

Decision on the List of Issues

Imperial Oil Resources Ventures Limited (IORVL) - Same Season Relief Well (SSRW) Technical Proceeding

The National Energy Board's (Board) SSRW Policy requires an applicant to demonstrate, in its Contingency Plan, the capability to drill a relief well to kill an out-of-control well in the same drilling season. The intended outcome of the SSRW Policy is to minimize harmful impacts on the environment. As stated in the Board's *Review of Offshore Drilling in the Canadian Arctic* (the Arctic Review), an applicant wishing to depart from the SSRW Policy would have to demonstrate how they would meet or exceed the intended outcome of the SSRW Policy. Accordingly, the focus of this IORVL SSRW technical proceeding is whether or not the approach proposed by IORVL would meet or exceed the intended outcome of the SSRW Policy.

The Board sets a List of Issues in advance of a public proceeding so that the applicant and potential participants know the general topics that will be examined. Setting the List of Issues early on can assist people and groups in understanding whether or not they wish to participate. The List of Issues does not constrain the Board from ensuring that it obtains all the information it considers necessary to make its determination in the SSRW technical proceeding.

The following people and organizations submitted comments:

- Canadian Association of Petroleum Producers
- Inuvialuit Game Council (IGC)
- Dr. John Irwin, Simon Fraser University
- Natural Resources Defense Council (NRDC)
- Government of the Northwest Territories - Lands
- Government of the Northwest Territories - Industry, Tourism and Investment
- Pembina Institute
- Sierra Club Canada Foundation
- Tuktoyaktuk Community Corporation
- Hamlet of Tuktoyaktuk
- Wildlife Management Advisory Council – North Slope (WMAC-North Slope)
- World Wildlife Fund Canada (WWF Canada)
- Yukon Government - Department of Energy, Mines and Resources

The Board has carefully reviewed all the comments filed. Some included general comments about the SSRW Policy, drilling in the Beaufort Sea, public processes and participation, or substantive views about the content of the issues. For the purposes of this decision, the Board only considered comments about what it should include on the List of Issues.

The following sections outline the Board's response to general comments and requests made regarding the List of Issues, as well as its reasons for revising, or not revising, the draft List of Issues. In many cases, comments addressed topics that were already captured under the draft List of Issues. The revised List of Issues is attached as Appendix A of this decision.

General Comments and Requests

Clarification of Issues and Information Requirements

Some submissions commented on the broad nature of the draft List of Issues. WWF Canada considered the draft List of Issues to be lacking in specificity and expressed the need for detailed information requirements. NRDC requested that the Board provide greater clarification of the intended scope of the four issues already presented in the draft List of Issues and requested that the Board consider outlining sub-issues.

In this decision, the Board provides greater clarity about what is encompassed in its List of Issues. Therefore, the Board does not consider it necessary to identify specific sub-issues.

In consideration of the comments regarding the need for clarity and detailed information requirements, this decision sets out relevant information requirements as they relate to the List of Issues. These requirements should not be viewed as exhaustive; the Board may require additional information during the course of the proceeding.

Request for Draft Criteria

WWF Canada also encouraged the Board to prepare and circulate for public comment a draft set of criteria for evaluating IORVL's proposal.

The criteria relates to Issue #1 in the List of Issues. The Board will determine the criteria based on a full evidentiary record after hearing from the participants during the proceeding. Accordingly, the Board is of the view that it is not necessary to release draft criteria in advance of the decision.

IORVL's Position on the List of Issues

WWF Canada recommended that the Board require IORVL to state its position on the List of Issues and on the intended outcome and purpose of the SSRW requirement. The Board does not consider it necessary to request that of IORVL. All interested persons, including IORVL, had the opportunity to comment on the draft List of Issues. Ultimately, the onus is on IORVL to make the necessary submissions to support its proposal. In reaching this decision on the List of Issues however, the Board did consider the information supplied by IORVL on 16 June 2014 about what it intended to submit as part of its proposal.

