

STANDARD OPERATING PROCEDURE

Marine Vessel Launching Procedure		Document Number: 961C-SOP-004
Original Approval Date: MAY 30, 2017	Revision Number: 3	Page 1 of 6
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MARINE VESSEL LAUNCHING PROCEDURE

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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 launching a marine vessel.

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

- Lack of communication.
 - Ensure that all involved in the task review and sign off on the FLRA.
- Personal injury, drowning, hypothermia, contact with pond water, entanglement, lifting, strains.
 - Rescue vessel, trained rescue workers, life ring, personal floatation device/life jackets, marine survival suits (water temp and weather will determine), guard rails, active control zone, or work halted until clear of area.
 - Training MedA3.
- Asset loss/damage, contact with pond water, stress.
 - Bailing device/bilge pumps, deploy marker buoy, radio communication, signaling device, rescue vessel, trained rescue workers, personal floatation device/life jackets, marine survival suits (water temp and weather will determine), minimal wake from larger vessels around smaller vessels, Training MedA3, weather observation.
- Collision, contact with pond water.
 - Clear/confirmed radio communication, assigned radio channel, fenders for mooring to other vessels, signalers when working in close proximity, minimal wakes, restrict work with visibility, weather observation.

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- Exposure to elements, asset loss/damage, hypothermia.
 - Radio communication, signaling device, secondary means of propulsion, personal floatation device/life jackets, marine survival suits (water temp and weather will determine), Preventative maintenance program.
- Smoke inhalation, man over board, asset loss/damage.
 - Appropriate size and number of fire extinguishers, fire suppression (qualifying assets), rescue vessel, trained rescue workers, personal floatation device/life jackets, marine survival suits (water temp and weather will determine), Training, MedA3, extinguisher.
- Complications to injury or condition, loss of life.
 - Emergency response procedures, trained first aiders, rescue vessel, trained rescue workers.

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

6.1 Launch Procedure Using Trailer

1. Haul boat to the ramp of the pond. Remove any straps and other securing devices except the safety chain and trailer winch hook on the front of the boat.
2. Don as required, the approved PFD/Lifejacket and PPE.
3. Back the trailer (with boat) down the ramp until the trailer wheels are just about ready to enter the water.

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4. Stop the vehicle and trailer, secure the vehicle from movement and complete a walk-around of the vessel deck area ensuring all tripping hazards are removed and materials being stored on deck are correctly secured. Where applicable, ensure bilge plug is in place and secure.
5. Remove the safety chain and trailer winch hook from the front of the boat. Ensure there's a bowline from the bow of the boat to the trailer.
6. Back the trailer into the water as far as safely possible, or until the back end of the boat begins to float.
7. Secure boarding device to the vessel. Crew will access the vessel.
8. Crew will conduct a pre-use inspection of the vessel and pre-start procedure.
9. Crew will start the vessel and make preparations to reverse the vessel from the shore.
10. When the crew are satisfied the vessel is operation and the area is safe, they will notify shore personnel to release the bow line from the trailer.
11. Crew will reverse the vessel away from the shore.

6.2 Extraction Procedure (Using Trailer)

1. Back the trailer down the ramp as far as safely possible. It is useful to have the rollers closest to the front of the trailer just visible above the water surface.
2. Slowly drive the boat towards the trailer. Adjust for wind as needed.
3. Have a spotter near the trailer help guide the boat so the channels under the hull line up with the center of the trailer.
4. Spotter will ensure the vessel is lined up and securing straps / lines are ready for use.
5. As the boat contacts the trailer, accelerate slightly to assist the vessel position. USE CAUTION to avoid damaging the front end of the boat or trailer.
6. Keeping the boat in forward gear in low throttle, attach the winch clamp to the front of the boat and winch boat to touch the front stopper.
7. Shut down all engines and lockout equipment.
8. Attach the safety chain and support the sides of the vessel in the trailer.
9. Drive trailer to a safe area and secure the vessel for travel.

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6.3 Launching Procedure Using Crane

1. Crane operator and Truck Operator are responsible to drive the boat (on its trailer) to the desired pond. The area will be designated and communicated to them by supervision. Crane Operator is responsible for making sure the lifting pad is safe and adequate for the lift. They are responsible to consult each other regarding where to park for their access to the boat and pond.
2. Complete a walk-around of the vessel deck area ensuring all tripping hazards are removed and materials being stored on deck are correctly secured. Complete all pre-start checks as defined.
3. Crane Contractor and/or qualified rigger(s) will connect slings, hooks, shackles, and other lifting equipment to designated lifting lugs on the vessel.
4. Connect bow / stern line to the vessel for the purpose of securing the vessel once it is placed in the water.
5. Trucking Contractor and/or qualified rigger(s) will remove all securing devices from the vessel to trailer and ensure required tagline(s) affixed.
6. Crane Contractor will carefully lift and deposit the vessel into the pond, being sure nothing damages the prop/leg.
7. Crew will secure the vessel to the shore/dock using the bow and stern lines.
8. Crew will access the vessel using the dock / shore / walkway or other approved method (Skiff). All crew members will use approved PPE (PFDs).
9. Crew will unshackle/release the vessel from the lifting device.
10. Crew will inspect the vessel including pre-use and pre-start checks.
11. Crew will move the vessel to another location or predetermined mooring area as directed.

6.4 Extraction Procedure (Using Crane)

1. Crane operator and truck operator are responsible to drive the trailer to the desired pond. The area will be designated and communicated to them by supervision. Crane Operator is responsible for making sure the lifting pad is safe and adequate for the lift. They are responsible to consult each other regarding where to park for their access to the boat and pond.
2. Crew will secure the vessel to the shore / dock using the bow and stern lines.
3. Crew will shut down all engines and lockout all equipment. Crew will inspect the vessel to ensure it is prepared for lifting and transport.
4. Crew will connect the vessel using to the crane using approved lifting devices and tagline(s) under the direction of the Crane Operator / Rigger.
5. Crew will exit the vessel and the pond using an approved method.

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6. Crane Contractor will carefully lift and remove the vessel from the pond, being sure nothing damages the equipment and position the vessel on the trailer deck under the direction of the Trucking Contractor and/or rigger(s).
7. Trucking Contractor will attach all securing devices from the vessel to trailer.

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 7, Section 115-118 Emergency Preparedness and Response}
- Alberta Occupational Health and Safety Act, Regulation and Code {Part 18, Section 240-241 Life Jackets and Personal Flotation Devices}
- 950C-C-033 Inclement Weather Code

9.0 APPENDICES

- No appendices.