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ENERGY INC.



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Typical Pipeline Operations

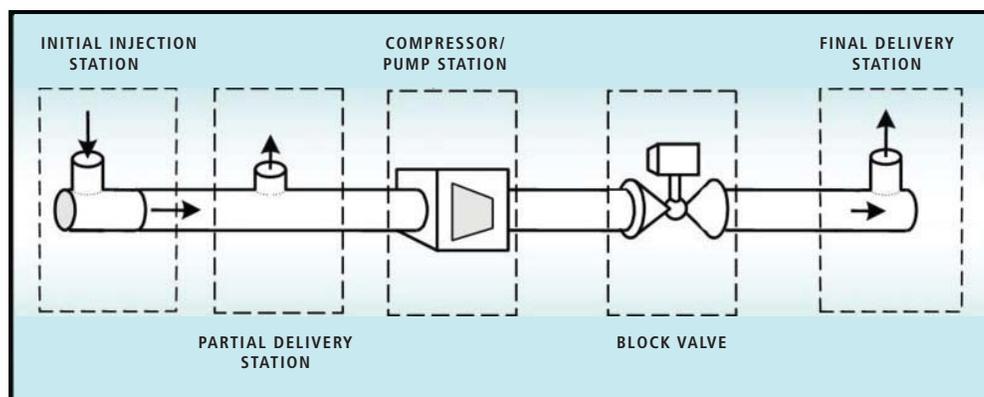
A pipeline allows for materials to be transported to or from a refinery, gas plant or other production site, and travel long distances, at high speeds, to secondary industry locations, businesses and other sites. Pipelines allow for effective and under normal conditions, undisturbed travel of materials. To ensure safety and protection for the environment, security systems allow for constant, real time monitoring of any pipeline.

Components of a Pipeline

INITIAL INJECTION STATION This is the beginning of the system, where the product is injected into the line. Storage facilities, pumps or compressors are usually located at these locations.

COMPRESSOR/PUMP STATIONS Pumps for liquid pipelines and compressors for gas pipelines are located along the line to move the product through the pipeline. The location of these stations is defined by the topography of the terrain, the type of product being transported, or operational conditions of the network.

PARTIAL DELIVERY STATION Known also as Intermediate Stations, these facilities allow the pipeline operator to deliver part of the product being transported.



BLOCK VALVES These are the first line of protection for pipelines. With these valves the operator can isolate any segment of the line for maintenance work or isolate a rupture or leak. Block valves are usually located at regular intervals along the line, depending on the type of pipeline.

REGULATOR STATION This is a special type of valve station, where the operator can release some of the pressure from the line. Regulators are usually located at the downhill side of a peak.

FINAL DELIVERY STATION Known also as Outlet stations or Terminals, this is where the product will be distributed to the consumer.

Preparing for Pipeline Construction

PERMITS Before commencing the project, various local, provincial and also Federal permits will have to be acquired. The permits address interests of the general public as well as all of our natural resources - land, air, water, vegetation and wildlife.

ACQUIRING RIGHTS OF WAY This process covers key issues such as special construction concerns, restoration of the land, compensation and future use of the land. Once the pipeline route is selected, a land agent acting on behalf of Enhance Energy Inc. will contact each affected landowner along the route to discuss the project and negotiate a Right-of-Way Agreement. The landowner is compensated a fair value for the permanent right-of-way, which allows the landowner continued use and enjoyment of the property.

The Stages of Pipeline Construction

Construction of the Enhance Phase 1 CO₂ Pipeline will involve:

SALVAGING TIMBER All usable timber will be salvaged from wooded areas that need to be cleared along the proposed pipeline right of way. This timber will either be hauled to local sawmills or set aside at the landowner's request. Woody debris left over after salvage is typically burned.



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Standing crops are mowed prior to topsoil stripping.



Topsoil is stripped from the spoil storage and construction activity areas on the right of way.



The pieces of pipe are strung along the right of way.

MOWING CROPLAND Cereal and hay crops that are in a mature state and have not been harvested will be mowed prior to topsoil salvage activities. Standing crops interfere with efficient topsoil stripping. The landowner may elect to cut immature crops for green feed.

SALVAGING TOPSOIL All topsoil is salvaged from the right of way as part of soil conservation. In addition to topsoil salvage, transitional material is also stripped from the right of way for replacement over any spoil material that cannot be replaced in the pipeline trench. Gaps are left in the stored topsoil windrow to allow landowners access across the right of way.

STRINGING PIPE All of the individual pieces of pipe are strung along the right of way after topsoil has been removed and any grading of sideslopes and steep hills has occurred. Some of the pipe pieces need to be bent to conform to the terrain.

WELDING The individual pieces of pipe are welded together to form a pipe section. All of the welds are visually inspected and x-rayed to ensure that the welds are secure and will not break.

COATING All of the pieces of pipe are coated prior to delivery to the right of way. The pipe is coated to eliminate the risk of corrosion. Corrosion of the steel pipe will eventually lead to a rupture and allow the CO₂ to escape to the atmosphere. Each of the welds on the pipeline is also coated to eliminate the corrosion risk.

LOWERING-IN The pipe sections are lowered into the trench. Each pipe section is approximately 400 to 500 metres long. The sections are then

welded together to form a complete pipeline.

BACKFILL SHADING Once the pipeline is lowered into the trench and all of the sections have been welded together, the trench is backfilled with the same material that was excavated. The backfill material is loose at this point. Care is taken to not allow rocks to fall onto the pipe and damage the coating or dent the pipe.

TRENCHLINE COMPACTION The loosely backfilled material in the trench is compacted in order to get all of this material back into the trench and to minimise the potential for the trenchline to settle. Sunken trenchline may affect the operation of and may damage agricultural implements.

TOPSOIL REPLACEMENT The topsoil that was originally stripped from the right of way is replaced once the trenchline is compacted, the subsoil surface has been de-compacted and rocks have been picked. The topsoil is replaced as evenly as possible and picked of rocks. Random checks are made with a shovel to ensure that the topsoil was replaced evenly.

TOPSOIL CULTIVATION The replaced topsoil is cultivated to relieve any residual compaction that was created by the equipment that replaced the topsoil. Any exposed rocks are again picked from the surface.

SEEDING Seeding is done on all pasturelands, native and previously wooded areas, and also on hayland, at the request of the landowner. Seed mixes are tailored to landowner specifications and applied only when the probable success of seed germination is high.



Small diameter chain trenching operation.



The pipeline is lowered into the trench.



Hay and pasture areas are seeded.