"Equivalency"

A relief well is one contingency measure used to respond to a loss of well control. The Board heard during the Arctic Review that there may be other options to achieve the goal of killing an out-of-control well. The Board also heard concerns about not including SSRW capability as a 'tool in the operator's toolbox.' The Board considered these views in the Arctic review, and stated that it expects an operator to continue well intervention using all available means to bring into control a well blowout, while designing, mobilizing, and undertaking relief well operation.

The term “equivalency” has been used by organizations as well as IORVL in their submissions to the Board for this proceeding. For clarity, the Board concluded in the Arctic Review that an applicant wishing to depart from the SSRW Policy would have to demonstrate how they would meet or exceed intended outcome of the policy; the term “equivalency” was never used by the Board. The Board will not be deciding if one or more tools and techniques perform an ‘equivalent’ function as an SSRW in this proceeding. Rather, the Board will decide whether it is willing to forgo the requirement for SSRW capability because of the ability of other tools to meet or exceed the intended outcome of the SSRW Policy.

Issues Included in the List of Issues

Issue #1: What criteria and risks should be considered in determining whether the intent of the SSRW Policy has been satisfied by the tools and techniques proposed to respond to an out-of-control well.

Several comments, questions, and concerns were raised about what criteria should be included and principles to guide the development of criteria. NRDC raised concerns about the meaning of ‘killing’ a well and how that should be interpreted.

The Board will not revise Issue #1 as it is broad enough to consider these matters. For further clarity, the Board expects IORVL to provide the following information in its technical proposal:

- A list of the criteria, and any related assumptions, to be considered in determining whether the intended outcome of the SSRW Policy would be met or exceeded by the tools and techniques proposed to respond to an out-of-control well.
- Justification for the criteria, together with identification of other criteria considered and the rationale for not including the other criteria.

Issue #2: How the tools and techniques proposed would meet the criteria and address risks in the circumstances of a worst case scenario.

Risk Assessment

IORVL indicated that its proposal would not cover risk assessment except in the context of operations integrity.

The WMAC-North Slope suggested that the Board consider the application of best practices and statistical and analytical methods to collect and produce data that will contribute to determining the comparative level, extent and the uncertainty of risks associated with the application of SSRW capability and the proposed approaches.

The Board is of the view that Issue #2 is broad enough to consider risk assessment and how the tools and techniques proposed would address risks. The Board expects the following information

to be filed by IORVL on this matter in its technical proposal:

- The possible mechanisms and pathways of well control failure, and how the application of the tools and techniques proposed would respond to those mechanisms and pathways to regain well control, with regard to:
 - the uncontrolled release of the formation fluids from inside and outside of the well bore; and
 - the appropriateness and limitations of the proposed tools and techniques for each of the possible failure mechanisms and pathways.
- A detailed description of the uncertainties associated with the tools and techniques proposed to respond to an out-of-control well, including:
 - the probability and reasons of failure of same-well intervention techniques to regain well control; and
 - a comparison of uncertainties associated with the tools and techniques proposed to those of a relief well.
- A risk assessment that explains how the probability and reasons of failure of same-well intervention methods to regain well control would be reduced to an acceptable level by the application of the proposed tools and techniques, and what an acceptable level of risk should be, including:
 - quantitative assessment of the probability of failure of the tools and techniques proposed; and
 - quantitative assessment of the probability of failure of a SSRW.

Lessons Learned

IORVL stated that it would include information on how learnings from ExxonMobil's worldwide drilling experience with high-pressure wells would be applied to Beaufort Sea activities.

The Board is also of the view that incorporating lessons learned is essential to understanding how the tools and techniques proposed would function to regain control and kill an out-of-control well, and that this is inherent within Issue #2. At a minimum, the Board expects the following information to be filed by IORVL in this regard:

- A description of how the lessons learned from previous major offshore drilling accidents relate to, and have been applied to, the tools and techniques proposed. The description should also reflect how the unique operating environment of the Beaufort Sea has been considered when applying the lessons learned to the tools and techniques proposed.

Worst Case Scenario

IORVL indicated that it did not intend to submit information about a worst case scenario.

