



ALBERTA
ENVIRONMENT AND PARKS

*Office of the Minister
MLA, Lethbridge - West*

Ministerial Order 41 /2015

*Environmental Protection and Enhancement Act,
R.S.A. 2000, c. E-12.*

Water Act, R.S.A. 2000, c. W-3.

Order Respecting Environmental Appeals Board Appeal Nos. 13-022-25, 14-011, and 14-018

I, Shannon Phillips, Minister of Environment and Parks, pursuant to section 100 of the *Environmental Protection and Enhancement Act*, make the order in the attached Appendix, being an Order Respecting Environmental Appeals Board Appeal Nos. 13-022-025, 14-011, and 14-018.

Dated at the City of Edmonton, in the Province of Alberta, this 5th day of October, 2015.

Shannon Phillips
Minister

Appendix

Order Respecting Environmental Appeals Board Appeal Nos. 13-022-025, 14-011, and 14-018

With respect to the decisions of the Director, South Saskatchewan Region, Operations Division, Alberta Environment and Sustainable Resource Development, to issue Amending Approval Nos. 1242-02-02, 1242-02-04, and 1242-02-05 under the *Environmental Protection and Enhancement Act*, R.S.A 2000, c. E-12, and Approval No. 00334295-00-00 under the *Water Act*, R.S.A. 2000, c. W-3, to the Town of Tuner Valley, I, Shannon Phillips, Minister of Environment and Parks, order as follows:

1. Amending Approval 1242-02-04 and Approval 00334295-00-00 are confirmed.
2. Section 8 of Amending Approval 1242-02-02 is varied by deleting the phrase “Section 5.3.9.1, 5.3.9.2, 5.3.9.3 and 5.9.3.4 are added as follows” and replacing it with the phrase “Sections 5.3.9.1, 5.3.9.2, 5.3.9.3 and 5.3.9.4 are added as follows”.
3. Section 8 of Amending Approval 1242-02-02 is varied by deleting the following:

“5.3.9.2 The approval holder shall monitor the groundwater monitoring wells and surface water as required by 5.3.9.1 for the parameters and at the frequency as required by **TABLE 1 SOURCE WATER AQUIFER AND RIVER WATER MONITORING**

TABLE 1 SOURCE WATER AQUIFER AND RIVER WATER MONITORING

PARAMETER	LOCATION (minimum number of wells and surface water monitoring locations)	MINIMUM FREQUENCY
Physical parameters Color, pH, Total Dissolved Solids, Turbidity	Monitoring wells: MW14-01 MW14-02	Twice a year (once in the spring and fall)
Routine Parameters Bicarbonate, Calcium, Carbonate, Chloride, Conductivity, Fluoride, Hydroxide, Iron, Magnesium, Manganese, Nitrate, Nitrite, Potassium, Sodium, Sulphate, Total Alkalinity, Total Dissolved Solids, Total Hardness, Total Kjeldahl Nitrogen, Total Organic Carbon Turbidity	MW 14-03 MW 14-04 MW 14-05 MW 14-06 MW 14-07 MW 14-08 and Sheep River surface water (2 locations):	
Metals Aluminum, Antimony, Arsenic, Barium,	- one point south of the water treatment plant and	

Beryllium, Bismuth, Boron, Cadmium, Chromium, Cobalt, Copper, Cyanide, Fluoride, Iron, Lead, Magnesium, Mercury, Molybdenum, Nickel, Selenium, Silver, Strontium, Thallium, Tin, Titanium, Uranium, Vanadium, Zinc	- one point 3 km upstream	
Hydrocarbons Benzene, Toluene, Ethylbenzene, Xylenes, Petroleum Hydrocarbon Fractions F1 and F2		
PAHs Acenaphthene, Acenaphthylene, Anthracene, Fluoranthene, Fluorene, Naphthalene, Phenanthrene, Pyrene <i>Carcinogenic</i> Benzo(a)anthracene, Benzo(b+j)fluoranthene, Benzo(k)fluoranthene, Benzo(g,h,i)perylene, Benzo(a)pyrene, Chrysene, Dibenzo(a,h)anthracene, Ideno(1,2,3-c,d)pyrene		
Polychlorinated Biphenyls PCBs		
Naturally Occurring Radioactive Material (NORMs)		
Petroleum Hydrocarbon Fractions F3 and F4		

and replacing it with the following:

“5.3.9.2 The approval holder shall monitor the groundwater monitoring wells and surface water as required by 5.3.9.1 for the parameters and at the frequency as required by **TABLE 1 SOURCE WATER AQUIFER AND RIVER WATER MONITORING**

TABLE 1 SOURCE WATER AQUIFER AND RIVER WATER MONITORING

PARAMETER	LOCATION (minimum number of wells and surface water monitoring locations)	MINIMUM FREQUENCY
Physical parameters Color, pH, Total Dissolved Solids, Turbidity	Monitoring wells: <ul style="list-style-type: none"> • MW14-01, 	Twice a year (once in the spring and once in the fall).

