

Directive 044 Revision Stakeholder Feedback and ERCB Responses

Stakeholder Feedback - Issue	Stakeholder	ERCB Response
<p>1. 24-hour in-line production flow test</p> <p>“An appropriate alternative (<i>to the 24-hour production test</i>) would be to have a certain number of production accounting errors (either over the calendar period or prorated per total number of wells/company) trigger an ERCB audit. Alternatively, ERCB could request a mitigation/ revised production reporting plan be submitted with a Directive 044 self-disclosure that uses a production accounting error as an explanation.”</p> <p>“(In place of the 24 hour in-line production flow test)” a company “respectfully suggests that accounting errors would be better managed via an internal audit process with a further requirement for an ERCB audit should there be an excessive number of errors in any calendar year.”</p> <p>A company “proposes that an alternative to replace this ‘in-line 24-hour testing’ requirement could be ‘periodic auditing’ that we understand is currently in place with the ERCB. If it is determined after a production audit that the measured water volumes are still questionable then it may be appropriate to have the operator proceed with a 24 hour in-line production test. Having to proceed with a 24 hour test due to an accounting reporting error will add additional unnecessary operating costs to many marginal hydrocarbon producers that present a low or no risk to groundwater.”</p> <p>“[...] however we are not in agreement with point 5, the completion of a 24-hour in-line production test at wellhead of the subject well as a result of a production accounting error. [...]” a company “agrees that well licensees are responsible for accurate reporting, however if the accounting error is the result of truck tickets being allocated incorrectly, or third party accounting errors are the root cause of the allocation error, then that should be acceptable as evidence. If that evidence, like it or not is the reason for the error, then it should be accepted as such.”</p> <p>“...if a well has been identified as producing more than 30 m³ of water per month, the historical water production of the well should be assessed. If there has been limited or no water production for numerous months prior to the current month, this is a strong indicator that there could be a Production Allocation error associated with the volume.”</p>	<p>Industry</p>	<p>Production accounting errors were identified in the <i>Directive 044 Status Report 2009-B</i> as the most common non-compliance. Errors in production accounting numbered 243 in the first two years the directive was active and continue to be a significant issue.</p> <p>ERCB staff do not expect that submitting production reporting plans will effectively correct existing errors and prevent future ones.</p> <p>The auditing alternatives that industry proposed were not considered rigorous enough, and the ERCB has no jurisdiction to review trucking tickets. Alternatively, a 24-hour in-line production test will provide direct evidence.</p> <p>ERCB staff expect the licensee to have the production history of each of its wells, and such production accounting errors should be easily identified and corrected via the internal audits before the data is submitted to the ERCB.</p> <p>ERCB staff also expect that industry will have enhanced its internal production reporting processes during the five-year surveillance period to identify and rectify the historic sources of the accounting errors. As most of the identified cases of inaccurate water production reporting were related to the low volumes. ERCB staff expect that the increase in the trigger volume to 30 m³/month will significantly reduce the number of accounting errors.</p>

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2. Level of Enforcement		
<p>“Industry also believes that the level of enforcement related to a <i>Directive 044</i> non-compliance arising from an accounting error is excessive, given the low degree of material risk.”</p> <p>“Industry requested reduction in the level of enforcement related to <i>Directive 044</i> non-compliance, particularly enforcement related to production accounting errors.”</p> <p>“...’A company’ believes that the enforcement Risk Level should be reduced from a high Level Risk to a Low Risk Non-Compliance event. [...] Based on the ERCB’s data compilation as outlined in the <i>Directive 044</i> Status Report, there was only one well that required segregation of perforations as industry has undertaken to segregate all other wells where cross-flow could be an issue. In addition, the Status Report also indicates that there was a small volume of non-saline water produced by oil and gas wells and that most of the water came from single-zone completions in sandstone reservoirs. Based on this information, the material risk is Low and thus, ‘a company’ believes the enforcement level should be reduced to Low Risk Enforcement.”</p> <p>“Additionally, to issue a High Risk Enforcement for an allocation or administrative error that has no effect on human health, public safety, the environment or resource conservation, does not seem reasonable.”</p>	Industry	<p>The revision of <i>Directive 044</i> will change the focus to higher risk cases.</p> <p>High level enforcements will continue to be rescinded after high water production is shown to be a reporting error (upon successful completion of the 24-hour in-line production test) .</p>
3. Retroactive implementation		
<p>“For ongoing cases where companies have been required to sample wells under the existing <i>Directive 044</i> but have been unable to do so because of access, logistics, etc., Industry suggests that the ERCB implement the ‘proposed’ changes retroactively. This would allow the more efficient use of manpower and effort for both industry and the ERCB.”</p>	Industry	<p>ERCB staff agree with the proposed retroactive implementation of the <i>Directive 044</i> revised requirements.</p>
4. Downhole Camera		
<p>“Down hole cameras should be an accepted method of identifying all water producing zones both above and below BGWP and also an accepted method of identifying perforations lower down in the wellbore that facilitate non-saline water transfer into saline formations.”</p>	Non-Government Organization	<p>Downhole camera investigation is an acceptable method of investigating the fluid entry in the wellbore as stated in <i>Directive 044</i> Sections 2 and 3.2.1</p>
5. Groundwater cross flow between perforations		
<p>“Bulletin 2010-36 ignores the reality of significant volumes non-saline water drainage from upper production perforations down the wellbore and out through perforations into lower non-homogenous under pressured geologic formation locations.”</p>	Non-Government Organization	<p>ERCB staff believe that produced water volumes recorded at surface for wells are as accurate as practically possible, and that identifying and tracking potential exceptions, such as fluid not flowing to surface, is not currently feasible.</p> <p>ERCB staff identified two high risk cases where the cross-flow may occur in a shut-in wellbore without the current surveillance capturing it: the wells that has been perforated but not put on</p>

