

# **Solution Gas Conservation Escalation Process**

**June 2014**

**Alberta Energy Regulator**

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## Introduction

To manage emissions at facilities licensed by the Alberta Energy Regulator (AER) that are already flaring, venting, or incinerating solution gas or propose to do so, the AER follows the process set out in this document. It also helps the AER address public concerns about routine flaring, venting, and incinerating from facilities emitting solution gas and ensure that

- objections to or operational complaints about emissions are confirmed;
- operators are aware of any objections to or operational complaints about emissions from their facility or site, giving the operators an opportunity to address them;
- those facilities or sites that the AER considers for mandatory solution gas conservation are significant and due to extraordinary circumstances;
- staff conduct thorough investigations and make consistent recommendations across the province; and
- the final decision to require solution gas conservation is made at the appropriate level of authority.

This process was developed to support new and stronger solution gas conservation requirements in the April 2014 edition of *Directive 060: Upstream Petroleum Industry Flaring, Incinerating, and Venting*. These rules give the AER the authority to require licensees to conserve gas when flaring, venting, or incinerating even when it may be uneconomical to do so. Any decision to require gas conservation is made by senior AER staff.

This process does not address emissions from gas processing facilities, such as gas dehydrator flaring or incineration facilities.

### Requiring Conservation Outside of the Solution Gas Escalation Process

As the escalation process for solution gas conservation is complaint and objection driven, there may be other situations where solution gas conservation may be required. To fulfill its mandate and ensure that solution gas emissions are managed responsibly, the AER may also need to consider requiring solution gas conservation

- in areas where hydrocarbon odours or emissions are a persistent concern,
- on a play basis to meet the outcome-based targets of the AER's play-based regulatory initiative (formerly the AER's Unconventional Regulatory Framework), and
- on any site to meet the solution gas flaring limits in section 2.1 of *Directive 060*.

## Regulatory Requirements

The following acts, rules, and regulations pertain to odour management in the upstream oil and gas industry.

- *Oil and Gas Conservation Rules (OGCR)*

### **Section 7.035**

The licensee, in the case of a well or facility, the operator, in the case of a facility that is exempted from the requirement to obtain a license or approval, and the approval holder, in the case of an oilfield waste management facility, must comply with the requirements of *Directive 060* and *Directive 039*.

- *Responsible Energy Development Act*

### **Section 42**

The Regulator may, in its sole discretion, reconsider a decision made by it and may confirm, vary, suspend or revoke the decision.

- *Environmental Protection and Enhancement Act (EPEA)*

### **Section 116(1) and (3)**

- (1) Where the Director is of the opinion that a substance or thing is causing or has caused an offensive odour, the Director may issue an environmental protection order to the person responsible for the substance or thing.
- (3) An environmental protection order under this section may order the person to whom it is directed to take any or all of the following measures:
  - (a) investigate the situation;
  - (b) take any action specified by the Director to prevent the offensive odour;
  - (c) minimize or remedy the effects of the offensive odour;
  - (d) monitor, measure, contain, remove, store, destroy or otherwise dispose of the substance or thing causing the offensive odour or lessen or prevent the offensive odour;
  - (e) install, replace or alter any equipment or thing in order to control or eliminate the offensive odour;
  - (f) construct, improve, extend or enlarge a plant, structure or thing if that is necessary to control or eliminate the offensive odour;
  - (g) take any other action the Director considers to be necessary;
  - (h) report on any matter ordered to be done in accordance with directions set out in the order.

