Sandy Point Refinery

Biodiesel Unit Handover Report

From: Maria Rodriguez (Day Shift)

To: Jake Thompson (Night Shift)

Date: September 18, 2024

Time: 1900 hours

1. Triglyceride Tank K-901 Issue Resolution:

- Clog successfully cleared by maintenance team at 1100 hours

- Root cause: Solidified fatty acids near outlet valve

- Current status: Tank level stable, feed rate normalized

- Action: Monitor tank level closely for next 24 hours

2. CSTR Reactor R-901 Status:

- Operating at optimal conditions

- Reaction temperature: 60°C (within range)

- Pressure: 2.1 bar (normal)

- Catalyst concentration adjusted to 1.2 wt% to improve conversion

3. Biodiesel Separator SP-94:

- Performance stable throughout the shift

- Separation efficiency: 98.5% (above target of 98%)

- Glycerol byproduct purity: 92% (within spec)

4. Methanol Feed System:

- K-902 level at 78% (sufficient for night shift)

- Feed rate adjusted to 120 L/h based on triglyceride composition

5. Product Quality (S-23):

- 1000 hours sample: Within specifications

- 1400 hours sample: Slight increase in water content (450 ppm, limit 500 ppm)

- Action: Increase residence time in dryer by 5%

6. Equipment Status:

- All pumps and heat exchangers functioning normally

- Inline filter F-201 differential pressure increasing gradually

Action: Schedule replacement for tomorrow's day shift

7. Safety and Environmental:

- No incidents reported

- Methanol vapor readings at 15 ppm (below 25 ppm limit)

- All effluents within permitted discharge limits

8. Upcoming Tasks for Night Shift:

a. Continue monitoring K-901 level and outlet flow

b. Take biodiesel samples at 2200 and 0400 hours

c. Adjust dryer parameters as needed to reduce water content

d. Prepare for catalyst batch change in R-901 scheduled for tomorrow

e. Monitor methanol storage (K-902) temperature due to expected cold front

9. Production Targets:

- Current production rate: 45 m³/day

- Target for night shift: Maintain 45 m³/day

10. Miscellaneous:

- New batch of triglycerides expected to arrive at 0600 hours

- Lab reported higher than usual free fatty acid content in incoming feedstock

Action: Be prepared to increase catalyst dosage if needed

Please acknowledge receipt of this handover. Contact me if you need any clarifications or if any issues arise during your shift.

Signed: Maria Rodriguez

Time: 1900 hours