

**TABLE 4-24
ALTERNATIVE 4 - ESTIMATED TRANSPORTATION REQUIREMENTS, TWO SEASONS**

Project Activity	Transported Items	Transportation Method ¹ (by number of round trips)					Comments
		Bus	Barge	Boat	Helicopter	Truck	
Island Construction							
Manufacture Concrete Mats	Personnel, Cement, Aggregate, and Supplies	120				250	Mobilize personnel via bus locally in Deadhorse daily. Local trucking from Deadhorse yard to block plant with aggregate and water. Haul Road trucking from Fairbanks and Anchorage with permanent materials.
Ice Road Construction	Personnel, Heavy Equipment	150				125	Mobilize personnel via bus from Deadhorse to job site daily. Local trucking from Deadhorse yard to job site with equipment and supplies.
Island Construction	Personnel, Gravel, Heavy Equipment	300				30,500	Mobilize personnel via bus from Deadhorse to job site daily. Local trucking from Deadhorse yard to job site with equipment and supplies, Haul Road trucking from Fairbanks and Anchorage with permanent materials. Haul approximately 15,000 cy of gravel per day from mine site to Seal Island.
Install Island Piling	Personnel, Sheet Pile, Foundation Piles, Concrete Footings				360	75	Mobilize Personnel via helicopter from Deadhorse to job site daily. Truck supplies from Anchorage/Fairbanks to North Slope via Haul Road, then to Seal Island by ice road.
Install Island Slope Protection	Personnel, Concrete Blocks, Filter Fabric, Hardware		45	10	440	175	Mobilize personnel via helicopter from Deadhorse to job site daily, via boat during bad weather. Barge supplies in July to August from West Dock to Seal Island. Truck fuel and supplies to West Dock for shipment by barge.
Pipeline Installation							
Install Road and Caribou Crossings	Personnel, Materials, Heavy Equipment	100				64	Mobilize personnel via bus to/from the job site. Truck trips required for transporting equipment and supplies to/from the job site.
Install Offshore Pipelines	Personnel, Materials, Heavy Equipment, Consumables	985				384	Mobilize personnel via bus to/from the job site. Truck trips required for transporting equipment and supplies to/from the job site.
Install Onshore Pipelines	Personnel, Materials, Heavy Equipment, Consumables	837				762	Mobilize personnel via bus to/from the job site. Truck trips required for transporting equipment and supplies to/from the job site.
Module Installation							
Infrastructure Installation	Personnel, Heavy Equipment, Consumables/Tools, Construction Materials, Fuel/Start-up Materials	360	5	50	900		Mobilize personnel via bus, then boat or helicopter, to job site daily. Infrastructure installation will require 2 local barge trips and 1 barge trip from Anchorage. Barges will transport materials between Anchorage and/or West Dock and Seal Island.

**TABLE 4-24 (Cont.)
ALTERNATIVE 4 - ESTIMATED TRANSPORTATION REQUIREMENTS, TWO SEASONS**

Project Activity	Transported Items	Transportation Method ¹ (by number of round trips)					Comments
		Bus	Barge	Boat	Helicopter	Truck	
Module Installation (Cont.)							
Process Facilities Installation	Personnel, Modules, Fuel/Start-up Fluids	120	6	20	240		Mobilize personnel via bus, then boat or helicopter, to job site daily. Same heavy equipment as used for infrastructure installation and will require 2 barges from Anchorage.
Drilling							
Drilling Mobilization	Personnel, Drill Rig, Drilling Materials and Supplies				30	280	Assume one helicopter trip per day for drilling personnel. Drill rig and associated buildings require 5 to 6 local barge trips. Approx. 4 months of supplies will require 15 to 16 local barge trips.
Drilling Resupply	Personnel, Drilling Materials and Supplies		15				Personnel already housed on island. Approx. 4 months of supplies will require 150 to 200 truck trips. Subsequent biannual resupply (Feb to April by ice road, Aug to Sept by barge). During the first year of drilling, diesel fuel would be obtained via trucks from Prudhoe Bay, or from other instate refineries via trucks and/or barges or from Canada via barges.
Operations/Maintenance Activities							
Ice Road Construction	Personnel, Heavy Equipment	30				50	Mobilize personnel from Deadhorse. Water haul and blade to condition road.
Operations Staff, Pipeline Recon, and Rotating Equipment Maintenance	Personnel, Commodities, Supplies	60	50	50	84		Transportation of staff and consumables via bus over ice road during winter and by helicopter and/or barge/boat during open water season.
Logistics Resupply	Heavy Equipment, Chemicals, Parts, Materials		3			50	Annual resupply by barge during open water season and by truck during winter over ice road.
Island Grading and Slope Protection Maintenance	Graders, Tractors, Cranes		3				Heavy equipment to re-grade island and potentially add gravel.

Notes: 1 = Transportation methods reflect maximum total estimated round trips during noted period.
 cy = Cubic yards

Source: Hanley, 1997b:Attachment 4