FUEL TRANSFER TO SERVICE TRUCK FROM BULK STORAGE TANK

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The following is a step by step procedure on how to complete a specific task or meet a facility specific requirement. Standard Operating Procedures (SOPs) are written for all identified critical tasks. By virtue of the hazard or complexity associated with critical tasks it is paramount that the SOP be followed as written. SOPs contain a listing of high-level hazards associated with the task, for detailed hazard analysis reference the applicable Task Hazard Assessments. SOPs do not replace the requirements contained in the company Standards, Codes, and Processes nor does it replace the need to comply with required legislation. Section 8.0 references documentation that the worker shall understand before work commences.

1.0 PURPOSE

- To establish a company standard to safely and effectively carry out work as it applies to transferring fuel to a service truck from a bulk storage tank with a wiggins nozzle.

2.0 SCOPE AND APPLICATION

- This document applies to all company Heavy Construction Mining operations. Ensure all site-specific requirements are being met or exceeded before performing the task.

3.0 HAZARDS AND CONTROLS

- Explosion or flammable hazards while working with fuel.
    - Eliminate all ignition sources such as cigarettes, welding, cutting, cell phones, and other non-intrinsically safe devices.
    - No smoking within a minimum of 15 meters of equipment and fuel storage areas. Observe and follow area-specific rules if greater than 15 meters.
    - Use bonding cable/grounding strap or ensure the fuel hose has a device built-in to prevent static charge.

- Splashing fuel on the body.
    - Always wear proper PPE while fueling which includes FR coveralls in addition to standard PPE.
    - Never leave the nozzle with the 90° spout unattended while transferring fuel.
    - Ensure internal balls are properly seated in Wiggins fittings before disconnecting. After unlocking the nozzle, control it when coming off the fitting. If the ball in the receiver fitting has not seated, the fuel will flow around the fitting. The nozzle can be pushed back on to stop the flow.

- Fuel leaking or spilling causing environmental contamination.
    - Use drip trays at all connections.
    - Do not leave the nozzle unattended when connected.
    - Turn off the pump when it is not needed.
    - Store the hose & nozzle properly
    - In the event of a fuel spill, shut off the nozzle and pump. Contain the spill using a spill kit and/or absorbing pads that are found in the service truck or at the fuel island. The spill must be reported to a supervisor immediately.

- Injury when moving fuel hose.
    - Walk forward when moving or carrying a hose. Walking backward puts a great deal of stress on the knees and stepping on uneven ground may strain the knee while under load or cause an ankle injury.
    - Pull the hose off the reel onto the ground. Do not try pulling it off the reel while walking.
- Tripping or slipping on uneven and slippery ground.
    - Ensure there is adequate light for the area.
    - Avoid stepping in ruts or on lumps.
    - Use traction aids in slippery conditions.
    - Do not pull hoses from reels while walking, unwind the hose first then carry it to the work area.
- Slipping and falling while mounting and dismounting equipment or when working on equipment.
    - Follow 4x3 contact rules. Always face the machine when dismounting and mounting.
    - Do not wear traction aids when walking on equipment.
- Uncontrolled movement of equipment while being serviced.
    - Follow 962C-SOP-037 Securing Disabled or Parked Equipment in an Operating Environment.
    - Park equipment on flat, level ground. Ground all implements if equipped.
    - Follow 950C-C-028 Hazardous Energy Isolation Code for lockout/tag out.
    - Wheel chocks must be placed on all rubber-tired equipment. This includes service trucks.

4.0 CHECKLIST

- ☐ Attend all preparatory meetings (IE: daily PSI; job scope; review of JSA's and SOP's for the job)
- ☐ Complete FLRA cards before starting the work.
- ☐ Ensure all personnel involved in the task are aware of the hazards and the controls to be used, as identified in the SOP's; JSA's; and FLRA's.
- ☐ Conduct a pre-job inspection of all equipment to be worked on and tools to be used.
- ☐ **Standard of Training required for working on this job: On-the job training.**

5.0 DEFINITIONS

5.1 Company

Means North American Construction Group Ltd. (NACG) and all directly or indirectly owned subsidiary companies, including joint ventures.

5.2 Company Personnel

Includes the Company's employees, officers, directors, agents, associates, consultants/contractors, temporary employees and third party processors.

5.3 HSE

Refers to the Health, Safety & Environment department.

6.0 PROCEDURE

1) Complete hazard assessment (i.e. FLRA) for task. Notify supervision if unsure of task or if there are hazards outside of the worker's control.
2) Complete a pre-use inspection of all equipment and tools to be used. Tagout and remove from service any damaged or defective tools and equipment. Notify supervision.
3) Shutdown equipment and isolate all hazardous energy. Install wheel chocks on service truck.
4) Confirm there are no sources of ignition within 15 m.
5) If required, attach a grounding strap to the service truck.
6) Place spill tray at hose connection and potential spill points.
7) Remove the receiver cap and clean around the receiver using a rag.
8) Pull the hose out and walk towards the service truck.
9) Pull back on the actuator, remove the receiver cap, and connect the nozzle to the receiver.

    (i) **Connecting a Wiggins nozzle –** ensure that the Wiggins nozzle is positively mated to the receiver prior to opening the valve. Open the valve that is between the receiver and the tank.

10) When fueling is complete, close the valve behind the receiver, remove the nozzle from the receiver and replace the receiver cover. Allow the nozzle to drip into the spout rather than on the ground.

    (ii) **Disconnecting a Wiggins nozzle** – close the ball valve behind the receiver, remove the nozzle from the receiver and replace the receiver's cover. Note: When disconnecting the nozzle from a Wigging's receiver, disconnect the nozzle slowly to ensure the check valve is properly seated in the receiver on the fuel cell. If the ball inside the check valve does not seat properly, fuel will discharge when the nozzle is removed.

11) Do NOT overfill the tank.

    - The service person must stay with the truck while it is being filled.
    - Regularly monitor the fill gauge on the tank and/or the site glass at the back.
    - Stop the fill at no more than 80%.

12) After filling:

    - Return the fuel hose to its proper storage location.
    - Hang the nozzle and ensure it will not fall to the ground.
    - Place a drip tray under the nozzle.

13) Properly dispose of all absorbent pads and return spill trays to their proper storage.
14) Remove wheel chocks and locks.

7.0 NOTES

If this task is to be done by a method different than described in this SOP, the work must **STOP** and the alternate method must be **DOCUMENTED** with an adequate hazard assessment tool such as a JSA. The document must be **APPROVED** by a supervisor before such procedures are implemented.

8.0 REFERENCES

- Alberta Occupational Health and Safety Act, Regulation and Code – {Part 19 Section 279}
- 950C-C-020 Flammables and Combustibles Storage and Handling Code
- 950C-C-028 Hazardous Energy Isolation Code
- 960C-SOP-200 Fueling of Diesel and Gasoline Powered Equipment
- 960C-SOP-212 Field Servicing of Equipment
- 960C-SOP-019 Slip, Trip and Fall Hazard Prevention

9.0 APPENDICES

- Appendix A – Example of Wiggins Nozzle

Appendix A Example of Wiggins Nozzle

Wiggins Nozzle