WARDROP

Procurement and Logistics for Remote Site Locations

by Mike Shamro

Remote site locations face many challenges in becoming successful and profitable operations. Whether it is a diamond mine in the high Northwest Territories (NWT) or a nickel mine along the Labrador coast in eastern Canada, they share the same challenges.

As there is no road to these sites allowing year-round access, the only access (other than air) during certain times of the year is by land, ice or sea. Air is not a viable option for construction or operating supplies due to the high cost and size limitations. It is, however, used year round to fly personnel to and from the sites and bring in food supplies and emergency supplies for construction or operations.

In the NWT, it is during winter when the lakes are frozen to a depth that allows truck transport over them, that supplies are brought to the site. Along the Labrador coast, it is during the summer after the ice has melted, that ships and tugs with barges can transit these remote sites.

In either case, the principles are much the same. You must have a bullet proof Procurement and Logistics plan in place to ensure the successful development and operation of the project. Scheduling, execution of purchase orders, and timely delivery of equipment and materials are keys to success. Staging areas are established at strategic locations to minimize the distance to the final destination allowing the trucks, ships, and tugs and barges to cycle back to the staging area to reload and return to site. Under normal circumstances equipment and materials would be delivered to the staging areas by truck or rail in advance of the onset of the shipping season.

In the NWT, the shipping season along the ice road normally runs from early February, starting with light loads to help build the ice thickness, to the end of March where the last two weeks would normally see the heavy loads go up. The route takes you across frozen lakes (approximately 70% of the distance) and portages (land crossings) to the various mines ranging in distance from 300-600km from the staging areas. The road is maintained and operational 24 hours per day and is also patrolled by security enforcing the speed limits along the road (25km/hr on the lakes and 15km/hr on the portages). High speeds can damage the ice and portages shortening the life of the road, so obeying the rules of the road are extremely important. The ice road running north from Yellowknife can get up to 9,000 loads per season with some sites taking in excess of 4,000 loads.

Along the Atlantic coast, the shipping season normally runs from early July through to the end of November where the waters in most parts are ice free with the exception of the occasional iceberg. As for any remote sites, it is important to have a strategic staging area...in this case a port facility with adequate lay down area to accommodate the goods being transported. There are a number of these along the upper St. Lawrence that have good road and rail access for the delivery of goods to the staging area. With a sailing time of approximately five days for a ship and eight days for a tug and barge to reach these sites, having 40+/- sailings in the season, considerable resources are required to ensure that nothing is left behind.

Should any item critical to the construction schedule miss the shipping season and is too large or heavy to airlift, the consequence could have a significant impact on the scheduled start up date of the plant.

In summary, the keys to success are:

- Have a bullet-proof plan
- Execute the plan accordingly
- Have a good contingency plan
- Assemble a great team to work with you