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South32's Dendrobi coal sludge into cre Wollongong EPA off

ABC Illawarra / By Nick McLaren

Posted Mon 17 Aug 2020 at 5:13pm









Paul Scully MP

Shadow Minister for Natural Resources

Member for Wollongong

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Website: www.paulscullymp.com.au

On Tue, Aug 18, 2020, 9:02 AM Paul Scully < Paul.Scully@parliament.nsw.gov.au wrote:

The clean-up started on the day it happened. I don't know anyone who likes seeing this sort of event happen and everyone involved knows that I am paying close attention to the responses of everyone involved – operator and regulator.

Licence Variation

Licence - 3241



BACKGROUND

- A. DENDROBIUM COAL PT in 3241 ("the licence") issued The licence authorises the 2526 ("the premises").
- B. On 10 August 2020, the Elicensee that an incident h Waters Creek.
- C. An EPA Authorised Officer occurred. A stormwater p and the release of turbid w
- The EPA officer inspected Waters Creek and parts o deposited along some edg
- E. The EPA determined that to the dictionary definition
- The EPA has added condicause of the incident, its ecreeks.

A. DENDROBIUM COAL PT INFORMATION ABOUT THIS NOTICE

- This notice is issued under section 58(5) of the Act.
- Details provided in this notice, along with an updated version of the licence, will be available on the EPA's Public Register (http://www.epa.nsw.gov.au/prpoeo/index.htm) in accordance with section 308 of the Act.

Appeals against this decision

 You can appeal to the Land and Environment Court against this decision. The deadline for lodging the appeal is 21 days after you were given notice of this decision.

When this notice begins to operate

- The variations to the licence specified in this notice begin to operate immediately from the date of this
 notice, unless another date is specified in this notice.
- If an appeal is made against this decision to vary the licence and the Land and Environment Court
 directs that the decision is stayed the decision does not operate until the stay ceases to have effect or
 the Land and Environment Court confirms the decision or the appeal is withdrawn (whichever occurs
 first).



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AUGUST 17 2020 - 12:00PM

Impact of coal pollution on Figtree creek still unclear



Ben Langford

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Reference De	escription	Sample	Sample	Replicate	ate Samplei	minium-To	rsenic-Tot	arium-Tot	admium-T	o Cobalt-Tota	copper-Tot	Iron-Total	nganese-To	ybdenum-1	Nickel-Tota	Lead-Tota	lithium-Tota	rontium-To	ranium-T	ot Zinc
	I	Description	No.																	
Units						μg/L	μg/L	μg/L	_ μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μ
PQL						10	1	1	0.1	1	1	10	5	1	1	1	1	1	0.5	
Method					N	1etals-022	Metals-022	Metals-022	Metals-02	2 Metals-022	Metals-022	Metals-022	Metals-022	Metals-022	Metals-022	Metals-022	Metals-022	Metals-022	Metals-0	22 Meta
250238 Fi	gtree	BWU 1	1	(27/08/2020	520	<1	130	<0.1	<1	<1	290	7	<1	<1	2	. 8	170	<0.5	<1
250238 Fi	gtree	BWU 2	1	(27/08/2020	300	<1	150	<0.1	<1	<1	230	8	<1	<1	<1	6	170	<0.5	<1
250238 Fi	gtree	BWU 3	1	(27/08/2020	640	<1	160	<0.1	<1	<1	460	18	<1	1	<1	6	160	<0.5	
250238 Fi	gtree	BWU 3	1	1	27/08/2020	670	<1	160	<0.1	<1	<1	510	19	<1	1	<1	6	160	<0.5]
250238 Fi	gtree	FT Spill	2	(12/08/2020															
250238 Fi	gtree	FT Spill	2	(12/08/2020	1400	4	480	<0.1	5	2	3100	1900	4	4	1	. 22	890	0	.6
250238 Fi	gtree	FT Spill	2	1	12/08/2020	1600	4	470	<0.1	5	1	3000	1900	4	4	<1	23	870	0	.6
250238 Fi	gtree	DB MP1	3	(27/08/2020	<10	10	720	<0.1	<1	<1	56	<5	71	10	<1	410	710	2	.7
250238 Fi	gtree	DB MP2	3	(27/08/2020	<10	10	750	<0.1	<1	<1	57	<5	71	10	<1	410	730	2	.6
250238 Fi	gtree	SAL 1	5	(27/08/2020	60	48	790	<0.1	10	4	130	6	170	280	<1	2300	610	5	.6
250238 Fi	gtree	SAL 2	5	(27/08/2020	60	46	820	<0.1	9	4	110	6	170	270	<1	2500	620	5	.5
250238 Fi	gtree	SAL 3	5	(27/08/2020	70	57	830	<0.1	12	. 5	160	6	200	340	<1	2700	580	6	.3
250238 Fi	gtree	ACMKR	6	(27/08/2020	60	<1	83	<0.1	<1	1	89	9	<1	<1	<1	3	190	<0.5	
250238 Fi	gtree	BD1	15	(27/08/2020	60	<1	21	< 0.1	<1	4	21	<5	<1	1	<1	<1	46	<0.5	