<p>Routine Parameters Bicarbonate, Calcium, Carbonate, Chloride, Conductivity, Fluoride, Hydroxide, Iron, Magnesium, Manganese, Nitrate, Nitrite, Potassium, Sodium, Sulphate, Total Alkalinity, Total Dissolved Solids, Total Hardness, Total Kjeldahl Nitrogen, Total Organic Carbon Turbidity</p>	<ul style="list-style-type: none"> • MW14-02, • MW 14-03, • MW 14-04, • MW 14-05, • MW 14-06, • MW 14-07, and • MW 14-08; 	
<p>Metals Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Chromium, Cobalt, Copper, Cyanide, Fluoride, Iron, Lead, Magnesium, Mercury, Molybdenum, Nickel, Selenium, Silver, Strontium, Thallium, Tin, Titanium, Uranium, Vanadium, Zinc</p>	<p>and Sheep River surface water (at 2 locations):</p> <ul style="list-style-type: none"> • one point south of the water treatment plant, and • one point 3 km upstream. 	
<p>Hydrocarbons Benzene, Toluene, Ethylbenzene, Xylenes, Petroleum Hydrocarbon Fractions F1 and F2</p>		
<p>PAHs Acenaphthene, Acenaphthylene, Anthracene, Fluoranthene, Fluorene, Napthalene, Phenanthrene, Pyrene <u>Carcinogenic</u> Benzo(a)anthracene, Benzo(b+j)fluoranthene, Benzo(k)fluoranthene, Benzo(g,h,i)perylene, Benzo(a)pyrene, Chrysene, Dibenzo(a,h)anthracene, Ideno(1,2,3-c,d)pyrene</p>		
<p>Polychlorinated Biphenyls PCBs</p>	<p>Monitoring wells:</p> <ul style="list-style-type: none"> • MW14-01, • MW14-02, • MW 14-03, • MW 14-04, • MW 14-05, • MW 14-06, • MW 14-07, and • MW 14-08; 	<p>One time only, unless required otherwise by the Director in writing.</p>
<p>Naturally Occurring Radioactive Material (NORMs)</p>		
<p>Petroleum Hydrocarbon Fractions F3 and F4</p>	<p>and Sheep River surface water (at 2 locations):</p> <ul style="list-style-type: none"> • one point south of the water treatment plant, and • one point 3 km upstream. 	

”

4. Section 13 of Amending Approval 1242-02-05 is varied by deleting the phrase:

“Grab sample
Once every six months
or
Once per month if well water or water
from the infiltration gallery is pumped
directly into the water treatment plant at
any time during that month”

found in Schedule 3C in two places, and replacing it with the phrase:

“Grab sample
Once every six months
or
Once per month if well water or water
from the infiltration gallery is pumped
directly into the water treatment plant at
any time during that month
or
As directed by the Director in writing in
accordance with section 5.4.5 or section 5.4.10 of this Approval
(the direction of the Director takes precedence)”

5. Section 14 of Amending Approval 1242-02-05 is varied by deleting the phrase:

“Grab sample
Once before water is pumped to the raw
water storage reservoir
and
Once every four months after the initial
sample is analyzed”

found in Schedule 3D in two places, and replacing it with the phrase:

“Grab sample
Once before water is pumped to the raw
water storage reservoir
and
Once every four months after the initial
sample is analyzed
or
As directed by the Director in writing
in accordance with section 5.4.5 or section 5.4.10 of this Approval
(the direction of the Director takes precedence)”

5. Amending Approval 1242-02-05 is varied by adding the following immediately after section 16:

“17. ADD 2.1.9, 2.1.10, 2.1.11, and 2.1.12 as follows:

2.1.9 The approval holder shall invite the members of the QUAD Regional Water Partnership to join the Waterworks Advisory Committee (WWAC), which was established in accordance with the mediation agreement in Appeal No. 08-029.

2.1.10 The approval holder shall ensure that WWAC meets a minimum of twice per calendar year.

2.1.11 The first three meetings of WWAC held after September 1, 2015, shall be chaired by an independent facilitator, paid for by the approval holder, and appointed by the Manager, Municipal Dispute Resolution Services, Alberta Municipal Affairs.

2.1.12 The approval holder shall ensure that all written communication between the approval holder and Alberta Environment and Parks regarding the waterworks system is publically available by posting it on the Town of Turner Valley website.”

18. ADD SECTIONS 5.4 and 5.4.1 to 5.4.17 as follows:

SECTION 5.4: MONITORING REVIEW

MONITORING REVIEW PROGRAM

5.4.1 The approval holder shall conduct a Monitoring Review Program, which shall be provided to the Director for review and approval.

