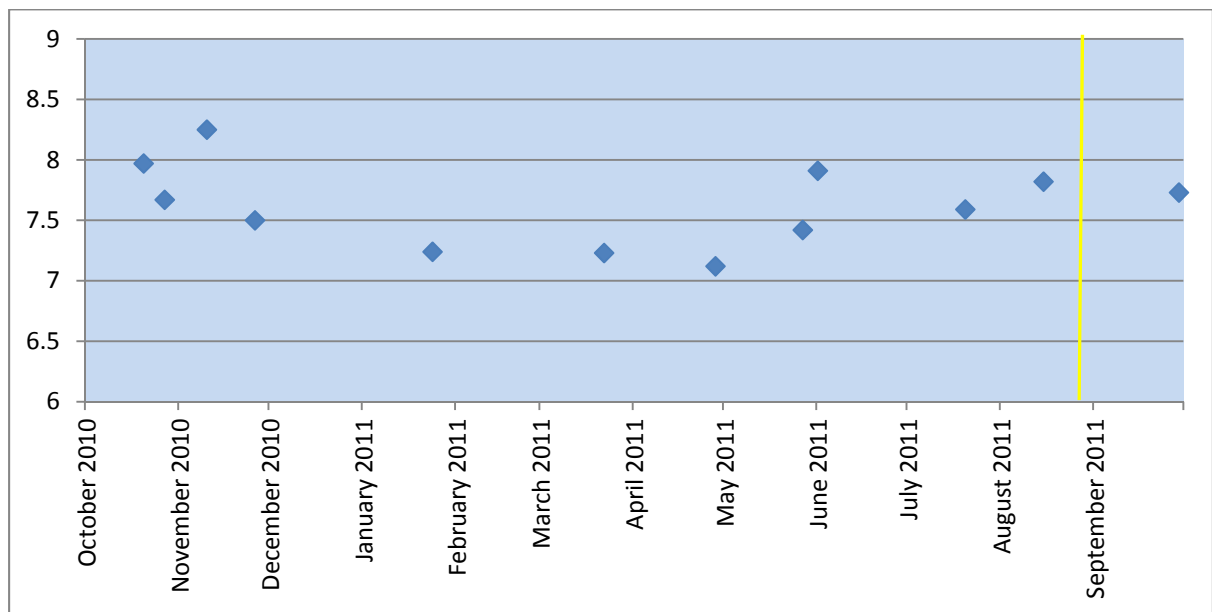


Figure 5. Baseline pH water results in Harris Creek. Construction of the access road for VS#6 commenced late August (depicted by yellow line).

