Key Activities Completed:

1. Completed the pre-commissioning punch list.
2. All mechanical and electrical completed.
3. Heat pump and MCC commissioning and training completed.
4. Completed commissioning of refrigerant alarm system.
5. System commissioning and training in progress.

Existing or Potential Problems Addressed:

1. There are no unresolved problems.

Activities Targeted for Next Month/Quarter:

1. Complete full system commissioning and training.
2. Install pipe insulation.
3. Complete project exhibit design.
4. Finalize project reporting and monitoring requirements with ACEP/AEA.
ASLC HEAT PUMP PROJECT TIMELINE

Updated July 1, 2011

June 6, 2010 – July 7, 2010: Procure and contract mechanical/electrical engineering services

July 8 – November 30, 2010: Complete design (Drawings, Specifications, Final Cost Estimate)


December 1, 2010 – July 1, 2011: Equipment procurement (including instrumentation), installation and commissioning, and final reporting:
   a. Shop drawing/manufacture submittals and review – 3 weeks
   b. Manufacture and ship heat pumps, heat exchangers and instrumentation to Seward – 12 weeks
   c. Ship heat exchangers, heat pumps, instrumentation from Seattle to Anchorage to Seward – 2 weeks
   d. Installation of all mechanical, electrical and instrumentation components – 6 weeks, including piping and seawater supply pump
   e. Start-up, commissioning, and training – 2 weeks

July 15, 2011 – June 30, 2012: Project monitoring and reporting to ACEP

EXHIBIT TIMELINE

April 1, 2011– August 30, 2011: Exhibit design

September 1- October 30, 2011: Exhibit procurement & fabrication

November 1 – 30, 2011: Exhibit installation and evaluation
Project personnel assigned to the project are as follows:

Darryl Schaefermeyer, ASLC Operations Manager       Project Executive
Randy Stauffer, ASLC Project Engineer                Project Manager
John Underwood, ASLC Facilities and Life Support Supervisor Project Superintendent

Douglas (Ricky) Deel, ASLC Exhibits Manager         Exhibit Development

Andy Baker, P.E., (www.yourcleanenergy.us)           Consulting Engineer
Lee Bolling, EIT, (www.yourcleanenergy.us)           Engineering Technician

John Faschan, P.E. (www.edc-alaska.com)              Electrical Engineer
Kevin Hansen, P.E. (www.edc-alaska.com)              Mechanical Engineer

The project is on schedule and budget to meet the Contract completion date of January 15, 2012.

Attachments:
(1) Schedule & Milestone Overview as of 7/1/11
(2) Summary of Material, Equipment & Contract Purchase Orders as of 7/6/2011
(3) Financial Report
(4) Photos
Sea Water Heat Pump Project
Schedule & Milestone Overview
As of 7/1/11

1. Heat Pumps Ordered (1) Nov. 12, 2010
2. Complete System Engineering Nov 30, 2010
5. Receive System Components Mar. 7 – May 6, 2011
7. Install Piping in 2nd Floor Gallery April 4 - 7, 2011
8. Install Components & Piping in Basement April 11 – June 6, 2011

Notes:
(1) Due to warming sea water temperatures, complete system verification is not possible at this time of year.
Figure 2 Evaporator and Condenser Loop Pumps
Figure 3 Trane Heat Pumps
Figure 4 Heat Pump Motor Control Center
Figure 5 Heating Loop Pumps and HX-4
Figure 6 Trane Tracer Controller
Figure 7 Refrigeration Gas Monitor
Figure 8 Trane Tracer Control Screen
Figure 9 Trane Control Module Screen
Figure 10 Refrigeration Monitor Alarm Strobe
Figure 11 Refrigerant Monitor Alarm Strobe
Figure 13 Trane Tracer Control Module
Figure 14 Salt Water Supply Strainer Controller
Figure 15 Heat Pumps showing Refrigerant Relief Vent Header