NEW EQUIPMENT & SYSTEM APPROVAL PROFORMA

Ref: *13/2598*

Note: the prompts given below are only a guide to the information required for approval. Dependent on the type of equipment or system that requires approval delete any section that is not applicable or include additional information if necessary. Mandatory fields are marked with an asterisk (*).

1 **Equipment or System to be approved** *

Shell GADUS Gauge Face Curve Grease (previously branded Shell Alvania)

2 **Originator** *

Name: Wayne Olsen Company: ARTC E/W

3 **Introduction** *

The *CRC for Rail Innovation*, part funded by ARTC, has performed an evaluation on the effectiveness of a range of five different gauge face grease lubricants in the marketplace.

Shell GADUS was identified as being the most effective in terms of lubrication, spread and cost effectiveness. Type Approval is being sought to be permitted to use this improved gauge face grease.

4 **Determination of Need** *

The Adelaide Hills area has extremely tight back to back curves on steep gradients. While curve lubrication has been used here for many years it is believed Shell GADUS will provide improved results compared with currently used lubricants.

Poor lubrication leads to excessive curve wear, flanging noise, potential wheel climb, excessive wheel wear, train drag and higher fuel usage by locos.

5 **Significant Change or Not** *(as determined by the Manager Standards)* *

This change in equipment or system is assessed as MINOR

6 **Review Panel** *(as determined by the Manager Standards)* *

- John Furness – Manager Standards
- Wayne Olsen – Engineering Performance Manager, East West
- Denis Snowden – WHS Coordinator
- Jessica Tai – Track Engineer

7 **Safety**

There are no changes to the existing method of working, maintenance or environmental conditions hence safety of maintenance personnel will not change.

This product may cause skin/eye irritation. A Job Safety Analysis is to be carried out for the case of prolonged or repeated skin contact without proper cleaning.

Product is not classified as flammable or dangerous for the environment.

MSDS and Technical Data Sheet provided.

8 **Performance and Suitability**

Shell GADUS is suitable for both electrical and manual lubricators.

As mentioned above, an evaluation of five different gauge face greases carried out by the *CRC Innovation for Rail* identified Shell GADUS as being the most effective in terms of lubrication, spread and cost effectiveness.

See attached documents :

- Shell GADUS – Technical Data Sheet
- Shell GADUS – MSDS
- Key Findings from CRC for Rail Innovation Annual Report – Rail Curve Lubrication - Best Practice for Australian Heavy Haul Lines – 8 Apr 2011. (Note: Shell GADUS has been identified as 'Grease C' in this report)

(i)	**Use in other rail networks** Currently being used by QR and RailCorp. *(As confirmed in meeting with Mark Escritt of Logicoil and Paul Fisher of Shell).*
(ii)	**Use in the ARTC network** Limited trial in East/West with electronic lubricators (Portec and Lincoln) in Adelaide Hills at 19.700km and 33.500km has shown good results with Tribometer friction measurements. Similar gauge face lubricant products have been in use across the ARTC network for over 35 years. See RC2411 : *Guidelines for Trackside Lubrication – Appendix 1 – Approved Lubricants*
(iii)	**Issues arising from usage of the equipment/system** N/A
(iv)	**Changes required to infrastructure or systems for use of the equipment** No alteration to network configuration, hence no Network Alteration Notice required.
9	**Reliability** The Shell Company is recognised as a leader in global lubricants.
10	**Maintainability** Same as current Track Maintenance procedures for existing lubricators.
11	**Approval** * Shell GADUS Curve Grease is approved system wide.
12	**Conditions of Approval** * 1. Installation and maintenance is to be in accordance with manufacturer's instructions. 2. Job Safety Analysis to be carried out prior to use and appropriate PPE utilised. 3. Corridor to ensure excessive grease does not contaminate ballast, drainage or top of rail.

13	**Does the Originator accept the additional Conditions of Approval as set by the Review Panel:**	Yes	☑	No	☐	N/A	☐

14 **Sign off** ***ARTC office use only***

Review Panel:

John Furness	On File	Date:	24 January 2013
Wayne Olsen	On File	Date:	23 January 2013
Jessica Tai	On File	Date:	23 January 2013
Denis Snowden	On File	Date:	21 January 2013