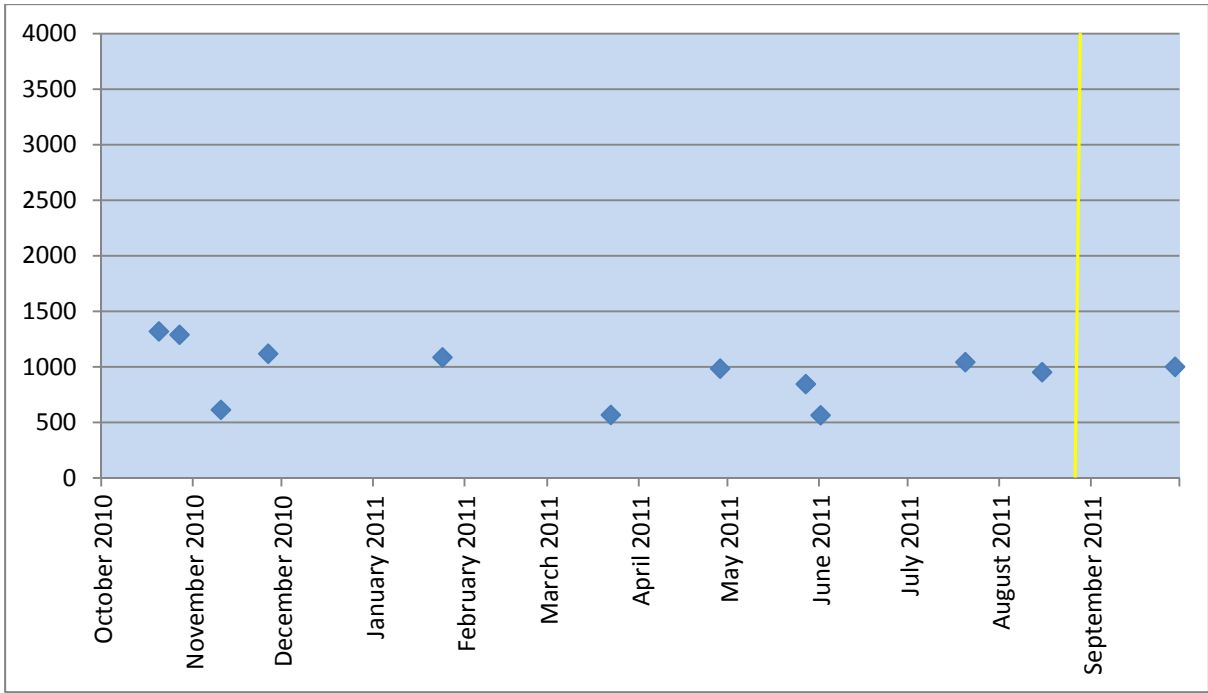


Figure 6. Baseline conductivity water results in Harris Creek.

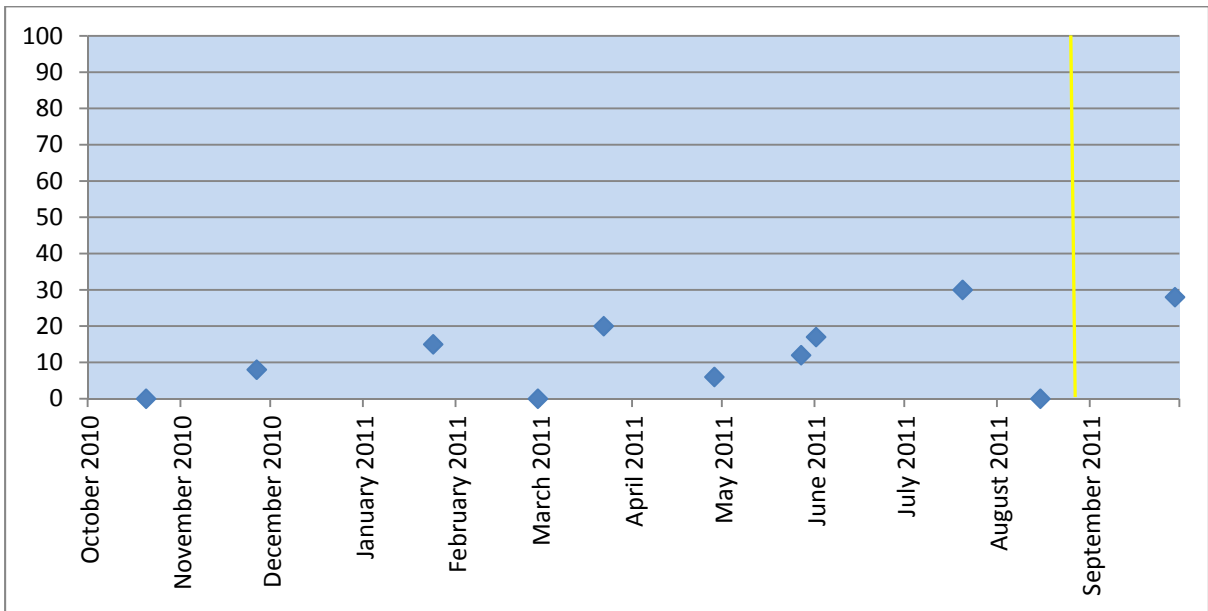


Figure 7. Baseline TSS water results in Harris Creek.

