

Notice

Environmental Protection Act 1994

Environmental Protection Order

This environmental protection order is issued by the administering authority pursuant to section 358 of the Environmental Protection Act 1994.

MRV Metals Pty Ltd ACN 610 100 402
29 High Street
TEXAS QLD 4385

CC: PO Box 161
TEXAS QLD 4385
Jason.elks@moretonresources.com.au

Your reference: EPML04238116

Our reference: CA50816, STAT1293

6 July 2018 (as varied 20 August 2018)

Dear Sir/Madam

Take notice: that under the *Environmental Protection Act 1994* (the Act) this environmental protection order (EPO) is issued to MRV Metals Pty Ltd (you) by the administering authority. The administering authority is the Chief Executive of the Department of Environment and Science, previously known as the Department of Environment and Heritage Protection (the department).

The EPO is issued in respect to the mining activities carried out by MRV Metals Pty Ltd ACN 610 100 402 at the Granite Belt Project Mine Site (ML100106), on land described as Lot 2 on SP 140743, Lot 28 on MPH14454, Lot 29 on MPH14454, Lot 182 on FTY438, Lot A on CVE163 and Lot 13 on CVE164, situated at Texas, QLD (the premises).

The original EPO was issued on 6 July 2018 and a varied EPO was issued on 20 August 2018 as a result of an internal review application by you. The original EPO remains in effect until the date of the varied EPO.

A. Grounds

This EPO is issued to you on the following grounds:

1. To require you to take reasonable measures to secure compliance with conditions of the EA, including condition F1, E1 and H1, under section 358(d)(iii) of the Act. Those conditions are as follows:

Condition F1: Contaminants that will, or have the potential to cause environmental harm must not be released directly or indirectly to any waters, except as permitted under the conditions of this environmental authority.

Condition E1: The environmental authority holder must not release contaminants to groundwater.

Condition H1: The consequence category of any structure must be assessed by a suitably qualified and experienced person in accordance with the Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933) at the following times:

- a) Prior to the design and construction of the structure, if it is not an existing structure; or*
- b) Prior to any change in its purpose or the nature of its stored contents.*

2. To require you to take reasonable measures to secure compliance with the General Environmental Duty under section 358(d)(i) of the Act. The General Environmental Duty is detailed in section 319 of the Act which states the following:

*A person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practical actions to prevent or minimise the harm (the **general environmental duty**)*

3. To require you to take reasonable measures in response to a contravention of section 440ZG of the Act, under section 358(e)(iii). Section 440ZG of the Act is as follows:

A person must not –

- (a) Unlawfully deposit a prescribed water contaminant –*

- (i) In waters; or*
- (ii) In a roadside gutter or stormwater drainage; or*
- (iii) At another place, and in a way, so that the contaminant could reasonably be expected to wash, blow, fall or otherwise move into waters, a roadside gutter or stormwater drainage.*

The facts and circumstances forming the basis for these grounds are:

1. Environmental authority EPML04238116 (the EA) was issued to you on 16 May 2017 and authorises environmentally relevant activities including chemical storage, metal smelting and refining, mineral processing and crushing, milling, grinding or screening and authorises resource activities including investigating the potential development of a mineral resource, mining gold ore, mining copper ore and mining lead, silver or zinc..
2. The EA took effect upon grant of mining lease (ML) 100106 which occurred on 28 September 2017.
3. On 19 June 2018, authorised officers of the department conducted an inspection of the premises (inspection 1) in the presence of your representative. During this inspection, officers collected the following information:
 - a. Your representative stated that MRV was transferring water (via active pumping) from other water storages at the premises into Western Dam;
 - b. Officers observed seepage to be expressing from the toe of the Western Dam embankment and into the Sump;
 - c. Seepage was observed to be collecting in the Sump and then releasing to downstream waters; and

