

Information Required for Directive 060 Applications Pertaining to Upstream Facilities

All data must be presented in metric units and submitted in PDF format

Application Type	Information Required
All Applications	<ul style="list-style-type: none"> • List the following licensee details: <ul style="list-style-type: none"> ○ licensee/company name ○ BA code ○ company contact information • Information on the proposed activity: <ul style="list-style-type: none"> ○ reason for the variance request with a reference to the relevant Directive 60 section ○ the date the variance is required and duration of the variance ○ surface location <ul style="list-style-type: none"> ▪ including the AER facility licence number and Petrinex reporting code(s) ○ a recent extended gas analysis with H₂S content (the use of the closest offset gas analysis is acceptable), the GOR, and the analysis verifying if the gas can support stable combustion ○ a copy of the dispersion modeling demonstrating AAAQO will be met (for variances involving H₂S as required) ○ exact distance to the nearest residence with a summary of consultation efforts and outcomes ○ daily production records (gas, oil, liquids, water) for the preceding 60 days ○ description of production disposition under normal operating conditions (e.g. oil to tank then truck; gas pipelined to conserving facility or injection well, etc.) – Process flow diagrams or metering schematics are also helpful. ○ proposed production cut back rates (% , volume and/or rates) ○ a description of any Interactions conducted with AER field staff on this issue
Variance to Requirements During Outage of a Solution Gas Conserving Facility (Table 1 Variance)	<p><i>In addition to the information required for All Applications, include:</i></p> <ul style="list-style-type: none"> • documentation to support the reason for the variance request; for example, a copy of correspondence from the pipeline company regarding scheduled shutdown work and dates • an explanation and documentation to support why production cannot be cut by 75% (e.g. justification such as ultimate damage to resource recovery, unacceptable equipment damage/loss, unacceptable risk to safety and/or the environment) • a description of the operational procedures that will be implemented to minimize solution gas flaring or venting • confirmation that non-associated gas will be shut in first with specific locations identified • for extended shut-in periods include a decision tree analysis for temporary conservation options