Noise

Construction activities have been undertaken within the construction hours defined in the Project Approval i.e. 7am-6pm Monday to Saturday. During initial construction, activities have generally been undertaken for less than the full hours allocated within the Approval.

Where any evening traffic movements have been required the nearby residents have been consulted.

Noise monitoring was undertaken to address the first month of VS#6 road construction activities. This covered construction activity on both the eastern and western side of the first road cut-through. This monitoring was undertaken by specialist acoustic consultants, with the following results reported:

Location	Date & Start Time	Criteria Laeq	Contribution due to construction works, leq
1 – Blades Place	06/10/2011 11.45am	50	43
2 – Camden Road	06/10/2011 12.15pm	50	44

Road construction activities for the Ventilation Shaft were measured to contribute less than the 50dBa noise criteria specified in the Project Approval and, as such, were compliant. Noise monitoring will be undertaken monthly for the first six months of road construction and again for the drilling of the Ventilation Shaft.

Vegetation, Biodiversity & Rehabilitation

During the construction of the access road topsoil has been stored in preparation for rehabilitation of the embankments and road verges. During construction of the road the area exposed is visually much wider than the area that will remain once the road has been completed.

Once each stage of the road embankments and verges has been completed the top soil will be placed over the exposed areas and then hydro-mulched and irrigated to promote revegetation. Once the revegetation has been established the temporary sediment and erosion control devices will be removed to restore the areas to the pre-existing rural landscape.



Figure 8. Topsoil has been separated and stored above the proposed banks. Once the banks are completed the topsoil will be utilised to enable the banks and road verge to be re-grassed.

An offset area of the Endangered Ecological Community Cumberland Plain Woodland exists on the Project site. This area is located immediately north of current access road construction activities. Fencing has been installed on site to isolate the work area from this established vegetation and a management program has been developed.

BHPBIC are in the process of implementing a program to supplement this existing vegetation on site.

Air Quality

During construction activities any exposed areas have been stabilised as soon as practicable and a water truck has been operated regularly to suppress dust. Road base has been placed on the temporary road access to reduce the potential for dust from vehicle movements.

Once the road-side embankments and verges have been re-instated these will be spray grassed to assist with stabilisation and prevent airborne dust.

Heritage

An Aboriginal cultural heritage site exists within the Cumberland Plain Woodland offset area described above. This site is an Aboriginal Scar Tree. Prior to construction activities a buffer zone was created around this tree and a permanent fence installed to delineate the boundary of the construction site and ensure no clearing or equipment interaction within the area of the scar tree.



Figure 9. Barrier fencing was initially installed to identify the Scar Tree. The site has subsequently been excluded by a permanent fence.

A second scar tree and scatter site are located on the Project property. These sites are located well away from current construction activities. These sites will also be fenced from the work by area to ensure they are not impacted.

A Conservation Management Plan is currently being developed for the buildings on the Mount Batten property. This is being developed with input from heritage consultants and the Wollondilly Shire Council.

Contacts

BHPB Illawarra Coal Community Call Line - 1800 10 22 10

Email - ICEnquiries@BHPBilliton.com

Douglas Park Community Information Spot at the DP Hall –

- 1st Thursday of every month 12pm to 4pm, and
- 3rd Saturday of every month 10am to 2pm.

Douglas Park Notice Board – Located outside of the DP General Store

Attachment 1 – Illawarra Coal Community Update September 2011

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FOR MORE
INFORMATION

BHP BILLITON ILLAWARRA COAL COMMUNITY CALL LINE

Residents who have any questions, concerns, or complaints about BHP Billiton Illawarra Coal's activities are encouraged to contact us through our community call line on 1800 102 210.

