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**From:** Al Drew <aldrew@telus.net>  
**Sent:** Wednesday, August 03, 2011 6:45 PM  
**To:** Evan Vokes  
**Subject:** Re: South Lateral Line Lowering and Cut Out Project (NPS 24)

Yes, would you please send me the spreadsheets for Welder Qualification Test Report, Manual Weld Parameters, and Piping Report ( 4 weld if possible). I have these spreadsheets from the Keystone Conversion project but I don't know if they are still valid and some of the cells are locked. Thanks

Regards

Al

**From:** Evan Vokes  
**Sent:** Wednesday, August 03, 2011 5:15 PM  
**To:** Azmina Dhalla ; aldrew@telus.net  
**Cc:** Robert Lazor ; Rick Ostrom ; Chris Penniston ; David Booth  
**Subject:** RE: South Lateral Line Lowering and Cut Out Project (NPS 24)

I can give you some philosophy on this one Azmina and Al

With the previous points, qualification on the E8010 electrode is essential as welders trained on E6010 often undercut the roots when they switch to E8010 without practice. This will increase your likelihood of a high rate of weld rejection which adds to the schedule time and hard feelings because the welder has never been called for undercut before. The physical meaning is when we use E8010, an untrained welder will likely increase the amount of undercut and RT can find undercut very well. If you are unfamiliar with the E8010 defects, rod angle and technique are very important and Rick can give pointers of how to prod the contractor if undercut shows up in the roots at qualification. We have had some interesting cutouts due to this small detail so it is in the spec to make execution smoother. Nothing quite matched the happiness of having one projects 14 week lead eccentric reducer mangled by a welder that had never burned E8010 before. Much easier to spend some time on welder qualification and have one RT shot per production weld.

These production problems are the spirit and intent of the specification as many of these specification points are good engineering practice but more importantly an oversight on points in the specification may affect schedule. We know that the contractor does not get paid for repairs but it is just a drag on the whole project as everything lags and costs always increase. This is very similar to why we want temporary welds for hydrotest examined as it costs a lot of money and time if we blow one out and we cannot replace time or lives.

Always remember that the TES WELD PL is our promise to the board so when a project is audited, the code and the TC specification must be complied with entirely. Welder qualification parameter records and production parameter records are a good place to start so make sure that V, A and ts are recorded. (we can send a spreadsheet if you want) If you can't comply with the spec for some reason, please send us in the variance form ASAP so we can deal with the problem rather than visit the board for non-compliance issues later.

It is not a code or specification requirement but we cant tell what the mechanical properties of the final tie in weld by NDE and this weld is not strength tested. We can use proof by reference by using the closure weld parameter form as a good way of proving due diligence on the mechanical properties of a final tie in weld. We didn't want to promise the board we will do this in our spec as it is too easy to be found in noncompliance but it is still good practice.

Just double check to make sure that TEAM brings an X ray tube before they get to site as too often, the dispatcher is more versed at herding cats than the practice of NDE and sends gamma as they don't understand the technical difference. I recommend that you use the word "tube" in your conversation so they understand. Jason knows what is required, it is just the dispatcher I am worried about and I always hate to get the resulting phone call.

OPR 99 rule 53 states "shall audit" but does not give us any specific requirement. I would recommend that you pick one of: digging, welding, nde or coating and have the relevant engineer/tech visit to get an audit record. If you want to desktop

NDE Audit of RT film to meet the audit requirement, I can arrange that for you. With your watercourse location, someone that looks at geotech is a good audit idea as well.

Hope this helps

Evan

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**From:** Chris Penniston  
**Sent:** Wednesday, August 03, 2011 4:07 PM  
**To:** Rick Ostrom; Azmina Dhalla  
**Cc:** Robert Lazor; Evan Vokes; 'aldrew@telus.net'  
**Subject:** RE: South Lateral Line Lowering and Cut Out Project (NPS 24)

The only thing I would add is we should qualify PLASSE-15-RP as well, since this uses an uphand root as opposed to the downhand root of PLNEW-16.

