



sign here please
australia signs the kyoto protocol

alcoa anglesea

environment report

december

2007



australia's aluminium

air

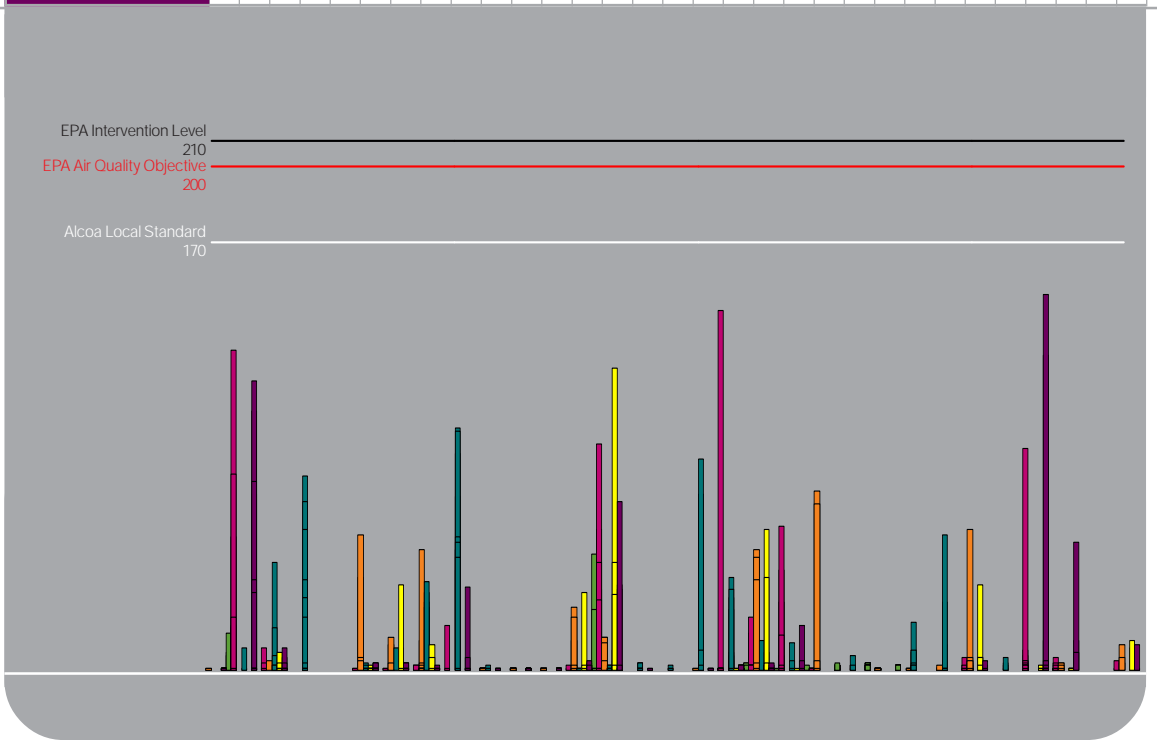
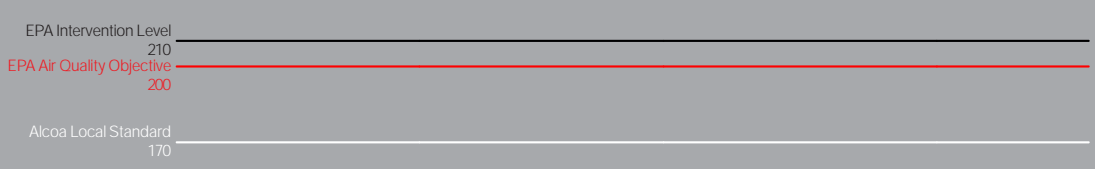
Air Monitoring	Average	Maximum
Stack Monitors		
Opacity g/m ³ 10-minute average	0.065	0.193
Stack SO ₂ kg/min 1-hour average Licence limit 100kg/min	75.25	87.51

Ambient Monitors	Average	Maximum
SO ₂ 1 hour ppb		
Community Centre	2	46
Primary School	3	143
Mt Ingoldsby	1	71
Scout Camp	3	96
Camp Wilkin	1	120
Camp Road	2	150

