



water target achieved

Alcoa Anglesea maintains the focus on town water use

anglesea environment report

DECEMBER 2006

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2006 town water target achieved

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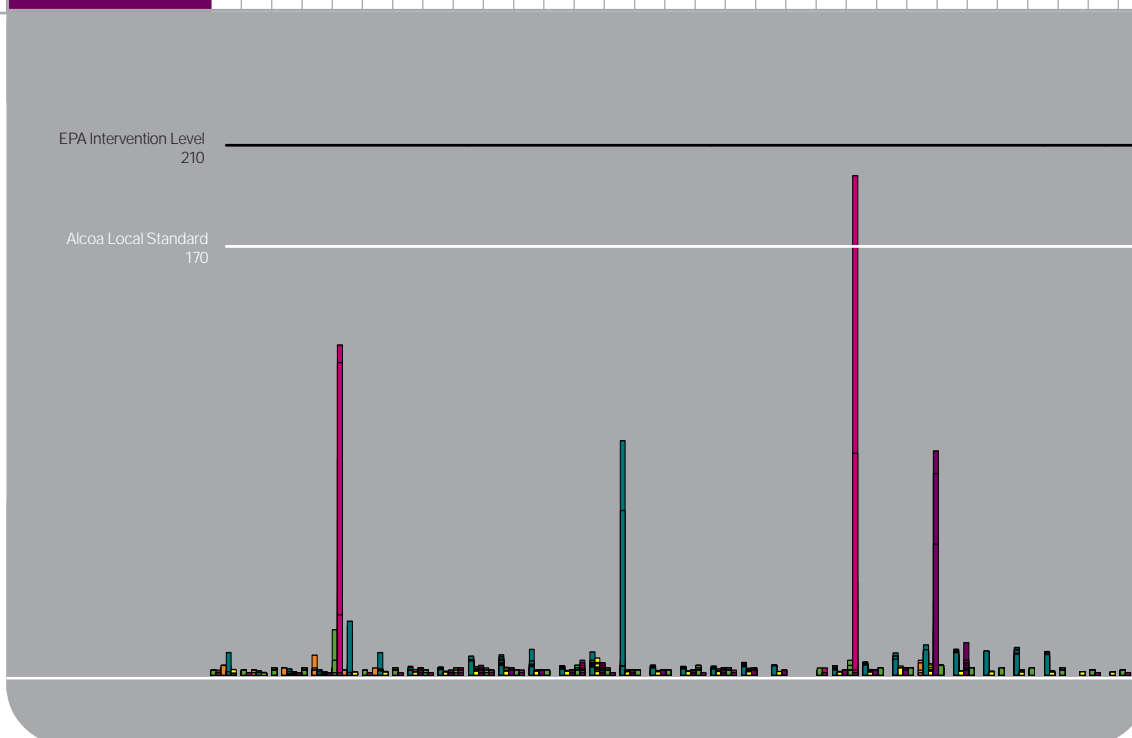
australia's aluminium

air

Air Monitoring	Average	Maximum
Stack Monitors		
Opacity g/m ³ 10-minute average	0.067	0.324
Stack SO ₂ kg/min 1-hour average Licence limit 111.34kg/min	60.18	77.42

Ambient Monitors	Average	Maximum
SO ₂ 1 hour ppb		
Community Centre	2	18
Primary School	2	198
Mt Ingoldsby	< 1	8
Scout Camp	4	93
Camp Wilkin	2	7
Camp Road	2	89

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	29	30	31
Community Centre	2	2	3	3	18	2	3	2	3	3	2	2	4	3	2	2	4	3	-	-	3	6	3	3	4	3	3	3	3	2	2
Primary School	2	1	0	0	131	1	1	1	3	2	2	0	6	1	0	0	1	2	-	-	3	198	0	0	0	0	0	0	0	1	1
Mt Ingoldsby	4	2	3	8	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	6	0	0	0	0	0	0	0	1	1
Scout Camp	9	2	3	2	21	9	4	3	8	8	10	4	9	93	4	4	4	5	4	5	9	7	-	-	-	-	12	10	10	11	10
Camp Wilkin	2	1	1	1	2	2	2	2	3	3	2	2	7	2	2	2	3	3	2	2	4	5	2	2	2	2	2	1	2	3	2
Camp Road	0	0	1	1	-	0	3	2	4	3	2	2	5	2	2	2	3	3	2	2	3	89	3	-	-	-	-	-	-	-	