Table 3.4.1 Trigger values for toxicants at alternative levels of protection. Values in grey shading are the trigger

values applying to typical slightly-r applying these levels to different ed

Chemical	
METALS & METALLOIDS	
Aluminium	pH >6.5
Aluminium	pH <6.5
Antimony	
Arsenic (As III)	
Arsenic (AsV)	
Beryllium	
Bismuth	
Boron	
Cadmium	Н
Chromium (Cr III)	Н
Chromium (CrVI)	
Cobalt	
Copper	Н
Gallium	
Iron	
Lanthanum	
Lead	Н
Manganese	
Mercury (inorganic)	В
Mercury (methyl)	
Molyhdenum	

nts at alternative levels of protection. Values in	I GIEV SIIa	ullig are the th	ddei						
Cadmium	Н	0.06	0.2	0.4	0.8 ^C	0.7 ^B	5.5 B, C	14 ^{B, C}	36 ^{B, A}
Chromium (Cr III)	Н	ID	ID	ID	ID	7.7	27.4	48.6	90.6
Chromium (CrVI)		0.01	1.0 ^C	6 ^A	40 ^A	0.14	4.4	20 ^c	85 ^C
Cobalt		ID	ID	ID	ID	0.005	1	14	150 ^c
Copper	Н	1.0	1.4	1.8 ^c	2.5 ^c	0.3	1.3	3 ^c	8 ^A
Gallium		ID	ID	ID	ID	ID	ID	ID	ID
Iron		ID	ID	ID	ID	ID	ID	ID	ID
Lanthanum		ID	ID	ID	ID	ID	ID	ID	ID
Lead	Н	1.0	3.4	5.6	9.4 ^c	2.2	4.4	6.6 ^C	12 ^C
Manganese		1200	1900 ^c	2500 ^c	3600 ^c	ID	ID	ID	ID
Mercury (inorganic)	В	0.06	0.6	1.9 ^c	5.4 ^A	0.1	0.4 ^c	0.7 ^c	1.4 ^c
Mercury (methyl)		ID	ID	ID	ID	ID	ID	ID	ID
Molybdenum		ID	ID	ID	ID	ID	ID	ID	ID
Nickel	Н	8	11	13	17 ^C	7	70 ^c	200 ^A	560 ^A
Selenium (Total)	В	5	11	18	34	ID	ID	ID	ID
Selenium (SeIV)	В	ID	ID	ID	ID	ID	ID	ID	ID
Silver		0.02	0.05	0.1	0.2 ^c	8.0	1.4	1.8	2.6 ^c
Thallium		ID	ID	ID	ID	ID	ID	ID	ID
Tin (inorganic, SnIV)		ID	ID	ID	ID	ID	ID	ID	ID
Tributyltin (as μg/L Sn)		ID	ID	ID	ID	0.0004	0.006 ^c	0.02 ^c	0.05 ^C
Uranium		ID	ID	ID	ID	ID	ID	ID	ID
Vanadium		ID	ID	ID	ID	50	100	160	280
Zinc	Н	2.4	8.0 ^C	15 ^C	31 ^c	7	15 ^c	23 ^C	43 ^c
NON-METALLIC INORGANICS									





