



up, up and away
all three falcon chicks successfully take off

alcoa anglesea

environment report

november

2008



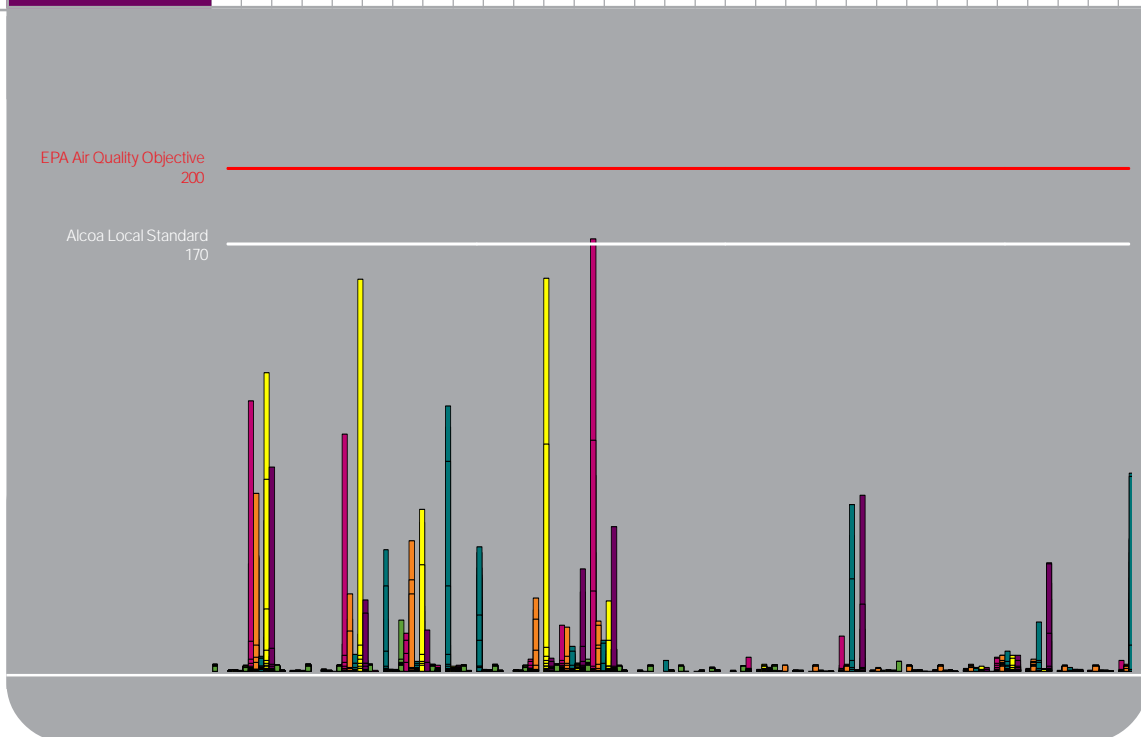
australia's aluminium

air

Air Monitoring	Average	Maximum
Stack Monitors		
Opacity g/m ³ 10-minute average	0.074	0.228
Stack SO ₂ kg/min 1-hour average Licence limit 100kg/min	66.17	80.26

Ambient Monitors	Average	Maximum
SO ₂ 1 hour ppb		
Community Centre	1	20
Primary School	2	172
Mt Ingoldsby	2	71
Scout Camp	3	106
Camp Wilkin	2	156
Camp Road	1	81

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
Community Centre	3	2	2	3	2	3	20	3	2	3	2	3	5	2	2	2	2	2	2	0	0	0	4	0	0	0	0	0	0	0
Primary School	0	108	1	0	94	0	15	2	0	0	5	18	172	0	0	0	6	0	0	14	0	0	0	1	6	1	0	0	4	
Mt Ingoldsby	0	71	0	0	31	0	52	0	0	0	29	17	20	0	0	0	0	0	2	2	3	2	3	3	7	5	3	2	3	
Scout Camp	1	6	0	1	7	49	4	106	50	-	0	10	12	0	4	0	0	1	0	1	66	1	1	0	2	8	19	2	0	79
Camp Wilkin	0	119	0	0	156	1	65	2	1	0	156	3	28	0	1	1	0	3	0	0	0	0	0	0	2	6	1	1	0	0
Camp Road	0	81	0	0	28	1	17	3	0	0	5	41	58	0	0	0	0	2	0	0	70	0	0	0	2	6	43	1	0	19