water



Water Storage

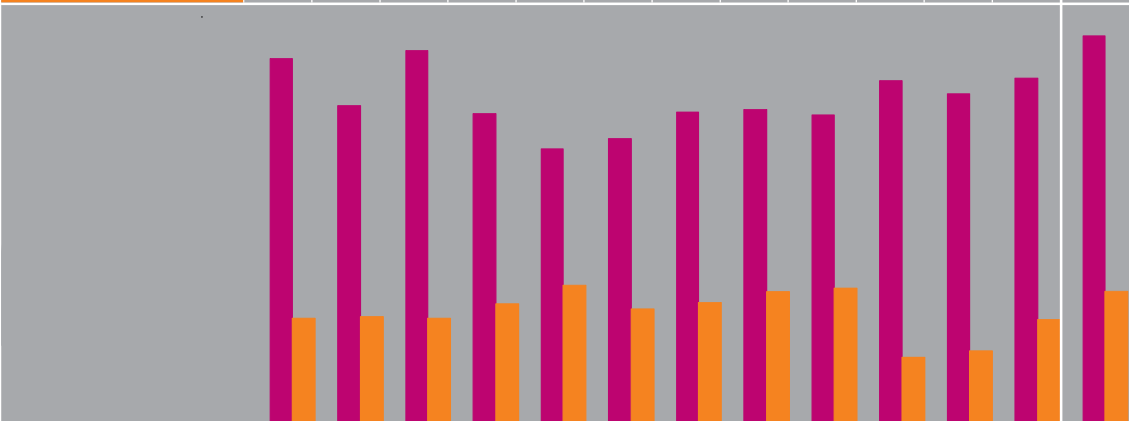
Barwon Water storage levels for the Geelong system at 22.2% capacity. Stage 4 restrictions now apply.

Water Discharge	December	Total
ML		
Ashponds (SP1)	146	1690
Mine (SP4)	0	0.8

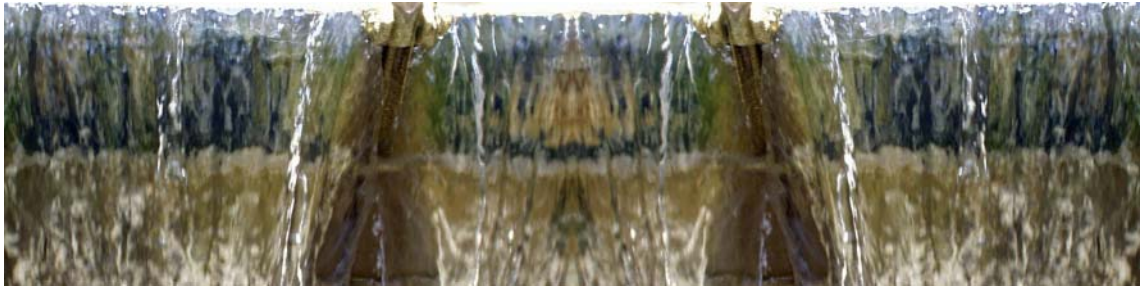
Water Monitoring 12/12/2006	SP1 Ashpond		SP4 Mine		SP3 Final	
	EPA limit	Lab Result	EPA limit	Lab Result	EPA limit	Lab Result
pH	4-10	8.9	3-9	-	5-9	7.3
Susp. Solids	100	< 2	100	-	30	< 2
Colour	50	4	50	-	50	4
Aluminium	10	< 0.1	10	-	5.5	< 0.1
Iron	10	< 0.2	0	-	4.0	< 0.2
Zinc	0.4	< 0.1	2.0	-	0.3	< 0.1

WATER WATER USAGE PER MONTH (ML)

Date	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
Town Water	1.0	1.0	1.0	1.5	1.6	0.8	1.0	1.1	0.9	1.6	1.8	1.6	14.9
Bore Water	279	243	285	237	210	218	238	240	236	262	252	264	2964
Mine Water	81	82	81	92	106	88	93	101	104	51	56	80	1015



water target achieved



In a year of extreme drought conditions where low water storages and water restrictions have been in the spotlight, Alcoa Anglesea has strived for and achieved the ambitious goal of a further reduction in town water use. Just 14.9 ML of water was used in 2006 meaning Alcoa Anglesea has now reduced its town water use by more than 60% from 2000, two years ahead of the corporate 2008 target.