- d. No effective control measures were in place to prevent or limit the overflow of seepage collecting in the Sump and your representative did not nominate any proposed control measures (to prevent the overflow).
4. During inspection 1, department officers conducted sampling of the water stored in Western Dam and of the seepage expression collecting in the Sump, with the following results recorded:
 - a. Western Dam pH of 2.7 and elevated concentrations of zinc, aluminium, arsenic, copper, cobalt, chromium, cadmium, manganese, iron, nickel, sulfate, fluoride and ammonia; and
 - b. Sump pH of 3.48 at surface, pH 3.6 at 0.5 m depth and elevated concentrations of zinc, aluminium, arsenic, copper, cobalt, chromium, cadmium, manganese, iron, nickel, sulfate, fluoride and ammonia.
5. Authorised officers of the department reviewed correspondence from you on 29 June 2018 and 3 July 2018 which confirmed that:
 - a. You have transferred water to Western Dam; and
 - b. You were aware of the potential for seepage expressing to the Sump due to the storage of water within Western Dam.
6. On 4 July 2018, authorised officers of the department conducted a further inspection of the premises (inspection 2) and made the following observations:
 - a. Seepage was continuing to express from the toe of the Western Dam embankment and into the Sump;
 - b. Seepage was continuing to collect in the Sump and then release to downstream waters, with the extent of visible flowing waters evident for approximately 70m downstream of the Sump;
 - c. The saturation within the drainage channel where the seepage was expressing had visibly increased and moved further upslope, with a greater volume of flowing water observed within the drainage channel compared to the observations made during inspection 1; and
 - d. No additional control measures had been implemented by you since inspection 1 to prevent or limit the release of seepage from the Sump to waters.
7. During inspection 2, officers conducted in situ sampling of the water stored in Western Dam and of the seepage expression collecting in the Sump, with the following results recorded:
 - a. Western Dam pH of 2.77 and elevated concentrations of zinc, aluminium, arsenic, copper, cobalt, chromium, cadmium, manganese, iron, nickel, sulfate and ammonia; and
 - b. Sump pH of 2.86 at surface, pH 2.85 at 0.5 m depth and elevated concentrations of zinc, aluminium, arsenic, copper, cobalt, chromium, cadmium, manganese, iron, nickel, sulfate and ammonia.
8. The department considers that the contaminant release detailed above has the potential to cause environmental harm, based on review of published water quality guidelines, including the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality (Australian and New Zealand Environment and Conservation Council, 2000)*.
9. Appendix 1 of this EPO is a results table for monitoring conducted on 22 October 2017, 19 June 2018 and 4 July 2018 and those results are compared with the limits in the EA for authorised release points and ANZECC trigger levels.

Compliance with an EA conditions

10. Condition F1 of the EA states:

Contaminants that will, or have the potential to cause environmental harm must not be released directly or indirectly to any waters, except as permitted under the conditions of this environmental authority.

11. Contaminant is defined in the EA to be (a) a gas, liquid or solid; or (b) an odour; or (c) an organism (whether alive or dead), including a virus; or (d) energy, including noise, heat, radioactivity and electromagnetic radiation; or (e) a combination of contaminants.

12. Contaminants is defined in the EA to mean any prescribed water contaminants listed under Schedule 9 of the *Environmental Protection Regulation 2008*.

13. Schedule 9 of the *Environmental Protection Regulation 2008* lists the following substances as prescribed water contaminants:

- a. A liquid containing suspended or dissolved solids;
- b. A substance that has a pH outside the range 6.5 to 8.5; and
- c. Industrial waste.

14. The department considers the water transferred to Western Dam and subsequently released via seepage to the sump and 70m downstream contains prescribed water contaminants and hence also contained a contaminant or contaminants as defined under the EA.

15. The department considers that you released contaminants with the potential to cause environmental harm.

16. Waters is defined in the EA as follows:

Includes river, stream lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), storm water channel, storm water drain, and groundwater and any part thereof.

17. Authorised officers of the department observed the release of contaminants via seepage to the sump, beyond the sump 70 metres downstream and to groundwater (refer to paragraph 23).

18. The department considers that the release was a release to waters because it was to unconfined surface waters, stormwater channels, bed or banks of waters and/or groundwater.

19. Conditions A1, A2, F2 and F3 of your EA do not authorise the release of contaminants to Western Dam, seep or further downstream. As a result, the department considers that the releases were not permitted under the EA.

20. Therefore, the department considers that you have contravened condition F1 of your EA.

21. Condition E1 of the EA states:

The environmental authority holder must not release contaminants to groundwater.