You can also send us feedback, questions or complaints by email using the following address:

ICEnquiries@BHPBilliton.com

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FOR MORE
INFORMATION

DOUGLAS PARK COMMUNITY INFORMATION SPOT

If you would also like to discuss anything in relation to these proposed developments or any other parts of Illawarra Coal's operations with a company representative, you can do so by visiting:

Illawarra Coal's Douglas Park Community Information Spot

Douglas Park Community Centre

Every 1st Thursday of the month (12pm-4pm)
Every 3rd Saturday of the month (10am-2pm)

For additional information please contact:

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Illawarra Coal Community Call Line
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Illawarra Coal

ILLAWARRA COAL COMMUNITY UPDATE



Information regarding Illawarra Coal's activities in the Douglas Park area is contained in this newsletter.

NO 6 VENTILATION SHAFT UPDATE

WHO IS ILLAWARRA COAL?

Illawarra Coal is a subsidiary of BHP Billiton and we operate three underground coal mines – Appin and West Cliff in the Wollondilly region, and Dendrobium Mine in the Illawarra region. Using longwall technology, these mines produce premium quality hard coking coal for steelmaking.

We supply more than 70 per cent of the coal used by the Australian steel industry for the manufacture of products such as whitegoods, building materials, cars, railway lines, and many other everyday items.

West Cliff and Appin mines extract coal from the Bulli Seam which is up to 600 metres below the surface. The Appin Mine pit top is situated on Douglas Park Drive, Douglas Park, and has an additional site near the village of Appin. The West Cliff Mine and its associated infrastructure are situated on the Appin Road, east of Appin. These mines and their associated infrastructure are combined to form Illawarra Coal's Bulli Seam Operations.

SEPTEMBER 2011

THE PURPOSE OF THIS INFORMATION SHEET IS TO PROVIDE YOU WITH AN UPDATE ON ILLAWARRA COAL ACTIVITIES IN YOUR AREA.

As you may have noticed, work has commenced on the access road to the No 6 Ventilation Shaft site, which is located on property owned by the Company between Douglas Park township and the Hume Highway. The access road intersects Menangle Road, north of the Camden Road intersection and initial works are associated with constructing the intersection which will include a northbound passing lane and southbound exit lane. Once complete, the road will follow a path to the Shaft location which will be positioned close to the Hume Highway and not visible to most areas of Douglas Park.

The access road will be a seven-metre wide, dual lane, sealed road. The area that is currently disturbed for construction will be grassed to look like the surrounding farm land.

The project received government approval in May 2011 and work on the access road began in August. It is anticipated that the intersection will be complete by November 2011 and the entire access road will be complete by February 2012.

The location of the new access road was determined, in consultation with the Douglas Park Advisory Panel, to avoid interactions between

Douglas Park Primary School and construction traffic (the current site access is in Duggan Street, adjacent to the School). All traffic movements will be managed in accordance with government-approved management plans – which address elements such as the timing of traffic movements, speed limits and possible curfews – and the Douglas Park Drivers' Code of Conduct. Under this code, heavy traffic is prohibited within the Douglas Park urban area during drop off and pick up times at Douglas Park School.

A full copy of the approval document, which includes all conditions of consent, is available on the Department of Planning and Infrastructure website: majorprojects.planning.nsw.gov.au/page/determinations.

Prior to project approval, we worked closely with the Douglas Park Advisory Panel, particularly on the preparation of the Environment Assessment (EA), and we hope to continue working with the Panel throughout the ventilation shaft construction process. **Your representatives on the Panel are: Naomi Sheil, Patricia Smith, Peter Smith, Amy Parish, Christine Towndrow, Danny Stewart, Jim Samphier, Brian Edwards.**

ACTIVITY	COMMENCEMENT	SCHEDULED COMPLETION
Menangle Road intersection	August 2011	November 2011
Access Road	August 2011	January 2012
VS#6 Site Preparation	September 2011	January 2012
VS#6 Shaft Construction	February 2012	December 2014
VS#6 Fan Installation	July 2013	June 2015
Demobilisation, Noise Bund & Revegetation	January 2015	October 2015



