



Alaska SeaLife Center[®]

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**Alaska SeaLife Center Seawater Heat Pump Project
Denali Commission Emerging Energy Technology Grant
UAF 10-0069**

**Alaska Energy Authority Renewable Energy Grant
AEA Grant Agreement No. 7030017
Quarterly & Monthly Report ending December 31, 2010**

Key Activities Completed:

1. 95% Design Review meeting held in Anchorage on November 18, 2010, including budget revision review meeting with ACEP and AEA.
2. 100% design documents completed on November 30, 2010.
3. Demolition and removal of cooling loop PVC piping completed in preparation for installing Schedule 40 steel piping to Fan Rooms 1 and 2 that will connect the heat pump system heating loads to AHU-1, AHU-2A/2B, AHU-4, AHU-5 and AHU-6
4. Ordered heat pumps from Trane and released for manufacturer on December 20, 2010 following engineer review and approval of shop drawings.
5. Issued RFP for equipment bids for heat exchangers, closed loop circulation pumps, air separators, expansion tanks, control valves, non-motorized valves, motor control center, and PVC and steel piping/fittings.
6. Issued request for proposal to several control contractors for furnishing, installation and commissioning of heat pump system controls and instrumentation.
7. Reviewed electrical specifications and plans with proposed electrical contractor.

Existing or Potential Problems Addressed:

1. ASLC met with AEA and ACEP/Denali Commission representatives on November 18, 2010 to review the grant budget formats and to request that the budget formats be modified to better facilitate the allocation of costs between the two grants. AEA has informed ASLC that the format presented by ASLC at the meeting was acceptable and requested ASLC to prepare and submit an amendment to the schedule, milestone table and budget. ASLC submitted revised schedule, milestone table and budget to AEA on December 16, 2010

and AEA made some formatting revisions which were acceptable to ASLC. Revisions are being incorporated in a grant agreement amendment by AEA.

Activities Targeted for Next Quarter

1. Procure remaining project equipment and materials (heat exchangers (3), circulation pumps (6), air separators and expansion tanks, motor control center, motorized valves, non-motorized valves, and PVC and steel piping and fittings).
2. Select control (including control system package) and electrical contractors.
3. Complete grant agreement amendment to the schedule, milestone table and budget amendment with AEA.
4. Commence and complete installation of system piping, valves, heat exchangers, pumps, air separators, expansion tanks, motor control center and electrical work in preparation for delivery and installation of heat pumps in April 2011.

ASLC HEAT PUMP PROJECT TIMELINE

Revised December 31, 2010

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 – January 31, 2011: Procure and control and electrical contractors.

December 1, 2010 – May 30, 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 and commissioning – 2 weeks

May 31, 2011 – June 30, 2012: Project monitoring and reporting to ACEP

EXHIBIT TIMELINE

November 1 – February 28, 2011: Exhibit design and procurement

March 1- May 1, 2011: Exhibit fabrication

May 1 - 30, 2011: Exhibit installation and evaluation

Project personnel assigned to the design phase are as follows:

Steven Carrick, Director of Visitor Services & Facilities	Project Executive
Darryl Schaefermeyer, ASLC Operations Manager	Project Manager
John Underwood, ASLC Facilities and Life Support Supervisor	Project Engineer
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.

Financial report will be submitted separately on January 6, 2011.

Attachments: (1) Revised AEA schedule, milestone table, and budget