



rehab reno

1970's rehab brought into the 21st century

alcoa anglesea

environment report

february



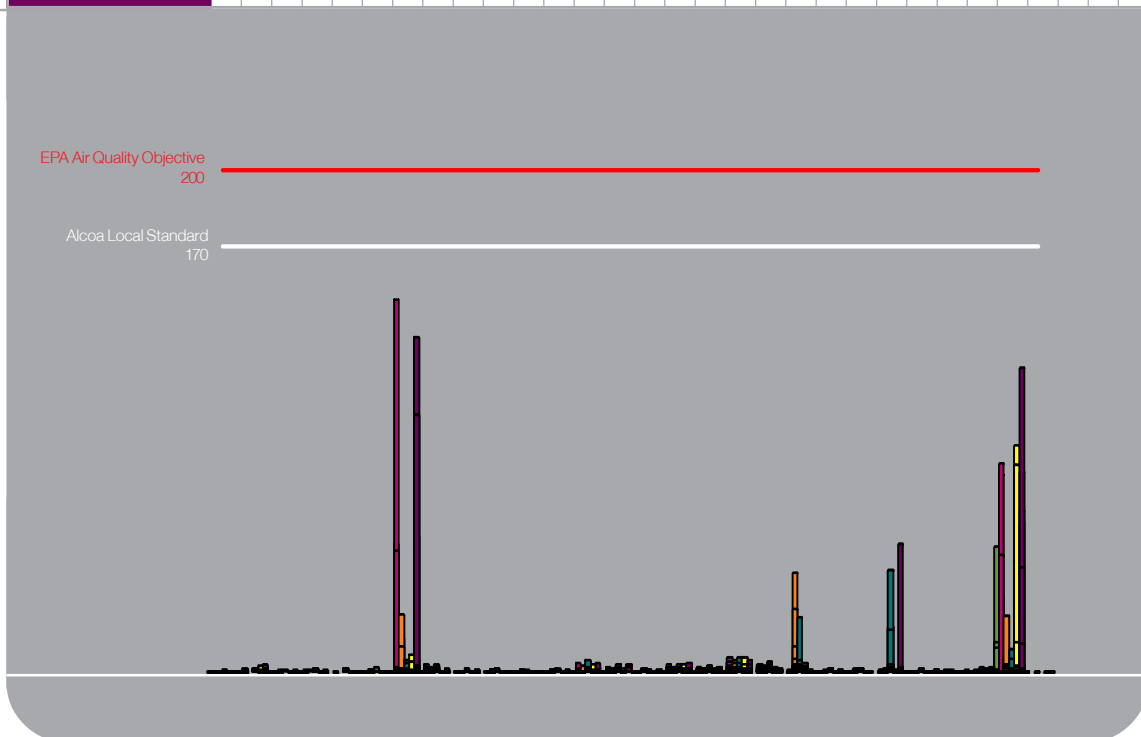
australia's aluminium

air

Air Monitoring	Average	Maximum
Stack Monitors		
Opacity g/m ³ 10-minute average	0.083	0.204
Stack SO ₂ kg/min 1-hour average Licence limit 100kg/min	73.75	84.81

Ambient Monitors	Average	Maximum
SO₂ 1 hour ppb		
Community Centre	0	50
Primary School	2	148
Mt Ingoldsby	1	39
Scout Camp	1	40
Camp Wilkin	0	90
Camp Road	1	133

Ambient Monitors		SO ₂ Maximum 1 hour averages (ppb)																														
Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28				
Community Centre	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	50	0			
Primary School	0	1	0	0	0	0	148	3	0	0	0	0	3	2	0	3	2	5	3	0	0	0	1	0	0	0	83	0				
Mt Ingoldsby	0	0	0	1	0	1	22	2	0	1	1	0	2	1	1	2	1	4	2	39	0	1	1	0	0	0	22	0				
Scout Camp	1	1	1	1	1	2	5	3	1	1	0	1	4	3	1	3	2	6	4	22	1	1	40	1	1	2	9	0				
Camp Wilkin	0	2	0	0	0	0	6	0	0	0	0	0	3	1	0	3	1	6	2	3	0	0	0	0	0	1	90	0				
Camp Road	0	3	0	0	0	0	133	1	0	0	0	0	4	3	0	3	1	4	1	0	0	0	51	0	0	2	121	0				



