

WorkSafe Services

PO Box 160
Saint John NB E2L 3X9
Phone 506 632-2200
Toll free (Claims) 1 800 222-9775
N.E. Regional Office 1 800 561-2524
Web www.whscc.nb.ca

Services de travail sécuritaire

Case postale 160
Saint John NB E2L 3X9
Téléphone 506 632-2200
Sans frais (Réclamations) 1 800 222-9775
Bureau de la Région du N.-E. 1 800 561-2524
Web www.whscc.nb.ca



September 10, 2007

"The Employer"

The Chief Compliance Officer is writing in response to the employer's e-mail dated August 10, 2007 requesting a deviation from Section 278(1) of the General Regulation 91-191 under the *Occupational Health and Safety Act*. More specifically, what the employer is requesting is a deviation from Section 278(1) to enable hot tapping and related welding work at the employer's premises.

Section 278(1) of Regulation 91-191 requires that flammable and explosive substances be drained from the containers before heat is applied to the container. In addition, Section 279(1)(b) states "*An employer shall ensure that welding, cutting, burning or soldering operation is not undertaken on a container or pipe ... containing ... explosive and flammable substances*".

To support the employer's request, the employer has provided a Design Work Sheet that indicates the following:

Justification

14" nozzle @ BC Tank at Fill line is below ASME B31.3 Code minimum wall thickness and must be repaired. An environmental spill may result. It is not practical to completely drain this line. The repair can be accomplished safely without personnel risk.

Technical Background

Pre-inspection UT to verify wall thickness is above 0.25" on all main nozzles complete.

Safe Hot Tapping Practices in the Petroleum and Petrochemical Industry reviewed.

Job analysis flow sheet determined this method of repair.

Burn through prevention mitigated by using 3/32 E1718 rod.

- Piping P1 to P1 weld, min wall to be 0.25" to be able to weld hot; 6.2 of API.
- 14" Sch 40 piping wall is .438 per Crane Technical paper.
- Welding procedure to be used.
- Low – hydrogen E7018 3/32 electrode.

Post inspection of all welds is required.

Welding with qualified welder.

Welding without flow; tank as a heat sink per operation procedure

WorkSafe • Travail sécuritaire

Safety Requirements

Tank as a heat sink
Nomax Coveralls and PPE on workers
Fire blankets below and around piping and at least two fire extinguishers
Fire Monitors poised
Communication with Control Room
Hot work permit – that has fire watch requirements
Tail Board Form completed

Installation of new 1" piping off main lines

1. Pre fabricate three patches made up to cover a 12" section of 14" schedule 40 pipe; Material has to be ASME A516 or A515-Plate with certification, 7/16" tick; Three rolled sections required, these sections are to fit around 14" – schedule 40-pipe that contains bunker C fuel. Welding a patch P1 to P1 material as the employer has wall thinning on the 14" pipe, the material is rolled and cut per below. The employer is adding at 1/8" NPT thread hole and plug on all three pieces as a tell-tail hole for leaks; One ½ section 180 degrees 12" long x 22" roll length to fit ½ of a 14" pipe approx. machine to weld; Two ¼ section 90 degrees 12" long x 14-21/31" roll length to fit ¼" of a 14" pipe approx. machine to weld;
2. PT or UT inspection of welds on spool pieces;
3. Inspect this weld via UT or PT;
4. Continue until all sections are installed;
5. Inspect all welds via UT or PT.

In addition, the employer has indicated to the Chief Compliance Officer that a qualified Welder (Licence Exp. April 24, 2008, Licence Exp. March 26, 2008, Licence Exp. April 20, 2008, Licence Exp. March 26, 2008 - issued by Technical Inspection Services Branch-Province of New Brunswick) was to carry out the work described above.

As a result of the information provided, a deviation from Section 278(1) of Regulation 91-191 under the *Occupational Health & Safety Act* is granted for welding on the Tank to repair a 14" fuel nozzle with the following conditions, some of which the employer has provided for in the employer's procedure:

1. The employer's Health & Safety Staff must take part in the planning and execution of hot tapping. It may also be appropriate to involve the Joint Health & Safety Committee as well.
2. A safe and easy access and egress must be provided from the work location for the hot tapping crew, including an alternate means for emergency evacuation.
3. Staff performing the hot tapping operation must be competent in all of the procedures involved in the process, including emergency and evacuation procedures.
4. The equipment and material involved in the process must meet the appropriate safety codes and standards including those outlined in the API Recommended Practice.
5. The MSDS's for the pipe/tank contents including temperatures and pressures of the vessels to be hot tapped must be reviewed with the staff involved in the operation.
6. Appropriate protective clothing must be provided and worn by the staff performing the operation.
7. A means of communication must be established between the hot tapping crew and the emergency response staff.
8. Fire watch and extinguishing equipment must be available in the work area.
9. A means of shutting off power locally must be available.

10. Personnel working in the areas of hot tapping must be notified of the type of work being undertaken and advised of the appropriate emergency procedures.

By copy of this letter, the Chief Compliance Officer has advised WHSCC staff of the decision.

Regards,

Chief Compliance Officer