Executive Summary
The Nanisivik Naval Facility Construction Project

In 2007, the Prime Minister announced plans to increase Canadian military presence in Arctic waters, to assert and enforce Canadian sovereignty. To meet this commitment, DND has initiated the Arctic/Offshore Patrol Ships (AOPS) project. In support of the AOPS project, the Nanisivik Naval Facility (NNF) is being built to support patrolling naval vessels in Arctic waters during the navigable season. The NNF consists of a deep-water berthing and refuelling station to serve the AOPS, the Royal Canadian Navy and other government vessels during the navigable seasonin the Northwest Passage.

The construction of the Nanisivik Naval Facility, a deep water berthing and refuelling facility, will begin in July or August 2014 when a construction contract will be awarded to a contractor. The majority of work will be carried out in 2015-2019, with the commissioning of the equipment and de-mobilization of the contractor in 2020.

WHARF

The existing Wharf structure will be used, as is, with very minor improvements to maintain or improve its functionality. As such, very little work will be carried out in or near the water and there will be no dredging or pile driving. Upgrades will include corrosion protection and standard wharf hardware such as removable foam-filled fenders, bollards, lighting, ladders, bull rails, safety equipment, spill booms, flag mast, wind sock and other required amenities to meet applicable codes and DND standards.

CARGO STAGING AND MARSHALLING AREA

An existing area of approximately 8,000 m2 located southwest of the Wharf will be graded and local aggregate material will be placed to establish the Cargo Storage and Marshalling Area. In addition, a secure laydown area will be provided in the fenced Bulk Liquids Storage Facility.

BULK LIQUIDS STORAGE FACILITY

Earthworks will be required to construct the Bulk Liquids Storage Facility, which will contain the naval distillate and diesel storage tanks, the POL(Petroleum, Oil, & Lubricants) storage area, generators and the electrical house, the general purpose storage building and a secure laydown area. Containment berms will be constructed around the perimeter of each tank and the POL storage area. Each naval distillate tank will have a separate containment cell while the diesel tanks will both be located within the same engineered steel containment dike. An arctic-rated geomembrane liner will be installed inside the containment cells and dike and covered with compacted gravel. A 3 m high security fence will be installed around the perimeter of the Bulk Liquids Storage Facility (approximately 800 m^2).

Pipelines will be constructed to deliver naval distillate from the Wharf to and from the Bulk Liquids Storage Facility, and to transfer diesel from the Wharf to the Bulk Liquids Storage Facility. Precast or cast-in-place concrete foundations for the pipelines will be placed on compacted crushed aggregate at grade. Pipelines will be welded, coated and placed on the foundations.

Prior to commissioning, hydrostatic testing of the pipelines and storage tanks will be conducted. All pipelines and storage tanks will be grounded.

BUILDINGS

An unheated general purpose storage building, which will consist of a stick-built, steel frame structure on a concrete foundation, will be located within the fenced Bulk Liquids Storage Facility. The steel frame will be pre-fabricated in southern Canada and shipped to the site for assembly. The general purpose storage building will be used for light repair work and storage. A wharf operator shelter, located at the Wharf, will consist of a skid-mounted module with viewing windows on three sides. Minor upgrades may be required to the three existing DND trailers on-site. Two of the trailers will be used to support on-site personnel during fuelling operations and the third trailer will be used for utilities.

HELICOPTER LANDING AREA

The Helicopter Landing Area will consist of a large, marked flat area, free of obstruction, located at the north end of the existing concrete slab. Fuel transfer will occur through the use of a portable hand pump.

POWER GENERATION

Power generation will be required for fuel pumps, various heaters, motor-operated valves/instrumentation, the general purpose storage building, wharf operator shelter, DND trailers and for area lighting during fuelling operations. Two self-sufficient redundant generator modules will be the design basis for the power plant located within the fenced Bulk Liquids Storage Facility. Generators will only operate when the site is occupied.

LIGHTING

Lighting will be installed on 10 to 15 m high poles at the Wharf and on tanks at the Bulk Liquids Storage Facility. There will be no lighting on roads.

ARCTIC OFFSHORE PATROL SHIPS (AOPS)

The specific operations of the AOPS vessels are not known at this time because the first ship will not begin operations until the Arctic shipping season in 2020. Based on current plans, two AOPS vessels will conduct operations in the North during the shipping season (approximately early July to early October). When in operation, the Royal Canadian Navy, using current practices that the Joint Task Force North has in place for the conduct of operations by DND and Royal Canadian Air Force in the north, will advise and consult with regulatory agencies and other stakeholders beforehand. It should be noted that Nanisivik and the waters of the area will not be patrolled any more or less than other regions of the Arctic. The main purpose of AOPS visiting the Nanisivik area is for refuelling, and it is expected that they will leave port shortly thereafter.

AOPS vessels will visit the facility four to ten times per deployment. In terms of actual operations at sea, most of the time AOPS vessels will not operate in the vicinity of the facility unless coming to refuel. Operations at sea will mostly be limited to Baffin Bay, the Beaufort Sea, Lancaster Sound and Hudson Bay with occasional planned visits to Arctic communities for community relations and other types of support operations. At present, only two ships will deploy to the Arctic for the shipping season, and in many cases they will operate in the vicinity of Canadian Coast Guard icebreakers operating in the Arctic. These at-sea operations will take place from July to early October in areas where the ice coverage is minimal or receding.

For patrol and other operations, there are established processes for the deployment of ships into Arctic waters that satisfy the requirements outlined in the Nunavut Land Claim Agreement, resources and self-government agreements, as well as ensure compliance with federal and territorial environmental legislation. The Nunavut Land Claim Agreement contains access provisions that require notification prior to the conduct of activities in their settlement regions, as well as engagement. All ship movement and activities will be incorporated into the current process used by Joint Task Force North for the deployment and operations conducted by DND and Canadian Air Force in the Arctic. DND currently provides detailed notification and consultation for all northern activities and operations. As the Project is focused solely on infrastructure, at a minimum the ships will abide by the Standard Operating Procedures (SOPs) and regulations already in place for ships operating in the Arctic.

When AOPS are deployed in the Arctic, AOPS ships will support search and rescue operations and emergency response to incidents such as oil spills on an as-required and as-available basis. The Canadian Coast Guard will be the lead on any search and rescue operation; however, support will be provided to them by the Navy should it be required / requested.