

Appendix H-2

EEM and MDMER monthly mean concentrations, pH range
and effluent volume

Month	As		Cu		CN		Pb		Ni		Zn		TSS		Ra 226		pH	Number day of discharge	Daily volume	Monthly volume	Results for Rainbow Trout Acute Lethality Tests (mean percentage mortality in 100% effluent test concentration)	Results for Daphnia magna Monitoring Tests (mean percentage mortality in 100% effluent test concentration)
	mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L				m ³ /day	m ³		
January																						
NDEP	NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP	0	NDEP	0	NDEP	NDEP
NDEP	NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP	NDEP
NDEP	NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP	NDEP
NDEP	NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP	NDEP
Monthly concentration (mg/L)																						
Charge (Kg)																						
February																						
NDEP	NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP	0	NDEP	0	NDEP	NDEP
NDEP	NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP	NDEP
NDEP	NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP	NDEP
NDEP	NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP	NDEP
Monthly concentration (mg/L)																						
Charge (Kg)																						
March																						
NDEP	NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP	0	NDEP	0	NDEP	NDEP
NDEP	NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP	NDEP
NDEP	NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP	NDEP
NDEP	NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP		NDEP	NDEP
Monthly concentration (mg/L)																						
Charge (Kg)																						

NDEP :No Deposit
NMR: No Measurement Required
N/A: Technician forgot to take the reading

Month	As		Cu		CN		Pb		Ni		Zn		TSS		Ra 226		pH	Number day of discharge	Daily volume	Monthly volume	Results for Rainbow Trout Acute Lethality Tests (mean percentage mortality in 100% effluent test concentration)	Results for Daphnia magna Monitoring Tests (mean percentage mortality in 100% effluent test concentration)	
	mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L				m ³ /day	m ³					
April																							
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	0	NDEP	0	NDEP	NDEP	
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP		NDEP		NDEP	NDEP	NDEP
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP		NDEP		NDEP	NDEP	NDEP
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP		NDEP		NDEP	NDEP	NDEP
Monthly concentration (mg/L)																							
Charge (Kg)																							
May																							
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	0	NDEP	0	NDEP	NDEP	
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP		NDEP		NDEP	NDEP	NDEP
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP		NDEP		NDEP	NDEP	NDEP
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP		NDEP		NDEP	NDEP	NDEP
Monthly concentration (mg/L)																							
Charge (Kg)																							
June																							
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	10	NDEP	134272	NDEP	NDEP	
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP		NDEP		NDEP	NDEP	NDEP
NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP		NDEP		NDEP	NDEP	NDEP
24-Jun-18	0.00205	0.00205	0.00225	0.00225	< 0.0005	0.00025	0.0003	0.0003	0.0031	0.0031	0.0075	0.0075	5	5	< 0.005	0.0025	7.59		15091		10	0	
Monthly concentration (mg/L)		0.00205		0.00225		0.00025		0.0003		0.0031		0.0075		5		0.0025	7.59						
Charge (Kg)		0.2752576		0.302112		0.033568		0.0402816		0.4162432		1.00704		671.36		0.33568							

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N/A: Technician forgot to take the reading

