

APPENDIX A
BEST MANAGEMENT PRACTICES AND PROCEDURES

FLUID TRANSFER GUIDELINES

The following information on personnel safety and safe handling procedures for fluid transfer protocol follows the best management practices (BMP) of North Slope Operations as compiled from the *Alaska Safety Handbook* (2002). Information on the use of surface liners and drip pans is a jointly issued Unified Operating Procedure (UOP), summarized from the *North Slope Environmental Handbook* (May 2001).

OBJECTIVE

The objective of the Fluid Transfer Guidelines is to establish minimum requirements to protect the safety and health of employees when using vacuum and tanker trucks to transfer flammable and combustible fluids to or from non-permanent facilities. The objectives are to ensure that:

- Vacuum trucks shall never be directly hooked-up to pressurized lines or vessels. Tanks are not considered pressure vessels. Fluids discharged from pressurized sources are to be flowed into tanks rather than directly to the vacuum unit.
- Equipment used during transfer of flammable and combustible fluids meets applicable safety requirements.
- The layout of equipment adequately separates potential ignition sources from potential sources of flammable or combustible vapors or liquids, and provides for personnel egress.
- All personnel involved in transfer operations use appropriate precautions for handling flammable and combustible fluids.

EXCEPTIONS

Equipment fueling operations, permanent loading and unloading facilities (e.g., bulk fuel loading dock, oily waste, recycle facilities, and fixed chemical tanks), pumping fluid into a well, flowline, or other permanent facility, or routine use of a drill site or well pad bleed tank will continue according to established safe operating procedures.

RESPONSIBILITIES

Vehicle Contractor/Operator. Ensure proper training, safe operation, and maintenance of their equipment.

Company Representative. A Company Representative shall perform the following pre-job checkout before the start of any flammable or combustible fluid transfer to or from a non-permanent facility. If a particular situation cannot meet specifics of the following requirements, the Company Representative will take appropriate steps to safeguard personnel and equipment.

- Inspect the site of the loading and unloading operations. If a Contract Foreman will supervise the work, conduct the site visit with the Contract Foreman. Conduct a pre-job safety discussion and a job scope review, including the potential hazards of the work and emergency procedures, with all participants.
- Survey the truck and equipment to assure compliance with the policy criteria.
- Review loading positions, emergency escape routes, and fire lanes.
- Complete a pre-job safety meeting identifying potential hazards and escape routes. Identify a minimum of two emergency exit paths leading away from the transfer area for personnel

egress. At least two exit routes must be unobstructed with a minimum width of 5 feet and should be established perpendicular to the prevailing wind direction.

A Company Representative shall perform the following:

- Review the wind direction relative to the trucks and equipment layout. Monitor the prevailing wind conditions so any potential sources of hydrocarbons are kept at least 25 feet downwind of any potential ignition source.
- Locate the inlet and/or outlet piping (truck connections) and truck-mounted fluid pumping equipment 25 feet or more downwind from any potential ignition source on the site or on the back of the truck.
- Ensure the trucks and/or tank involved in the transfer are separated by at least 25 feet.
- Review positions of fire extinguishing equipment and ensure the operator is trained in its proper use.
- Maintain a minimum unobstructed pathway of 20 feet for fire and emergency vehicle access to the transfer area.
- Assure continuous electrical bonding between transfer equipment.
- Use the Unit Work Permit with the checklist on the back for all operations covered by this policy when a Company Representative is not present for the entire transfer.
- When venting at low ambient temperatures, there is potential for the vented gas to condense and possibly freeze off the vent and check valves. Ensure that when applicable, the operator monitors the condition and takes appropriate actions to mitigate the hazard.
- Test the means of communication for proper function.
- Ensure flammable and combustible fluids to be vacuumed are at least 40 degrees below their flash point.
- Liquid flash point measurement will be required for vacuumed operations as warranted by the Company Representative. Frequent tests are suggested, especially where the material may not be homogeneous.

A Company Representative shall ensure the North Slope Unified Operator Procedure on the use of drip pans/surface liners is followed for environmental protection, as described below.

NORTH SLOPE FLUID TRANSFER GUIDELINES

Note: SAFETY is the first and foremost goal in all operations, including the transfer of all fluids. It is EVERYONE'S responsibility to ensure all related safety and environmental guidelines are being followed at all times.

- 1) Check all vehicles and/or equipment. Ensure that it has been properly maintained and that there are no leaking parts. If your vehicle or equipment does not appear to be in proper order and leaks are apparent, stop the job and have adequate repairs done. In accordance with field operating procedures, a surface liner may be used for a short period of time under critical use equipment.
- 2) Stage vehicles away from water bodies, tundra and wildlife habitats. Staging or parking of vehicles and equipment in off-pad locations or on-pad edges should be avoided whenever possible.
- 3) Position equipment so that valves, piping, tanks, etc., are protected from damage by other vehicles or heavy equipment.
- 4) Verify that adequate secondary containment and absorbent pads are on hand. Use according to published field operating procedures.
- 5) Before starting any fluid transfer operation, inspect all hoses, connections, valves, etc. Ensure that these items have been properly maintained; gaskets are present and in good shape; all valves are checked to verify they're in the proper on/off position, and that each connection is tightened properly.
- 6) Prior to the actual fluid transfer, check all tank and container levels, valves, and vents to prevent overfilling or accidental releases.
- 7) Use secondary containment under all appropriate connections, vents or any other likely source of spillage. Use as many secondary containers as are practical, or as are required per the published field operating procedures.
- 8) Upon starting the transfer of liquids, keep line of sight with operator and/or all connections, hoses, vents or any other likely source of spillage. Be prepared to stop proceedings if any leak is noticed. Do not attempt to repair a leaking situation while fluid is being transferred. Stop operations to fix leaks.
- 9) Maintain a constant line-of-sight with critical components throughout the transfer. Transfer operations must not be left unattended.
- 10) After transfer is complete, take every precaution while breaking connections. Secondary containment and absorbent pads must continue to be used until the rigging down process is complete.
- 11) Check all tank and container levels after each transfer for signs of spills. Immediately report all spills to the Field Environmental group in your area.