

**memo**

date January 26, 2011  
attention Peter Andre  
location TCT 15 floor

cc Dave Toporowsky

from David Taylor  
subject Cutbank Lateral Loop Project

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### **Welding Procedures Datasheets & Supporting Procedure Qualification Records**

As requested by the project, Materials Engineering has reviewed the welding procedures that were provided to the National Energy Board (“NEB”) in compliance with condition 8 of Order XG-N081-19-2010 in detail and is satisfied the welding procedures listed below are complete and comply with CSA Z662-07 requirements. The review also addressed the e-mail comments from the NEB staff dated January 19 and January 25, 2011.

During our review of the welding procedures several were identified as being repeat procedures, redundant to the project or having supporting documents that were unclear in their intended use. These procedures have been removed from the submission.

The submission also includes the welding procedures for the branch connections (in-service hot taps) and for the assemblies that were completed in the fabrication facility.

The welding procedures listed below are for use during the installation of the pipe and prefabricated assemblies. The procedures identified as PLNEW are for application on the pipe to pipe joints (below ground welds), including the prefabricated assemblies (pipe to pipe). The procedures identified as PLASSE are for welding the NPS 12 cross over piping in the field. The PLFAB procedures were used by the fabrication facility for the pipe to component welds.

#### **Assemblies – field welding**

1. PLASSE-01-ASSY (NPS 12 and below – assembly pipe to pipe – below ground)  
- 2201, 2294, 2295, 2412, 2580, 2691
2. PLASSE-02-ASSY (NPS 12 and below – assembly pipe to pipe – aboveground and repairs)  
- 2167, 2154, 2691
3. PLNEW-13-ML –NPS 16 – crossover - below ground pipe to pipe (5.6 mm – 7.1 mm wall thickness)  
- 2357, 2460, 2470, 2471, 2484, 2486, 2487, 2492, 2493, 2771, 3077
4. PLNEW-14-RP - NPS 16 -crossover - below ground repair  
- 2395, 2495

#### **Branch Connection welds (hot taps)**

5. WPDS-BRCH-03-Flow  
- 2636, 2637, 2652

**Pipeline – field welding**

6. PLNEW-15-ML – below ground pipe to pipe (7.2 mm – 12.7 mm wall thickness)  
- 2097, 2119, 2125, 2470, 2471, 2492, 2493, 2494
7. PLNEW-16-RP – below ground repair  
- 2152, 2473, 2495

**Fabrication – shop welding**

8. PLFAB-01-ASSY – NPS 16 to 48 - rolled welds  
- TL55, TL149, TL159, TL160, TL166, TL179, TL180, TL181, TL193, TL205
9. PLFAB-02-ASSY – NPS 16 to 48 - position welds  
- TL15, TL88, TL99, TL108, TL160, TL182, TL186, TL187, TL194, TL220
10. PLFAB-03-ASSY – NPS 2 and larger - pipe to pipe, pipe to component  
- TL84, TL85, TL188, TL189
11. PLFAB-04-ASSY – NPS 2 -12 - pipe to component – position welds  
- TL84, TL85, TL147, TL148, TL182, TL188, TL189, TL192
12. PLFAB-05-ASSY – NPS 2 – 12 – pipe to component – rolled welds  
- TL147, TL148, TL182, TL192, TL194, TL220
13. PLFAB-08-ASSY – socket welds – NPS 2 and below  
- TL84, TL85, TL188, TL189
14. PLFAB-11-ASSY – NPS 2 and below – o’lets  
- TL6, TL15, TL54, TL70, TL75, TL77, TL78, TL84, TL89, TL108
15. PLFAB-15-ASSY – NPS 2 and larger – rolled welds  
- TL31, TL39, TL40, TL175, TL176, TL177, TL178, TL188, TL189

If you have any questions please call.

Thank you

Sincerely,



David Taylor  
Manager  
Materials Engineering