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	0	15	0	0	0	0	0	0	0	0	0	0	0	46	0	0	0	0	3	1	2	3	3	2	0	0	0	0	0	0	0
Primary School	0	127	9	0	0	1	1	2	18	0	0	0	2	90	0	0	0	143	21	57	1	0	0	0	0	5	0	88	5	0	4
Mt Ingoldsby	1	0	4	0	0	54	13	48	0	1	1	1	25	13	0	0	1	0	48	0	71	0	1	1	2	56	0	0	3	0	10
Scout Camp	0	9	43	77	0	3	9	-	96	-	-	-	45	2	0	0	1	2	3	2	70	84	2	12	0	6	0	19	54	0	5
Camp Wilkin	0	0	7	0	0	2	34	10	0	0	0	0	31	120	0	0	0	1	56	1	0	0	0	0	0	34	0	2	1	0	12
Camp Road	1	115	9	0	0	3	3	2	33	1	1	1	4	67	1	0	1	2	3	18	0	0	0	0	0	4	0	149	51	0	45



water



Water Storage

Barwon Water storage levels for the Geelong system at 36.5% capacity. Stage 4 restrictions apply with a Daylight Savings exemption to permit limited residential garden watering.

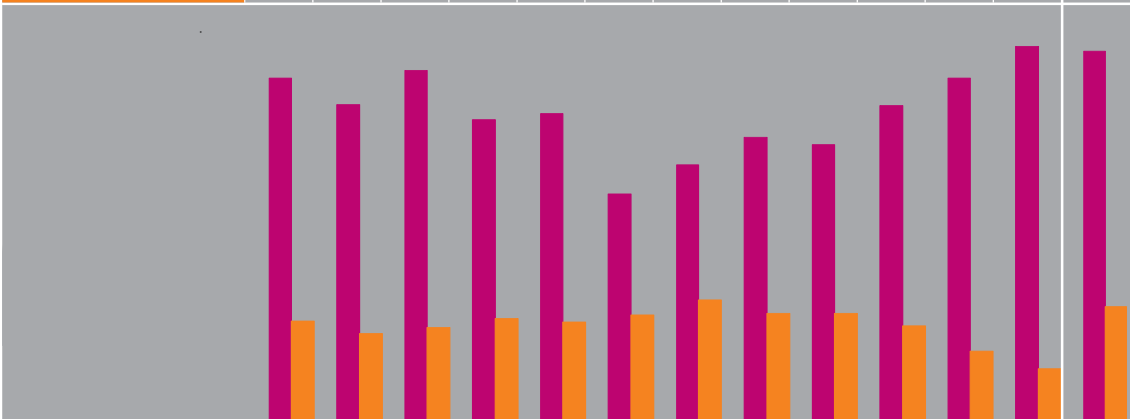
Water Discharge ML	December	Total
Ashponds (SP1)	133*	1598
Mine (SP4)	0	0

* average value based upon data from year to date. December data not available due to equipment error.

Water Monitoring 17/12/2007	SP1 Ashpond		SP4 Mine		SP3 Final	
	EPA limit	Lab Result	EPA limit	Lab Result	EPA limit	Lab Result
pH	4-10	7.9	3-9	-	5-9	6.1
Susp. Solids	100	< 2	100	-	30	2
Colour	50	5	50	-	50	10
Aluminium	10.00	0.05	10.0	-	5.500	0.260
Iron	10.00	0.06	20.0	-	4.000	0.072
Zinc	0.400	0.015	2.000	-	0.300	0.100

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	1.9	1.4	0.8	0.9	1.0	14.3
Bore Water	274	253	280	241	246	182	205	227	221	252	274	299	2954
Mine Water	81	71	76	83	80	86	98	87	87	77	57	43	926



kyoto protocol

During December the United Nations hosted a climate change conference in Bali, Indonesia. It was here that Australia signed the ratification documents for the Kyoto protocol, ending the Australian Government's long-held opposition to the global climate agreement. So what is the Kyoto protocol?

What is the Kyoto protocol?

The Kyoto protocol is an international and legally binding agreement to reduce greenhouse gas emissions worldwide. It came into force in February 2005 after being agreed at a 1997 UN conference in Kyoto, Japan. A total of 174 nations ratified the pact to reduce the greenhouse gases emitted by developed countries to at least 5% below 1990 levels by 2008-12.

Is everyone signed up to the pact?

No. The United States, the world's biggest carbon emitter, opposed the Kyoto protocol in 2001, saying it would be too expensive and should include targets for developing nations.

Following Australia's ratification, the United States is now the only developed nation outside the pact.

Australia had previously steadfastly refused to ratify Kyoto, arguing that Australia would not agree to a pact setting greenhouse gas emission targets unless the big polluters among developing countries, such as China and India, were also subject to binding targets.

Why are developed nations expected to cut their carbon?