water



Water Storage

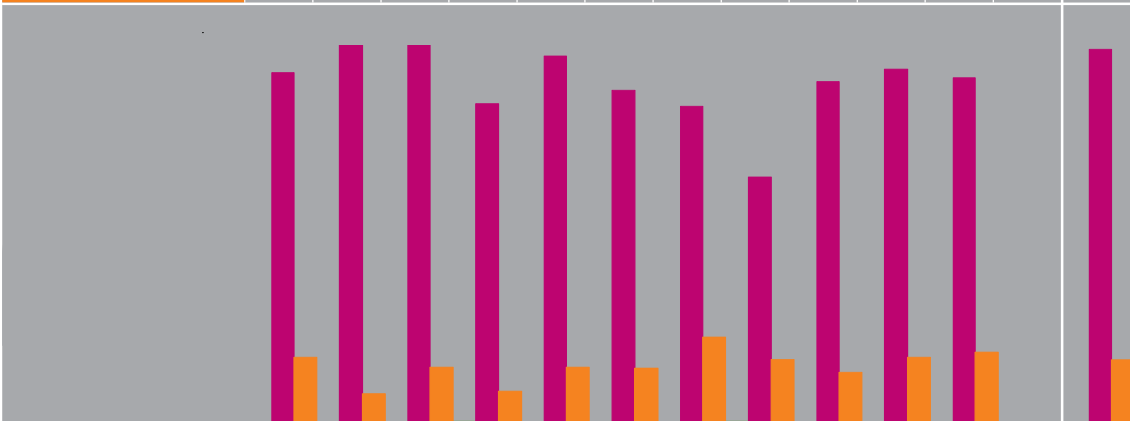
Barwon Water storage levels for the Geelong system at 26.8% capacity. Stage 4 Water Restrictions - Daylight Savings are now in force until April 5, 2009. Garden watering limited to 7PM-8PM twice weekly.

Water Discharge	November	Total
ML		
Ashponds (SP1)	131	1515
Mine (SP4)	0.98	1.1

Water Monitoring 24/11/2008	SP1 Ashpond		SP4 Mine		SP3 Final	
	EPA limit	Lab Result	EPA limit	Lab Result	EPA limit	Lab Result
pH	4-10	8.4	3-9	no	5-9	7.4
Susp. Solids	100	< 4	100	discharge	30	< 4
Colour	50	4	50	at	50	5
Aluminium	10.00	0.29	10	time	5.50	0.11
Iron	10.00	0.13	20	of	4.00	0.05
Zinc	0.40	< 0.02	2.0	sampling	0.30	0.02

WATER WATER USAGE PER MONTH (ML)

Date	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
Town Water	1.4	0.9	0.9	2.2	1.0	0.9	1.7	2.2	1.0	1.3	0.9		14.4
Bore Water	279	304	305	254	292	265	252	196	272	282	275		2976
Mine Water	53	24	45	26	45	44	69	51	41	53	57		508



peregrine falcons



In the last edition of the Environment Report, our Peregrine Falcon chicks were downy white. But they sure do grow up fast! With the webcam at www.alcoa.com/falcons we have been able to watch them gradually lose their down, get their juvenile plumage, take their first flights and eventually leave the nest. All in a month!

The chicks work up to the big 'first flight' with hours of wing pumping at the edge of the nest and venturing further out on the perch until they finally take off. Stan was the first to take the plunge, albeit a little prematurely. Concerned emails came in from across the globe to ask where the little fella had gone. Pt Henry security were even honoured with a phone call from China asking of Stan's whereabouts. After several days had past with no recent sighting, there were grave concern's for Stan's welfare. But six days later and no worse for wear, Stan was back in the nest box sharing his story of adventure with his two big brothers.

As our fledglings have become more competent in flight, they have moved away from the nest box to learn how to hunt with their parents. Peregrine chicks learn this in part through 'playing' - diving and swooping each other in mid air. You may have been lucky enough to see this activity around the Power Station in the last two weeks. The parents also capture prey for the fledglings to teach them how to snatch it from them in mid air replicating the hunting technique of the Peregrine.

This 'playing' can be deadly - able to reach speeds of up to 380 km/h, the mix of high speed and inexperience leads to high collision and mortality rates in fledglings. Juvenile mortality is quite high in Peregrine Falcons with 90% of Peregrines dying in their first year. Here at Anglesea, Jet, Tess and Dash were all lost within weeks of fledging from the nest. Good news is, if they get through the first 12 months, they have a high rate of survival to approximately 12 years of age.

PLANTS OF THE ANGLESEA HEATH

LONG PURPLE FLAG (*Patersonia occidentalis*)

Patersonia....after Colonel William Paterson, Lieut-Governor of New South Wales, 1800-1810

occidentalis...from the Latin meaning of or from the West, referring to it's distribution in south western Australia

- Size: 20-40cm H x 30-60cm W
 Habitat: valley sclerophyll forest, swamp and wattle tea-tree scrub
 Distribution: widespread in southern Australia
 Form: compact clumping perennial herb
 Foliage: long, flat leaves to 60cm x 5mm, convex on one surface
 Flowers: the tube of the bluish-purple flower is almost hidden by the bracts, flowering stems are as long as, or longer than, the foliage, up to 85cm long
 September to January
 Did you know? each flower only opens for just one day

LONG PURPLE FLAG



LAND

RAINFALL (mm)