water



Water Storage

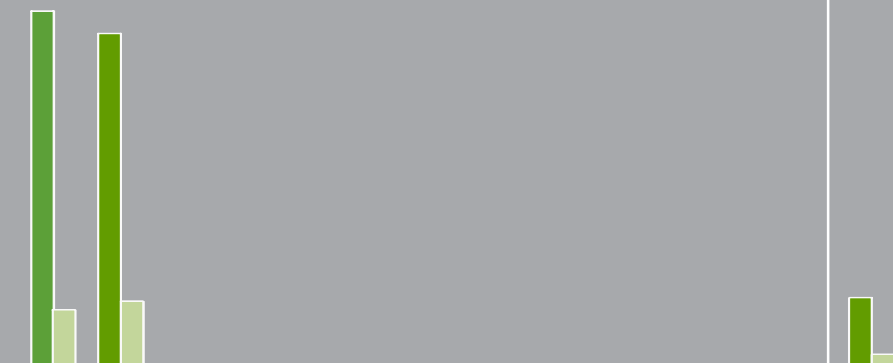
Barwon Water storage levels for the Geelong system at 22.1% capacity. Stage 4 restrictions apply with a Daylight Savings exemption to permit limited residential garden watering.

Water Discharge	February	Total
ML		
Ashponds (SP1)	123	262
Mine (SP4)	0	0

Water Monitoring 24/02/2009	SP1 Ashpond		SP4 Mine		SP3 Final	
	EPA limit	Lab Result	EPA limit	Lab Result	EPA limit	Lab Result
pH	4-10	8.2	3-9	no	5-9	7.4
Susp. Solids	100	< 4	100	discharge	30	< 4
Colour	50	4	50	at	50	5
Aluminium	10	0.11	10	time	5.5	0.031
Iron	10	0.15	20	of	4.0	0.14
Zinc	0.4	0.009	2.0	sampling	0.30	0.008

WATER WATER USAGE PER MONTH (ML)

Date	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
Town Water	2.5	1.0											3.5
Bore Water	288	270											558
Mine Water	46	53											99



mine rehabilitation



Whilst mine rehabilitation wasn't on the cards for 2009, a small peninsula of soil remained in the overburden cut from 2007 that impeded the revised mine plan for this year.

Small peninsula is no understatement. The area was only 0.245 hectares, smaller than most backyards! However, as our most precious resource for mine rehabilitation it was not going to be wasted.

Fortunately, a large area of old rehabilitation was cleared in 2008 in early preparation for mine rehabilitation activities in 2010. This area was first rehabilitated during the years 1975 - 1985 and does not meet today's rehabilitation standard. It will be 're-rehabilitated' in the coming years as we see the coal haul road filled in and the two sides of the open cut join into a continuous valley of rehabilitated heathy woodland.

With 0.245 hectares of topsoil, we were able to rehabilitate 0.658 hectares of area, neatly bounded by the drain from the mine wetland dam and the coal haul road, that fits into this long term plan.

The formula for this year's mine rehabilitation was a variation on the techniques we have employed in previous years. This area was cleared of its overstorey and the understorey mulched in 2007, leaving minimal vegetation on the site. Therefore it was simply a case of soil movement to complete this year's rehab. The absence of mulch should not significantly impact upon our rehabilitation results as previous research has shown that mulch does not contribute additional species to our rehabilitation above those that regenerate from the topsoil. In the space of two weeks, 200mm of subsoil was laid down over the existing soil profile topped with 50mm of topsoil. A few quick laps on the dozer ripped up the ground nicely for some broadcast seeding and it was all done.

PLANT OF THE ANGLESEA HEATH

ROSY BAECKEA (*Euryomyrtus ramosissima* ssp. *prostrata*)

Size:	8-20cm H x 0.3-1.5m W
Habitat:	tea tree heath
Distribution:	Victoria, NSW, SA and Tasmania
Form:	sparsely-branched spreading perennial shrub
Foliage:	narrow papery leaves 3-10mm long with pointed tips
Flowers:	single, pendant small white to pale pink tea-tree-like flowers to 5mm wide June to February
Status:	listed as 'Rare in Victoria' whilst this species is listed as rare, it is considered a characteristic species of our heathy woodland and returns in significant numbers in our mine rehabilitation
Did you know?	until recently, this species was identified as <i>Baeckea ramosissima</i> ssp. <i>prostrata</i> , as the common name still suggests.