PROVIDING OUR EMPLOYEES UNDERGROUND WITH FRESH AIR IS A CRITICAL HEALTH AND SAFETY IMPERATIVE FOR US, AND THE NO 6 VENTILATION SHAFT IS AN IMPORTANT ELEMENT IN THE VENTILATION SYSTEM FOR THE EXISTING APPIN MINE (WHICH IS CURRENTLY EXTRACTING COAL BENEATH THE SURFACE APPROXIMATELY ONE KILOMETRE TO THE NORTH-EAST OF DOUGLAS PARK) AND FUTURE WORKINGS IN THE AREA. THE PROCESS OF MINE VENTILATION INVOLVES TAKING AIR IN AT ONE PART OF THE MINING AREA, AND DRAWING IT OUT FROM ANOTHER.

The No 6 Ventilation Shaft will be an 'up-cast' shaft with fans – meaning that the air is drawn through the mine from elsewhere and emitted to the atmosphere via the ventilation shaft. Once site access has been completed, we will start other site preparation works which are expected to take around six months. In mid-2012 shaft construction equipment should begin to arrive on site and the drilling or 'sinking' of the shaft should start soon after that.

The drilling or 'sinking' of the shaft will take around 18 months to complete. Once this has been done, the fans and other infrastructure will be installed. If all these works proceed according to schedule, the ventilation shaft and its associated infrastructure will be completed by mid-2015.

Situated on the southern end of the Mountbatten Stud property and screened by a vegetated earth bund, the shaft structure will not be visible to the township of Douglas Park. Around seven metres high on completion, the top of the shaft structure will be visible from Spaniards Hill and some other surrounding high points.

TO CREATE A SAFE WORKING ENVIRONMENT FOR OUR PEOPLE UNDERGROUND, ILLAWARRA COAL CONDUCTS A COMPREHENSIVE MINE SAFETY GAS DRAINAGE PROGRAM TO REMOVE METHANE GAS FROM THE COAL SEAM AHEAD OF MINING.

Illawarra Coal does not 'mine' coal seam gas and we don't use the process known as fracking. Our primary reason for draining the gas is to improve the safety of our underground operations. Coal seams can contain high levels of methane. When gas builds up in a mine the gas poses a significant safety and operational risk. To minimise the build-up of gas in the mine some of the gas is removed from the coal before mining occurs by drilling a well from the surface.

We are currently developing plans for the next phase of our program to drill mine safety gas drainage holes.

Associated with current and future workings, these holes will be operated on a temporary

basis and, when they are no longer required, will be backfilled with cement, all equipment will be removed and the site will be rehabilitated.

This program of works will require drilling on a 24-hour basis, but with strict noise controls in place. Setting up of the site will occur in the day time only and involve standard earthmoving equipment. It will be screened with four-metre high, concrete walls to minimise noise and visual impacts. Noise monitoring will be carried out to ensure we comply with strict noise limits.

Once our gas drainage holes are drilled, they are cased. Casing is a process where the drilled hole is lined with steel which

is cemented into the rock formation. This technique allows a complete seal between the rock and the casing, which ensures that aquifers are not compromised, and the water table is not impacted.

Gas from our proposed mine safety gas drainage holes will in some cases be flared in an enclosed flare stack, or where possible, piped to the Company's methane gas power plants where it is used to generate electricity, reducing the Company's greenhouse gas emissions. The flares are quiet and should not be audible at nearby residences. They are very safe and have in-built safety shutoff mechanisms which stop the flow of gas when the flares are not in use.



Where possible, gas from mine safety gas drainage holes is piped to methane gas power plants or in some cases is flared in enclosed flare stacks similar to those pictured above.

LAND RESTORATION

UPON COMPLETION OF ALL GAS EXTRACTION OPERATIONS, ALL INFRASTRUCTURE AND ASSOCIATED PIPELINES INCLUDING FLARE STACKS ARE REMOVED AND THE HOLE IS BACKFILLED WITH CEMENT. ALL DISTURBED AREAS ARE REVEGETATED TO THEIR ORIGINAL CONDITION.