In addition, the wording of TES-WELD-PL 7.1 (c) "The following changes from the conditions used in their test weld shall necessitate re-qualification of the welders:" (v): "Change of consumables within the same electrode covering but different strength class. i.e. same ASME F grouping, E6010 to E8010". This would seem to imply that PLASSE-14 should also be qualified since it uses a E6010 root rather than the E8010 of PLNEW-15.

That being said, I would be inclined to allow PLNEW-15-ML to qualify for PLASSE-14-ASSY due to their general similarities.

Chris

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**From:** Rick Ostrom  
**Sent:** Wednesday, August 03, 2011 3:58 PM  
**To:** Azmina Dhalla  
**Cc:** Robert Lazor; Chris Penniston; Evan Vokes; 'aldrew@telus.net'  
**Subject:** RE: South Lateral Line Lowering and Cut Out Project (NPS 24)

Azmina,

Regarding your first question, I have removed wording within our TES-WELD-PL and CSA Z662 to give an explanation. Our specification states that we will follow the requirements stated within CSA Z662. Please refer to the note below within 7.8.1.3 within CSA Z662

"Check tested" will be a re-qualification.

Our TCPL specification TES-WELD-PL states;

7.1 General, (g) The Company may exempt from qualification welders who can produce proof of current qualification for the Work in accordance with the requirements of CSA Z662

Clause 7.8.

CSA Z662-07 states;

7.8.1.3..... Welders continuously employed by a company and regularly making welds shall be required to requalify at intervals of not greater than 2 years. Welders not so employed shall be required to requalify at intervals not

greater than 1 year.

*Note: Notwithstanding the requirement for requalification at intervals of either 1 or 2 years, company-employed welders who have not made welds for a period in excess of 3 months since they last qualified should be at least check-tested.*

Regarding welder qualification tests, each welder will be required to qualify with a pipe to pipe procedure weld and a repair procedure weld.

Pipe material grade or CE are not essential variables with respect to welder qualification, but as the qualification pipe (new pipe) is grade 483 and carbon equivalent comes into effect, please qualify using each of; PLNEW-15-ML and PLNEW-16-RP.

They do not need to qualify with each of the WPDS provided.

Robert, Chris, Evan...anything to add?

*Rick Ostrom*

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**From:** Azmina Dhalfa  
**Sent:** Wednesday, August 03, 2011 1:36 PM  
**To:** Rick Ostrom  
**Cc:** Robert Lazor; Chris Penniston; Evan Vokes; 'aldrew@telus.net'  
**Subject:** RE: South Lateral Line Lowering and Cut Out Project (NPS 24)

Hi Rick,

A few question from our welding inspector:

- If the welders were tested this year on the same procedures, do they have to be re-tested?
- Does each welder have to be tested on all 4 of the procedures?

Thanks,

Azmina

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**From:** Rick Ostrom  
**Sent:** Tuesday, May 31, 2011 1:58 PM  
**To:** Azmina Dhalfa

**Cc:** Robert Lazor; Chris Penniston; Evan Vokes  
**Subject:** South Lateral Line Lowering and Cut Out Project (NPS 24)

<< File: South Lateral Line Lowering and Cutout Project.doc >> << File: PLASSE-14-ASSY.pdf >> << File: PLASSE-15-RP.pdf >> << File: PLNEW-15-ML.pdf >> << File: PLNEW-16-RP.pdf >>

Azmina,

Attached are the welding procedure data sheets (WPDS) to be used for welding construction for your project.

Also attached is an outline of the application for each WPDS.

Have you selected a construction contractor as of yet?

Please call Robert, Chris or myself if you have any questions.

Regards,

*Rick Ostrom*

*TransCanada Pipelines*

*Engineering and Asset Reliability*

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