Month	As		Cu		CN		Pb		Ni		Zn		TSS		Ra 226		pH	Number day of discharge	Daily volume	Monthly volume	Results for Rainbow Trout Acute Lethality Tests (mean percentage mortality in 100% effluent test concentration)	Results for Daphnia magna Monitoring Tests (mean percentage mortality in 100% effluent test concentration)	
	1	0.5	0.6	0.3	2	1	0.4	0.2	1	0.5	1	0.5	30	15	1.11	0.37							
	mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L								
July																							
1-Jul-18	0.00110	0.00110	0.00129	0.00129	< 0.005	0.0025	0.00033	0.00033	0.0025	0.0025	0.0054	0.0054	10	10	< 0.005	0.0025	7.11	31	16070	352,551	0	0	
10-Jul-18	0.00117	0.00117	0.00139	0.00139	< 0.005	0.0025	< 0.0002	0.0001	0.0025	0.0025	0.0055	0.0055	5	5	< 0.005	0.0025	7.51		17672		NMR	NMR	
15-Jul-18	0.00129	0.00129	0.00130	0.00130	< 0.005	0.0025	< 0.0002	0.0001	0.0022	0.0022	< 0.005	0.0025	9	9	< 0.005	0.0025	7.32		2590		NMR	NMR	
23-Jul-18	0.00178	0.00178	0.00207	0.00207	< 0.005	0.0025	< 0.0002	0.0001	0.0025	0.0025	0.0086	0.0086	21	21	0.007	0.007	7.34		15691		NMR	NMR	
29-Jul-18	0.00185	0.00185	0.00104	0.00104	< 0.005	0.0025	< 0.0002	0.0001	0.0023	0.0023	< 0.005	0.0025	8	8	< 0.005	0.0025	7		12237		NMR	NMR	
Monthly concentration (mg/L)		0.001438		0.001418		0.0025		0.000146		0.0024		0.0049		10.60		0.0034							
Charge (Kg)		0.5069683		0.4999173		0.8813775		0.0514724		0.8461224		1.7274999		0		1.1986734							
August																							
5-Aug-18	0.00210	0.00210	0.00112	0.00112	< 0.005	0.0025	< 0.0002	0.0001	0.0028	0.0028	< 0.005	0.0025	8.00	8.00	< 0.005	0.0025	7.26	26	14846	153,066	0	0	
13-Aug-18	0.00222	0.00222	0.00850	0.00850	< 0.005	0.0025	0.00022	0.00022	0.003	0.003	0.0085	0.0085	10.00	10.00	< 0.005	0.0025	7.37		4302		NMR	NMR	
19-Aug-18	0.00295	0.00295	0.00099	0.00099	< 0.005	0.0025	< 0.0002	0.0001	0.0034	0.0034	0.0067	0.0067	11.00	11.00	0.008	0.008	7.18		3634		NMR	NMR	
26-Aug-18	0.00028	0.00028	< 0.0005	0.000250	< 0.005	0.0025	< 0.0002	0.0001	< 0.001	0.0005	< 0.005	0.0025	< 1.00	0.50	< 0.005	0.0025	6.80		103		NMR	NMR	
Monthly concentration (mg/L)		0.00189		0.002715		0.0025		0.00013		0.002425		0.00505		7.38		0.00388							
Charge (Kg)		0.28891		0.4155742		0.382665		0.0198986		0.3711851		0.7729833		0		0.5931308							
September																							
3-Sep-18	0.00237	0.00237	0.00062	0.00062	< 0.005	0.0025	< 0.0002	0.0001	0.0027	0.0027	< 0.005	0.0025	14.00	14.00	< 0.005	0.0025	7.08	3	532	2,632	0	0	
	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP		NDEP		NDEP	NDEP	
	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP		NDEP		NDEP	NDEP	
	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP		NDEP		NDEP	NDEP	
	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP		NDEP		NDEP	NDEP	
Monthly concentration (mg/L)		0.00237		0.00062		0.00250		0.00010		0.00270		0.00250		14.00		0.0025	7.08						
Charge (Kg)		0.00624		0.0016318		0.00658		0.0002632		0.0071064		0.00658		36.848		0.00658							

Quarterly charge (Kg)0.802120.917121.270620.071631.224412.5070636.81.79838508249

NDEP :No Deposit
NMR: No Measurement Required



Location of Meliadine Discharge point: 63°2'15.5"N 92°13'06"W

Mois	As mg/L	Cu mg/L	CN mg/L	Pb mg/L	Ni mg/L	Zn mg/L	TSS mg/L	Ra 226 Bq/L	Lowest pH	Highest pH	Effluent Volume m ³	Results for Rainbow Trout Acute Lethality Tests (mean percentage mortality in 100% effluent test concentration)	Results for Daphnia magna Monitoring Tests (mean percentage mortality in 100% effluent test concentration)
January	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
February	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
March	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
April	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
May	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
June	0.00205	0.00225	0.00025	0.0003	0.0031	0.0075	5	0.0025	7.59	7.59	134272	10	0
July	0.001438	0.001418	0.0025	0.000146	0.0024	0.0049	10.60	0.0034	7.00	7.51	352551	0	0
August	0.0018875	0.002715	0.0025	0.00013	0.002425	0.00505	7.38	0.0039	6.80	7.37	153,066	0	0
September	0.00237	0.00062	0.0025	0.0001	0.00270	0.00270	14.00	0.0025	7.08	7.08	2,632	0	0
October	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
November	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP
December	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP	NDEP