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Summary Licence No: 3241

View this licence (PDF document 151 kb)

Licence holder: DENDROBIUM COAL PTY LTD

Premises: DENDROBIUM MINE

CORDEAUX ROAD, MOUNT KEMBLA, NSW, 2526 LGA: WOLLONGONG Catchment: Illawarra Coast

Administrative fee: \$79,230.00

Licence status: Issued

Activity type: Mining for coal

Coal works

Licence review: Complete date 09 May 2019

Complete date 09 May 2014 Complete date 09 Sep 2009 Complete date 09 Sep 2004 Complete date 24 Sep 2001 Due date 09 May 2024

Environment Protection Licence

Licence - 3241



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Number: 3241

Anniversary Date: 01-July

Licensee

DENDROBIUM COAL PTY LTD

PO BOX 275

UNANDERRA NSW 2526

Premises

DENDROBIUM MINE

CORDEAUX ROAD

MOUNT KEMBLA NSW 2526

Scheduled Activity

Coal works



red to in the table are identified in this licence for the purposes of the monitoring s for discharges of pollutants to water from the point.

Water and land

nitoring Point	Type of Discharge Point	Location Description
	Stormwater and minewater discharge from Dendrobium mine. Brine discharge from Appin West mine. Discharge quality monitoring	Pipeline discharging to Allan's Creek labelled as "Discharge Point" on map titled "Dendrobium Mine Water Disposal Pipeline" dated 8 November 2002.
		- ··· · · · ·



