

going underground
is this the future of geelong's water supply?

alcoa anglesea

environment report

july

2007



australia's aluminium

air

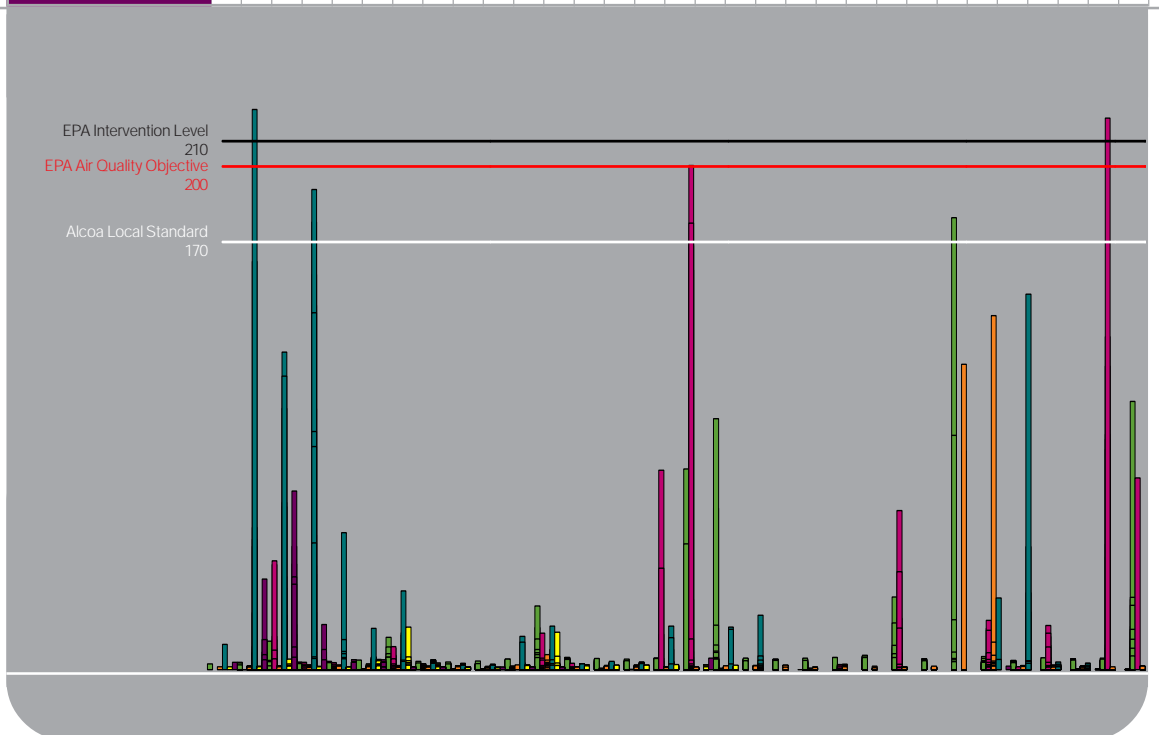
Air Monitoring	Average	Maximum
Stack Monitors		
Opacity g/m ³ 10-minute average	0.067	0.262
Stack SO ₂ kg/min 1-hour average Licence limit 100kg/min	62.29	86.29

Ambient Monitors	Average	Maximum
SO ₂ 1 hour ppb		
Community Centre	5	180
Primary School	5	219
Mt Ingoldsby	2	141
Scout Camp	8	223
Camp Wilkin	1	17
Camp Road	3	71

Ambient Monitors

SO₂ 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	3	11	3	3	4	13	3	3	4	4	25	5	4	5	5	80	100	5	4	5	5	6	29	5	180	5	4	5	5	5	107
Primary School	0	43	4	3	0	9	2	0	0	2	15	3	1	0	2	79	200	1	-	0	1	2	1	63	-	1	20	1	18	1	219
Mt Ingoldsby	2	2	2	2	2	2	2	2	1	2	6	1	2	2	1	1	1	2	2	1	2	2	1	1	87	141	2	2	2	1	2
Scout Camp	162	223	191	55	5	31	4	3	2	13	17	2	3	3	17	0	17	22	-	-	-	-	-	0	0	29	149	3	3	-	0
Camp Wilkin	1	4	2	1	4	17	3	1	1	2	15	2	2	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Camp Road	36	71	18	4	4	1	1	0	1	1	1	-	-	0	-	5	-	0	0	-	-	-	-	-	-	1	-	2	0	0	-



water



Water Storage

Barwon Water storage levels for the Geelong system at 25.5% capacity. Stage 4 restrictions apply.

