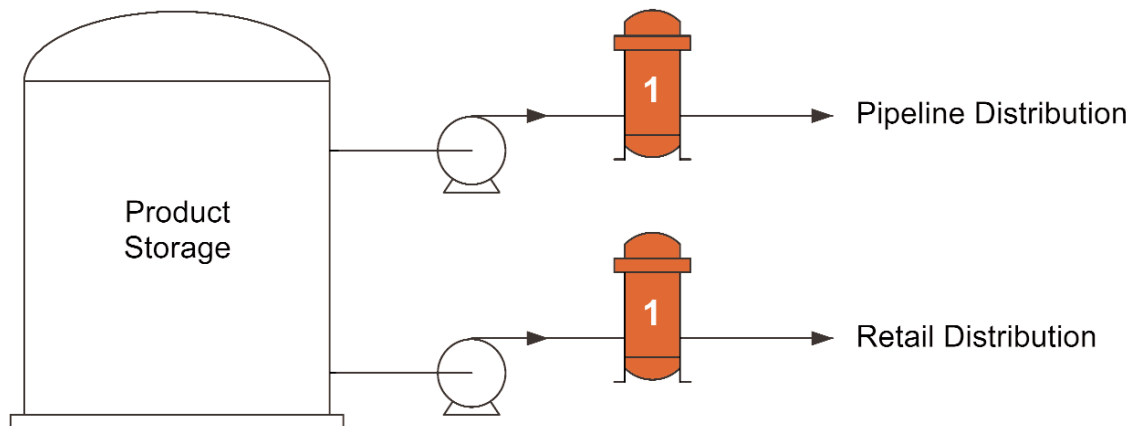




Final Products



Contaminant removal from any of the refinery's final liquid product is performed before delivery of the product to market. These final products are typically stored in on-site tank farms while awaiting delivery. Although the products have been repeatedly cleaned throughout the refining process, the storage tanks will contribute contaminants such as pipe scale and corrosion induced particulate that can cause the product to be off spec. Filtration is typically required by transportation companies as a guard to assure final product quality immediately prior to delivery. These "guard filters" assure product quality when received by distribution. Delivery of the product may be through pipelines, tanker trucks or rail cars. These final liquid products typically are: gasoline, diesel, kerosene, jet fuel and fuel oil.

Operational Problems

1. Off specification product
2. Downstream equipment fouling

Solutions

1. A Nowata Filtration cartridge or bag filter on the liquid product line is used to remove any pipe scale or corrosion products that could be carried into distribution lines.