

1 **Introduction**

A Customer Tie-in Process for SemCAMS is required to ensure a common and consistent application of design, operation and measurement philosophy throughout various gas gathering and processing facilities owned by SemCAMS. This document identifies those policies, processes, procedures and standards for the design, operation, accurate measurement and reporting incumbent on Owners of facilities at the **acceptance points** and it may be implemented as a Letter of Agreement.

Refer to 1.5 for the Customer Tie-in Process Flow Chart.

Refer to 1.6 for Customer New Well Tie-in Checklist.

1.1 **Document Conventions**

This document and the process it describes are managed as part of the SemCAMS Measurement Integrity Process (MIP). The MIP has been undertaken by SemCAMS to outline policies, processes and standards to ensure measurement and allocation is handled consistently and equitably throughout the plants and gathering systems that SemCAMS owns and/or operates. Updates to this document will be created as the need arises and Customers can request updates directly from the contacts listed in section 2 of this document.

1.2 **Definitions**

Throughout this document, specific terms are used that are key to SemCAMS business processes. The terms are **bolded and italicized** as they are used throughout this document. The definitions of these terms are provided as follows.

CSO – Common Stream Operator	Company that is responsible for submitting daily estimates of gas production to the sales transportation pipeline companies on behalf of all the shippers at each sales meter station.
Customer	Any company or party that has ownership or interest in an acceptance point that feeds into a SemCAMS operated facility.

EFM – Electronic Flow Measurement	Any combination of devices used to calculate gas or liquid volumes in a microprocessor based computation device. EFM may or may not include the ability for remote communication/configuration. Customer is directed to the appropriate pipeline specific requirements in Section 3 of this document.
Gathered Volume	<p>Volume received into a SemCAMS gathering system for an acceptance point.</p> <ul style="list-style-type: none"> • Volume is to include gas equivalent of any condensate that is recombined with the gas and is still present in the product stream at the SemCAMS plant inlet. • Volume is to be net of any self fuel or flare / vent taken downstream of the physical measurement (within the confines of the Customers facility or reporting battery / compressor station). • For effluent metered locations volume provided to SemCAMS will have had effluent factor applied and volume prorated back from a sufficient group metering location (see Prorated Group Allocation Point). • For non-SCADA entities volume may be estimated for the purpose of “daily volumetric reporting¹”
Product Stream Analysis	<p>Component analysis data (to C7+ minimum) for product(s) measured at an acceptance point.</p> <ul style="list-style-type: none"> • Gas analysis to C7+ component (minimum) • Where condensate is recombined with gas require liquid hydrocarbon analysis to C7+ component, molar mass of the grouped fraction (C7+) and daily gas and liquid volumes corresponding to the date the product samples were taken. • SemCAMS to perform recombination calculations for the gathered volume as required.
Acceptance point	<p>A meter owned and operated by SemCAMS, or by a company with which SemCAMS does business and is used to measure product (by component) entering a SemCAMS pipeline or gas processing facility. A acceptance point meter includes those which:</p> <ul style="list-style-type: none"> • determine the allocation of product to customers, • determine the volume of product entering a gathering system or gas plant. <p>Acceptance points are broken down further into the following types:</p>

¹ Refer to Section 5 of this document.

	<p>Measured Well Head</p> <p>Acceptance point is at a well head employing two or three phase separation.</p> <ul style="list-style-type: none"> • SemCAMS allocation is from plant inlet (or other SemCAMS operated intermediate entity) directly to well head gathered volume and product stream analysis.
	<p>Custody Group Allocation Point</p> <p>Acceptance point is at a group metering location employing two or three phase separation.</p> <ul style="list-style-type: none"> • SemCAMS allocation is from plant inlet (or other SemCAMS operated intermediate entity) directly to groups gathered volume and product stream analysis. • Customer is responsible for allocation to entities in front of this acceptance point.
	<p>Prorated Group Allocation Point</p> <p>Acceptance point is at the physical wells in front of a group metering location <u>based on pro-ration</u> of the gathered volume measured at the group metering location.</p> <ul style="list-style-type: none"> • SemCAMS allocation is from plant inlet (or other SemCAMS operated intermediate entity) to each wells prorated share of the groups gathered volume and each wells product stream analysis (volume at group point is considered the “receipt volume” but analysis data for the purpose of allocation is from the individual wells). • Group metering location employs two or three phase separation. • Product stream analysis for the group metering location is used only for the volume calculations performed at the group location <u>not for allocation</u>. • Must be applied to all effluent measured wells. • Will be applied to “measured wells” where customer provides a gathered volume from a known group metering location or shows fuel / flare / vent common to all upstream wells.
<p>Tie-In Point</p>	<p>Physical connection to a pipeline system (either producer owned or owned by SemCAMS).</p>

1.3 **Application of the Process**

This process is to be applied for all Customer entities that will be connected as **acceptance points** into a SemCAMS system. The Customer is responsible to ensure all expectations detailed in this document have been met. Any exceptions to the standards specified in this document must be approved by SemCAMS prior to installation. SemCAMS would expect that Customer's will follow the process for entities that are connected as a **tie-in point** upstream of existing **custody group allocation acceptance points** but will not enforce the measurement requirements as listed in section 4 of this document. All measurement requirements for entities in front of **custody group allocation acceptance points** are to be determined by the operator of the **acceptance point**.

1.4 **SemCAMS Need for Information**

As the Common Stream Operator (CSO) of the West Whitecourt, Kaybob Amalgamated, West Fox Creek and Kaybob 3 gas plants and their associated gathering systems, SemCAMS is responsible for both daily and monthly allocation of sales gas and by-products to the producers (Customers). To carry out these tasks effectively, SemCAMS requires accurate production, ownership and marketing information in a timely fashion from the Customers. For this reason, this process applies not only to **acceptance points** but to entities attached upstream of **custody group allocation acceptance points**. By collecting information on these points, SemCAMS is able to be proactive in managing the allocation system.