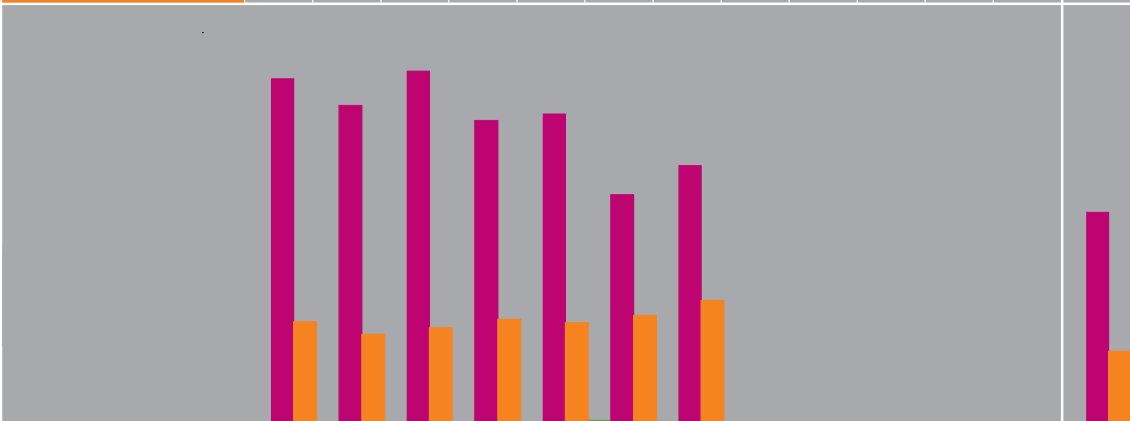
Water Discharge	July	Total
ML		
Ashponds (SP1)	134*	976
Mine (SP4)	0	0

* July value calculated from available data due to equipment calibration error.

Water Monitoring 26/07/2007	SP1 Ashpond		SP4 Mine		SP3 Final	
	EPA limit	Lab Result	EPA limit	Lab Result	EPA limit	Lab Result
pH	4-10	8.3	3-9	-	5-9	6.4
Susp. Solids	100	4	100	-	30	< 2
Colour	50	4	50	-	50	4
Aluminium	10.00	0.39	10	-	5.500	0.50
Iron	10.00	0.53	0	-	4.00	0.14
Zinc	0.400	0.013	2.0	-	0.300	0.035

WATER WATER USAGE PER MONTH (ML)

Date	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
Town Water	0.7	0.7	0.9	1.1	0.9	2.3	1.7						8.3
Bore Water	274	253	280	241	246	182	205						1681
Mine Water	81	71	76	83	80	86	98						575



anglesea borefield project

Barwon Water is investigating a new groundwater resource for the greater Geelong region. The Anglesea borefield project, identified in the Victorian Government's *Central Region Sustainable Water Strategy*, has been brought forward three years in response to declining surface water storages, the uncertainty of a return to average rainfall, and to meet future growth in the region.

It is anticipated the borefield could provide up to twenty megalitres of water a day to customers in the greater Geelong region, including Geelong, the Bellarine Peninsula, Torquay, Anglesea, Winchelsea, Lara and Bannockburn, by the summer of 2008/09.

The Anglesea borefield will tap into the Lower Eastern View aquifer which extends from the eastern edge of the Otway Ranges and flows in a south easterly direction deep under Anglesea and beyond.

Two borefield investigation zones have been identified. A northern investigation zone is located in the vicinity of Barwon Water's Forest Road basin site and a southern investigation zone is located adjacent to Coal Mine Road, along the southern boundary of the Alcoa coal mine.

