

Offshore Facilities

A dock facility will be constructed offshore to provide tide independent barge off-loading services to support the Chuitna Coal Project. The facility would be located approximately 450 feet offshore from the mean high water line and consist of a bulkhead island approximately 350 feet by 400 feet in size. Access from the uplands facilities area would be by a pile support bridge designed for use by heavy load lowbed tractor trailer and forklift equipment. The island would be constructed so that barges could be secured on the end and both sides for off-loading supplies and materials. The facility is designed as an open cell fill dock that utilizes sheet piles driven with a vibratory hammer. The open cells are filled with aggregate to form the surface of the dock area.

Upland Facilities

The use of Ladd Landing Logistics Center facilities is based on the overall Chuitna Coal Project activities for both initial construction and steady-state operations beginning in 2008 through the end of mine life. These facilities would include the following:

- Warehouse and Office Building
- Open Bulk Storage and Laydown Area
- Bulk Fuel Transfer and Storage Tanks
- Vehicle Wash Facility (Wash Bay)
- Septic Tank and Drain Field
- Water Well, Tank and Distribution System
- Drainage and Sediment Control System
- Security Fence and Gates
- Area Lighting
- Snow Storage Area

A description of each of these items is included below.

Warehouse and Office Building

The Ladd office/warehouse facility consists of a pre-engineered metal building. The building frame is designed for the wind, rain, snow, and ice loading of the local climate. Dry goods and re Fridgerated storage would be provided for containers.

Open Bulk Storage and Laydown Area

Repair parts that do not require storage in a controlled environment will be stored in a prepared open laydown area. These items include tires, large repair parts such as gearing, shafts, drives/reducers, sprockets, pulleys, tracks, buckets, teeth, wire rope, and related items. The laydown area is lighted and surfaced with an all-weather gravel material for year-round use. Where necessary to address snow accumulation, some covered storage

will be provided for small parts and supplies so that they could be accessed during winter time after significant snow accumulation

Bulk Fuel Transfer and Storage Tanks

Diesel fuel is a significant consumable for the Chuitna Coal Mine. The off-loading, transfer, and storage facility is sized to receive bulk fuel barge quantities from barges and provide adequate storage during short periods when weather conditions prevent shipments. The system includes pumps and transfer pipelines to three 1 million liter capacity tanks. Fuel is transferred by pipeline and pumped into a fuel tanker truck for transport to interim storage at the Chuitna Coal Mine on an as needed basis to support mining operations.

Vehicle Wash Facility (Wash Bay)

The wash bay will consist of a pre-engineered building and a closed loop water containment and recycling system. The water system includes a method to remove excess water from the system and would utilize oil separation to control loss of petroleum products from the closed loop into the surface water system. Petroleum contaminated solids would be removed periodically based on accumulated volume and hauled to the Chuitna Coal Mine for disposal. Disposal would be in the mine backfill or at a land application site designed and permitted for treatment of petroleum contaminated soil. Petroleum (oil and grease) contaminated water would be contained and collected for transport to the Chuitna.

Septic Tank and Drain Field

Treatment and disposal of sanitary water from the facilities would be completed utilizing a buried septic tank and drain field. The drain field would be constructed with sized gravel material as required to control percolation rate into the subsurface. The facility is sized to accommodate approximately 15 personnel.

Water Well and Tank and Distribution System

- a. The water well would be installed to approximately 100 feet of depth to recover groundwater from the aquifer contained in the glacial drift that covers the facilities area. Water will be pumped from the well and filtered prior to transfer into the storage tank. Water from this tank would be used for potable purposes and treated as required by health department requirements. The water system will also provide fire control to the facilities.

Drainage and Sediment Control System

Surface run-off from rainfall and snowmelt within the affected area of the facilities would be routed to two sediment control structures. The primary purpose of these structures is to control suspended solids to the extent required for meeting National Pollution

Discharge Elimination System (NPDES) permit discharge limitations. These ponds will be designed for achieving these water quality requirements and may be multiple cells for possible addition of flocculants or other treatment methods. The structures will be designed to meet the regulations of the Alaska Surface Coal Mining Program and Mine Safety Health Administration (MSHA).

Security Fence and Gates

The site will be fenced to control access to all facilities in the Ladd Logistics Center area. Gates to the adjacent public access roads will be provided for ease of entrance to the facility and will be controlled by the project dispatcher.

Area Lighting

- a. Permanent facilities area lighting will be provided for ease of operations during the fall, winter, and spring seasons when available daylight hours are low. Lighting also provides for safe operations and security of the site.

Snow Storage Area

As snow accumulates in the site during the winter season, removal for efficient operation will be required. Snow storage areas provide a place to dispose of the snow where meltwater can be collected for routing through sediment control structures. Two sites have been selected for this purpose.

Operations

The Ladd Landing Development would be operated on a 24 hour per day 7 days per week basis throughout the year to receive and transfer all materials and supplies needed for the Chuitna Coal Project operations.

Manning

Personnel requirements for Ladd Landing Development will be limited to operators, warehouse technicians, and supervisory classifications. Operators will be scheduled for delivery of supplies and materials on a twice daily basis to the Chuitna Coal Mine and the personnel housing site. Warehouse technicians will be scheduled on a 24 hour per day basis to remove parts and supplies from inventory and fill requisitions from operations activities of the project. Coordination with purchasing personnel and vendor freight forwarders will be completed to be sure that parts and supplies are received in a timely manner and that personnel are scheduled for arrival of barges for off-loading. Two supervisory personnel would oversee the activities of the facilities to ensure that proper direction is given to site personnel.

Equipment

Mobile equipment units are used for all handling of materials received at the landing. This equipment includes the following:

- 125 Ton capacity truck crane
- 20 Ton rough terrain hydraulic crane
- 20 Ton forklift
- 3 Ton forklift
- Supply Truck (suitable for hauling 6 meter containers)
- Fuel Truck (20,000 liters capacity)
- 2.5 cubic meter front end loader
- Snow plow
- Service truck
- Pickups

This equipment would be available for use on an as-needed basis to off-load materials from barges and transfer to warehouse facilities and/or for transfer to individual project component uses.

Delivery of diesel fuel and other liquid products will be by bulk carrier to the dock. Diesel fuel will be received in bulk quantities and pumped to the facilities storage tanks. Bulk tanks of lubricating oil, gasoline, anti-freeze and other products would be received in container lots and transshipped from the barge to the point of use. Empty containers would be returned to the supplier for re-use.