



SUNNYSIDE COAL MINE

COMMUNITY CONSULTATIVE COMMITTEE

MEETING #1

ENVIRONMENTAL MONITORING REPORT

Management Plans and Monitoring Requirements

The project approval and Environment Protection Licence issued for the Sunnyside Coal Project includes the requirement to undertake a range of monitoring in order to assess the impacts of the operation on the adjacent environment. Direct monitoring relates to the following parameters:-

Noise Monitoring
Air Quality Monitoring
Blast Monitoring
Surface and Groundwater Monitoring

In addition to these monitoring programs, the project approval and Environment Protection Licence requires activities on the site to be undertaken in accordance with the following management plans:

Environmental Management Strategy
Environmental Monitoring Program
Water Management Plan
Noise Monitoring Program
Air Quality Monitoring Program
Blast Monitoring Program
Landscape Management Plan
Aboriginal Cultural Heritage Management Plan
Energy Savings Action Plan
Waste Management Plan

To date, the Sunnyside Coal Project has developed and received Departmental Approval for the following management plans:

Environmental Management Strategy
Water Management Plan
Noise Monitoring Program
Air Quality Monitoring Program
Blast Monitoring Program
Aboriginal Cultural Heritage Management Plan

Waste Management Plan

The remaining plans will be submitted to the Department on a progressive basis.

In addition to the above requirement, on the grant of the Mining Lease for this project, it was a requirement that a Mining Operations Plan be developed to identify the mining methodology over the life of the mine. The Mining Operations Plan also defines rehabilitation commitments for the site and provides conceptual rehabilitation design criteria.

Community Consultative Committee

As part of the Community Consultative Committee process, Namoi Mining will present an Environmental Monitoring Report at each CCC meeting. The purpose of the report is to provide members with an up to date account of environmental performance across the site in accordance with the above mentioned management plans and monitoring programs.

Aboriginal Cultural Heritage Management Plan (ACHMP)

The ACHMP provides the basis for identification of known Aboriginal Sites in proximity to the areas of disturbance associated with the mine site. The ACHMP was prepared in consultation with the local Aboriginal community, with specific reference to the Red Chief Local Aboriginal Land Council, Bigundi Biame Gunnedar Traditional People, Gunida Gunyah Aboriginal Corporation and Min Min Aboriginal Corporation. With the assistance of these groups, and the Department of Environment and Climate Change, the mine lease and surrounding area was assessed for Aboriginal artefacts, and management strategies adopted to minimise impact on these sites. There were no Aboriginal sites identified within the area of disturbance associated with mining activities.

In terms of ongoing operations, a procedure has been adopted whereby soil stripping activities are undertaken in conjunction with representative Aboriginal stakeholders to monitor soil stripping for any evidence of Aboriginal artefacts. To date, no additional artefacts have been identified.

Site Water Management Plan

A Site Water Management Plan has been established in order to account for clean and dirty water flows from the surface of the mining lease. Dirty water flows (from areas of disturbance) are directed to purpose built sediment basins in order to settle out excess sediment before being able to release from the project site. Water is drawn from dirty water storages to enable use on site for dust suppression purposes. Dirty water will be managed in order to reduce the potential for off site discharge. In the event of off-site

discharge, water discharging from site will be sampled to ensure it meets applicable concentration thresholds pertaining to Electrical Conductivity, Total Suspended Sediment, pH and Oil and Grease.

Clean water flows from on the project site are directed away from disturbed areas and into storage dams. In the event that dirty water storage is insufficient for dust suppression requirements, additional water will be taken from the clean water storages.

Pit water will be directed to sumps within the void or to purpose built pit water storage dams. Pit water will be utilized for dust suppression purposes across the site. Preference in terms of water use will given to Pit Water, followed by dirty water, and then clean water.

In addition to sampling during discharge events, water will be sampled from water storages on site on a quarterly basis to define water quality. Sampling will also be undertaken from tributaries located off site to define water quality parameters upstream and downstream of the mine site.

Noise Monitoring

The consent for the Sunnyside operations requires noise monitoring on a monthly basis for the first 6 months of operations to determine if noise levels are within modeled expectations. Monitoring will be undertaken from the following properties:-

“Illili”, “Ivanhoe”, “Ferndale”, Plain View”, and “Lilydale”

Noise monitoring will be undertaken by specialist consultants using attended methods as well as unattended monitoring using noise loggers.



