

AER Enhanced Production Audit Program on PETRINEX: Compliance Assessment Indicators (CAI) - Revised November 25, 2019

CAI #	CAI Name	Definition	Why An Issue	Possible Actions	Subtypes															Activity	Product	CAI Message	Trigger Value	Category	Weight
103	Unacceptable Oil Proration Factor – Proration Battery	Oil proration factor of 1.00000 has been reported for a proration battery.	<i>Directive 017: Measurement Requirements for the Oil and Gas Industry (Directive 017), chapter 3</i> <i>Manual 011: How to Submit Volumetric Data to the AER</i> , appendix 4	Confirm the accuracy of the total estimated and actual oil production volumes determined for the wells linked to the battery.	322	342	344	345	366	367										OIL	[Fluid type] proration factor: [TolerancePctLow]		Error	4	
104	Unacceptable Gas Proration Factor – Proration Battery	Gas proration factor of 1.00000 is reported for a proration battery.	<i>Directive 017, chapter 3</i> <i>Manual 011: How to Submit Volumetric Data to the AER</i> , appendix 4	Confirm the accuracy of the total estimated and actual gas production volumes determined for the wells linked to the battery.	322	342	362	363	364	366	367									GAS	[Fluid type] proration factor: [TolerancePctLow]		Error	4	
105	Unacceptable Water Proration Factor – Proration Battery	Water proration factor of 1.00000 has been reported for a proration battery.	<i>Directive 017, chapter 3</i> <i>Manual 011: How to Submit Volumetric Data to the AER</i> , appendix 4	Confirm the accuracy of the total estimated and actual water production volumes determined for the wells linked to the battery.	322	342	344	345	362	364	366	367								WATER	[Fluid type] proration factor: [TolerancePctLow]		Error	4	
106	Inappropriate Production Volumes – Well-Level (VME0037)	Condensate production has been reported for a well linked to a gas multiwell proration SE Alberta battery.	As outlined in <i>Manual 011: How to Submit Volumetric Data to the AER</i> the description for a gas multiwell proration SE Alberta battery states, "Well production is calculated and reported as prorated. Proration factors are based on proration tests and group measurements. These production facilities have no condensate production."	Confirm that the fluid has been reported accurately and ensure the facility subtype is correct.	363	366													PROD	COND	[Fluid type] reported for [well count] well(s)	[Well count]	Error	4	
108	Unacceptable Hours on Production/Injection – Abandoned/Suspended Well	Well hours on production or injection have exceeded the number of hours from the start of the month up to the abandonment or suspension date for a well that was either abandoned or suspended during the current month. Activity: PROD or INJ, Well mode: (01, 02, 03, 08, 14), (Suspended, Abandoned, Abandoned Zone, Junked & Abandoned, Abandon & Whip stocked).	<i>Directive 007</i>	Confirm the accuracy of the reported hours on production or injection and ensure that the abandonment/suspension date is correct.	n/a																Maximum producing hours exceeded for [well count] well(s): [Well 1], [Well 2], [Well 3], [Well 4], [Well 5]...	[Well count]	Error	4	
109	Multiple Gas Dispositions – Gas Group Battery (VME0038)	Multiple destination points have been reported for gas dispositions at a gas group battery. Activity: DISP or PURDISP	As outlined in <i>Manual 011: How to Submit Volumetric Data to the AER</i> , a gas multiwell group battery is defined in part as A production reporting entity for two or more single-well gas batteries that are grouped and reported together under a single reporting code, where "all wells must deliver to a common facility."	Confirm the accuracy of the dispositions and ensure the facility delineation is appropriate.	361	365														GAS	Gas dispositions to [Facility 1], [Facility 2], [Facility 3], [Facility 4], [Facility 5]...	[Facility count]	Error	4	
112	Linked Well Status Fluid Type Inappropriate for Facility Subtype	The well fluid type linked to a facility is inappropriate for the facility subtype. Excludes 'Suspended' facilities. Removed status of SUSP, ABZONE, ABANDONED, ABANDONED WHIPSTOCK, AND JUNK.	<i>Directive 017</i> outlines the following criteria for wells linked to batteries: Oil batteries – All wells in the battery must be classified as oil wells Gas batteries producing oil – All wells in the battery must be classified as gas wells Gas proration batteries – All wells in a gas proration battery must be classified as gas wells	Confirm the accuracy of the facility subtype and well classifications, and ensure that the reporting requirements outlined in <i>Directive 060: Flaring, Incinerating, and Venting (Directive 060)</i> and <i>Directive 007</i> have been met.	311	321	322	331	341	342	343	344	345	351	361	362	363	364			Well status fluid type: [well fluid abbrev] for [well count] well(s): [Well 1], [Well 2], [Well 3], [Well 4], [Well 5]...		Error	4	