Congratulations to all the employees of Alcoa Anglesea who have been vigilant in minimising the use of town water. The water saving is particularly critical, given the current drought leading to Stage 4 water restrictions being enforced by Barwon Water. Alcoa Anglesea has quickly adapted to the changing water restrictions, including the decommissioning of the carwash facility. The acceptance of the need to save water by all employees is to be highly commended.

The driving force behind water saving at Alcoa began in 2004 when Alcoa and Barwon Water signed an agreement to produce water management plans with the intent of reducing water use. The agreement was launched by the Hon John Thwaites, Minister for Water. Alcoa (Pt Henry & Anglesea) has spent over \$1 million dollars on water conservation initiatives since forming the partnership.

The first step in the agreement was for Alcoa to undergo a series of water audits. Key findings from the audits were implemented, in particular the installation of water saving devices on all showers, basins and taps utilising town water. This project had a financial payback of 15 months, as well as significantly saving water. Other projects were also identified by the site Water Team and carried out by maintenance teams. This included such projects as the conversion of toilets to GS water, trigger nozzles fitted on hoses, and prominent water saving signage.

Alcoa Anglesea's goal in 2007 is to maintain its water saving efforts with a target to further reduce water use by 10% by 2010 resulting in a 70% reduction since 2000.

PLANTS OF THE ANGLESEA HEATH

GANG-GANG COCKATOO (*Callocephalon fimbriatum*)

Size:	34cm
Weight:	257g
Description:	small stocky cockatoo with a wispy crest, adult male has a distinctive scarlet red head + crest with the rest of the body slate-grey, adult female has a dark grey head + crest with the feathers on the breast and abdomen edged in pink and yellow
Distribution:	endemic to south-eastern Australia
Habitat:	in summer the Gang-gang is found in tall mountain forests and woodlands with dense shrubby understorey, in winter they will move into drier, open forest and woodlands
Food:	mainly feed on seeds of native and introduced trees and shrubs with a preference for eucalypts and wattles
Did you know?	Gang-gang Cockatoos almost always use their left foot to hold food when eating

GANG-GANG COCKATOO



LAND

RAINFALL (mm)

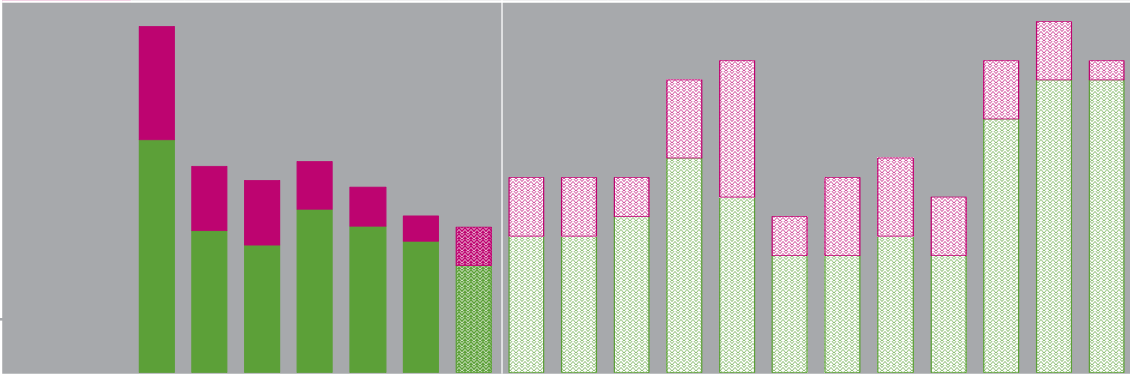
Month	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
2006 Rainfall	46.2	19.6	7.3	37.1	129.4	17.0	40.8	26.0	32.8	15.8	15.4	29.0	417.4
1968-2005 Average	44.6	43.9	42.5	53.5	59.3	60.8	61.1	67.0	69.3	73.6	54.1	44.2	673.8



WATER

TOWN WATER USE (ML)