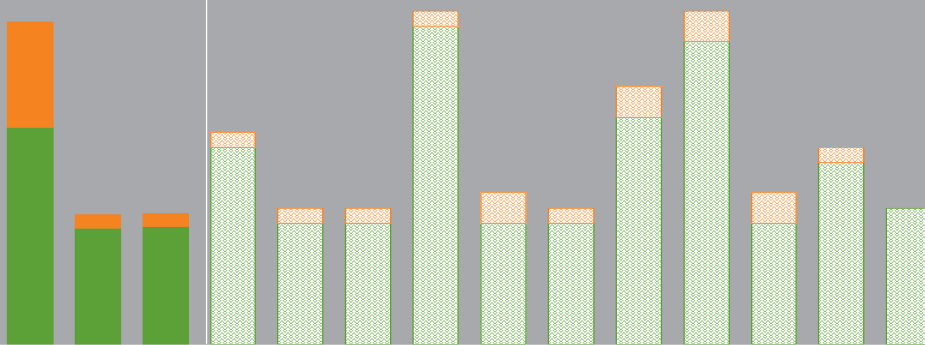
Month	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
2008 Rainfall	19.8	35.8	15.2	17.3	32.5	43.8	75.8	61.6	40.0	12.4	40.0		394.2
1968-2007 Average	44.5	42.7	41.1	52.5	61.0	59.9	62.2	65.3	67.7	70.9	54.3		622.1



WATER

TOWN WATER USE (ML)

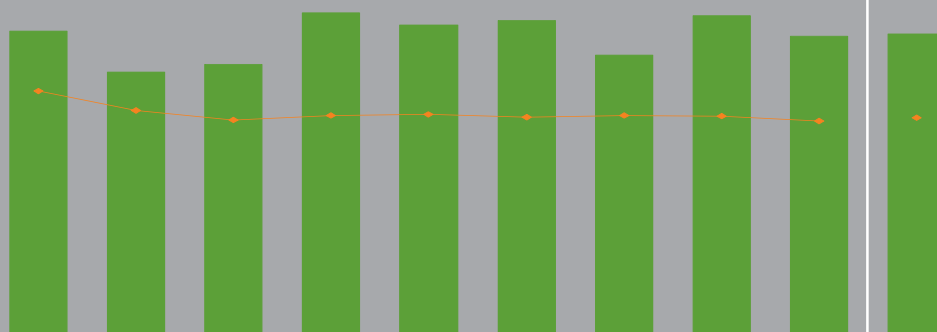
	2000	2007	2008	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Process	23.9	12.8	13.0	1.3	0.8	0.8	2.1	0.8	0.8	1.5	2.0	0.8	1.2	0.9	
Amenity	11.6	1.5	1.4	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.0	



AIR

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

	1990	2000	2001	2002	2003	2004	2005	2006	2007	2008
GHG Mt	1.42	1.23	1.27	1.50	1.45	1.47	1.31	1.49	1.40	1.41
◆ GHG t/MWh	1.34	1.24	1.19	1.21	1.21	1.20	1.21	1.20	1.18	1.20



environmental improvement

Environmental Management Targets	November	2008 YTD	Forecast	2008 Target
Reportable Environmental Incidents	0	0	0	0
Monthly EHS ASAT Audit Completion (%)	100	100	100	90
Air Emission Targets	November	2008 YTD	Forecast	2008 Target
Ambient SO ₂ (no. readings > 200ppb)	0	0	0	0
Stack SO ₂ (no. hrs > 100kg/min)	0	0	0	0
SO ₂ Load Reductions (lost MWh)	2269	21279	23213	N/A
GHG Efficiency (t CO ₂ e/MWh)	1.21	1.20	1.20	1.20
Opacity (10 min av > 0.25g/m ³ normal operation)	0	0	0	0
Water Targets	November	2008 YTD	Forecast	2008 Target
Town Water (ML)	0.9	14.4	15.7	14.2
Bore Water (ML)	275	2976	3247	2370
Waste Targets	November	2008 YTD	Forecast	2008 Target
Waste to Landfill (t)	4.46	12.54	13.7	8.0
Solid Prescribed Waste to Landfill (t)	0.0	0.0	0.0	0.0
Mine Rehabilitation Targets	November	2008 YTD	Forecast	2008 Target
2008 Area to Clear (ha)		0.0		0.0
2008 Area to Rehabilitate (ha)		0.0		0.0
2007 Mine Rehabilitation Species Richness (%)		N/A		100

OUR ENVIRONMENT AND OUR EMPLOYEE

Hi Lisa - so what are you doing here at Anglesea?

I am backfilling the Environmental Scientist's role part-time. Currently I am working on Anglesea's EREP plan and a Hydrogeological Assessment Gap Analysis

Where have you been working previously?

I have previously worked at Anglesea, Portland and Point Henry as part of the Graduate Program. Most recently I have returned from maternity leave.

Can you explain a little about EREP?

EREP is an Environment and Resource Efficiency Plan. Any industry which exceeds thresholds of 120 ML water use or 100 TJ energy use per annum is required to report to EREP, which is a department of the EPA. Alcoa Anglesea meets both of these thresholds.

How is it important to what we do here?

EREP aims to encourage industry to minimise water and energy use, as well as minimising waste production. It doesn't change what we do here at Anglesea very much, as we have already done a lot of work in these areas. EREP will help us to maintain the focus on minimising our resource use, particularly in to the future when planning projects.

...LISA MILLS

