



Province of Alberta

ENVIRONMENTAL PROTECTION
AND ENHANCEMENT ACT

**MERCURY EMISSIONS FROM
COAL-FIRED POWER PLANTS
REGULATION**

Alberta Regulation 34/2006

With amendments up to and including Alberta Regulation 200/2016

Office Consolidation

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(Consolidated up to 200/2016)

ALBERTA REGULATION 34/2006

Environmental Protection and Enhancement Act

**MERCURY EMISSIONS FROM COAL-FIRED
POWER PLANTS REGULATION**

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Schedule

Interpretation

1(1) In this Regulation,

- (a) “approval” means an approval authorizing activities consisting of construction, operation and reclamation, or any of those activities, in relation to a coal-fired power plant;
- (b) “approval holder” means the holder of an approval;
- (c) “authorized control program” means a control program that is authorized under section 2(3);
- (d) “authorized optimization program” means an optimization program that is authorized under section 7(2);

- (e) “capture” means the fraction representing the total measured mercury in the substances collected through mercury control equipment or actions, or both, at the plant divided by the total measured mercury in the raw coal, expressed as a percentage;
- (f) “coal-fired power plant” means a power plant described and listed in the Schedule;
- (g) “construction” does not include the construction of a new generating unit;
- (h) “control program” means the mercury emission control program referred to in section 2(1);
- (i) “the Director” means a person who is designated by the Minister as a Director for the purposes of this Regulation;
- (j) “generating unit” or “unit” means a single line of process equipment that is directly related to the production of electricity at a coal-fired power plant;
- (k) “optimization program” means a mercury emission control optimization program referred to in section 4(4) or 5(4), as the case may be;
- (l) “raw coal” means the coal used for combustion at a coal-fired power plant that has not been subjected to any prior processing such as coal washing or other treatment.

(2) A reference in this Regulation to any authorized control or optimization program is to be taken to include any amendments made to that program and authorized, up to the relevant time.

Control program

2(1) An approval holder shall, before April 1, 2007, submit for the Director’s authorization a proposal for a mercury emission control program at its coal-fired power plant.

(2) The approval holder shall ensure that the control program proposal includes, at minimum,

- (a) a description of the specific mercury control equipment and actions proposed to achieve a minimum capture of 70%;
- (b) the rationale for selecting that equipment and those actions and the expected capture of each such item of equipment and action and of the aggregate of all of them,

- (c) information about any permanent shut-down of a generating unit, including the date of the shut-down and a proposed plan for the dismantling and decontamination of the unit,
 - (d) the results of consultations held on the control program proposal with the public,
 - (e) a description of how public comments were addressed in developing the proposed control program,
 - (f) a proposed schedule for implementation of the control program,
 - (g) a proposed mercury emission monitoring program, including the methods and frequency of monitoring to measure the capture performance of the control program and a schedule for the installation of continuous emission monitoring for mercury by 2010 or an equivalent program, and
 - (h) a program for reporting to the Director the results of the monitoring program referred to in clause (g).
- (3)** If the Director finds the control program as proposed satisfactory, the Director shall authorize it and give notice of the authorization to the approval holder in writing.
- (4)** If the Director finds the proposed control program unsatisfactory, the Director shall give written notice to the approval holder of that fact and of the deficiencies found.
- (5)** The approval holder shall, before the relevant date specified in the notice referred to in subsection (4),
- (a) correct all deficiencies so notified, and
 - (b) resubmit the proposed control program for authorization.
- (6)** The Director may, by notice given in writing before authorization under subsection (3), direct the approval holder
- (a) to provide the public with notification of the proposed control program, or
 - (b) to consult with the public about the proposal,
- or both, in the manner required by the notice.
- (7)** The approval holder shall comply with the notice given under subsection (6).

(8) The approval holder shall implement and comply with the authorized control program.

(9) The approval holder shall report to the Director the results of the monitoring program referred to in subsection (2)(g) in accordance with the authorized control program.

Notifications about certain generating units

3(1) The approval holder for each of the H.R. Milner Generating Unit and the generating units referred to in the Schedule as Battle River Generating Units 3 and 4 and Sundance Generating Units 1 and 2 shall, before April 1, 2007, make a written declaration to the Director of its intention either to operate the unit beyond, or to shut it down before, the end of

- (a) 2012 in the case of the H.R. Milner Generating Unit,
- (b) 2015 in the case of a Battle River generating unit, and
- (c) 2017 in the case of a Sundance generating unit.