ROSY BAECKEA



LAND

RAINFALL (mm)

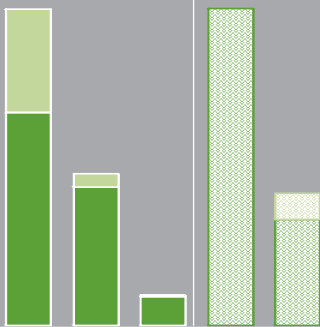
Month	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
2009 Rainfall	5.0	5.8											10.8
1968-2008 Average	43.9	42.5											86.4



WATER

TOWN WATER USE (ML)

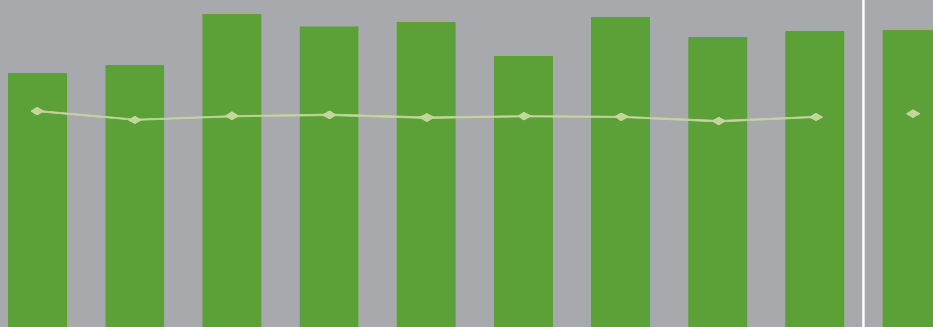
	2000	2008	2009	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Process	23.9	15.5	3.3	2.5	0.8										
Amenity	11.6	1.5	0.2	0.0	0.2										



AIR

GREENHOUSE GAS (GHG) TOTAL (Mt) & GHG EMISSION EFFICIENCY (t/MWh)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
GHG Mt	1.23	1.27	1.50	1.45	1.47	1.31	1.49	1.40	1.42	1.43
◆ GHG t/MWh	1.24	1.19	1.21	1.21	1.20	1.21	1.20	1.18	1.20	1.22



environmental improvement

Environmental Management Targets	February	2009 Total	Forecast	2009 Target
Reportable Environmental Incidents	0	0	0	0
Env Near Miss vs Env Incident Run Rate (ratio)	2	1.3	1.3	2.5
Monthly EHS ASAT Audit Completion (%)	88	83	83	90

Air Emission Targets	February	2009 Total	Forecast	2009 Target
Ambient SO ₂ (no. readings > 200ppb)	0	1	1	0
Stack SO ₂ (no. hrs > 100kg/min)	0	0	0	0
SO ₂ Load Reductions (lost MWh)	435	1902	11416	N/A
GHG Efficiency (t CO ₂ e/MWh)	1.22	1.22	1.22	1.20
Opacity (10 min av > 0.25g/m ³ normal operation)	0	0	0	0

Water Targets	February	2009 Total	Forecast	2009 Target
Town Water (ML)	1.0	3.5	21	14.1
Bore Water (ML)	270	558	3348	4000

Waste Targets	February	2009 Total	Forecast	2009 Target
Waste to Landfill (t)	0.0	0.0	0.0	8.0
Solid Prescribed Waste to Landfill (t)	0.0	0.0	0.0	0.0

Mine Rehabilitation Targets	2009 Total	2009 Target
2009 Area to Clear (ha)	0.245	0.0
2009 Area to Rehabilitate (ha)	0.658	0.0

OUR ENVIRONMENT AND OUR EMPLOYEE

Elise, what's been happening so far in 2009? I started this year knowing I had 11 weeks of work before I left on maternity leave. So it's been like preparing for my own personal shutdown making sure projects for the next 12 months are scoped, documented, suppliers informed and all information up-to-date and accessible for someone else to run with. Had some impromptu mine rehabilitation thrown in as well.

When will we see you back at Anglesea? At this stage I have planned for 12 months maternity leave which will see me back at Anglesea on March 22, 2010. It seems so far away but i'm sure the year will go quickly.

Who will be looking after your role while you are on leave? My role has been split into the two areas of land management and mine rehabilitation. Lisa Mills will be taking care of everything land management related for the site whilst three mine rehabilitation projects will be tackled by our Alcoa colleagues in Western Australia.

Good luck – we hope it all goes well. Thank you - so do !!

...ELISE JEFFERY