Climate change will hit the poorest and most vulnerable the hardest, according to the Intergovernmental Panel on Climate Change (ICPP), but it will affect everyone. With their greater economic and technological resources, industrialised countries are considered to be equipped to do the most to reduce greenhouse gas emissions.

What happens after Kyoto?

Delegates from over 180 nations, together with observers from intergovernmental and non-governmental organisations met this month to negotiate a new pact to succeed the Kyoto protocol, which expires in 2012.

Parties need to agree on the key areas which the new climate agreement should cover, such as mitigation (including avoided deforestation, where industrialised nations pay rainforest-rich nations to protect their forests to offset greenhouse gas emissions), adaptation, technology and financing.

They also need to agree on when the talks and negotiations will conclude so that the new climate change deal can be ratified by national governments before the end of 2012.

Other important issues under negotiation in Bali, included adaptation to climate change, the launch of a fund for adaptation, reducing emissions from deforestation, issues relating to the carbon market, and arrangements for a review of the Kyoto protocol.

PLANTS OF THE ANGLESEA HEATH

SCENTED PAPERBARK (*Melaleuca squarrosa*)

Melaleuca...from Greek *melas*; black and *leukos*; white, referring to black marks on the white trunks of some species due to fire

squarrosa... having scales or scale-like overlapping leaves, referring to the shape of the leaf

- Size: 2 - 5m H x 1- 2 m W
 Form: erect, open to compact large shrub or rarely, a small tree to 10m high
 Foliage: stiff dark green ovate to triangular leaves to 18mm long; crowded in pairs and distinctly decussate (each pair at right angles to the pair below)
 Flowers: profuse terminal spikes of scented cream to yellow flowers
 Habitat: September to February
 Habitat: damp and valley sclerophyll forests, swamp and wattle tea-tree scrub; must be in moist to wet soils

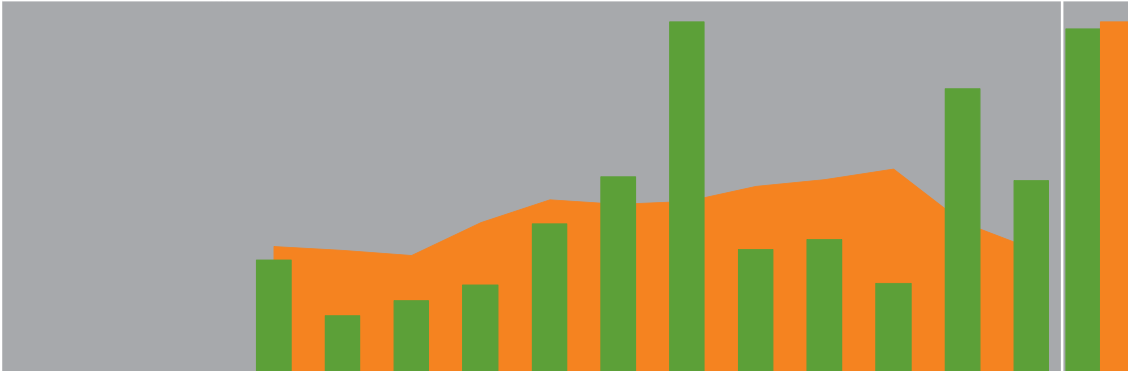
MELALEUCA SQUARROSA



LAND

RAINFALL (mm)

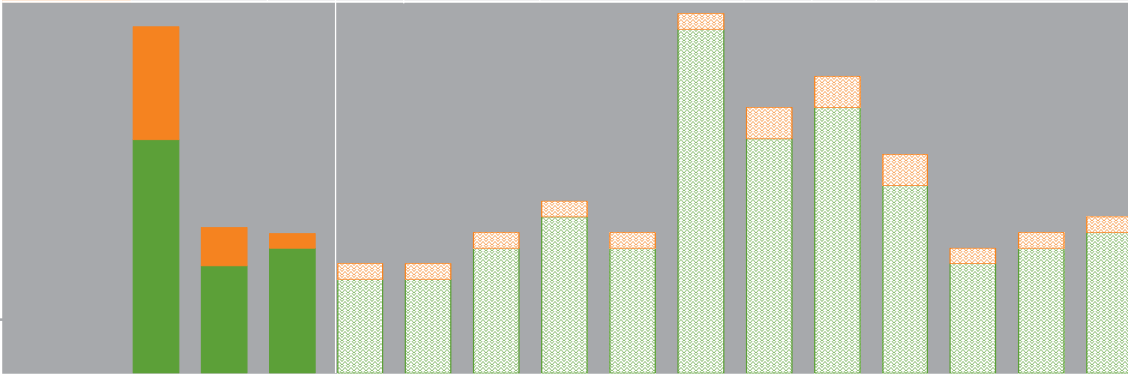
Month	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
2007 Rainfall	40.0	20.2	25.6	31.0	52.8	69.2	124.0	43.6	47.2	31.6	100.4	67.8	653.4
1968-2006 Average	44.6	43.3	41.5	53.1	61.2	59.6	60.6	65.8	68.3	72.0	53.1	43.8	666.9



