

3 Facility and Pipeline Requirements

This section details all of the pipeline related requirements that the **Customer** is to meet **when tying directly into a SemCAMS pipeline** for the stages of the process that are applicable

3.1 Stage 3 - Design and Installation

The **Customer** is asked to ensure their facilities comply with the following SemCAMS requirements as failure to meet these requirements may result in a delay in permission to start up:

1. Refer to Appendix B for pipeline specific engineering design and operating specifications pertaining to pipeline(s) delivering product for processing at the **K3 Plant**,
2. Refer to Appendix C for pipeline specific engineering design and operating specifications pertaining to pipeline(s) delivering product for processing at the **KA Plant**,
3. Refer to Appendix E for pipeline specific engineering design and operating specifications pertaining to pipeline(s) delivering product for processing at the **West Fox Creek Plant**,
4. Refer to Appendix D for pipeline specific engineering design and operating specifications pertaining to pipeline(s) delivering product for processing at the **West Whitecourt Plant**,
5. The **Customer** will ensure that all piping meets SemCAMS SP-60 requirements.
6. The metering facility design must meet the specifications outlined in the measurement section of this document.
7. The **Customer's** design review will include a SemCAMS representative. The design review will include (but not be limited to):
 - Ownership break / lease management responsibility
 - block valve, check valve, spec blind, local pressure indicator
 - future blinded tee connection
 - cathodic protection and isolation
 - emergency shut down devices and set points
 - piping codes and standard engineering practices
 - piping configuration / layout / plot plan
 - chemical injection and corrosion monitoring equipment
 - automation and measurement requirements
 - shutdown key (refer to Schedules in Appendix B-E)

8. The **Customer** will contact SemCAMS Gas Control (780-712-5082) prior to entering any SemCAMS facility,
9. The **Customer** is required to contact SemCAMS and obtain permission at least 72 hours prior to requested start-up.
10. The **Customer** will supply required Emergency Response Plan information to SemCAMS for updating of the SemCAMS ERP.

3.1.1 Gas Quality

The gas entering a **receipt point** must meet the following criteria:

- free of oxygen,
- CO₂ content must be less than 2%. If the CO₂ content exceeds 2%, the **Customer** will be responsible for any penalties incurred.

3.1.2 Liquid Quality

Injection of free hydrocarbon liquids must be approved by SemCAMS. Hydrocarbon liquids must be free of the following:

- oxygen,
- water,
- paraffin,
- solids,
- work-over fluids.

Injection of free water must be approved by SemCAMS.

All Customers gas/condensate shall be free from substances in such quantities that may obstruct, damage or be detrimental to the operation of the pipeline.

3.1.3 Dew Point Control

Customer facilities that require dew point control (refer to Schedules in Appendix B - E) must incorporate in their design the following:

- Gas dew point analyzer required at all dehydration facilities.
- Dew point limit of -10° Celsius.
- BS&W probe if condensate is approved to be injected into SemCAMS pipeline.
- Condensate BS&W maximum limit to be determined jointly by the **Customer** and SemCAMS engineering/operations prior to start up.
- Automatic shutdown set points for dew point and BS&W.

3.1.4 Chemical Injection Requirements

SemCAMS pipeline systems have pipeline specific requirements pertaining to chemical injection (refer to Schedules in Appendix B - E). **Customer** injected chemicals must be compatible with SemCAMS existing chemical programs and meet specific minimum rate injections. SemCAMS Pipeline Supervisor must review and approve chemicals and injection rates. The following conditions apply:

- No chemical sulphur dispersants accepted into SemCAMS Pipelines. The **Customer** will ensure equipment is in place to eliminate the possibility of sulphur dispersant entering the SemCAMS pipeline.
- No Methanol to be introduced into high pressure sour pipelines systems without prior approval from Pipeline Supervisor.

3.1.5 Cathodic Protection

SemCAMS maintains cathodic protection to protect pipelines owned and operated by SemCAMS. SemCAMS presently contracts Alta-West Cathodic Services to perform monthly rectifier checks together with an annual survey to ensure adequate protection is being supplied and maintained throughout the system.