NDEP: No Deposit
NMR: No Measurement Required



	Alkalinity	Aluminum	Ammonia Nitrogen (NH3-NH4)	Cadmium	Hardness	Iron	Mercury	Molybdenum	Nitrate	Selenium	T°	pH	O ₂	Conductivity	Arsenic	Ra226	TSS	Nickel	Zinc	Lead	Copper	Cyanide		Sub-Lethal Toxicity			
	mg CaCO ₃ /L	mg/L	mg N/L	mg/L	mg CaCO ₃ /L	mg/L	mg/L	mg/L	mg/L	mg/L	°C		mg/L	µS/cm	mg/L	Bq/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		<i>Ceriodaphnia dubia</i>	<i>Pimephales promelas</i>	<i>Lemna minor</i>	<i>Pseudokirchneriella subcapitata</i>
Effluent characterization (63°2'15.5"N 92°13'06.3"W) (MEL-14)																											
23-Jul-18	39	4.39	0.47	0.00002	344	0.293	< 0.00001	< 0.001	4.48	< 0.0001	17.7	7.16		1605	0.00178	0.007	21	0.0025	0.0086	< 0.0002	0.00207	< 0.005	8/7/2018	>100.00%	>100.00%	72.30%	>90.90%
13-Aug-18	33	0.705	0.88	< 0.00001	491	0.134	< 0.00001	0.0018	3.18	< 0.0001	9.2	7.22		1925	0.00222	< 0.005	10	0.003	0.0085	0.00022	0.0085	< 0.005	8/13/2018	the Ceriodaphnia test for the sample collected August 13th did not pass the Control validity criteria	>100.00%	38.20%	>90.90%
19-Aug-18	37	1.03	0.8	< 0.00001	557	0.26	< 0.00001	0.0022	3.69	< 0.0001	7.8	7.8		2210	0.00295	0.008	11	0.0034	0.0067	< 0.0002	0.00099	< 0.005					
26-Aug-18	6.3	0.005	4.1	< 0.0001	57.1	< 0.01	< 0.00001	< 0.001	15.3	< 0.0001	14.2	7.49		1527	0.00028	< 0.005	< 1	< 0.001	< 0.005	< 0.0002	< 0.0005	< 0.005					
3-Sep-18	15	1.32	0.91	< 0.0001	544	0.153	< 0.00001	0.0014	5.74	< 0.0001	10	7.01		1998	0.00237	< 0.005	14	0.0027	< 0.005	< 0.0002	0.00062	< 0.005					
Water Quality Monitoring Exposure Area (63°01'44.6"N 92°09'14.6"W) (MEL-13)																											
23-Jul-18	16	6.64	< 0.05	0.000028	485	0.405	< 0.00001	0.0013	< 0.1	0.00011	15.7	7.16	11.7	79.6	0.00283	< 0.005	1	0.0033	0.0107	0.00021	0.00281	< 0.005					
20-Aug-18	17	0.0118	< 0.05	< 0.00001	25.3	0.029	< 0.00001	< 0.001	< 0.1	< 0.0001	10.8	8.16	11.8	81.6	0.00042	< 0.005	1	< 0.001	< 0.005	< 0.0002	0.00079	< 0.005					
26-Aug-18	15	0.0098	0.19	< 0.00001	24.5	0.024	< 0.00001	< 0.001	< 0.1	< 0.0001	10.1	7.75	12.0	84.2	0.00046	< 0.005	1	< 0.001	< 0.005	< 0.0002	0.00077	< 0.005					
4-Sep-18	16	0.0083	< 0.05	< 0.00001	25.2	0.019	< 0.00001	< 0.001	< 0.1	< 0.0001	10	8.19	12.2	85.4	0.00043	< 0.005	1	< 0.001	< 0.005	< 0.0002	0.00076	< 0.005					
Water Quality Monitoring Reference Area (63°06'52.2"N 92°20'23.6"W) (MEL-03-01)																											
25-Jul-18	16	0.00357	< 0.005	< 0.000005	21.1	0.0236	0.000008	0.000083	1.26	0.00005	10.8	7.7	12.7	65.0	0.000195	< 0.0067	< 1	0.000706	0.00103	< 0.00001	0.00077	< 0.001	9/3/2018	90.10%	>100.00%	>97.00%	>90.90%
20-Aug-18	17.5	0.00283	< 0.005	< 0.000005	20.4	0.0178	0.0000006	0.000064	< 0.005	< 0.00004	10.7	8.52	11.9	71.0	0.000209	< 0.0074	< 1	0.000412	< 0.0008	0.00001	0.00064	< 0.001					
26-Aug-18	18	0.007	< 0.05	< 0.00001	21.4	0.014	< 0.00001	< 0.001	< 0.1	< 0.0001	9.2	6.75	12.4	75.6	0.0002	< 0.005	< 1	< 0.001	< 0.005	< 0.0002	0.00067	< 0.005					
15-Sep-18	17.9	0.00291	< 0.005	< 0.000005	38.7	0.0071	< 0.0000005	0.000067	0.0073	< 0.00004	6.11	7.26	12.5	73.9	0.000186	< 0.0097	< 1	0.000535	< 0.0008	< 0.00001	0.00088	< 0.001					

NDEP :No Deposit