(2) If an approval holder fails to comply with subsection (1), it is deemed for the purposes of sections 4 and 5 to have declared its intention to continue operation of the generating unit in question beyond the relevant year mentioned in subsection (1).

Effect of certain declarations on certain generating units

4(1) Where a declaration or declarations are or are deemed to be made under section 3 that

- (a) all 5 of the generating units referred to in that section will be shut down, or
- (b) any one or more, but not all, of those units will continue operating,

all approval holders shall comply with subsections (2) to (4), except in respect of a generating unit that is the subject of a declaration or a deemed declaration to shut down under section 3.

(2) With effect from January 1, 2010, an approval holder shall operate a generating unit only if the mercury controls, being the specific mercury control equipment or actions or both that are set out in the authorized control program, are

- (a) installed,
- (b) operated, and

- (c) implemented,

as the case may be, in accordance with the authorized control program.

(3) An approval holder shall, before January 1, 2011, report to the Director

- (a) the results of mercury emissions testing before, during and after implementation of the authorized control program,
- (b) the actual net electrical output in megawatt-hours for the last 3 years,
- (c) the proposed method and frequency of ongoing monitoring and reporting for mercury emissions beyond 2011, and
- (d) any other information requested by the Director in writing in relation to mercury.

(4) An approval holder shall, before January 1, 2012, submit a proposal for a mercury emission control optimization program for authorization by the Director.

Effect of unanimous declarations of continued operation

5(1) Where declarations are or are deemed to be made under section 3 that all 5 of the generating units referred to in that section will continue operating, all approval holders shall comply with subsections (2) to (4).

(2) With effect from January 1, 2011, an approval holder shall operate a generating unit only if the mercury controls, being the specific mercury control equipment or actions or both that are set out in the authorized control program, are

- (a) installed,
- (b) operated, and
- (c) implemented,

as the case may be, in accordance with the authorized control program.

(3) An approval holder shall, before January 1, 2012, report to the Director

- (a) the results of mercury emissions testing before, during and after implementation of the authorized control program,

- (b) the actual net electrical output in megawatt-hours for the last 3 years,
- (c) the proposed method and frequency of ongoing monitoring and reporting for mercury emissions beyond 2012, and
- (d) any other information requested by the Director in writing in relation to mercury.

(4) An approval holder shall, before January 1, 2013, submit a proposal for a mercury emission control optimization program for the Director's authorization.

Mercury emission limit requirements

6(1) The Director may, by notice in writing, direct an approval holder to comply with the specific mercury emission limits set by the Director and contained in the direction.

(2) In setting a limit under subsection (1), the Director

- (a) shall have regard to the results of the authorized control program or optimization program or both, as the case may be, and
- (b) may consider any other information the Director considers appropriate.

(3) With effect from January 1, 2010, an approval holder shall comply with the mercury emission limits provided to it under subsection (1).

Optimization program

7(1) An approval holder shall ensure that the optimization program proposal includes, at minimum,

- (a) the mercury emission results of the authorized control program,
- (b) the results of any mercury emission monitoring requirement under section 10,
- (c) the actions that will be undertaken, with related schedules, to optimize the operation and performance of the mercury control equipment and actions installed and operated under the authorized control program,

- (d) actions that can be undertaken, with related schedules, to optimize capture based on the latest information available on mercury emission control,
- (e) the projected evaluation period necessary to verify the natural short-term and long-term variations in authorized optimization program performance,
- (f) the assessment process that will be used to determine the capability of the authorized optimization program, and in particular its ability to achieve a minimum capture of 80% or an incremental improvement in the existing capture, and
- (g) proposed amendments to any existing monitoring and reporting programs related to mercury.

(2) If the Director finds the optimization program as proposed satisfactory, the Director shall authorize it and give notice of the authorization to the approval holder in writing.

(3) If the Director finds the proposed optimization program unsatisfactory, the Director shall give written notice to the approval holder of that fact and of the deficiencies found.

(4) The approval holder shall, before the relevant date specified in the notice referred to in subsection (3),

- (a) correct all deficiencies so notified, and
- (b) resubmit the proposed optimization program for authorization.