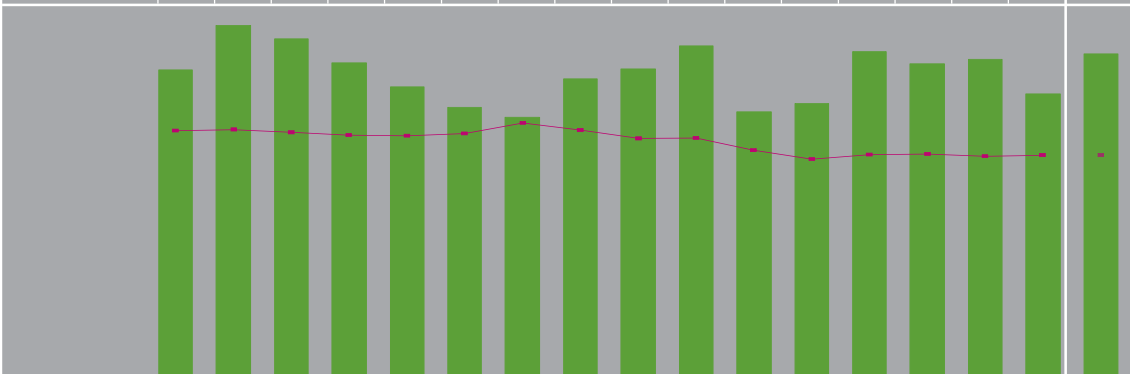
	2000	2001	2002	2003	2004	2005	2006	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Process	23.9	14.6	13.1	16.7	15.0	13.5	11.0	0.7	0.7	0.8	1.1	0.9	0.6	0.6	0.7	0.6	1.3	1.5	1.5
Amenity ^a	11.6	6.6	6.6	5.0	4.0	2.6	3.8	0.3	0.3	0.2	0.4	0.7	0.2	0.4	0.4	0.3	0.3	0.3	0.1



AIR

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

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
GHG Mt	1.42	1.62	1.56	1.45	1.34	1.25	1.20	1.38	1.42	1.53	1.23	1.27	1.50	1.45	1.47	1.31	1.49
◆ GHG t/MWh	1.34	1.35	1.33	1.32	1.31	1.33	1.38	1.34	1.30	1.30	1.24	1.19	1.21	1.21	1.20	1.21	1.21



environmental improvement

Environmental Management Targets	December	2006 Total	Forecast	2006 Target
Reportable Environmental Incidents	0	0	-	0
Monthly EHS ASAT Audit Completion (%)	100	94	-	90
Air Emission Targets	December	2006 Total	Forecast	2006 Target
Ambient SO ₂ (no. readings > 210ppb)	0	4	-	0
Stack SO ₂ (no. hrs > 100kg/min)	0	0	-	0
SO ₂ Load Reductions	2	111	-	N/A
GHG Efficiency (t CO ₂ e/MWh)	1.21	1.21	-	1.20
Opacity (10 min av > 0.25g/m ³ normal operation)	0	0	-	0
Water Targets	December	2006 Total	Forecast	2006 Target
Town Water (ML)	1.6	14.9	-	17.2
Bore Water (ML)	264	2964	-	2440
Waste Targets	December	2006 Total	Forecast	2006 Target
Waste to Landfill (t)	0.0	9.1	-	10.0
Solid Prescribed Waste to Landfill (t)	0.0	0.0	-	0.0
Mine Rehabilitation Targets		2006 Total		2006 Target
2006 Area Cleared (ha)		3.3		3.3
2006 Area Rehabilitated (ha)		7.5		> 3.3
2005 Mine Rehabilitation Species Richness (%)		N/A		100

OUR ENVIRONMENT AND OUR EMPLOYEES..

It's been 2 years since Anglesea embarked on a concerted effort to reduce its town water use. What sort of things does the maintenance department do to ensure no water is wasted?

A more concerted response to repairs on the water systems. shorter showers,"soap up" first then turn the taps on to wash hands and face and trigger nozzles on all town water hoses.

Have these learning's being implemented at home?

Yes I have installed the same restrictors on both our showers. I have been on the websites that were suggested for info on water conservation in the last issue of "Enviro News" and from the research and talking to our resident plumber Bindy I have diverted about 80% of grey water to our gardens at little cost and alteration. We had a tank installed about 10 years ago and only used the water for drinking but now we use this to "hand water" the plants and garden beds as before it was done by the hose or the auto watering system.

As a regular provider of feed back on the Environment Report, what issues interest you most?

Long term..What does the future hold for the next generation? Short term..How we can keep running this station with minimum impact to the environment and the people?... so I have a job.

...PAUL MANNIX

