



# Seward Loading Facility

## FACILITY FACTS

### Facility Scope

The Seward Loading Facility (SLF) is located in Seward, Alaska, at the southern terminus of the Alaska Railroad (ARRC). The 30-year-old facility is located on ARRC land. Its primary purpose is to unload coal from railcars, convey the coal to storage, reclaim coal from storage, and load coal into bulk ships. The loading facility consists of the following major components (*see drawing on page 2*):

- **Railcar dumper facility**, with a pit and unloaders to discharge material (coal/gravel) from hopper cars;
- **Conveying systems** to move coal from the railcar dumper to ships or the stockpile and to move coal from the stacker-reclaimer through a sampling station and onto the ship loader;
- **Stacker-reclaimer** distributes coal from the conveyor to the stockpile and, in turn, reclaims the coal from the stockpile for ship loading;
- **Stationary ship loader** with a conveyor system for discharging coal into the holds of oceangoing bulk carriers; and
- **Two-story office/control building**, a **shop building**, and a **crew breakroom**.

### Coal Facility Operations:

- Average size of coal pile: 90,000 to 95,000 metric tons (MT)
- Capacity of typical coal ship: 45,000 to 75,000 MT
- Trainloads to fill a ship: Each train carries about 6,350 MT, so it takes about 7 to 11 trainloads to fill a ship
- Coal Train Activity: Typically 2-3 trains/week.



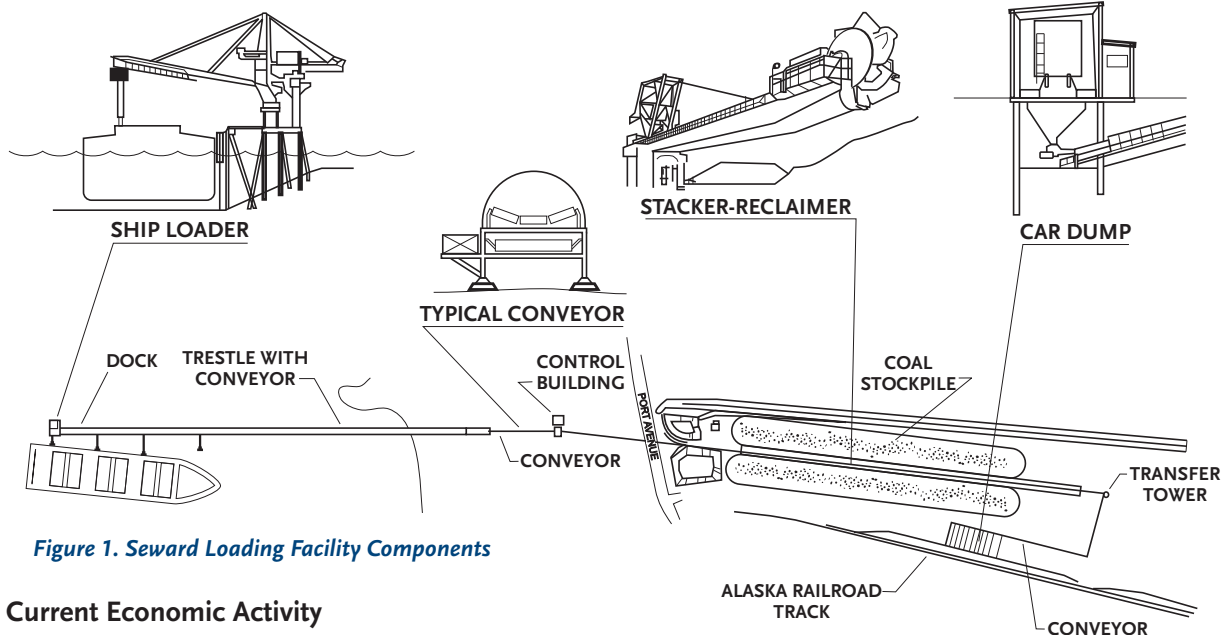
*A coal ship loads at the facility's conveyor-fed dock.*

### Economic Impact

#### Community/State Support of Economic Benefit

The SLF was originally built in 1984 as an economic development project of the State of Alaska with encouragement and political support from the City of Seward and Usibelli Coal Mine. The State was eager to enter into the business of export coal and saw this as an opportunity to engage in the world coal market.