113	Invalid Well Links – Single-Well Battery	Production has been reported for more than one well for a single-well battery.	Table 2 <i>Manual 011: How to Submit Volumetric Data to the AER</i> defines the following single-well batteries: - Crude oil single-well battery (subtype 311) – "A production facility for a single flow-lined crude oil well" - Crude bitumen single-well battery (subtype 331) – "A production facility for a single flow-lined crude bitumen well" - Gas single-well battery (subtype 351) – "A production facility for a single flow-lined gas well" Facilities classified into one of these subtypes may not report production for more than one well.	Confirm that the facility subtype is correct.	311	331	351														Number of wells reporting production [well count]	[Well count]	Error	4	
116	Directive 017 Chapter 5 Approval, Gas Receipts – Single-Well Battery	Gas has been reported as a receipt into a single-well oil or gas battery. Activity: REC, FUEL, PURREC Exclude single-well facilities where (total receipts + total purchase receipts) = < fuel volume	Measurement by difference is defined as any situation where an unmeasured volume is determined by taking the difference between two or more measured volumes. Measurement by difference results in the unmeasured volume absorbing all the measurement error associated with the measured volumes.	Confirm that <i>Directive 017</i> , chapter 5 approval criteria pertaining to gas receipts have been met.	311	331	351													REC	GAS	Receipt of gas reported		Conditional	4
117	Directive 017 Chapter 5 Approval, Gas Receipts – Proration Battery	Total gas (including gas equivalent if applicable) reported as a receipt (including purchase receipts) into a proration battery is greater than 75% of the battery's gas dispositions (fuel + flare + vent + sales). Formula: (total receipts + total purchase receipts) ÷ (total DISP + total purchase DISP + fuel + flare + vent) × 100 > 75 Exclude facilities where (total receipts + total purchase receipts) = < fuel volume	Measurement by difference is defined as any situation where an unmeasured volume is determined by taking the difference between two or more measured volumes. Measurement by difference increases the uncertainty of the prorated well volume estimate and results in the unmeasured volume absorbing all the measurement error associated with the measured volumes.	Confirm the accuracy of the reported volumes and ensure that <i>Directive 017</i> , chapter 5 approval criteria pertaining to gas receipts has been met.	322	342	344	345	362	363	364	366	367							GAS	Gas receipts = [REC ÷ DISP × 100]% of Dispositions: Receipts = [Gas REC volume] 10³ m³ Dispositions = [Gas DISP volume] 10³ m³	[REC ÷ DISP × 100]	Conditional	4	
118	Directive 017 Chapter 5 Approval, Oil Receipts – Oil/Bitumen Proration Battery	Total oil receipts at an oil or bitumen proration battery is greater than 1000 m³ and greater than 100% of the total oil produced. Formula: (total receipt > 1000) and (total receipts ÷ total PROD) × 100 > 100	Measurement by difference is defined as any situation where an unmeasured volume is determined by taking the difference between two or more measured volumes. Measurement by difference increases the uncertainty of the prorated well volume estimate and results in the unmeasured volume absorbing all the measurement error associated with the measured volumes.	Confirm the accuracy of the reported volumes and ensure that <i>Directive 017</i> , chapter 5 approval criteria pertaining to oil receipts have been met.	322	342	344	345												REC		Oil receipts are > [Parameter 1] m³ and [REC ÷ PROD × 100]% of production: Receipts = [Oil REC volume] m³ Production = [Oil PROD volume] m³	[REC ÷ PROD × 100]	Conditional	4
119	Excessive Venting – Gas Facility (VME0035)	Total gas vented is greater than 15 10³ cubic metres (m³)	The licensee or operator must use the decision tree analysis shown in figure 5 of <i>Directive 060</i> to evaluate all new and existing gas battery vents regardless of volume except for intermittent small sources (less than 100 m³ per month). The AER does not consider venting an acceptable alternative to flaring. If gas volumes are sufficient to sustain stable combustion, the gas must be burned (or conserved). If venting is the only feasible alternative, it must meet the requirements in section 8 of <i>Directive 060</i> .	Confirm the accuracy of the reported volumes and ensure that <i>Directive 060</i> requirements pertaining to economic evaluations regarding conservation of gas have been met.	351	361	362	363	364	367	365	366	621	622						VENT	GAS	[Activity ID]: [activity volume] 10³ m³	[Activity volume]	Conditional	4