22. You are the holder of the EA.

23. During inspection 2, authorised officers of the department observed that the release was flowing 70m downstream of the seep where it disappeared. Officers consider that this was a release to groundwater.

24. Contaminants has been defined above and the release to groundwater was a prescribed water contaminant and hence a contaminant.

25. Therefore, the department considers that you have contravened condition E1 of your EA.

26. Condition H1 of the EA states:

The consequence category of any structure must be assessed by a suitably qualified and experienced person in accordance with the Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933) at the following times:

- c) Prior to the design and construction of the structure, if it is not an existing structure; or*
- d) Prior to any change in its purpose or the nature of its stored contents.*

27. You have previously used Western Dam as a water supply dam for the collection of stormwater.

28. The department considers that the use of Western Dam for the storage of contaminants is a change in the purpose of Western Dam and/or a change in the nature of its stored contents.

29. The department considers you have not conducted an assessment of consequence category for Western Dam prior to the change in its purpose or the nature of its stored contents.

30. Therefore, the department considers that you have contravened condition H1 of your EA.

General environmental duty

31. The department considers that you are carrying out an activity on the premises, being environmentally relevant activities and/or resource activities.

32. The department considers that this activity is likely to cause environmental harm, unless you take reasonable and practicable actions to prevent or minimise that harm.

33. The department considers that the use of Western Dam for the storage of contaminants, the seepage of contaminants to the sump and the release 70m downstream of the sump have the potential to cause environmental harm.

34. The department considers that you have not taken all reasonable and practicable measures to prevent or limit environmental harm from the identified contaminant release.

35. The department considers reasonable measures would be not to pump contaminants to Western Dam and to operate the pump-back infrastructure that remained at the premises when you took control of the premises in order to prevent the release of contaminants.

36. The department considers that reasonable and practicable measures are available to you to:

- a. Prevent further release of contaminants from Western Dam; and
- b. Reduce the potential for environmental harm to occur from contaminants that have been released to waters.

37. Therefore, the department considers that you are not complying with the general environmental duty in carrying out of environmentally relevant activities and/or resource activities.

Section 440ZG of the Act

38. Under s440ZG of the Act it is an offence to unlawfully deposit a prescribed water contaminant in waters, stormwater drainage or where it could move into waters or stormwater drainage.

39. As detailed above, the department considers that you have released a prescribed water contaminant.

40. As detailed above, the department considers that the release of a prescribed water contaminant is not authorised under the EA and is unlawful.

41. Waters is defined in the Act to *mean Queensland waters*. Queensland waters is defined in the *Acts Interpretation Act 1954* to mean *all waters that are (a) within the limits of the state; or (b) coastal waters of the state*.
42. The area between Western Dam and the limed rock check has been identified as a watercourse under the *Water Act 2000*.
43. The department considers the release of contaminants from the seepage to 70m downstream of the sump is a release to a watercourse and hence a release to waters and that you have contravened section 440ZG of the Act.
44. In the alternative, the department also considers that the release of contaminants from the seepage to 70m downstream of the sump was at a place and in a way so that the contaminant could move into waters and hence you have contravened section 440ZG of the Act.
45. The department considers that in consideration of the facts and circumstances detailed above (including the contraventions of conditions F1, E1 and H1 of the EA, the failure to comply with the general environmental duty and the contravention of section 440ZG of the Act) it is reasonable to require you to implement the requirements listed below.

B. Requirements

In accordance with this EPO, you are required to do the following:

1. By no later than 5pm on 6 July 2018, cease the transfer of contaminated water to Western Dam or any other structure that is not authorised under the EA to receive or store contaminated water.
2. From 9 July 2018 until otherwise advised by the department, implement and maintain measures sufficient to recover contaminated seepage from the Sump and prevent the release of contaminants to waters.
3. From 13 July 2018 until otherwise advised by the department, implement and maintain a monitoring program which determines on a daily basis:
 - a. The rate of seepage from Western Dam to the Sump (in L/day);
 - b. The total volume of water transferred under requirement 1 of this EPO (in ML/day); and
 - c. The quality of water within Western Dam and the quality of water within the Sump, including at minimum pH and electrical conductivity.
4. From 13 July 2018 until otherwise advised by the department, provide a report to the department at a minimum frequency of once per calendar week detailing the following:
 - a. The actions taken by MRV to comply with this EPO; and
 - b. All results of the monitoring program conducted under requirement 3 of this EPO.
5. By 20 July 2018 until otherwise advised by the department, complete the transfer of all contaminated water stored within the Western Dam to water storage facilities authorised under the EA and included in the Plan of Operations to receive and store contaminated water.