A pipeline is required to link the southern and northern borefield sites to the pre-treatment plant at the Forest Road basin, and the pre-treatment plant to Wurdee Boluc Reservoir. The preferred pipeline alignment weaves it's way through the Anglesea Heath from Coalmine Road to Forest Road. As land managers of the Anglesea Heath

Alcoa needs to ensure that all environmental and heritage factors are assessed, including avoiding construction within the Anglesea Heath wherever possible; avoiding areas of high conservation significance; and avoiding known aboriginal heritage sites to minimise the impact of construction upon the values of the Anglesea Heath.

The Agency Reference Group, formed in March, meets monthly to discuss and streamline the environmental and legislative process needed to satisfy each agency's requirements for project approval. The group includes representatives from Alcoa in addition to the EPA, Southern Rural Water, DSE, Parks Victoria, Surf Coast Shire and Corangamite CMA.

Consultants GHD Pty Ltd are working with Barwon Water to deliver this project including providing information and consulting with the community. The project information centre includes:

- > a **project office**: on the corner of Harvey and Parker Street, Anglesea (the former DSE and Parks Victoria office). A project team member will be in the office every **Tuesday from 9.30am-4pm** to discuss the project. Please phone 5226 2516 to make an appointment.
- > a **website**: www.barwonwater.vic.gov.au
- > the **free call number**: **1800 735 9131**; and
- > an **email address**: angleseaborefield@barwonwater.vic.gov.au.

The July Community Information Bulletin is now available through these avenues.

ANIMALS OF THE ANGLESEA HEATH

ST ANDREW'S CROSS SPIDER (*Argiope keyserlingi*)

Size:	male: 4mm female: 20mm
Form:	small bodied with long legs; often appears to have only four legs due to it's resting position in the web
Colour:	male: head + chest are brown; abdomen is cream with mottled brown pattern female: head + chest are brown with silky hairs; abdomen has horizontal stripes of yellow and crimson brown; legs are dark brown to black with a few yellowish bands
Habitat:	found in eastern Australia in habitats ranging from rainforest margins to open forest and heathland
Food:	prey includes flies, moths, butterflies, bugs and bees
Web:	reflects UV light which is attractive to flying insects who use it to locate food sources
Bite:	considered harmless

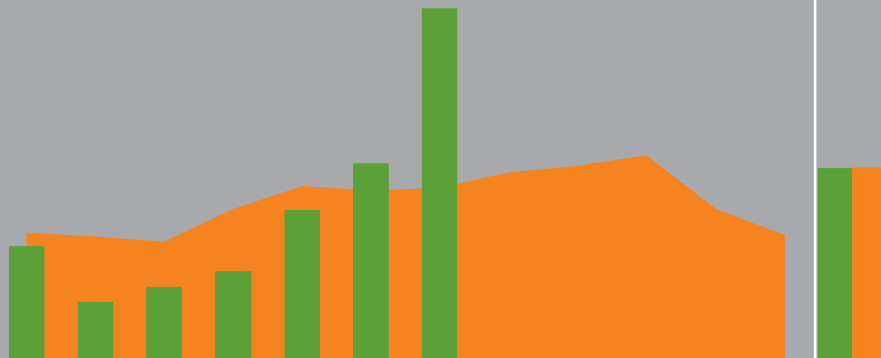
ST ANDREW'S CROSS SPIDER



LAND

RAINFALL (mm)

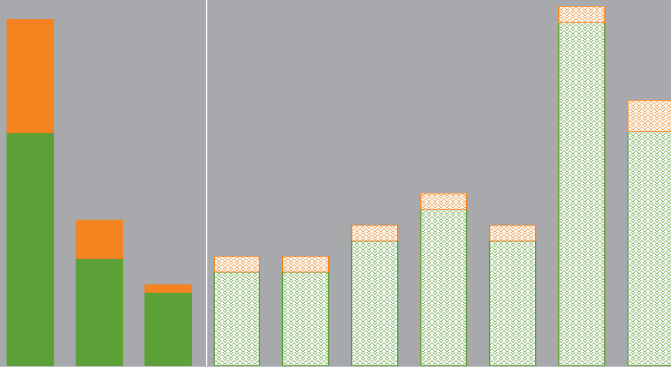
Month	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
2007 Rainfall	40.0	20.2	25.6	31.0	52.8	69.2	124.0						362.8
1968-2006 Average	44.6	43.3	41.5	53.1	61.2	59.6	60.6						363.8