(5) The approval holder shall implement and comply with the authorized optimization program.

Amendments to programs

8(1) An approval holder may submit proposals for amendments to an authorized control or optimization program in writing to the Director.

(2) The approval holder shall ensure that the amendment proposal includes, at minimum,

- (a) a detailed description of the proposed changes to the authorized control or optimization program, as the case may be,
- (b) an explanation of the rationale for the proposed changes, and

(c) any other information required in writing by the Director.

(3) The Director may authorize or refuse to authorize any proposal for an amendment to an authorized control or optimization program.

(4) Section 2(6) and (7) apply in respect of proposed amendments to an authorized control program.

(5) Proposed amendments to an authorized control or optimization program have no effect until they are authorized by the Director to the approval holder in writing.

Conditions on authorizations

9 The Director, on giving an authorization under section 2(3), 7(2) or 8(3) may attach conditions in and to the authorization, and any such condition forms a part of the applicable program that prevails over any other part of the program that is inconsistent with that condition.

Reporting

10(1) The Director may, by notice in writing, direct an approval holder

- (a) to submit to the Director reports respecting any requirements of this Regulation, or
- (b) to conduct additional monitoring and reporting related to mercury in the manner and frequency specified in the notice.

(2) An approval holder shall comply with a direction under subsection (1).

Record keeping and analytical requirements

11(1) Unless otherwise authorized in writing by the Director, an approval holder shall record all of the following information in respect of any samplings conducted or analyses performed in accordance with this Regulation:

- (a) the places, dates and times of the samplings;
- (b) the dates the analyses were performed;
- (c) the analytical techniques, methods or procedures used in the analyses;

- (d) the names of the persons who collected and analyzed each sample;
- (e) the results of the analyses.

(2) The approval holder shall retain all information recorded under subsection (1) for a minimum of 10 years unless otherwise authorized in writing by the Director.

(3) With respect to any sample required under this Regulation, the approval holder shall ensure that the collection, preservation, storage, handling and analysis are conducted in accordance with its approval or this Regulation or both, as the case may be, unless otherwise authorized in writing by the Director.

Offences

12(1) An approval holder who contravenes a provision of section 2, 3, 4, 5, 6, 7, 8(4), 10 or 11 is guilty of an offence and liable,

- (a) in the case of an individual, to a fine of not more than \$50 000, or
- (b) in the case of a corporation, to a fine of not more than \$500 000.

(2) No person shall be convicted of an offence referred to in subsection (1) if that person establishes on a balance of probabilities that the person took all reasonable steps to prevent its commission.

Expiry

13 For the purpose of ensuring that this Regulation is reviewed for ongoing relevancy and necessity, with the option that it may be repassed in its present or an amended form following a review, this Regulation expires on December 31, 2021.

AR 34/2006 s13;200/2015;200/2016

14 *(This section amends the Administrative Penalty Regulation (AR 23/2003); the amendment has been incorporated into that Regulation.)*

Coming into force

15 Subject to sections 4(2), 5(2) and 6(3), this Regulation comes into force on the day it is filed under the *Regulations Act*.

Schedule

(Sections 1(1)(f) and 3(1))

The coal-fired power plants, being the power plants that use coal as their primary fuel and for which subsisting approvals governing them were in existence at the end of 2005, and the numbers of those approvals, are as follows:

Item number	Location/name of power plant	Number of approval
1	Battle River*	1512-02-00
2	Sundance**	9830-01-00
3	Sheerness	123-02-00
4	Genesee	773-02-00
5	H.R. Milner	9814-01-00
6	Wabamun	10323-02-00
7	Keephills	10324-01-00

The Battle River and Sundance generating units referred to generally in section 3(1) are those described below:

* Battle River Power Plant's process equipment includes:

- A The generating unit at that power plant that was constructed in 1969 and was, at the end of 2005, designated as that plant's Unit 3;
- B The generating unit at that power plant that was constructed in 1975 and was, at the end of 2005, designated as that plant's Unit 4.

** Sundance Power Plant's process equipment includes:

- A The generating unit at that power plant that was constructed in 1970 and was, at the end of 2005, designated as that plant's Unit 1;
- B The generating unit at that power plant that was constructed in 1973 and was, at the end of 2005, designated as that plant's Unit 2.



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