NOME POWER GENERATION FACILITY REPLACEMENT PROJECT
PROGRESS REPORT

GRANTEE: NOME JOINT UTILITY SYSTEM

PROJECT NAME: NOME POWER GENERATION FACILITY REPLACEMENT

GRANT #: AEA #_____; DENALI COMMISSION

PERIOD OF REPORT: February 1, 2003 through March 31, 2003

Project Activities Completed:

On January 24, 2003, the Denali Commission adopted Resolution 03-06 allocating $4 million in FY2003 funding for the Nome Power Project.

Representatives from four engine manufacturers were invited to Nome to present technical and product data on six potential engines to be incorporated into a new power plant. Representatives from Caterpillar/NC Machinery, Electro-Motive Diesel, Wärtsilä, and Fairbanks-Morse participated in the day-long meeting. The Utility Board then met to review a decision matrix compiled following the work session. Cost (capital, operating and maintenance), service, performance and manufacturer support were considered. As a result of the meeting, the Board determined to eliminate two units from consideration, and to continue with further evaluation of the remaining four units. The final documentation to allow execution of the grant agreement for a Community Development Block Grant (CDBG) was completed and the award put in place. The Utility prepared and submitted an application for funding assistance under the USDA–Rural Utility High Energy Cost Community Grant Program. The Denali Commission passed a resolution allocating up to $4 million in FY2003 funding. Contract engineers and staff met with the State of Alaska to review preliminary engineering data obtained from investigation of the new site.

Existing or Potential Problems:

The impact on air permitting requirements of the various engines must be determined prior to selection of the preferred unit(s) to be pursued.

Activities Targeted for Next Reporting Period:

- survey other users of equipment to acquire independent performance and reliability data
- continue design activities relative to switchgear, control systems and structural components of facility
- work with engine manufacturers to compile air quality data on which to make decision
- select engines
- in cooperation with the State of Alaska, address any environmental issues on new site

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PERIOD OF REPORT: April 1, 2003 through June 30, 2003

Project Activities Completed:

Power plant supervisory and maintenance personnel participated in several tele-conferences with customers utilizing generators under consideration. Engine representatives were invited to Nome to provide additional information and clarification on data submitted. Public meetings were held on the progress and status of activities. The Board reviewed a report prepared by air permitting consultants which revealed the potential that selective catalytic reduction (SCR) may be required as best available control technology (BACT) under the Alaska Dept. of Environmental Conservation (ADEC) air permitting program. Revised data on configuration changes to avoid SCR was received. The Board reviewed operating, maintenance and capital costs, diesel efficiency, service, training, availability and reliability issues. By Resolution # R03-06 the Board selected Wärtsilä as the supplier of the new equipment. Representatives from the State of Alaska spent a week in Nome working with NJUS staff to address the minor environmental issues previously identified on the property to be conveyed. Negotiations are continuing with the engine manufacturer on a Letter of Intent for the Nome Project. We were notified by the US EPA that our application for funding assistance through their Brownfields Program had been approved; funding is designated for environmental monitoring and any additional restoration activities.

Existing or Potential Problems:

None.

Activities Targeted for Next Reporting Period:

- meet with engineers to review and approve foundation design
- proceed with site development
- meet with ADEC on air quality construction permit
- continue property acquisition efforts
- complete Letter of Intent with engine manufacturer

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PERIOD OF REPORT: July 1, 2003 through September 30, 2003

Project Activities Completed:

The Letter of Intent for the Nome Project with Wärtsilä was executed; with this decision, detailed design for the generation and control equipment can now proceed. City Utility and manufacturer engineering and administrative teams met to review technical mattes on permitting, design and construction. Operations personnel provided modifications to engine criteria which will be incorporated into the final engine package. NJUS' air consultants submitted protocols to the Alaska Department of Environmental Conservation ("ADEC") for air modeling; subsequently a meeting was held in Juneau to provide an update on design, discuss permitting, air quality modeling, meteorological data collected and review timelines, and another meeting scheduled for November to review the Title V Air Quality Construction Permit Application. A bid package was released for dynamic compaction of soils on the site required to meet seismic design codes; a contractor was hired with work begun mid-September and completed the first week of October. Property acquisition activities continue with the State of Alaska with foundation work conducted under authority of an Advance Right of Entry. Meetings were held with AIDEA/AEA and the Denali Commission to amend existing Grant #2195101 to include Denali Commission construction funding. A final application was submitted to EPA for Brownfields awarded funding to assist in environmental monitoring at the site.

Existing or Potential Problems:

None.