Noise Limits:

The noise limits applicable to operations on the Sunnyside Project Site, as prescribed in the Project Approval and Environment Protection Licence, are as follows:-

Day/Evening LAeq(15 minute)	Land
35	Any residence on, or more than 25% of, any privately owned land, except "Lilydale".

Impact Assessment Criteria dB(A).

To date, noise assessment on the project site has been undertaken in relation to sound power levels of earthmoving equipment which has confirmed machine noise levels are within prescribed rating limits for each machine. An initial round of attended and unattended monitoring was also undertaken for construction phase monitoring, all of which identified compliance within noise limits. The attended monitoring results were as follows:-

Attended Noise Levels – 29th January 2009

Location	Date/Time	dB(A), Leq	Wind Speed Direction	Noise Source
Ferndale	29/01/2009 12:54pm	33.1	1-2m/s, NE	Wind(30), Birds(30), SCM(<25)
Lilydale	29/01/2009 1:27pm	40.1	1-2m/s, NE	Birds(38), Insects(35), SCM(inaudible)

The latest round of full monitoring is being conducted during the week of 9th March 2009.

Air Quality Monitoring

Air quality monitoring is required on all sides of the project site to assess deposited dust and particulate matter levels that may be attributable to mining operations. Specifically, the project is required to meet the following consent criteria.

Pollutant	Averaging Period	Criterion
Total Suspended particulate (TSP) matter	Annual	90 ug/m3
Particulate matter < 10ug (PM10)	Annual	30 ug/m3

Pollutant	Averaging Period	Criterion
Particulate matter < 10ug (PM10)	24 hour	50 ug/m3

Pollutant	Averaging Period	Maximum increase in deposited dust level	Maximum total deposited dust level
Deposited Dust	Annual	2g/m2/month	4g/m2/month

Dust monitors have been established on all sides of the project site, as well as two High Velocity Air Samplers (HVAS) located on the “Illili” and “Lilydale” properties.



Deposited Dust and High Velocity Air Sampler.

Deposited dust monitoring has been occurring since 2007 in order to establish background dust levels prior to the commencement of mining activities. The HVAS for PM10 measurements have only recently been established.

Deposited dust levels for the site to date are as presented in the tables below:

BACKGROUND DUST DATA 2007

Month	SD1 Ferndale	SD2 Sunnyside	SD3 Plainview	SD4 Lillydale	SD5 Ivanhoe
January 2007					
February 2007					
March 2007	0.7	10.9	1.9	2.1	2.4
April 2007	1.0	6.2	2.0	1.1	1.8
May 2007	0.5	0.6	0.7	0.5	0.4
June 2007	0.3	0.4	0.6	0.3	0.3
July 2007	0.8	2.5	1.0	0.7	0.7
August 2007	0.4	0.5	0.8	0.5	0.4
September 2007	0.4	9.7	0.6	0.4	0.9
October 2007	1.8	16.7	4.7	1.3	1.2
November 2007	0.7	22.3	1.0	0.6	1.6
December 2007	1.2	52.1	1.8	2.2	8.0
Annual Average	0.8	12.2	1.5	1.0	1.8

DEPOSITED DUST DATA 2008

Month	SD1 Ferndale	SD2 Sunnyside	SD3 Plainview	SD4 Lillydale	SD5 Ivanhoe	SD6 Illili	SD7 Innisvale
January 2008	1.0	42.2	2.9	1.1	7.3		
February 2008	0.9	86.9	1.6	1.3	5.4		
March 2008	2.6	212.0	11.6	1.4	2.2		
April 2008	1.0	25.4	2.1	0.8	3.6		
May 2008	0.5	28.9	0.9	0.8	7.3		
June 2008	0.4	8.9	9.7	0.5	3.6		
July 2008	0.3	11.7	5.1	0.3	0.2		
August 2008	0.8	24.1	4.9	0.7	1.1		
September 2008	0.6	30.3	2.3	0.9	2.0		
October 2008	1.9	122.0	2.8	1.4	3.5		
November 2008	0.8	64.7	1.5	1.2	2.2		
December 2008	1.1	NLS	1.6	1.2	3.0	3.0	0.9
Annual Average	1.0	59.7	3.9	1.0	3.5		