- *Directive 060*

### **Section 2.6 (1)**

The licensee or operator must conserve solution gas at all sites where

- a) combined flaring and venting volumes are greater than 900 m<sup>3</sup>/day per site and the decision tree process and economic evaluation (see section 2.8) result in a net present value (NPV) of greater than -Cdn\$55 000;
- b) the gas-oil ratio (GOR) is greater than 3000 m<sup>3</sup>/m<sup>3</sup>; all wells producing with a GOR greater than 3000 m<sup>3</sup>/m<sup>3</sup> at any time during the life of the well must be shut in until the gas is conserved; or

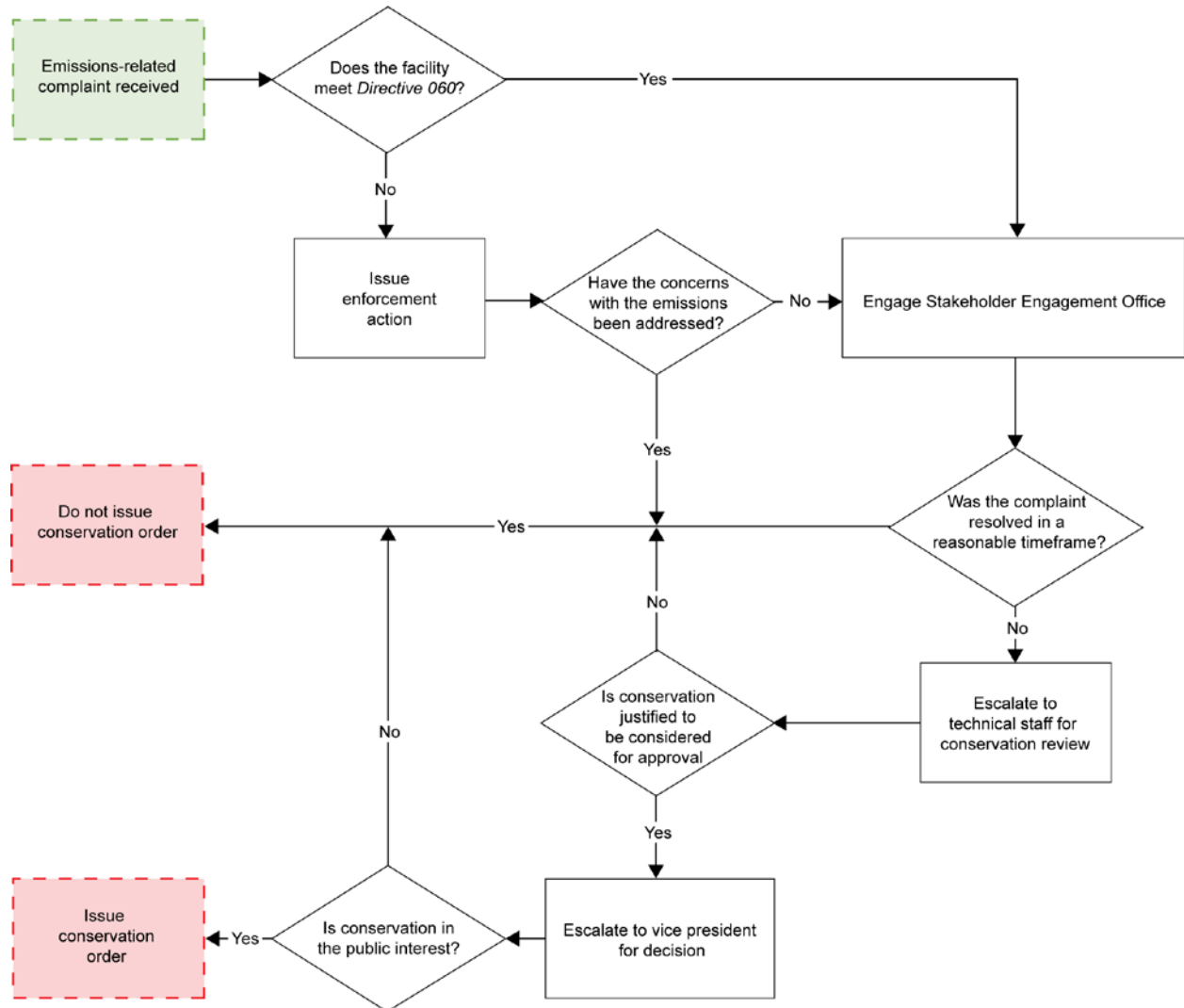
- c) flared volumes are greater than 900 m<sup>3</sup>/day per site and the flare is within 500 m of an existing residence, regardless of economics; or
- d) the AER directs the licensee, operator, or approval holder to conserve solution gas, regardless of economics.