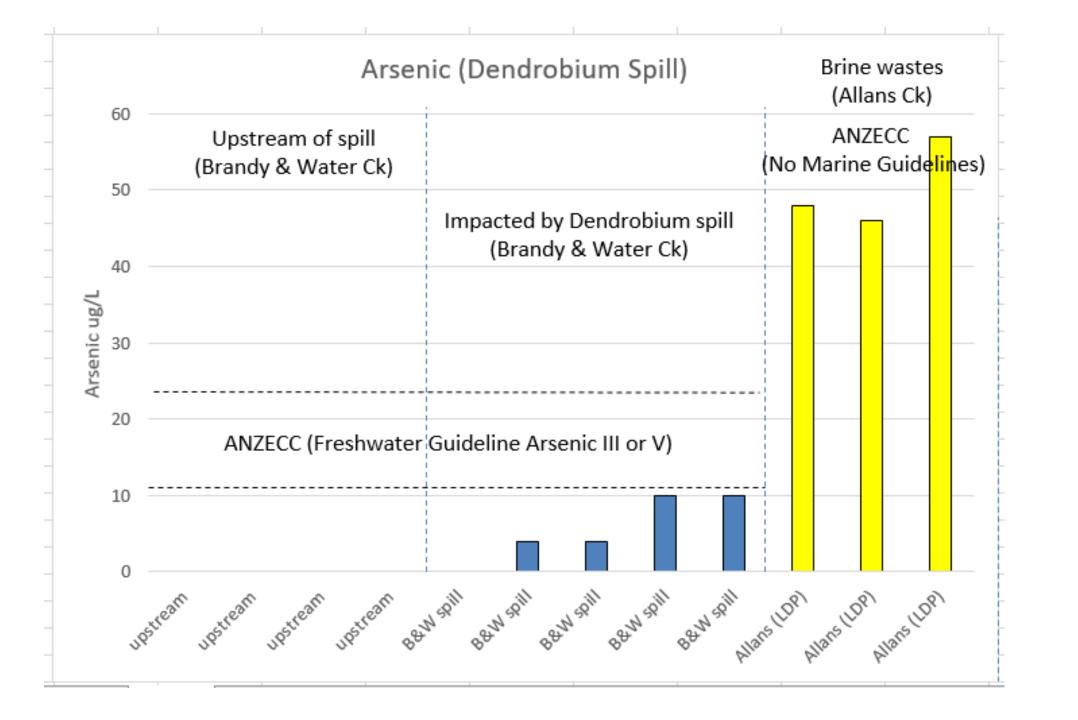


Upstream

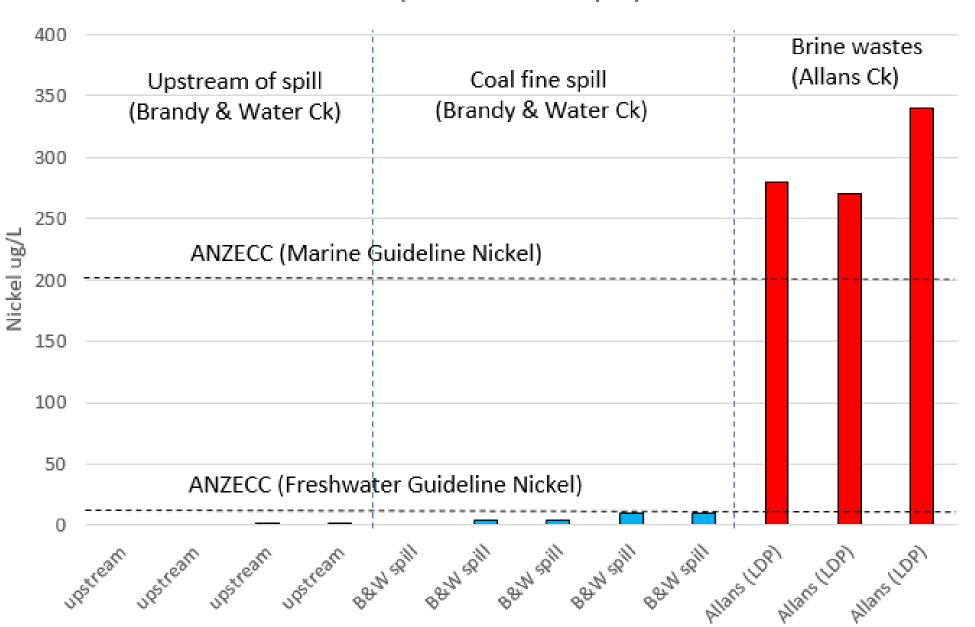


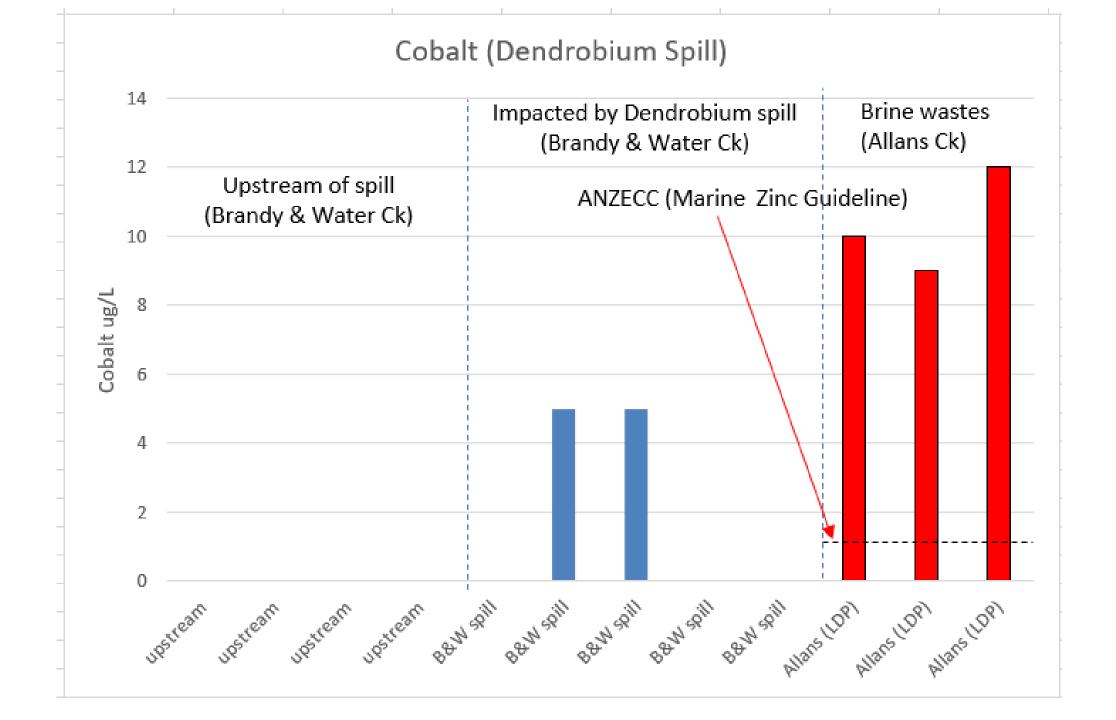
Brandy and Water Creek (Dendrobium spill)