Deposited Dust Data 2009

Month	SD1 Ferndale	SD2 Sunnyside	SD3 Plainview	SD4 Lillydale	SD5 Ivanhoe	SD6 Illili	SD7 Innisvale
January 2009	3.8	NLS	3.4	2.0	27.3	1.3	4.3
February 2009							
March 2009							
April 2009							
May 2009							
June 2009							
July 2009							
August 2009							
September 2009							
October 2009							
November 2009							
December 2009							
Annual Average	3.8	#DIV/0!	3.4	2.0	27.3	1.3	4.3

The deposited dust data for the site is highly variable and clearly influenced by other factors including agricultural activity and road dust. The Sunnyside monitor was removed in December 2008 on commencement of mining at the monitor location, and was replaced with the “Innisvale” and “Illili” monitors. Generally, dust levels will be monitored taking into account weather conditions and dominant wind directions to determine dust sources.

PM10 Data

Site	Date	Result	Report Average	Annual Average
Illili	24 th Jan 09	25		
	30 th Jan 09	37	31.0	31.0
Lilydale	18 th Jan 09	24		
	24 th Jan 09	25		
	30 th Jan 09	28	25.7	25.7
Criteria		<50		<30
		24hr max		Annual average max

As only measurements for January have been obtained to date, the quantification of an annual average is based on insufficient data at this time. The results indicate compliance with the 24hr maximum criteria.

Blast Monitoring

The consent for the Sunnyside project also included a requirement to monitor blast activities to assess impacts in terms of peak overpressure and ground vibration.

The consent limits specified for blasting are as follows:-

Air-blast Overpressure Level (dB(Lin Peak))	Allowable Exceedance
115	5% of the total number of blasts in a 12 month period
120	0%

Peak particle velocity (mm/s)	Allowable Exceedance
5	5% of the total number of blasts in a 12 month period
10	0%

Blast monitoring has been identified to occur at four locations over the life of the project. Blasts will be monitored at the “Ivanhoe”, “Illili”, “Plain View” and “Innisvale” properties, with “Illili” and “Innisvale” monitoring being undertaken on a rotational basis. Blast results to date are as per the table below:-

SHOT NO.	DATE	MONITOR LOCATION	PEAK GROUND PRESSURE (mm/s)	PEAK OVERPRESSURE (dBL)	TIME
1	18/Nov/08	Ivanhoe	0.91	110.7	1:44:48 PM
1	18/Nov/08	Plain View	0.86	107.8	1:44:58 PM
1	18/Nov/08	Illili	0.56	107.4	1:42:25 PM
2	25/Nov/08	Innisvale	0.40	103.2	3:10:59 PM
2	25/Nov/08	Plain View	DNT	DNT	DNT
2	25/Nov/08	Illili	0.61	105.5	3:10:48 PM
3	28/Nov/08	Ivanhoe	0.65	96.7	9:59:16 AM
3	28/Nov/08	Plain View	0.50	112.3	9:59:16 AM
3	28/Nov/08	Illili	1.24	100.9	9:59:07 AM
4	28/Jan/09	Illili	0.10	112.0	9:59:26 AM
4	28/Jan/09	Ivanhoe	DNT	DNT	
4	28/Jan/09	Plain View	DNT	DNT	

Monitoring results demonstrate compliance with blast criteria.

Groundwater Monitoring

Groundwater monitoring is undertaken from a range of monitoring piezometers and water bores both within and surrounding the project site. Standing Water Level checks are undertaken on a quarterly basis, with full water quality sampling to be undertaken on a 6 monthly basis. Monitoring results to date for Standing Water Level is as per the tables attached.

<i>Site ID</i>	<i>Piezometer / Water Bore</i>	<i>Date</i>	<i>Time</i>	<i>Depth to Ground - mbgl</i>	<i>Depth to Stand - mbtoc</i>
P1	GW968386	15-Jun-07		11.25	11.51
		7-Aug-07	835	11.20	11.46
		19-Dec-07	1535	11.25	11.51
		24-Jan-08	1140	11.21	11.47
		5-Mar-08	835	11.17	11.43
		7-Apr-08	1515	11.17	11.43
		8-May-08	1550	11.16	11.42
		3-Jun-08	Too Wet to Access		
		9-Jul-08	905	11.16	11.42
		11-Aug-08	845	11.15	11.41
		17-Nov-08	1655	11.19	11.45
		19-Jan-09	1355	11.22	11.48
		26-Feb-09	1645	11.00	11.30