Definitions

6. The following definitions apply to this EPO:

- a) 'Western Dam' means the water storage structure at location S -28.853003° E 151.258551° and referred to in Schedule I-Figure 2 (Project Infrastructure Layout) on Page 33 of the EA as "Western Dam" in Figure 1.3 Mine Layout.
- b) 'Sump' means the water storage structure at location S -28.85445° E 151.25867°, located downstream of the Western Dam embankment.

C. Obligations

If you propose to dispose of the place or business to which the EPO relates, you **must** advise the buyer of the existence of this EPO.

If you cease to carry out the activity to which this EPO relates, you **must** give written notice of ceasing to carry out the activity to the department within 10 days of ceasing the activity.

Take notice:

- the requirements of this order take effect immediately upon service of the order;
- failure to comply with this order is an offence under the Act;
- this order remains in force until further notice from the administering authority.

D. Penalty

Failure to comply with an EPO is an offence.

- The maximum penalty for an individual for wilfully contravening an EPO is 6,250 penalty units, totalling \$815,937.50 or five years imprisonment.
- The maximum penalty for a corporation for wilfully contravening an EPO is 31,250 penalty units, totalling \$4,079,687.50.
- The maximum penalty for an individual for contravening an EPO is 4,500 penalty units, totalling \$587,475.00.
- The maximum penalty for a corporation for contravening an EPO is 22,500 penalty units, totalling \$2,937,375.00.

Failure to provide written notice to the buyer is an offence.

- The maximum penalty for an individual is 50 penalty units, totalling \$ 6,527.50.
- The maximum penalty for a corporation is 250 penalty units, totalling \$ 32,637.50.

Failure to provide written notice within 10 business days of ceasing the activity to the department is an offence.

- The maximum penalty for an individual is 50 penalty units, totalling \$ 6,527.50.
- The maximum penalty for a corporation is 250 penalty units, totalling \$ 32,637.50.

Section 3 of the *Penalties and Sentences Regulation 2015* prescribes the monetary value of a penalty unit.

E. Reviews and appeals

The provisions regarding review of decisions and appeals may be found in sections 519 to 539 of the Act.

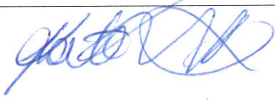
Once the original decision has been reviewed, a person who is dissatisfied with the review decision may be able to appeal against that decision to the relevant court within 22 business days after receiving notice of the review decision.

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A person whose interests are or would be adversely affected by a decision of the department may also be able to request a statement of reasons for a decision or a statutory order review under the *Judicial Review Act 1991*.

For further information about appeals see the information sheet - internal review and appeal to the Planning and Environment Court ([ESR/2015/1572](#)). You may have other legal rights or obligations and should seek your own legal advice.

Should you have any queries in relation to the notice, please contact Sthree Hilton on telephone number 07 4529 8385.



Signature

20 August 2018

Date

Kate Harbert
Manager (Compliance)
Delegate of the Chief Executive
Department of Environment and Science
Environmental Protection Act 1994

Enquiries:

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Appendix 1: Water Quality Results for monitoring conducted on 22 October 2017, 19 June 2018 and 4 July 2018

Appendix 1: Water Quality Results for monitoring conducted on 22 October 2017, 19 June 2018 and 4 July 2018