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		<p>production; and the wells that were produced commingled and shut before initiating the surveillance in 2006.</p> <p>ERCB staff will continue to assess this matter and determine appropriate responses.</p>
<p>“It also ignores the reality that wellbore pumps are currently being used to pump low saline water from upper commingled production perfs down the wellbore and out into higher saline water bearing formations.”</p>	<p>Non-Government Organization</p>	<p>ERCB staff are currently addressing this concern by revising <i>Directive 051</i>. This revision will address the enhancements to segregation and metering requirements for in-well oil-water or gas-water separators that allow for re-injection of produced water downhole.</p>
<p>6. Well Density changes</p>		
<p>“Bulletin 2010-36 does not consider impact from changes to well density in Bulletin 2010-39.”</p>	<p>Non-Government Organization</p>	<p>Well density is not applicable because <i>Directive 044</i> sets out requirements and processes, for surveillance and mitigation purposes, of hydrocarbon wells with completions above the BGWP, regardless of the well density.</p>
<p>7. CBM Development</p>		
<p>“The ERCB misinformed the stakeholders that the Horseshoe Canyon Coals are mainly ‘dry’.”</p>	<p>Non-Government Organization</p>	<p>Little to no water production was observed from the HSC coals to date. None was captured by the <i>D044</i> surveillance in 2006-2008 as reflected in <i>Status Report 2009-B</i>.</p>
<p>“A company” “recommends that corresponding changes be made to the <i>Resource Applications Directive, D65</i>, and to the <i>Measurement Requirements Directive, D17</i>, such that HSC CBM wells that are ‘pushing’ the 5 m³/mo water production limit can more readily be assessed and produced.”</p>	<p>Industry</p>	<p>The recommendations are taken under advisement and will be considered when the directives in question are revised.</p>
<p>8. Data Collection and Sharing</p>		
<p>“<i>Bulletin 2010-36</i> does not identify produced water sampling and analysis parameters contemplated or necessary to protect the ecological health of a surface environment or population health.”</p>	<p>Non-Government Organization</p>	<p>Directive 044 explicitly provides testing parameters consistent with AENV’s requirements.</p>
<p>“Section 3.2(5) requires industry to collect source and composition of the water and file it with the ERCB even if the well licensee proposes to abandon the perforations ABGWP. ‘A company’ sees this as an inappropriate allocation of funds being that there is no additional value from doing this work.”</p>	<p>Industry</p>	<p>The proposed approach in <i>D044</i> is to review each submission before the sampling takes place. If there is no added value in collecting a water sample from the subject well, the sampling will not be requested by the ERCB. However, the ERCB may require sampling, even if perforations are to be abandoned to determine if a potential water issue exists..</p>

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9. Base of Groundwater Protection (BGWP)		
<p>“The BGWP needs revision and clarity prior to any adoption of regulations referencing BGWP. The current BGWP data used is inaccurate and rife with errors.”</p>	Non-Government Organization	<p>During the <i>D044</i> surveillance process, the regional BGWP database was found to be reliable and conservative.</p> <p>The ERCB will address the local variations on a case-by-case basis during the proposed hydrogeologic reviews.</p>
<p>“The standard BGWP criteria of 4000 mg/ltr TDS must be changed to the more protective internationally accepted standard of 10000 mg/ltr TDS.”</p>	Non-Government Organization	<p>The change to this criterion is within AENV's jurisdiction.</p>
10. Miscellaneous		
<p>“If the current 5 m³ were to be increased to 30 m³, then the volume of wellhead methanol injection necessary to prevent collector pipeline freezing would be necessarily increased. This increase in methanol volumes arriving at the multitude of small compressor/dehydrator facilities would further exacerbate the carcinogenic health risks posed by dehydrators/reboilers emitting increased volumes of methanol to atmosphere.”</p> <p>Will the emission reporting standards be revised for small facilities?</p> <p>Will the ERCB require installation of the methanol scavenging equipment and will that requirement be retroactive?</p> <p>Will the ERCB require all existing and new facilities to record and scavenge the inevitable increase in BTEX emissions?</p>	Non-Government Organization	<p>ERCB staff do not expect a significant increase in water production from the CBM wells as a result of the changes to <i>Directive 044</i>.</p>