Activities Targeted for Next Reporting Period:

- submit Title V Air Quality Construction Permit application to ADEC and meet with agency to review it for completeness and provide any additional supporting information required to allow processing
- site development: complete dynamic compaction and undertake site fill/grading
- continue property acquisition efforts to include final survey and appraisal
- continue toward 95% design completion

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PERIOD OF REPORT: October 1, 2003 through December 31, 2003

Project Activities Completed:

A final purchase package for the Wärtsilä generating equipment is being reviewed by engineers and staff. The property Record of Survey plat was completed and submitted to the State of Alaska to approval and the property appraisal was completed. Negotiations are ongoing with the State for the property acquisition and transfer. Additional information was generated and submitted to state air permitting regulators to assist in evaluation of selective catalytic reduction technology options. Following completion of dynamic compaction of soils, the property site was filled in compacted lifts to raise the elevation above the 100-year flood line.

Existing or Potential Problems:

No grant related problems.

On October 16, 2003, a fire erupted in a portion of the existing generating plant housing the community's main generator. Quick action by the plant operator and rapid response by the Nome Volunteer Fire Department extinguished the blaze. The community was forced back into reliance on old standby generators. Fire investigators determined the obvious cause was a result of a fuel line failure which allowed fuel to spew under pressure on to the hot engine. Forensic investigation and analysis of associated parts is underway to attempt to determine the cause of the line separation. The genset was repaired and returned to service on October 30, 2003. The building was made structurally stable with roof repairs to be completed when weather conditions allow.

Activities Targeted for Next Reporting Period:

- continue interaction with the State of Alaska Department of Environmental Conservation as they proceed with processing the Title V Air Quality Construction Permit application
- continue efforts to finalize property acquisition
- continue quest for additional funding partnerships
- continue toward 95% design completion

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PERIOD OF REPORT: January 1, 2004 through March 31, 2004

Project Activities Completed:

Continued response to Alaska Department of Environmental Conservation (ADEC) Air Permitting staff requests for additional detailed information as they evaluate BACT (best available control technology) aspects of our air permit application was the primary focus during the reporting period. Our application to the US EPA for a 50-50 matching grant through their Brownfields Program for assistance in environmental restoration activities on the new property site was successful, and grant terms and award documents successfully negotiated and signed. An application seeking funding assistance was revised and resubmitted to the US Department of Agriculture-Rural Utilities Service under their High Energy Cost Community program. (Under a prior application the Nome project ranked #10 out of around 50 applications submitted; 9 were funded during the initial round.) Proposals were received and a contract awarded to demolish an old shop building which remained on the new property site. Meetings were held in Washington, DC with Senator Ted Stevens, Senator Lisa Murkowski, and Congressman Don Young to update the delegation on status and progress of the new power plant project.

Existing or Potential Problems:

None related to grant administration. Continuation of plant design is being stymied by the uncertainty as to ADEC's final determination on BACT, which could require modification to the new building structure and foundation. Until an air construction permit is issued, NJUS cannot enter into a final generator purchase agreement with Wärtsilä; without the purchase agreement, Wärtsilä will not provide additional unit-specific engineering details required by the design team.

Activities Targeted for Next Reporting Period:

- continue interaction with the State of Alaska Department of Environmental Conservation in an attempt to get the Title V Air Quality Construction Permit published for public notice and comment, and final issuance
- complete property acquisition
- continue toward 95% design completion
- remove old shop building from the premises and complete gravel fill of property

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PERIOD OF REPORT: April 1, 2004 through June 30, 2004

Project Activities Completed:

A meeting was held with the Alaska Department of Environmental Conservation (ADEC) in Juneau on April 14. In addition to staff and air permitting consultants, representatives from the engine manufacturer, Wärtsilä, attended to provide additional technical information. On May 6, ADEC posted public notice of their intent to issue an Air Quality Control Construction Permit for the new plant. The 30-day public comment period ran through June 6. On May 17, we were notified that EPA was requesting ADEC to collect additional information on fuel switching technology, which has been submitted. The Utility Board, City Council, management and operating personnel held a work session with the project team to review design and timelines. The deed transferring the property to the City was recorded by the State of Alaska. The old shop building was removed from the site and additional gravel fill imported as required to elevate the building out of the flood plain. Weekly project design and management team meetings have been implemented. The steel piling materials have been ordered and are on a barge from Seattle heading to Nome. A contract has been awarded to install the piling. The building design and specifications package is being finalized to be released for bid.

Existing or Potential Problems:

None related to grant administration. It is hoped ADEC will make their final decision on air permitting matters and issue the Air Quality Construction Permit by mid-July. Additional funding for the project authorized by Congress conference committee action has not yet been awarded. We will continue to follow up with the Denali Commission, through which the funds were to be channeled.

Activities Targeted for Next Reporting Period:

- have the ADEC Air Quality Construction permit in hand
- execute final generator purchase agreement with Wärtsilä and receive detailed engine-specific engineering package
- receive foundation piling materials and proceed with contract to install
- complete specifications package, release and award bid, and get building on barge
- procure concrete slab materials, including aggregate
- complete foundation slab and begin erecting building (weather and supply-dependent)