5.4.2 The Monitoring Review Program shall include:

(a) the development of a monitoring program to review and revise the sampling schedule to optimize information and minimize sampling costs;

(b) the development of a monitoring program to sample twice per year, in order to catch the expected peak (high) and trough (low) of each parameter; and

(c) any other information required by the Director.

- 5.4.3 The approval holder shall submit the Monitoring Review Program to the Director for review and approval by April 1, 2016.
- 5.4.4 The approval holder shall correct any deficiencies in the Monitoring Review Program identified in writing by the Director within the timeframe specified by the Director.
- 5.4.5 Once the Director has approved the Monitoring Review Program, the Director shall issue written direction to the approval holder to implement the Monitoring Review Program with respect to Schedules 3C and 3D.

FURTHER MONITORING REVIEW PROGRAM

- 5.4.6 If, in the Director's opinion, a change is detected in the groundwater with new seasonal patterns or distributions, the Director may, in writing, direct the approval holder to conduct a Further Monitoring Review Program.
- 5.4.7 The Further Monitoring Review Program shall include:
 - (a) the development of a monitoring program to revise the sampling schedule to optimize information and minimize sampling costs;
 - (b) the development of a monitoring program to sample two or more times per year, in order to catch the expected peak (high) and trough (low) of each parameter; and
 - (c) any other information required by the Director.
- 5.4.8 The approval holder shall submit the Further Monitoring Review Program to the Director for review and approval by the date specified in writing by the Director.
- 5.4.9 The approval holder shall correct any deficiencies in the Further Monitoring Review Program identified in writing by the Director within the timeframe specified by the Director.
- 5.4.10 Once the Director has approved the Further Monitoring Review Program, the Director shall issue a direction to the approval holder to implement the Further Monitoring Review Program with respect to Schedules 3C and 3D.

SAMPLING METHODOLOGY

- 5.4.11 The approval holder shall conduct a Sampling Methodology Review, which shall be provided to the Director for review and approval.
- 5.4.12 The Sampling Methodology Review shall include:
- (a) a review of the sampling protocol and procedure;
 - (b) a review of the resulting analytics to ensure they are correct; and
 - (c) any other information required by the Director.
- 5.4.13 The approval holder shall submit the Sampling Methodology Review to the Director for review and approval by April 1, 2016.
- 5.4.14 The approval holder shall correct any deficiencies in the Sampling Methodology Review identified in writing by the Director within the timeframe specified by the Director.
- 5.4.15 Once the Director has approved the Sampling Methodology Review, the approval holder shall implement the revised sampling methodology.

NEW WELLS

- 5.4.16 If, in the opinion of the Director, any monitoring well is not producing sufficient water to effectively obtain a sample, and if, in the opinion of the Director, samples from that monitoring well are required to ensure the safety of the water supply, the Director may provide written direction to the approval holder to install a new monitoring well at that location or at another location.
- 5.4.17 Where the Director directs the approval holder to install a new well, the approval holder shall install the new well in accordance with the requirements of the direction and within the time specified by the Director.”
19. ADD SECTIONS 5.5 and 5.5.1 to 5.5.7 as follows:

“SECTION 5.5: LOW FLOW SAMPLING PILOT PROJECT

- 5.5.1 The approval holder shall develop a Low Flow Sampling Pilot Project Proposal and submit to the Director for review and approval.

- 5.5.2 The Low Flow Sampling Pilot Project Proposal shall include:
- (a) a description of a Pilot Project to test the low flow sampling protocol described in Appeal Nos. 13-022-025, 14-011, and 14-018 at a minimum of 5 sampling locations over a minimum period of 3 years;
 - (b) a description of the methodology that will be used to try to develop a correlation between the data currently being collected and the data collected by the Pilot Project;
 - (c) annual reporting requirements to the Director;
 - (d) final reporting requirements to the Director;
 - (e) a schedule for implementation; and
 - (f) any other information required by the Director.
- 5.5.3 The approval holder shall provide the Low Flow Sampling Pilot Project Proposal to the Director by April 1, 2016.
- 5.5.4 The approval holder shall correct any deficiencies in the Low Flow Sampling Pilot Project Proposal identified in writing by the Director within the timeframe specified by the Director.
- 5.5.5 Once the Director has approved the Low Flow Sampling Pilot Project Proposal, the approval holder shall implement it in accordance with the schedule of implementation.
- 5.5.6 The approval holder shall implement any changes to the Low Flow Sampling Project Proposal during the course of the Pilot Project, when directed, in writing, by the Director within the timeframe specified by the Director.
- 5.5.7 The Pilot Project shall be in addition to any other monitoring required by this approval.”