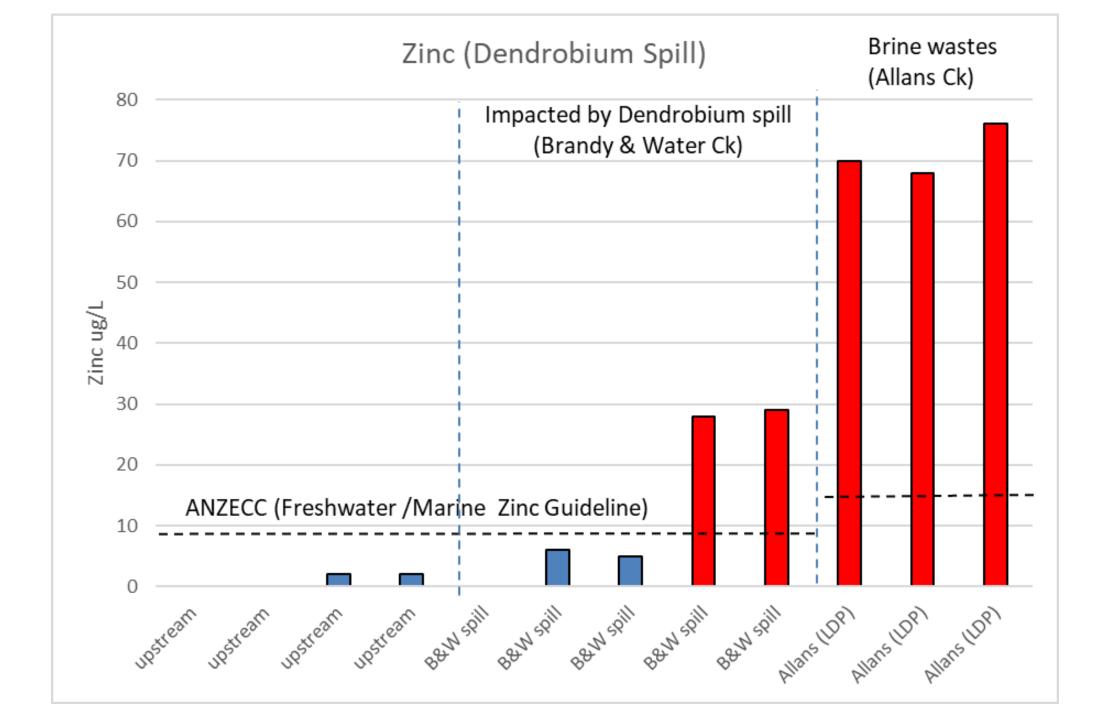
Coal brine wastes disposed into Allans Creek

