42" Pipeline Pre-Commissioning Project

Baleen Process Solutions and ChampionX successfully executes Pre-Commissioning project

BACKGROUND

A large 42" natural gas interstate pipeline system that spans approximately 303 miles from northwestern West Virginia to southern Virginia was planned to support incremental gas transmission throughput to keep up with market demands and enhance access to consumers in the Eastern United States. As an interstate pipeline it will be regulated by the Federal Energy Regulatory Commission (FERC) and is a critical U.S. infrastructure project due to its 2 BCF/day delivery capacity. Given the criticality of this asset to the market, the operator and pipeline construction company sought turnkey support to effectively and procedurally clean the pipeline post-hydrotesting, ensuring future internal corrosion risks stemming from these activities were minimized. Furthermore, they needed these services to be efficiently and safely managed. Prior to the pipeline being place in service the customers precommissioning plan included offline cleaning, pigging, pig tracking, drying, pre-commission corrosion treatment, and compression requirements.

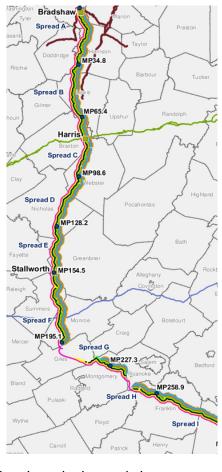
OBJECTIVE

Baleen Process Solutions partnered with ChampionX as well as end user customer to engineer a custom-tailored solution to achieve the project goals:

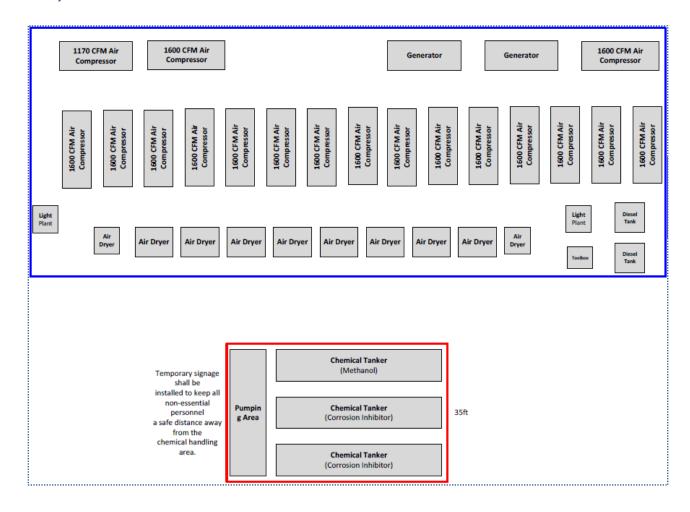
- Perform incident free operation (IFO).
- Pig the 300+ miles of 42" pipeline for pre-commissioning with no downtime.
- Maintain an overall project budget.
- 24-hour operations

RESULTS

ChampionX and Baleen Process Solutions completed the offline/online cleaning, pigging and pig tracking, drying, pre-commission corrosion treatment, and compression requirements and meeting all project goals. We successfully designed, planned, and managed with ChampionX's midstream services group. Baleen Process Solutions provided equipment and two 12-hour- shift personnel crews enabling 24-hour service on-site support over a period of six months to ensure this large capital project was a success. When operational pressures required the pipeline to be commissioned prior to the final segment's treatment, the ChampionX and BPS team nimbly redesigned their approach to treat online using pipeline gas; this required additional equipment such as filters, and separators to be procured and temporarily installed on sight to enable this final treatment. The post-hydro pipeline services across all line segments were completed to the operators drying and treatment specifications without any safety incidents. The team completed the project accident- and incident-free over the 60+ days. Baleen Process Solutions I ChampionX Midstream consulting teams travel to understand our customers' systems first-hand, providing support where and when needed.



Equipment Layout



2720 West Willow Street Scott, Louisiana 70583 North America 504 520 9494 International 281 723 1109

baleenprocesssolutions.com

This document is provided on an "as is" basis without warranties of any kind. BALEEN PROCESS SOLUTIONS, LLC DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR SUITABILITY FOR ANY PURPOSE, TITLE,

AND NON-INFRINGEMENT. While reasonable care has been taken in the preparation of this document, Baleen Process Solutions does not represent or warrant that the contents of this document are accurate, complete, reliable, current, or error-free.

© 2018 Baleen Process Solutions. All rights reserved.

