Please contact me at 907-747-6633 should you need additional information.

2050.11 to certify that this site is so.

were no persons required for this project and I am unable to find a copy of DOE Form

Amendment 2 (Shedon Jackson College of Natural Resources) is not included in this report. There

These reports cover the No. 4 Diesel project grant number 2195066. Amendment 1 only.

Please find enclosed the interim final technical report, the property inventory certificate,

RE: DE-FC-90-991D13826

Dear Lizama:

Codex, Colorado 80401-3393

1617 Cole Boulevard

Codex, Colorado 80401-3393

Department of Energy

Lizama, Pierce

November 3, 2003

November 3, 2003

City and Borough of Sika
A 4.4 MW diesel generator was installed at the Jarvis St. facility, which is SCADA controlled. A SCADA system was installed at the Jarvis St. substation, This system enables the Blue Lake Control Center to monitor and control the operation of all Jarvis St. substations, and SCADA System was installed at the Jarvis St. facility. This system enables the Blue Lake Control Center to monitor and control the operation of all Jarvis St. substations, and SCADA System was installed at the Jarvis St. facility. The construction of a 10 MW substation at the Jarvis St. facility provides power to the south end of town.

The purpose of the Sika Diesel Generator Project is to provide improvements to the City and Borough electrical systems. The improvements include specific sub projects, they are:

1. Description/Abstract

STI PRODUCT DESCRIPTION
The City’s portion of the D-4 Addition Project has reached completion. We have applied for the final payment of Grant DE-FG07-99ID13829, 219306.

Percentage completion: 100%

Inductors have been completed and tested.
Valentine Street SCADA has been completed and put into service. All feeder controls and

Valentine Street SCADA

Percentage completion: 100%

No. 4 Diesel

Percentage completion: 100%

The SCADA system at Jarvis Street is complete and in service.

Jarvis Street SCADA

Percentage completion: 100%

Procedures are completed. The substation is in service.

The Jarvis SL Substation is complete. Operator training is completed, switching

Jarvis Street Sub-Station

Construction complete of the Four diesel plant construction projects.

Following is a brief description of the progress of construction and the percentage of

Subject: Diesel Plant Construction Final Report

Date: 11/03/03

From: Dean O’Hara

To: Charlie Walls

November 2003
The total project cost of $5,748.164 is $5143.967 below the original budget amount.

B. Variance from Original Budget

<table>
<thead>
<tr>
<th>Original Budget</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$4,892.131</td>
<td>$5,748.164</td>
</tr>
<tr>
<td>$3,689.850</td>
<td>$4,892.131</td>
</tr>
<tr>
<td>$1,422.187</td>
<td>$3,689.850</td>
</tr>
<tr>
<td>$1,540.615</td>
<td>$1,422.187</td>
</tr>
<tr>
<td>$6920.280</td>
<td>$1,540.615</td>
</tr>
<tr>
<td>$5992.000</td>
<td>$6920.280</td>
</tr>
</tbody>
</table>

D+ Addition

Marine Street SCADA

B. Variance from Original Budget

A. Status of Budget

Budget Update:

None

D. Proposed Schedule Changes

Compromised for speed.

Reasons for Schedule Variance

2002 was requested.

A variance was requested April 2, 2001. A new completion date of March 30, 2001 was defined in the grant.

Schedule Update:

Recent Project Activities Completed:

See Attached

Period of Report:

November 2003

DE-FG07-96ID13826

Grant #:

City and Borough of Sika

Sika Diesel Generator Project

Funded Grantee:

See Attached
Activities Targeted for Next Quarter:
None

Issue:
None

Status of Financing:
Principal funds and DOE grants

Total Project is finished under budget

C. Reasons for Budget Variance
TABLE OF CONTENTS

1. Executive Summary

2. Project Overview

3. Objectives

4. Description of Activities Performed

5. Conclusions and Recommendations

6. Lessons Learned

7. Final Project Photos

8. USDOE Forms: DOE F 241.3, F2060.11, GO-PF13A

Separate Attachment

Separate Attachment
Division 2 - Project Overview

The conclusions and recommendational division of this report will provide a comprehensive retrospective analysis of the project. The recommendations within project parameters.

The description of activities performed in this report will provide an in-depth understanding. As well as the rationale behind the milestones array.

The objectives division of this Final Technical Report will describe the amendment conditions of the project. The Project Overview will also describe the origins of the project, the original conditions that went out to bid. The Project Overview will also describe the "before and after" conceptual design development and the actual parameters of the final project as it provided the impetus for the grant funding. How the grant amendment was developed, the awarding of the City and Borough of Sikea, Alaska.

This Final Technical Report provides a concise retrospective and summary of all facets of the Sheldon Jackson College Electrical Interconnection Renovation Position of the Alaska funded Alaska Energy Project.

Grant Agreement Number 2195069/Sikea Diesel Generator Project, Amendment 2

Amendment 3, signed May 26, 2001, included new AWW Direct Power Plan for CBS. The original scope included for a.

Between AE&A and CBS, was entered into 12/1/99. The revised scope provided for a.

The existing Sheldon Jackson College campus electrical system was examined in detail.