The IGC requested that the Board include “defining the worst case scenario” in the List of Issues, given the relation of the SSRW ruling to the Environmental Impact Review Board’s (EIRB) environmental impact assessment of the project. IGC noted EIRB’s responsibilities under paragraph 13(11)(b) of the *Inuvialuit Final Agreement* to establish liability and compensation by the developer based on the worst case scenario.

The Board’s filing requirements identify that an applicant’s Contingency Plan must describe the worst case scenario, including the estimated flow rate, total volumes of fluids, oil properties, and the maximum duration of a potential blowout. The Board considers the concept of a worst case scenario, as it relates to the filing requirements, is directly applicable to the SSRW technical proceeding because the concept of worst case scenario is inherent in understanding the risks and potential implications of not requiring SSRW capability, and how an alternative to a SSRW would minimize harmful environmental impacts and address those risks and potential implications.

The Board will not revise Issue #2 as it is broad enough to consider how the worst case scenario should be defined. For further clarity, the Board expects IORVL to file the following information in its technical proposal:

- A description of the worst case scenario that could result if the tools and techniques proposed, including all means of same-well intervention, were unsuccessful and SSRW capability was not available to respond to an out-of-control well. The description would include:
 - the estimated flow rate from the out-of-control well, the maximum duration of a hydrocarbon release, the total volume of hydrocarbons released, and the anticipated physical properties and behaviour of any hydrocarbons released; and
 - the mechanisms and pathways of well control failure that would be associated with unsuccessful same-well intervention methods.

Issue #3: How the tools and techniques proposed would address the challenges of the unique Arctic environment.

NRDC stated that the Board should consider a variety of response scenarios that include the timing and seasonality of a loss of well control, extreme weather, and the presence of ice. It further commented that the NEB should consider how the operating procedures have been adequately adapted or designed for Arctic conditions.

The Board considers that the proposed tools and techniques that would form a basis for a departure from the SSRW Policy must consider their functionality in the unique Arctic environment. Although the unique Arctic environment should be covered by the risks identified and addressed in Issues #1 and #2, the Board has added Issue #3 to the revised List of Issues for greater clarity given the interest in and importance of this matter.

To address this Issue, the Board expects IORVL to include the following information:

- How the tools and techniques proposed would address factors such as ice, extreme temperatures and pressures, gas hydrate presence, seafloor features, darkness, and other environmental factors that may be unique to the Arctic.

Issue #4: The terms and conditions, if any, that should be considered at the project application stage if the departure from the SSRW Policy is granted

WWF Canada commented that the opportunity to comment on the terms and conditions should be provided at the project application stage.

The Board agrees that most of the terms and conditions for the operations authorization should be assessed at the project application stage. However, the terms and conditions regarding IORVL's proposal to depart from the SSRW Policy should be considered during the SSRW technical proceeding. This will help to reduce duplication as evidence provided in support of the SSRW technical proceeding should not need to be filed again at the project application stage. Accordingly, the Board will retain Issue #4.

Issue #5: Implications of the Board accepting a departure from the SSRW Policy

Several comments related to the international regulatory context of SSRW capability. WWF Canada commented that approving a departure from SSRW capability would place Canada out of step with internationally recognized best practice and the standard required by other Arctic nations. Similarly, NRDC stated that the NEB should consider how a departure from requiring SSRW capability could impact international Arctic regulatory efforts.

The Board is open to considering how its standards for this proposal would compare to other offshore jurisdictions. The Board will not revise Issue #5 as it is broad enough to consider the international regulatory context of SSRW capability. For greater clarity, the Board expects that IORVL to provide the following information in its technical proposal:

- A description of how the tools and techniques proposed would compare to the regulatory standards, policies, and guidance for best operating practices in Arctic offshore environments. The description should include a comparison of the proposal to the requirements and expectation in place in other Arctic offshore jurisdictions, with particular regard to Norway, the United States, Greenland, Russia, and the east coast of Canada.

