



the pressure equipment safety authority

BOILERS AND PRESSURE VESSELS REPAIR OR ALTERATION REPORT

AB-40 (Side A) 2019-12

(A) #: 0164522

OWNER EQUIP. NO: 80-12-44

REPAIR ORG. JOB NO: _____

REPAIR and/or ALTERATION Partial Final

1. Name of Organization doing Repair/Alteration CNRL
Address 2100, 855 - 2 Street SW Calgary AB AQP No. & Expiry Date 8039-June 30, 2022

2. Name of Owner CNRL
Address 2100, 855 - 2 Street SW Calgary, Alberta, Canada T2P 4J8
Location of Installation 07-32-12-13W4

3. Boiler/Pressure Vessel Description Horizontal (Firetube) CRN D9230.2
Manufacturer's Name Universal Industries Serial No. 80-12-44

4. Original Design Conditions:
a) Vessel/Shellside/Boiler: Max Allowable Working Press. 75 PSI Min/Max Design Temp -20 / 350F
b) Jacket/Tubeside: Max Allowable Working Press. _____ Min/Max Design Temp /

5. New Design Conditions:
a) Vessel/Shellside/Boiler: Max Allowable Working Press. _____ Min/Max Design Temp /
b) Jacket/Tubeside: Max Allowable Working Press. _____ Min/Max Design Temp /

6. Description of defects (location and types of deterioration that resulted in the repair/alteration).
Miter joint was repaired by Eastend Iron in Taber AQP #2972

7. Original Code Edition and Addenda ASME Sect. VIII Year 1994 Addenda _____

8. Code Edition and Addenda used for performing the work ASME Sect. VIII Year 2019 Addenda _____

9. Description of Work performed. (Step by step description of repair/alteration method used. Attach additional pages as required, and reference any additional documents used to provide the required information; such as repair or alteration procedures, drawings, and specifications.)
In service pressure test was completed. Description as follows:
-Installed firetube into treater
-Filled treater to the lid with produced water.
-Squeezed pressure to 60 psi and held for an hour as per CNRL ,no sign of any leak or moisture throughout the firetube.
Chart Attached for reference.

10. Heat Treatment: Preheat Temp _____ Post Weld HT (Temp./Time) _____ Other _____

11. Non Destructive Examination (Specify type and extent).

12. Pressure Test Vessel/Shellside/Boiler Tubeside/Jacket
a) Hydrostatic In Service Pressure test to 60psi.
b) Other Test _____

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13. **Material** - List any material used in repair/alteration and any base material welded on:

Item	Material Specifications	Thickness / Schedule	Diameter	Item	Material Specifications	Thickness / Schedule	Diameter
Shell/Drums				Heads/ Ends			
Tubesheet				Tubes			
Nozzles				Flanges/Fittings		Class	

14. **Welding Procedures** – Alberta Registration Number WP- _____ WPS Numbers used: _____

15. **Welded Replacement Parts:** Attached are Manufacturer's Partial Data Reports or Repair/Alteration Reports properly identified and signed by Authorized Inspector for the following items of this report: (Welded parts supplied by others).

16. **Responsibility Owner/Client.** Identify below items that the owner/client has assumed responsibility for. **Note (2)**

- a) Alteration Design Submission _____ b) Repair/Alteration Procedure: _____ c) Material Control _____
 d) Welding Control _____ e) NDE _____ f) Heat Treatment _____ g) Pressure Test Owner

Note 2: Owner/client must have a valid Alberta Quality Program (AQP), for the scope of work, to assume responsibility for function c, d, e, f, or g.

17. **REMARKS:**

18. **CERTIFICATE OF COMPLIANCE**

We certify that the statements made in this Report are correct and that all design, material, construction and workmanship on this repair/alteration conform to the requirements of the Alberta Safety Codes Act and Regulations and the AB-513.

a) For all items except for items identified in 16:

 (Repair/Alteration Organization Name)

 (AQP Number & Expiry Date)

 (Signature & Date)

 (Print Name)

b) For items identified in 16 only:

CNRL

 (Owner/Client Organization Name)
8039 - June 30, 2022

 (AQP Number & Expiry Date)
Matthew Morvik

 (Signature & Date)
Matthew Morvik

 (Print Name)

19. DATE WORK WAS COMPLETED: March 18/2020

20. **CERTIFICATE OF INSPECTION**

I have inspected the repairs and/or alterations described in this report. To the best of my knowledge, this work has been done in accordance with the Safety Codes Act and Regulations and the requirements established in AB-513.

a) In-service Inspector (ISI) Certification

(When the repair is inspected by an ISI per the requirements established in AB-513)

Canadian Natural Resources Limited 8039
 Owner-User/Inspection Company Name AQP#
Cody Scheu 03/18/2020
 In-Service Inspector Signature & Date
Cody Scheu
 In-Service Inspector Name (Please Print)
453
 In-Service Inspector Alberta Cert #

b) ABSA Safety Codes Officer Certification

(When work is inspected by ABSA).

 ABSA SCO Signature & Date

 Print Name & Designation of Powers Number

Report Reviewed and Accepted by ABSA SCO : Douglas Brown D00005131 31 March 2020
 Print Name & Designation of Powers Number ABSA SCO Signature & Date