

1.0 Introduction

This Hydrostatic Test Plan (Plan) identifies measures to be taken by BakkenLink Pipeline, LLC (BakkenLink) and its contractors to ensure pipeline integrity and conform to regulatory requirements. The Plan will be carried out in accordance with the federal, state and local agency regulations. Measures identified in this Plan apply to work within the project area defined as the right-of-way and other areas used during hydrostatic pressure testing of the pipeline and facilities. BakkenLink and its contractor personnel will be thoroughly familiar with this Plan and its contents prior to initiating hydro-testing operations on the project.

1.1 Purpose

The purpose of this Plan is to define the necessary measures that are to be implemented during pipeline integrity testing to ensure the safety of pipeline construction personnel and the general public. This Plan describes safety standards and practices that will be implemented during construction of the project to minimize health, safety, and environmental (particularly water quality) concerns related to hydro-testing procedures throughout the project.

2.0 Hydrostatic Testing Procedures

The following procedures would be implemented by the Contractor during hydrostatic testing operations. This section of the Plan describes pre-testing requirements, the typical sequence of activities associated with the hydrostatic testing operations, and notifications required by BakkenLink and its Contractor.

BakkenLink will be responsible for securing the necessary permits and approvals from the governing authorities for the use of, and disposal of, test water. BakkenLink will also comply with the rules and regulations from any relevant agencies. BakkenLink will provide Contractor with a copy of the withdrawal and discharge permits and Contractor will keep copies onsite at all times during the testing operations.

BakkenLink will require a minimum hydrostatic test pressure of 1850 psig. The maximum pressure will be limited to 95% of the SMYS (Specified Minimum Yield Strength) of the steel pipe, which is 2421 psig.

2.1 Water Discharge and Use Regulations

The hydrotest water discharge locations for this project will be selected to avoid direct discharge into wetlands or waterways. If this becomes unavoidable, alternate water discharge method will be vetted with the appropriate agencies, the required permits will be attained, and best practices procedures will be used. If the water discharge has to be made into streams, ephemeral drainages, or wetlands, BakkenLink's Environmental Inspector on site will ensure that any required water sampling will be performed in accordance with state regulations for water quality sampling procedures. Contractor will notify BakkenLink's Inspector at least 72 hours prior to obtaining water and/or discharging water. Analysis of the samples would be in accordance with permit requirements.

2.2 Facility Segments and Potential Water Uses

Water will be used for hydrostatic testing for two tasks during pipeline installation activities. The pipeline segments will be hydrostatically tested once each segment is installed and mechanically completed. The pipeline will be constructed in eight (8) segments over the course of two phases. Phase

I will consist of construction for segments 4-8 beginning in the third quarter of 2012. Beginning in the first quarter of 2013, Phase II will consist of construction segments 1-3. The hydrotest segments are broken down as shown in Table 2-1 below. Five (5) Horizontal Directional Drills (HDDs) will be employed to install pipe in sensitive areas. Additionally, hydrostatic testing will occur for each HDD fabricated pipe string prior to its pull through the hole. The HDDs are provided in Table 2-2 Below. The approximate locations, length and estimated volumes of water for the pipeline segments and HDD segments as well as the proposed discharge locations are also provided in the tables.

Table 2-1. Pipeline Segments and Hydrotest Water Requirements

Seg. #	Pipeline Sections	Approx. MP		Segment length (ft)	Water Volume (gal)	Source	Proposed Discharge Locations (MP)
1	Beaver Lodge to North Lake	0	10	52,880	323,784	Municipal	MP 0
2	Lake Sakakawea	10	12	12,300	74,280	Municipal	MP 12
3	South Lake to Arrow	12	34	116,433	712,919	Municipal	MP 12 MP 34
4	Arrow Lateral	0	1.3	6,837	41,862	Municipal	AMS Lat MP 0
5	Arrow to Dunn	34	91	292,825	1,792,967	Municipal	MP 34 MP 91
6	Dunn Lateral	0	0.1	739	4,526	Municipal	DN Lat MP 0
7	Dunn to Fryburg	91	127	190,820	1,168,386	Municipal	MP 91 MP 127
8	Belfield Lateral	0	3.7	19,536	53,430	Municipal	BL Lat MP 0 MP 120
	Total			692,370	4,172,154		

Table 2-2. HDD Segments and Hydrotest Water Requirements

HDD Sections	Approx. MP	Segment length (ft)	Water Volume (gal)	Source	Proposed Discharge Locations (MP)
Lake Sakakawea – North Bluff	9.69	4,000	24,156	Municipal	MP 8.9
Little Missouri River - North Bluff	68.43	5,885	35,540	Municipal	MP 67.3
Little Missouri River	69.58	1,315	7,941	Municipal	MP 69.4
Little Missouri River - South Bluff	71.13	5,139	31,034	Municipal	MP 73
Forest Service Woody Draw	73.13	1,488	8,986	Municipal	MP 72.8
Forest Service Hwy 85	73.86	1,003	6,057	Municipal	MP 74.2
Summit Campground	74.82	5,849	35,322	Municipal	MP 77
Green River	109.18	1,530	9,240	Municipal	MP 108.9
I-94	124.16	1,004	6,063	Municipal	MP 124
Totals		27,213	164,339		

Water will be obtained from municipal or commercial sources. BakkenLink does not anticipate the use of natural waterbody or surface water withdrawals. All water obtained, used and discharged during the construction and testing of the pipeline will be pursuant to government regulations and appropriate permits. These sources will be further refined as the project develops.

