

RELEASES INTO CONTROLLED WATERS

Release Summary for Quarter 4

Year 2019 Permit No. BL 4567

Operator Vale Europe Ltd.,

Location: Clydach SA6 5QR

Parameter	Release Point Number									
	W1		Cooling Water flows (at W1)	W3	W4	W5	W6	W7	W8	W9
	<i>Limits</i>	Results								
Maximum Flow m ³ /hour	<i>625</i>	449.75		--- X	<i>50</i> X	<i>4.5</i> X	<i>11</i> X	--- X	<i>3</i> X	--- X
Mean Flow m ³ /hour		258.70	52							
Maximum Flow m ³ /day	<i>15000</i>	10794.00		--- X	<i>600</i> X	<i>13</i> X	<i>270</i> X	--- X	<i>15</i> X	--- X
Mean Flow m ³ /day		6208.74	1244							
pH Maximum	<i>9.0</i>	8.20								
pH Mean	<i>N</i>	7.73								
pH Minimum	<i>6.0</i>	7.30								
Temperature °C	<i>+20</i>	5.86								
Temperature Canal Abstraction °C *		10.66								
Suspended Solids mg/l	<i>10</i>	1.75				X	X	X		
Total Copper mg/l (Cu)	<i>1.0</i>	0.054						X		
Soluble Copper mg/l (Cu)	<i>0.5</i>	0.034						X		
Total Nickel mg/l	<i>2.5</i>	0.66						X		
Soluble Nickel mg/l	<i>2.0</i>	0.62						X		
Total Cobalt mg/l (Co)	<i>1.0</i>	0.021						X		
Soluble Cobalt mg/l (Co)	<i>0.5</i>	0.014								
Free and Fixed Ammonia as Nitrogen mg/l	<i>5</i>	0.04								
Oxygen Demand (PV4) mg/l	<i>3.0</i>	0.55								

Limits in Italics

--- denotes no limit

* Not a release, abstraction temperature at NGR SN 6955 0145

Date: As Per Email

Fiona Sharp

Sustainability Co-ordinator

– for Lee Davies Sustainability Supervisor

Signed on behalf of Vale Europe Ltd.,

Form W1 dated 27/10/03