<i>Site ID</i>	<i>Piezometer / Water Bore</i>	<i>Date</i>	<i>Time</i>	<i>Depth to Ground - mbgl</i>	<i>Depth to Stand - mbtoc</i>
P2	GW968387	15-Jun-07		16.77	17.61
		7-Aug-07	850	16.77	17.61
		19-Dec-07	1545	16.70	17.54
		24-Jan-08	1155	16.69	17.53
		5-Mar-08	845	11.69	12.53
		4-Apr-08	1450	16.61	17.45
		8-May-08	1600	16.58	17.42
		3-Jun-08	Too wet to access		
		9-Jul-08	916	16.58	17.42
		11-Aug-08	856	16.56	17.40
		17-Nov-08	1703	16.50	17.34
		19-Jan-09	1404	16.50	17.34
		26-Feb-09	1630	16.25	17.10

<i>Site ID</i>	<i>Piezometer / Water Bore</i>	<i>Date</i>	<i>Time</i>	<i>Depth to Ground - mbgl</i>	<i>Depth to Stand - mbtoc</i>
P3	GW968388	15-Jun-07		12.50	12.92
		7-Aug-07	945	12.72	13.14
		19-Dec-07	1620	12.99	13.41
		24-Jan-08	1235	13.08	13.50
		5-Mar-08	925	13.15	13.57
		4-Apr-08	1430	13.20	13.62
		8-May-08	1626	13.25	13.67
		3-Jun-08	942	13.29	13.71
		9-Jul-08	958	13.36	13.78
		11-Aug-08	940	13.41	13.83
		17-Nov-08	1726	13.57	13.99

		19-Jan-09	1308	13.65	14.07
		26-Feb-09	1430	14.10	14.40

<i>Site ID</i>	<i>Piezometer / Water Bore</i>	<i>Date</i>	<i>Time</i>	<i>Depth to Ground - mbgl</i>	<i>Depth to Stand - mbtoc</i>
P4	GW968389	15-Jun-07		60.48	60.90
		7-Aug-07	925	60.53	60.95
		19-Dec-07	1645	60.57	60.99
		24-Jan-08	1255	60.98	61.40
		5-Mar-08	910	60.57	60.99
		7-Apr-08	1540	60.56	60.98
		8-May-08	1700	60.53	60.95
		3-Jun-08	958	60.98	61.40
		9-Jul-08	1038	60.98	61.40
		11-Aug-08	1000	60.57	60.99
		17-Nov-08	1735	61.23	61.65
		19-Jan-09	1318	65.03	65.45
		26-Feb-09	1505	66.37	66.67

<i>Site ID</i>	<i>Piezometer / Water Bore</i>	<i>Date</i>	<i>Time</i>	<i>Depth to Ground - mbgl</i>	<i>Depth to Stand - mbtoc</i>
P5	GW968390	15-Jun-07		40.25	40.75
		7-Aug-07	915	39.69	40.19
		19-Dec-07	1635	40.42	40.92
		24-Jan-08	1250	40.40	40.90
		5-Mar-08	905	40.49	40.99
		7-Apr-08	1530	40.51	41.01
		8-May-08	1644	40.52	41.02
		3-Jun-08	953	40.52	41.02

		9-Jul-08	1034	40.59	41.09
		11-Aug-08	955	40.52	41.02
		17-Nov-08	1731	40.90	41.40
		19-Jan-09	1314	41.50	42.00
		27-Feb-09	1500	41.50	42.00

<i>Site ID</i>	<i>Piezometer / Water Bore</i>	<i>Date</i>	<i>Time</i>	<i>Depth to Ground - mbgl</i>	<i>Depth to Stand - mbtoc</i>
P6	GW968391	15-Jun-07		16.70	17.20
		7-Aug-07	1000	17.79	18.29
		19-Dec-07	1605	17.79	18.29
		24-Jan-08	1225	17.81	18.31
		5-Mar-08	950	17.83	18.33
		4-Apr-08	1445	17.75	18.25
		8-May-08	1618	17.76	18.26
		3-Jun-08	913	17.76	18.26
		9-Jul-08	948	17.78	18.28
		11-Aug-08	928	17.78	18.28
		17-Nov-08	1719	17.78	18.28
		19-Jan-09	1256	17.83	18.33
		2-Mar-09	1230	17.79	18.29