2.3 Pumps

If pumps for hydrostatic testing are to be used within 100 feet of any waterbody or wetland, secondary containment measures (such as bermed depressions lined with visquene plastic, plastic troughs, or other containment structure) would be implemented to prevent any spilled fuels or oils from reaching the waterbody or wetland, in accordance with BakkenLink's Spill Prevention, Containment and Countermeasures (SPCC) Plan and Construction Mitigation and Reclamation Plan (CMRP).

2.4 Safety Measures

The Contractor will be responsible for the safety of pipeline construction personnel and the general public during hydrostatic testing. The Contractor will develop a site specific test plan for each test section and, at minimum address the following safety measures:

- Place warning signs in or near populated areas.
- Restrict access to the area involving the hydrostatic test (i.e. test shelter, manifolds, pressure pumps, instruments, etc.) to only those personnel engaged in the testing operations.
- Prohibit major pipeline work not directly associated with the test operations around the pipeline sections being tested.
- Provide and maintain a reliable transportation and communication system during the test operations whereby personnel directly involved in the test will be able to communicate test status or issues that develop during the test.
- Check hoses, fittings, connectors and valves for proper pressure rating.
- Restrain and secure fill and discharge lines/hoses.

2.5 Test Sections and Pressures

Each pipeline section will be pressure tested to prove its integrity and substantiate the Maximum Allowable Operating Pressure (MAOP). All pressure tests will meet the requirements of 49 CFR Part 195, Subpart E. The minimum test pressure will be 1850 psig. The maximum pressure will be limited to 95% of the Specified Minimum Yield Strength (SMYS) of the steel, which is 2421 psig.

2.7 Cleaning the Pipeline

Upon completion of the pipe lowering and backfilling operations and prior to filling the pipeline segment for a hydrostatic test, the pipeline will be cleaned of any residual construction debris and particles by running multiple combinations of abrasive and swab pigs such that all mill scale, dirt, dust, and other solid or liquid materials are removed from the pipe. Cleaning activities will be governed by BakkenLink's general pipeline construction specifications.

2.8 Testing the Pipeline

The duration of the test will be not less than 8 hours, with the pressure maintained at or above the minimum test pressure at all points in the pipeline segment. Temperature and pressure will be allowed to stabilize prior to beginning the 8-hour test period. Temperature and pressure will be recorded every 30 minutes in a manner approved by BakkenLink. The test will be accepted upon proof of no leakage when no pressure changes are detected over the test period where changes cannot be attributed to

temperature affects. In the event of a leak during testing, the leak would be repaired and the above test repeated until a satisfactory test is obtained on the segment.

2.9 Depressurizing the Pipeline

After the test has been presented by the Contractor as a successful test and accepted by BakkenLink's Inspector, the pipeline would be depressurized as soon as practical.

2.10 Dewatering the Pipeline

Discharge points will be selected to avoid waterways and wetlands. Landowners and/or land management agency will be consulted when finalizing discharge points. All discharge points would utilize discharge dispersion devices provided in BakkenLink's construction typical drawings. The devices are designed to capture discharge water to limit erosion, scour, and filter contaminants. These devices are typically constructed of geotextile fabric, silt fence/filter cloth and straw bales. The rate of discharge will be monitored to prevent the device from being ineffective or overwhelmed by the volume of water.

3.0 Records

In accordance with applicable regulations and BakkenLink's pipeline construction specifications, the Contractor will maintain complete and comprehensive records of all hydrostatic tests and of related activities such as filling, pressuring, stabilizing, dewatering, etc. Records will be clearly identified with respect to the specific piping systems to which they apply and records will be accurately dated. In addition to the general requirements above, such forms will at a minimum include:

- date and time of test,
- identification of piping system,
- test medium, pressure and duration,
- automatic 24 hour pressure-time and temperature-time recording chart, including manual recording of pressure gauge readings at each additional station, test medium temperature at definite time intervals,
- test medium temperature at definite time intervals,
- a summary of leaks and repair methods, and
- the names and company affiliation of persons recording the test data;
- pressure and temperature recorder charts showing the date and time stop and start of recording;
- weather conditions during testing;
- elevation variations, whenever significant for the particular test (over 100' for liquids line);
- calibration certificates for dead weight gauges and records of field calibrations of pressure and temperature instruments;
- make, style number, and condition of pigs used in filling and dewatering and any remarks pertinent to any phase of the test.
- Results of the hydrotest will be provided to the BLM upon request at the conclusion of the project.