WATER

TOWN WATER USE (ML)

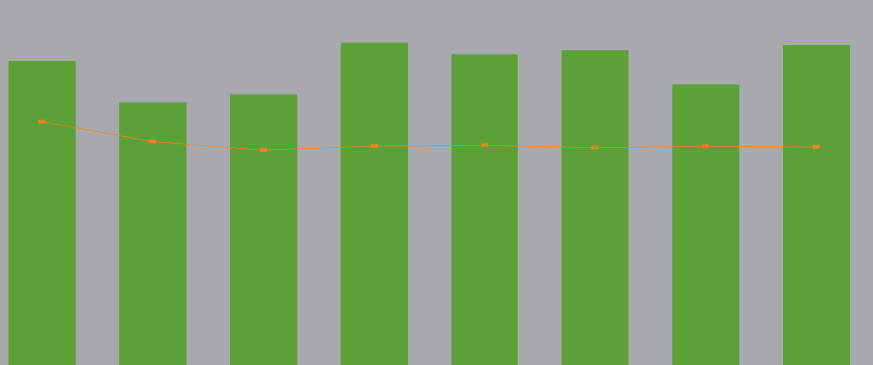
	2000	2006	2007	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Process	23.9	11.0	7.5	0.6	0.6	0.8	1.0	0.8	2.2	1.5					
Amenity	11.6	3.8	0.8	0.1	0.1	0.1	0.1	0.1	0.1	0.2					



AIR

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

	1990	2000	2001	2002	2003	2004	2005	2006	2007
GHG Mt	1.42	1.23	1.27	1.50	1.45	1.47	1.31	1.49	1.37
◆ GHG. t/MWh	1.34	1.24	1.19	1.21	1.21	1.20	1.21	1.20	1.19



environmental improvement

Environmental Management Targets	July	2007 Total	Forecast	2007 Target
Reportable Environmental Incidents	0	0	0	0
Monthly EHS ASAT Audit Completion (%)	100	100	100	90
Air Emission Targets	July	2007 Total	Forecast	2007 Target
Ambient SO ₂ (no. readings > 210ppb)	2	2	3	0
Ambient SO ₂ (no. readings > 200ppb)	3	4	7	0
Stack SO ₂ (no. hrs > 100kg/min)	0	0	0	0
SO ₂ Load Reductions (lost MWh)	4062	7912	13563	N/A
GHG Efficiency (t CO ₂ e/MWh)	1.17	1.19	1.19	1.20
Opacity (10 min av > 0.25g/m ³ normal operation)	0	0	0	0
Water Targets	July	2007 Total	Forecast	2007 Target
Town Water (ML)	1.7	8.3	14.2	14.2
Bore Water (ML)	205	1682	2883	2667
Waste Targets	July	2007 Total	Forecast	2007 Target
Waste to Landfill (t)	0.0	0.0	0.0	9.0
Solid Prescribed Waste to Landfill (t)	0.0	0.0	0.0	0.0
Mine Rehabilitation Targets	2007 Total		2007 Target	
2007 Area Cleared (ha)	2.9		3.5	
2007 Area Rehabilitated (ha)	5.0		> 3.5	
2005 Mine Rehabilitation Species Richness (%)	103		100	

OUR ENVIRONMENT AND OUR EMPLOYEES..

So Phil, you're the OHS Coordinator - how do you come to feature in this month's Env Report?

There's a cross over between Safety and Environment where asbestos is concerned. Potential exposure to asbestos presents an environmental and health risk and we need to ensure that our people are aware of the health impacts and the correct handling requirements. From an environmental view, asbestos once removed from use is then considered a waste material, and it is disposed of in our onsite dedicated landfill.

What is the status of asbestos training?

As part of a review of training requirements for everyone onsite, it was determined that there was a need for a revamp of the asbestos awareness training material we present to all employees. Prior to formalising our training needs analysis, this material has generally been delivered in preparation for outages but now will be a regular feature of our training profile.

And how is this year's training shaping up?

The general awareness package has been developed and training will be rolled out in September by myself or Nicci Marris. This will be for all Alcoa personnel and site-based contractors.

...PHIL SMITH