WATER

TOWN WATER USE (ML)

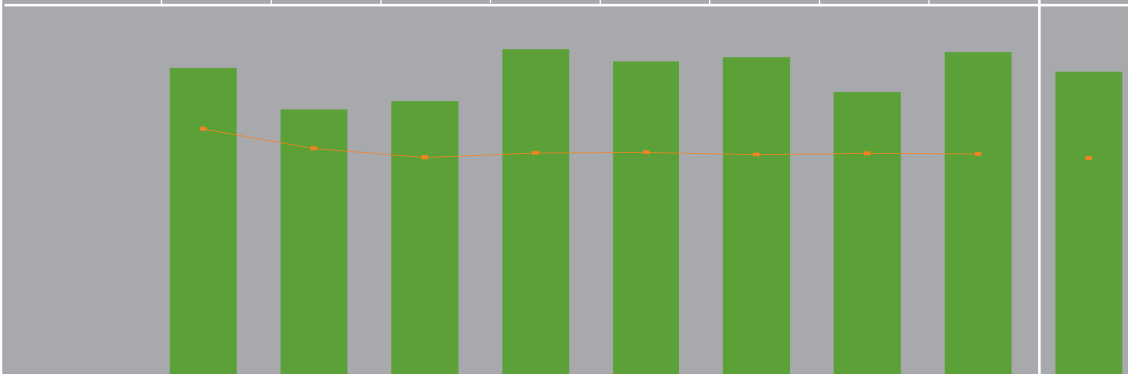
	2000	2006	2007	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Process	23.9	11.0	12.8	0.6	0.6	0.8	1.0	0.8	2.2	1.5	1.7	1.2	0.7	0.8	0.9
Amenity	11.6	3.8	1.5	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1



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	1.40
◆ GHG. t/MWh	1.34	1.24	1.19	1.21	1.21	1.20	1.21	1.20	1.18



environmental improvement

Environmental Management Targets	December	2007 Total	Forecast	2007 Target
Reportable Environmental Incidents	0	3	-	0
Monthly EHS ASAT Audit Completion (%)	100	100	-	90
Air Emission Targets	December	2007 Total	Forecast	2007 Target
Ambient SO ₂ (no. readings > 210ppb)	0	3	-	0
Ambient SO ₂ (no. readings > 200ppb)	0	4	-	0
Stack SO ₂ (no. hrs > 100kg/min)	0	0	-	0
SO ₂ Load Reductions (lost MWh)	713	24601	-	N/A
GHG Efficiency (t CO ₂ e/MWh)	1.18	1.18	-	1.20
Opacity (10 min av > 0.25g/m ³ normal operation)	0	0	-	0
Water Targets	December	2007 Total	Forecast	2007 Target
Town Water (ML)	1.0	14.3	-	14.2
Bore Water (ML)	299	2955	-	2667
Waste Targets	December	2007 Total	Forecast	2007 Target
Waste to Landfill (t)	0.0	3.8	-	9.0
Solid Prescribed Waste to Landfill (t)	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..

Tony - we hear there's been an energy makeover at your place - what's been going on? With the Federal Government solar rebate on offer, we've just installed sixteen solar panels on our roof which will satisfy all our power requirements. This is in addition to the existing solar hot water service.

And what are the benefits? On an average day we consume 15 kW a day, but now with the solar panels we can actually generate over 20 kW per day during the summer months. So the excess power is being fed straight back into the grid, which I can verify by watching my meter going backwards. Obviously this latest installation has significant greenhouse gas savings making us a carbon neutral household.

And the dollar benefits have got to be good? Our power bills are non-existent. On current power prices, we've calculated that it should take roughly 14 years for a complete payback, but we expect it will take less than this with the future cost-of-power projections. Plus we were also eligible for a carbon credits once-off payment! There's also the potential of it increasing the value of our house as the next owner will benefit from our capital outlay.

Any other plans Tony? Due to the capacity of the inverter, we can't put any more panels in place, but we are certainly looking forward to the next power outage!

...TONY FRANKEN