For the purposes of *Directive 060* and this protocol, the AER has defined surface developments and surface improvements in *Directive 056*, as follows:

- surface improvement: a railway, pipeline, canal or other right-of-way; a road allowance; a surveyed roadway; a dwelling; an industrial plant; an aircraft runway or taxiway; a building used for military purposes; a permanent farm building; a school; or a church.
- surface development: an occupied dwelling (full or part time); a publicly used development; a public facility (campgrounds, places of business); or any other surface development where the public may gather on a regular basis. This includes residences located immediately next to an emergency planning zone (EPZ) and those from which dwellers are required to egress through the EPZ.

## Solution Gas Conservation for Existing Facilities

The AER has an escalation process for issuing solution gas conservation orders for any emissions-related complaint it receives about an existing facility (see figure 1).



**Figure 1. Escalation process for issuing a solution gas conservation order for existing facilities**

A complaint can be about a single site or several sites and multiple operators. Once a complaint is received, staff must evaluate whether the sites in question comply with *Directive 060* and whether the operator can demonstrate that it is not economically viable to conserve solution gas by flaring or venting solution gas.



The AER then attempts to resolve concerns through the AER's alternative dispute resolution (ADR) process. How long it will take to resolve them depends on how complex the situation is—there is therefore no prescribed timeline for when this process should be completed. If concerns cannot be resolved within a reasonable timeframe, staff will need to decide if the situation should be escalated for conservation review. Technical staff will then recommend whether the AER should issue an order requiring solution gas conservation at one or more of the sites.

The AER expects both the complainant and the operator to cooperate during its investigation. All parties should be aware that the AER will not automatically issue a solution gas conservation order because an emissions-related operational complaint was made. However, it will objectively consider each complaint, taking into consideration all facts and circumstances before it.

### Staff Recommendations and the Final Decision

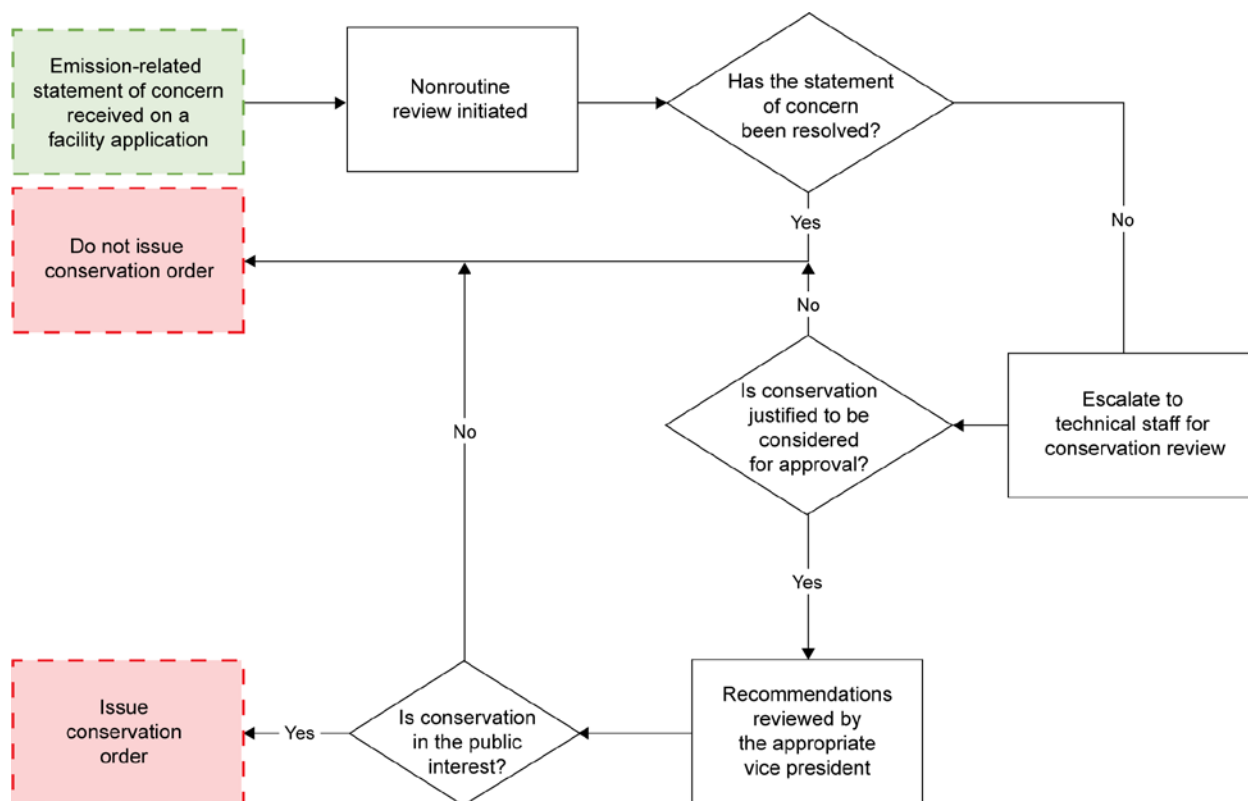
Technical staff will consider the following factors when determining whether to recommend issuing a solution gas conservation order:

- the location of the facilities or sites involved and how close they are to surface improvements and surface developments,
- the volume of solution gas being flared or vented at the site or facility and what the forecast production is,
- the solution gas conservation economics of the facilities or sites involved,
- the population density of nearby communities,
- the historical number of complaints and complainants,
- future community surface improvements or developments and oil and gas development,
- the operator's compliance history,
- the risk to the oil and gas industry's social license to operate,
- how other facilities in the area operate (the operational norm),
- how other similar situations were addressed, and
- other socioeconomic factors.

Technical staff will then give the recommendations to the appropriate vice president to make the final decision on whether to issue a conservation order. How much solution gas must be conserved (e.g., 95% or 100% solution gas) will be specified in the conservation order. The deadline by which the operator must comply with the order will be determined on a case-by-case basis. If a situation changes, the conservation order can be reconsidered or amended if necessary.

## Solution Gas Conservation for Facility Applications

The AER also has an escalation process for issuing solution gas conservation orders for any emissions-related statements of concern (SOC) it receives about a facility application. It is managed through existing nonroutine public involvement processes (see figure 2).



**Figure 2. Escalation process for issuing a solution gas conservation order for new facilities**

A case can involve a single site or several sites and multiple operators. Once an emissions-related SOC is received, the nonroutine review is initiated. Stakeholder engagement or ADR staff may assist in resolving the SOC. If the emissions-related SOC cannot be resolved within a reasonable timeframe, technical staff will begin a conservation review.

Receipt of an emissions-related SOC will not be sufficient to warrant issuing a solution gas conservation order. The AER expects complainants and operators to work together and that each will make reasonable attempts to resolve the concerns with emissions. The AER will take efforts made by operators to address and resolve the concerns into account when determining whether to issue a solution gas conservation order.

## Staff Recommendations and the Final Decision

The AER will develop a set of recommendations for addressing emissions-related SOCs using the same factors for evaluating whether to require solution gas conservation for existing facilities. Staff will give the recommendations to the appropriate vice president to make the final decision on whether to require the conservation of solution gas and issue a conservation order. How much solution gas must be conserved (e.g., 95% or 100% solution gas) will be specified in the conservation order. The deadline by which the operator must comply with the order will be determined on a case-by-case basis. If a situation changes, the conservation order can be reconsidered or amended if necessary.