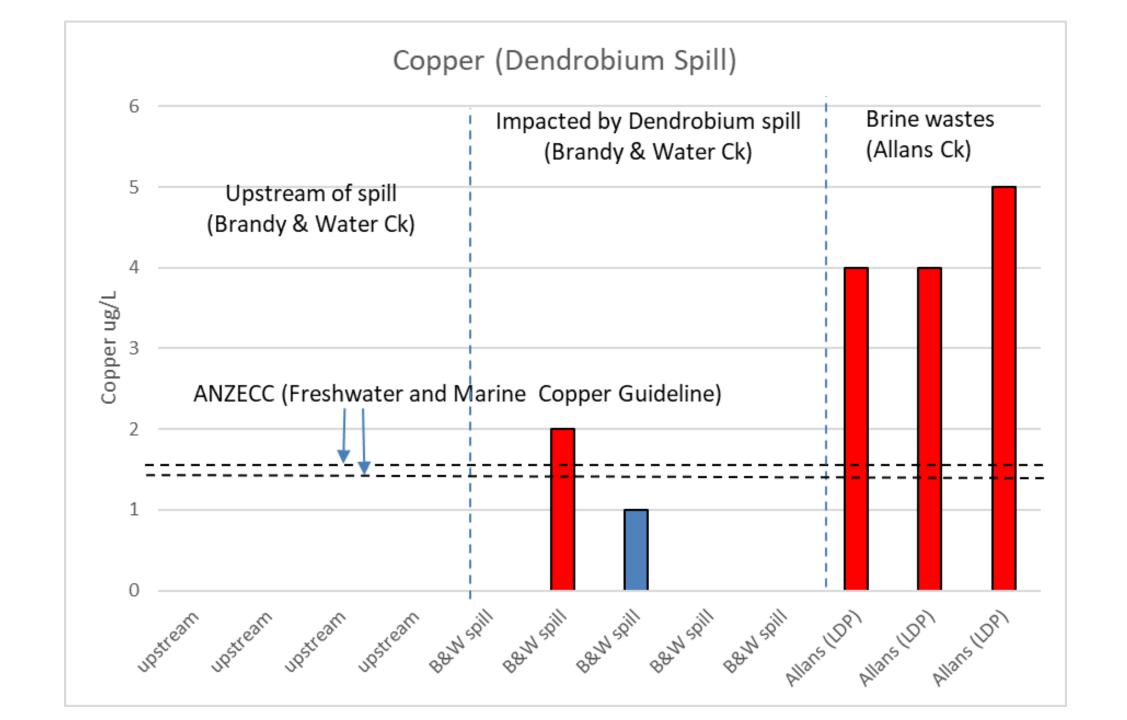


Nickel (Dendrobium Spill)









What impact did the Dendrobium coal fine spill have on Brandy and Water Creek (BWC)?

Probably a moderate ecosystem impact. I have not seen results that suggest it was hazardous to human health.

- 1. The sludge/sediment sample from BWC did not exceed any ANZECC (2000) sediment quality guidelines. But the coal fines are likely to cause ecological stress through damage / smothering to habitat, clogging of gills etc.
- **2.** Of moderate concern is that three water samples collected from Brandy & Water did exceed ANZECC (2000) water quality guidelines for protection of 95% of species for copper (1) and zinc (2 samples).
- **3.** Water samples collected from Brandy & Water were elevated above natural (background) concentrations for cobalt, barium, strontium, lithium (all have no freshwater guidelines) and were elevated but less than the arsenic ANZECC water quality guideline.



How does EPL 3241 succeed at protecting the environment?

Poorly. It permits the discharge of highly contaminated waste 'brine waste' at ecologically hazardous concentrations for nickel, zinc, copper, arsenic(?). It does not permit the discharge of cobalt. See clause L2.3 below:

Section 55 Protection of the Environment Operations Act 1997 **Environment Protection Licence** Licence - 3241 Licence Details Number: 3241 01-July Anniversary Date: Licensee DENDROBIUM COAL PTY LTD PO BOX 275 **UNANDERRA NSW 2526 Premises DENDROBIUM MINE** CORDEAUX ROAD MOUNT KEMBLA NSW 2526 **Scheduled Activity** Coal works

2.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\s.

How do the water chemical results from Allan's Creek compare to the EPA licence?

POINT 5

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Arsenic	milligrams per litre				1.3
Copper	milligrams per litre				0.080
Nickel	milligrams per litre				5
Oil and Grease	milligrams per litre				10
рН	pH				6.5-9.0
Total suspended solids	milligrams per litre				30

Arsenic in Allens Ck brine was 0.05 mg/L

Copper in Allens Ck brine at 0.005 mg/L

Nickel in Allens Ck brine at 0.340 mg/L

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