<p>Discontinue Solution Gas Conservation at a Condensate Producing, Crude Oil, or Bitumen Site</p>	<p><i>In addition to the information required for All Applications, include:</i></p> <ul style="list-style-type: none"> • The reasoning for discontinuing solution gas conservation with supporting documentation (e.g. a copy of a notice of pending shut down of a conserving gas plant) and the proposed disposition of the unconserved solution gas (e.g. flare, vent, etc.) <p>Alternatives Investigated:</p> <ul style="list-style-type: none"> • A copy of the solution gas flaring/venting decision tree analysis • A discussion of the alternatives that were investigated and the outcomes of the evaluations with supporting documentation as required: <ul style="list-style-type: none"> ○ ensure the feasibility of <u>all</u> conservation options are discussed: <ul style="list-style-type: none"> ▪ the possibility of combining / diluting gas from for improved economics, ▪ the transfer of solution gas volumes to a third party for conservation purposes e.g., gas coop, ▪ on-site fuel usage and/or power generation, ▪ the use of solution gas under existing and/or new technology, including opportunities for small volumes ▪ pipeline opportunities including repairs, new construction, tie in, relicensing etc. ▪ sweetening / treatment of the solution gas for alternate use or disposition, and ▪ other options considered ○ include a map of the surrounding infrastructure clearly labelled to explain conserving options as discussed ○ include information on public and safety concerns and the environmental impacts/benefits for each alternative evaluated ○ where third parties have indicated they are unwilling or unable to work with you, provide copies of correspondence <p>Economic evaluation:</p> <ul style="list-style-type: none"> • A copy of the economic evaluation conducted for the most economically feasible options for conservation meeting the requirements of Sections 2.9.1 and 2.9.2 • Ensure the evaluation includes: <ul style="list-style-type: none"> ○ A detailed breakdown of capital and operating costs schedules as set out in sections 2.9.1(6) and 2.9.1(7) <p>Approval for Expenditure quality capital costs shall not include:</p> <ul style="list-style-type: none"> ▪ contingency and risk capital, ▪ taxes and royalties, ▪ sunk costs, ▪ overhead costs, and ▪ miscellaneous costs <ul style="list-style-type: none"> ○ Oil and gas reserves calculations and supporting information demonstrating whether new sources of gas or enhanced recovery will make continued conservation economic (including a discussion of planned drilling programs and pressure maintenance schemes) ○ A production forecast for both the oil and gas streams and the economic limit (date and production rates) of the project based on
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	<p>the oil production rate (including planned drilling programs and pressure maintenance schemes, any future production from facility expansions must be included)</p> <ul style="list-style-type: none"> ○ A copy of the recent gas analysis from the project complete with gas heating value and gas liquid yields ● Confirmation that the requirements of sections 7 and 8 will be met when flaring/incineration or venting/fugitives ● A breakdown of the solution gas disposition ($10^3/m^3/d$), i.e. at what rate would the gas be used for fuel gas, flared, vented, etc. ● A discussion of the results of the evaluation based on a net present value threshold of -\$55,000 for solution gas conservation 										
Extinguish Sour Flare or Incinerator Pilot	<p><i>In addition to the information required for All Applications, include:</i></p> <ul style="list-style-type: none"> ● Confirmation and supporting documentation demonstrating that the requirements in Appendix 11 of Directive 060 will be met 										
Exception to the Ground Level Radiant Heat Requirements	<p><i>In addition to the information required for All Applications, include:</i></p> <ul style="list-style-type: none"> ● reasons why the ground level radiant heat intensity requirements cannot be met ● a facility plot plan showing the location of the flare stack ● proposed plans to restrict access to the area where ground level radiation requirements may be exceeded ● proposed operational procedures if it is necessary to work within the area where the radiant heat intensity guidelines could be exceeded 										
Miscellaneous Variance Requests (not listed above)	<p><i>In addition to the information required for All Applications, include:</i></p> <ul style="list-style-type: none"> ● A discussion of the relevant section of Directive 060 where a variance is being requested ● A description of the circumstances requiring the variance with supporting documentation ● A discussion and supporting documentation for each requirement of the related section. For example, if requesting a variance from Section 7.11 - <i>Flare Pits</i> to continue to use a cryogenic flare pit: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Requirement</th> <th style="width: 50%;">Discussion/Documentation</th> </tr> </thead> <tbody> <tr> <td>1) Section 7.11 Flare pit decommissioning exemption</td> <td>continue to use a cryogenic flare pit</td> </tr> <tr> <td>2) Produced liquids must not enter the pit, in accordance with section 8.080 of the <i>OGCR</i></td> <td>Include a copy of the process flow diagram to demonstrate flare streams to the flare pit and describe safeguards to prevent liquids from entering the flare pit</td> </tr> <tr> <td>3) Flaring of sour gas must comply with the <i>AAAQO</i></td> <td>Confirm compliance and provide a copy of the dispersion modeling where required</td> </tr> <tr> <td>4) Gas containing more than 10 mol/kmol H₂S must not be flared in pits</td> <td>Include a recent copy of the composition of the gas stream directed to flare</td> </tr> </tbody> </table>	Requirement	Discussion/Documentation	1) Section 7.11 Flare pit decommissioning exemption	continue to use a cryogenic flare pit	2) Produced liquids must not enter the pit, in accordance with section 8.080 of the <i>OGCR</i>	Include a copy of the process flow diagram to demonstrate flare streams to the flare pit and describe safeguards to prevent liquids from entering the flare pit	3) Flaring of sour gas must comply with the <i>AAAQO</i>	Confirm compliance and provide a copy of the dispersion modeling where required	4) Gas containing more than 10 mol/kmol H ₂ S must not be flared in pits	Include a recent copy of the composition of the gas stream directed to flare
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	5) The licensee, operator, or approval holder must conduct evaluations of solution gas flares for flare pits as described in sections 2.3 and 2.9 and implement the resulting decision	Include the results of the DTA and economic evaluation if applicable	
	6) Access restrictions and procedures must be in place in areas around flare pits where ground level <i>radiant heat intensity at maximum flare rates</i> will exceed 4.73 kW/m ²	Include the maximum ground level heat intensity and outline the restrictions and procedures proposed	
	7) If the facility is modified or if the facility increases its average annual production, the flare pit must be replaced with a flare stack	Include a discussion of any future plans for modifications or the addition of new gas sources	
	8) Did the AER previously require the pit to be removed	Provide supporting documentation	
	9) Operation of flare pits must comply with the provisions of the <i>Forest and Prairie Protection Act 25</i> and with any regulations under that act	Include an explanation of how the flare pit complies with other requirements	