Issues not Included in the List of Issues

Accident Prevention and Safe Operations

IORVL provided an overview of its intended proposal and indicated it would include information about operations integrity, and aspects of well blowout prevention through a suite of preventative measures, including its Operations Integrity Management System, risk assessment, a focus on safe operations, well design, rig selection, and training.

The Hamlet of Tuktoyaktuk commented that the List of Issues should address IORVL's prevention of incidents policies, practices, and safety culture. It further commented on the need for the List of Issues to consider the use of performance indicators in IORVL's operations.

The Board notes that a SSRW functions to minimize harmful environmental effects only when a well is out-of-control. If the need for a SSRW is solely in the situation of an out-of-control well, then the necessary measures to prevent a loss of control would have been unsuccessful or inadequate on some level. Therefore, the context for the SSRW technical proceeding is that a loss of well control has occurred, not whether a loss of control is likely. The Board is not convinced that aspects of maintaining well control and preventing a loss of control from occurring are relevant to the SSRW technical proceeding.

The Board has not added accident prevention and safe operations to the List of Issues. In the SSRW technical proceeding, the Board expects information on management systems that would be specific and unique to the implementation of the tools and techniques proposed. The Board does not intend to consider information on management systems that apply to the drilling program in a general manner as that would be evaluated in detail after receipt of the project application.

Environmental Assessment and Spill Effects

IORVL indicated in its 16 June 2014 submission that it will develop its environmental effects plans for inclusion at the project application stage.

NRDC submitted that the Board should determine how it will analyze whether an applicant's well control proposal minimizes harmful environmental impacts. This will require the collection of all data relevant for understanding the impacts of a spill as well as the establishment of an environmental baseline against which spill impacts can be measured. NRDC commented that it is impossible to fully divorce environmental impact considerations from a review of SSRW alternative proposals.

The Board will consider baseline information and spill effects as part of its environmental assessment for the project.

The Board is of the view that the intended outcome of the SSRW Policy is a high-level objective aimed at ensuring, to the extent possible, that a multi-year well blowout will not occur. Minimizing harmful impacts to the environment with a SSRW is achieved by stopping the flow of hydrocarbons into the environment. SSRW capability does not minimize environmental

effects in any other way. The Board is of the view that consideration of environmental impacts in the SSRW technical proceeding should be made in that same context.

The Board considers that, for the purposes of the SSRW proceeding, examination of environmental effects will be sufficiently accomplished by examining the expected flow rate, the maximum duration of a hydrocarbon release, and the total volume of hydrocarbons released, up until the well is brought back under control. The Board will examine these parameters for both IORVL's proposal and what would be achieved by a SSRW. This will be in consideration of a worst case scenario and the risks and limitations associated with the tools and techniques proposed.

The Board is of the view that it would be duplicative to undertake an environmental assessment in the SSRW technical proceeding, as the broader consideration of environmental effects would be part of the project application review under the *Canadian Environmental Assessment Act 2012*. The effects of the project's routine operations, the environmental and socio-economic consequences of a spill, and the adequacy of spill response and clean-up plans (including the effects of *in-situ* burning or dispersant application) would be examined at the project application stage. In no way would the Board's views on the SSRW advance ruling presuppose the Board's views on those issues to be heard and decided on later by the Board when it considers a potential future project application.

Appendix A

List of Issues – Imperial Oil Resources Ventures Limited Same Season Relief Well (SSRW) Technical Proceeding

The Board will consider the following issues in this proceeding:

1. What criteria and risks should be considered in determining whether the intent of the SSRW Policy has been satisfied by the tools and techniques proposed to respond to an out-of-control well.
2. How the tools and techniques proposed would meet the criteria and address risks in the circumstances of a worst case scenario.
3. How the tools and techniques proposed would address the challenges of the unique Arctic environment.
4. The terms and conditions, if any, that should be considered at the project application stage if the departure from the SSRW Policy is granted.
5. Implications of the Board accepting a departure from the SSRW Policy.

The Board does not intend to conduct an environmental assessment as part of this proceeding. An environmental assessment would be undertaken at the project application stage.