Export coal contracts continued until the early 2000s, when the Korean market declined substantially and nearly disappeared. Depressed coal prices, led by cheap exports from Indonesia, made the cost of Alaska coal too high compared to competing exporters from Indonesia, Australia, China, South Africa and Canada. At the urging of the Seward community and Senator Ted Stevens, the Alaska Railroad received a federal grant to purchase the facility in 2003. This effectively repaid remaining loan debt, and paid for subsequent improvements to enhance facility efficiency. These factors drove down the cost of operation, thus making Alaska's coal more competitive in the global coal market. Essentially, this preserved the export coal business in Alaska.



**Figure 1. Seward Loading Facility Components**

### Current Economic Activity

Today, the SLF remains the only rail facility available to accommodate export of Usibelli’s coal. Recent coal shipments have been destined for Chile, Japan and Korea. Coal-hauling revenues help ARRC recover some of the costs of maintaining the mainline track between Anchorage and Seward.

Coal exported from the facility peaked at more than one million metric tons in 2011 requiring nearly 200 coal trains traveling between the Healy mine and Seward over the course of the year. In recent years, a strong dollar has made U.S. exports less attractive, and export coal volumes hauled by the railroad have declined. For 2015, ARRC expects to haul less than a fifth of the peak volume.

### Employment Impact (2013)

The SLF operation provides good-paying jobs to about 100 Alaskans. Up to 16 full-time Aurora Energy Services employees work at the Seward facility and the Alaska Railroad attributes up to 50-plus jobs to coal export activity. The export coal mining effort in Healy accounts for about 40 jobs.

### Owners & Operators

In the early 1980s, Suneel Alaska Corporation, — the purchaser of the coal for the Korean domestic market — negotiated with the State of Alaska for construction of the coal dock and a loan from the Alaska Industrial Development and Export Authority (AIDEA). The Alaska Department of Transportation & Public Facilities (ADOT/PF) built the dock and Suneel installed the conveyor and loading systems.

The Alaska Railroad’s participation was limited to leasing its waterfront property for the facility and transporting the coal from Healy to Seward under contract with Suneel.

Hyundai Merchant Marine (HMM) succeeded Suneel as the coal purchaser and owner of the SLF in the early 1990s. AIDEA became a co-owner in 1995. HMM continued to operate the facility throughout the 1990s and into the early 2000s.

After ARRC purchased the facility with a federal grant in 2003, HMM remained the operator through a lease agreement with ARRC through the end of 2006. On January 8, 2007, facility management and control reverted to ARRC. At that time, ARRC entered into an agreement with Aurora Energy Services (AES), an affiliate of Usibelli Coal Mine (UCM), to operate and maintain the facility.

### Community Issues

#### Coal Dust

In February 2007, community concerns were raised about coal dust emissions, following unusually dry, cold and windy weather that resulted in coal dust from facility operations. ARRC coordinated with the Alaska Department of Environmental Conservation (ADEC) and modified train unloading and ship loading parameters to mitigate dust.

By March 2007, ARRC formed a Community Task Force. Public task force meetings were conducted in March and April 2007 and 2008 and 2009.

Also in March 2007, ARRC hired industrial facility experts — AMEC and Raring Corp. — to evaluate the SLF and develop recommendations for future dust control improvements. Many recommendations have been implemented.

ARRC received two Notices of Violation (NOVs) from ADEC under the air quality regulations — one in April 2007 and the other in March 2008. ARRC and AES resolved the NOVs with a Compliance Order by Consent (COBC), executed May 3, 2010. ARRC and AES successfully completed COBC provisions for best management practices.

### Clean Water Act Law Suit

In December 2009, ARRC and AES were sued under the Federal Water Pollution Control Act (also known as the Clean Water Act) by the Alaska Community Action on Toxics and the Alaska Chapter of the Sierra Club. According to the Sierra Club web site (<http://www.sierraclub.org/coal/>), a major goal of the group is to eliminate coal as an energy source with “Beyond Coal” campaigns in nearly every state, including Alaska. This action is separate from the coal dust NOVs.