<i>Site ID</i>	<i>Piezometer / Water Bore</i>	<i>Date</i>	<i>Time</i>	<i>Depth to Ground - mbgl</i>	<i>Depth to Stand - mbtoc</i>
P7	GW968392	15-Jun-07		12.77	13.04
		7-Aug-07	905	12.75	13.02
		20-Dec-07	1050	12.73	13.00
		24-Jan-08	1345	12.72	12.99
		5-Mar-08	855	12.74	13.01
		7-Apr-08	1520	12.70	12.97
		8-May-08	1712	12.71	12.98
		3-Jun-08	1006	12.72	12.99
		9-Jul-08	1045	12.73	13.00
		11-Aug-08	1013	12.72	12.99
		17-Nov-08	1750	12.70	12.97
		19-Jan-09	1343	13.70	13.97
		26-Feb-09	1410	12.65	12.90

<i>Site ID</i>	<i>Piezometer / Water Bore</i>	<i>Date</i>	<i>Time</i>	<i>Depth to Ground - mbgl</i>	<i>Depth to Stand - mbtoc</i>
P8	GW968393	15-Jun-07		15.63	15.63
		7-Aug-07	910	15.70	15.70
		19-Dec-07	1630	21.25	21.25
		24-Jan-08	1240	21.30	21.30
		5-Mar-08	900	19.25	19.25
		7-Apr-08	1525	20.13	20.13
		8-May-08	1710	20.49	20.49
		3-Jun-08	1003	18.79	18.79
		9-Jul-08	1043	19.12	19.12
		11-Aug-08	1010	19.72	19.72
		17-Nov-08	1747	16.74	16.74
		2-Mar-09	1300	15.85	15.95

Site ID	Piezometer / Water Bore	Date	Time	Depth to Ground - mbgl	Depth to Stand - mbtoc
27356	GW027356	15-Jun-07			
		7-Aug-07	1005		
		19-Dec-07	1555		
		24-Jan-08	1220	14.30	14.61
		5-Mar-08	1000	14.25	14.56
		4-Apr-08	1447	14.11	14.42
		8-May-08	1605	15.30	15.61
		3-Jun-08	852	17.61	17.92
		9-Jul-08	925	14.12	14.43
		11-Aug-08	908	16.05	16.36
		17-Nov-08	1710	13.92	14.23
		19-Jan-09	1250	14.45	14.76
		26-Feb-09	1400	14.50	14.80

<i>Site ID</i>	<i>Piezometer / Water Bore</i>	<i>Date</i>	<i>Time</i>	<i>Depth to Ground - mbgl</i>	<i>Depth to Stand - mbtoc</i>
45098	GW045098	15-Jun-07		10.42	10.76
		7-Aug-07	935	10.58	10.92
		19-Dec-07	1615	10.69	11.03
		24-Jan-08	1230	10.76	11.10
		5-Mar-08	920	10.82	11.16
		4-Apr-08	1440	10.87	11.21
		8-May-08	1622	10.89	11.23
		3-Jun-08	919	10.91	11.25
		9-Jul-08	952	10.96	11.30
		11-Aug-08	933	11.00	11.34
		17-Nov-08	1723	11.19	11.53
		19-Jan-09	1300	11.49	11.83
		26-Feb-09	1330	No Access	

Results to date indicate minor variability in groundwater levels. Ongoing data collection will provide for longer term analysis of groundwater impact. A full water quality sampling event is scheduled for April 2009.

Environmental Reporting

Namoi Mining is obliged to provide all environmental monitoring data to the Department of Planning, as well as Gunnedah Shire Council. In addition, monitoring results must be placed on the company website for public view.

Any exceedance in assessment criteria as specified in the consent and or Environment Protection Licence also requires Namoi Mining to provide relevant advice to the Department of Planning and Department of Environment and Climate Change within 24 hours of being aware of the exceedance. A written report outlining the cause of the exceedance, and the response to ensure the potential for future exceedance is minimised is to be forwarded to the agencies within 6 days of the initial notification.

Namoi Mining will also be required to submit an Annual Environmental Management Report(AEMR) to the relevant agencies each year. The AEMR must include all monitoring results, discussion of results, and environmental performance over the reporting period, as well as the goals and objectives for the following year. This AEMR will also be presented to the CCC.

Complaints

A Sunnyside Coal Mine complaints line has been established and advertised in the local paper. Anyone with concerns or specific complaints relating to the Sunnyside operations is encouraged to contact the complaints line to lodge their concern so that the matter can be dealt with and resolved as soon as possible.

The complaints line number is: **0427 106 384**.