Analyte grouping/ Analyte	Units	MRV Monitoring			DES monitoring		DES monitoring				EA limits for release to waters	ANZECC 95% trigger aquatic freshwater	Toxicant GL for protection of aquaculture species freshwater	ANZECC trigger value (low risk) stock drinking water
		22/10/17 Lower West Dam	22/10/17 West Dam	22/10/17 West Dam Sump	19/06/18 West Dam	19/06/18 West Sump	4/07/18 Pregnant Pond	4/07/18 West Dam	4/07/18 West Sump	4/07/18 House Bore				
pH Value field meter	pH Unit	5	3.85	3.63	2.7	3.48@ surface 3.6@ 50cm	2.83	2.77	2.86	6.11	6.5-7.5			
Electrical Conductivity @ 25Â°C	ÂµS/cm	5410	3020	8420	14600	11100	11800	13400	13100	7630	325			
Sulfate as SO4 - Turbidimetric	mg/L	3480	1880	6660	14600	9900	9030	12900	13000	2840	250			1000
Dissolved														
Aluminium	mg/L				868	404	404	721	704	0.31		ID	0.01	5
Arsenic	mg/L	<0.001	0.006	0.019	5.6	0.041	2.72	4.37	0.028	0.004	0.01	0.024	0.05	0.5
Cadmium	mg/L	0.0092	0.0298	0.0848	0.299	0.157	0.154	0.26	0.245	0.0002	0.0002	0.0002	0.0018	0.01
Chromium	mg/L				0.51	0.012	0.277	0.419	0.177	<0.001		0.001	0.002	1
Cobalt	mg/L	0.146	0.8	2.52	4.2	4.37	1.61	3.74	5.11	0.004	TBA	ID		1
Copper	mg/L	0.016	1.66	3.64	8.62	4.58	4.3	7.43	7.8	0.008	0.0014	0.0014	0.005	0.4 sheep 1 cattle
Lead	mg/L	<0.001	0.004	0.035	<0.010	0.02	<0.001	0.001	0.105	<0.001	0.0034	0.0034	0.007	0.1
Manganese	mg/L	9.87	21.6	74.4	103	137	33.1	87.6	154	0.028	0.1	1.9	0.01	not sufficiently toxic
Nickel	mg/L				6.99	5.12	2.83	5.72	5.8	0.005		0.011	0.1	1
Selenium	mg/L				<0.10	<0.10	0.03	0.03	0.03	<0.01		0.011	0.01	0.02
Silver	mg/L	<0.001	<0.001	<0.001	<0.010	<0.010	<0.001	<0.001	<0.001	<0.001	0.00005	0.00005	0.003	

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Analyte grouping/ Analyte	Units	MRV Monitoring			DES monitoring			DES monitoring				EA limits for release to waters	ANZECC 95% trigger aquatic freshwater	Toxicant GL for protection of aquaculture species freshwater	ANZECC trigger value (low risk) stock drinking water
		22/10/17	22/10/17	22/10/17	19/06/18	19/06/18	19/06/18	4/07/18	4/07/18	4/07/18	4/07/18				
		Lower West Dam	West Dam	West Dam Sump	West Dam	West Sump	West Sump	Pregnant Pond	West Dam	West Sump	House Bore				
Zinc	mg/L	1.34	25.9	65.6	202	105	108	178	162	0.036		0.008	0.005	20	
Iron	mg/L				1400	19.6	768	1320	498	<0.05		ID	0.01	not sufficiently toxic	
Total															
Cobalt	mg/L	0.187	0.66	2.5	3.93	4.13	1.74	4.26	5.97	0.003		ID		1	
Manganese	mg/L	12.1	17.7	75.2	89.9	122	36.1	95.6	171	0.031		1.9	0.01	not sufficiently toxic	
Silver	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	0.016	<0.005	<0.005	<0.001		0.00005			
Free Cyanide	mg/L	0.029	0.014	0.006	<0.040	<0.040	0.058	<0.020	<0.040	<0.004		0.007	0.005		
Total Cyanide	mg/L	0.036	0.02	0.01	<0.040	<0.040	0.077	0.022	<0.040	<0.004		0.007	0.005		
Weak Acid Dissociable Cyanide	mg/L	0.029	0.014	0.006	<0.040	<0.040	0.106	0.023	<0.040	<0.004		0.5			
Fluoride	mg/L				32	20	0.2	0.2	0.2	0.2			0.02	2	
Ammonia as N	mg/L				15.3	17.8	19.8	12.9	16.4	0.02		0.9	0.02		