SemCAMS could provide coverage to the **Customer's** pipeline subject to receipt and agreement by the **Customer** of the following conditions:

1. Alta-West Cathodic Services will perform an initial evaluation of the **Customer** owned pipeline to determine protection requirements. Cathodic protection requirements include protecting the pipeline only and do not include any well bore protection that may be required. Cost of this evaluation will be billed directly to the **Customer**.
2. On determining pipeline protection requirements, SemCAMS is prepared to provide the following:
 - (a) If initial protection requirements determine that SemCAMS existing rectifier **can** provide adequate protection levels without modifications or upgrades, SemCAMS will provide protection to the **Customer's** pipeline, providing an insulation kit is installed downstream of the wellhead and wellhead facilities to isolate them from the pipeline. There will be no guarantee or liability on SemCAMS part.

If during the life of the project any cathodic upgrades were required in order to continue protecting the **Customer's** pipeline, the **Customer** would be responsible for their share of upgrade costs.
 - (b) If initial protection requirements determined that SemCAMS existing rectifier **cannot** provide adequate protection levels without equipment upgrades or modifications, SemCAMS would still be willing to provide protection, with the **Customer** being responsible for upgrade costs. As stated above, there will be no guarantee or liability on SemCAMS behalf.

If during the life of the project any cathodic upgrades were required in order to continue protecting the **Customer's** pipeline, the **Customer** would be responsible for their share of upgrade costs.

In accepting any of the above protection conditions, the **Customer** accepts that Alta-West Cathodic Services would directly bill the **Customer** for cathodic protection services provided on the **Customer's** pipeline.

In either case an insulation kit(s) will be installed at a mutually agreed upon location. Should cathodic protection be supplied the insulating kit will be jumper - bonded.

3.1.6 **Automation for Remote Shut Down Capability**

Where automation is to be installed to enable SemCAMS remote shut down capability of an **acceptance point**, SemCAMS will advise the **Customer** what equipment will need to be installed to ensure compatibility with existing SemCAMS infrastructure. This will depend on which pipeline system the **acceptance point** is being connected to (refer to Schedules in Appendix B - E).

3.2 **Stage 4 – Commissioning and Startup**

SemCAMS Pipeline Supervisor to review **Customers** commissioning and startup procedures.

All initial liquid volumes (frac. fluids, hydrotest liquids, batch chemicals etc.) will not be accepted into the SemCAMS pipeline without approval of the SemCAMS Pipeline Supervisor.

All new pipelines will be hydro-tested, cleaned, purged and leak checked.

All ESD controls and automation equipment will be function tested prior to startup.

The **Customer** will supply P&ID's, metering schematics, quality control and other documentation as applicable.

During or immediately following this stage, SemCAMS reserves the right to conduct an inspection of the **Customer's acceptance point** facility. Any major deficiencies identified during the inspection must be corrected by the **Customer** within the specified time frame. Failure to do so will result in **shut in of the acceptance point**.

3.2.1 **Automation for Remote Shut Down Capability**

Where automation has been installed to enable SemCAMS remote shut down capability of an **acceptance point**, a SemCAMS representative will be present during commissioning to ensure functionality of the system. SemCAMS commissioning arrangements will be made by the *SemCAMS Field Business Development Supervisor*.

3.3 **Stage 5 – Normal Operations**

Customer will be responsible for the maintenance of the site in an environmentally conscience way.

Customer is responsible for maintenance and operation of their ESD valve and associated equipment.

Customer and SemCAMS to share corrosion monitoring, cathodic protection and other pertinent data to ensure appropriate management of the **tie-in point** and shared facilities.

Customer to establish and maintain communication with SemCAMS gas control (780-712-5082) with regards to production information, process upsets and emergency conditions.

3.3.1 **Automation for Remote Shut Down Capability**

The **Customer** will perform the routine and preventative maintenance on devices used in this capacity.