A federal judge in Anchorage dismissed most of the lawsuit in March 2013. Litigation continues on one remaining claim. Due to the pending lawsuit, it is not appropriate to comment on the plaintiff’s remaining allegations. However, ARRC and AES have demonstrated a commitment to environmental stewardship since taking over the facility and continue to do so. We take public concerns seriously.

### Regulatory Compliance

ARRC and AES have been proactive and conscientious in meeting Environmental Protection Agency (EPA) and ADEC regulations and permit requirements. As facility operator, AES wrote and implemented a Standard Operating Procedure for Dust Control that includes a total unloading/loading operations shutdown in extremely windy conditions. AES also wrote a Storm Water Pollution Prevention Plan (SWPPP) in compliance with the Multisector General Permit under the Clean Water Act and maintains a Spill Prevention Control and Countermeasure Plan. AES applied for an additional individual ADEC permit identified as being needed in 2015.



*The reclaimer collects coal from the stockpile to put on the conveyor.*

## Investments & Improvements

- In 2003, the Federal Railroad Administration awarded ARRC a \$9.54 million grant, of which \$8.3 million was used to acquire the facility, perform associated due diligence studies, evaluation and inspection.
- The remainder of the federal grant — \$1.24 million — was subsequently used for inspections, repairs and improvements. During 2003-2004, ARRC completed the first phase of mechanical, electrical, structural and dust control improvements. The major initial limitations of the facility were the ship loading circuit rate and the stock piling circuit rate, both resulting in a higher cost of transporting the coal to the ships. Initial repairs enhanced operational efficiency and improved safety.
- ARRC has proposed to expand the Seward Loading Facility by increasing its stockpile area to the east, and submitted permit applications to fill an approximately six-acre area, including a small man-made pond. The purpose is to provide additional space for storage, stockpiling and staging equipment and materials to improve rail yard operating efficiency and accommodate an increase in coal demand. Permits were issued for the project, and partial construction began in 2008.
- The industrial facility consultants hired in 2007 recommended capital improvements to modernize facility technology. These are estimated to cost

several million dollars. Funding may come in phases, as warranted by SLF operations at a level that can cover operational costs, as well as support capital investments.

- There are no federal or state grants currently in place for the facility. Since 2007, ARRC and AES have spent more than two million dollars on safety, operational and environmental improvements to the facility. Some of the significant environmental upgrades have included:
  - Installed additional dust control spray bars along conveyor belts and stacker / reclaimer
  - Sealed openings throughout the system to control dust
  - Ensured reliability of dust control systems during freezing temperatures to include frost-free valve and spray bar replacement, and water pump house and water line insulation and heating
  - Replaced the transfer chute on the ship loader to minimize shut downs and incidental spillage
  - Added additional scrapers and wipers to the ship loader belts
  - Added skirting to numerous locations along the ship loader belt
- Added drip pans below the conveyor belt located along the loading dock stretching from the shore to out over Resurrection Bay.
- Most recently in 2014-2015, the secondary containment under the over-water conveyor was substantially widened and deepened to prevent most, if not all, incidental coal from spilling into the water.
- Negotiations with ADEC related to the COBC resulted in the performance of three supplemental environmental projects (SEPs) by ARRC and AES in 2010. The SEPs included additional spray bars, high-pressure spray nozzles and a sealed chute and fogging system on the stacker/reclaimer.
- \$720,000 in capital funds were spent on the coal loading facility in 2012. Projects include construction of a gangway for ship access; dust control features on Tower 13 located at the Control Building (see Figure 1); and a ship ladder hoist.
- In 2013, \$250,000 was spent to repair, replace and upgrade a number of parts — electrical, pulley, roller, bearing, gearbox, bucketwheel shaft, belts and belt magnets and aligners, dust reduction and freeze protection. In 2014-2015, another \$250,000 was spent to improve the over-water conveyor containment, as well as to pursue other environmental and efficiency enhancements.