Division 1 - Executive Summary
coordination of elements, including disposal of old transformers.

combined into a single design/construction project to effect maximum

Department of Environmental Conservation Elected (USD/EFA) was

by the United States Environmental Protection Agency and the Alaska

Water, sewer, storm drain, renewable energy, replacement, and new installation funded

departments of the city and borough of Sika, Alaska.

deparadigm between the cooperating authorities. Provided about utilities, reduced duplication of
efforts, yielded significant planning and design, reduced duplication of

efficiency, reduced the utilities along with unified rights-of-way and

with code separation of the utilities and the water/sewerstorm utilities. Common coupons,

both the electric utilities and the water/sewerstorm utilities. Common coupons,

utility design criteria to fully promote efficient relationships and implementations of

consistent use of the money in both grants. The preliminary design plan was

consistent between the two utilities would be most efficient and

It was generally agreed by all parties to both projects that an integrated design

water/sewerstorm systems on the Sheldon Jackson College campus.

2. A key element to the success of the electric utilities' projects was the integration

agreements. The RF and bidding processes, and the contracts for construction.

The Sheldon Jackson College Project provided liaison between the

design and construction with the Environmental Protection Agency Grant

designed and constructed for the Environmental Protection Agency Grant.

The Sheldon Jackson College's Project Manager provided liaison between the

a Project Manager.

Section 5 of the MOU describes the requirement that SJC hire

Jackson College, was the pass-through agent for the grant funds to Sheldon

Jackson College, through the mechanisms of a memorandum of understanding with Sheldon

College, through the mechanisms of a memorandum of understanding with Sheldon

agreement with the City and Borough of Sika, Alaska. The City and Borough of

agreement with the City and Borough of Sika, Alaska. The City and Borough of

1. The Alaska Energy Authority, acting as the USD/EFA sponsoring office, supervised

Project coordination:

not provide financing for this project.

for the systems. Sheldon Jackson College coordinated the grant funds from the City and

through the systems. Sheldon Jackson College received the grant funds from the City and

for the federal funds provided for the work, and will assume responsibility

for the federal funds provided for the work, and will assume responsibility

above. The systems are to be multifunctional and replaced existing systems on the campus of

above. The systems are to be multifunctional and replaced existing systems on the campus of

The project as configured was funded by amendment to the USD/EFA grant referred to

DIVISION 2 - OVERVIEW...continued from Page 2
Ongoing coordination and liaison with the various utilities and governmental agencies involved in the funding, monitoring, and execution of the Project (US Department of Energy, Alaska Energy Authority, the City and Borough of Sitka, and others) to ensure that the eventual system will meet the needs of Sitka.

...and the design goal criteria.

...and operation was ongoing to receive an end product that met their specifications.

...and design goal criteria.

Provide a foundation for development of a coherent scope of work for the project.

...provide a foundation for development of the following:

...correlation of action and information contained in the following:

The Project Design Request for Proposals was developed to provide a foundation for the overall design criteria, and in addressing the overall design criteria, during the same time frame and in the same sessions, an electrical board to be done on campus and how said criteria interact with other work to be done on campus.

The conceptual design development was based on a 1999 existing electrical infrastructure assessment and planning document developed for Sheldon Jackson College by Hatch Energy Associates, an electrical engineering firm based in Anchorage, Alaska. That document identified the serious problems in the 2.4-kV distribution system and component replacement, as well as the need for rehabilitation of the distribution system and component replacement. The report emphasized that the system replacement (ring distribution) would be a significant cost in the long term and the study recommended that a new system be developed for the Sheldon Jackson College area to be funded by the City and Borough of Sitka.

...should be complete all the way to including new meters at the building.
Turbine - Rehabilitation of the out-of-service

The generator was to be connected to a steam boiler located near the steam

distribution system located in the Sheldon Jackson College's Sage Building.

1. Sage Hall - Hydroelectric Turbine - Rehabilitation of the out-of-service

DIVISION 3 - OBJECTIVES

The implementation of the hydroelectric renovation by up to five years. The hydroelectric plant was non-functional, The hydroelectric plant was in disrepair.

Institutional funding by FERC, which if implemented, would have delayed

the construction of the system. Upon completion and acceptance, The distribution

system was connected to distribution networks representing the hydroelectric plant. The project was designed to meet the needs of the City and Borough of Sitka Electrical Department. The service components of the existing distribution infrastructure was compatible with the grid of the City’s codes.

Before and After Project Parameters

Two projects of equal priority organized to save.

The final electrical distribution infrastructure was compatible with the grid of the City and Borough of Sitka Electrical Department. The service components of the existing distribution infrastructure was compatible with the grid of the City’s codes.

The final electrical distribution infrastructure was compatible with the grid of the City’s codes.

A portion of the original design criteria for the project and the project objectives.

Parameters or Final Design at time of Bid:

DIVISION 2 - PROJECT OVERVIEW...Continued from Page 4
It was acknowledged that front-end development of the highly complex project would necessitate early development of project design terms and design modifications.

Milestone support for project design terms and design modifications was necessary along with the necessary design coordination with the contractor. The national sponsors of the project were engaged in coordinating the amounts and the sequencing of the milestones and in supplying the amounts and the sequencing of the milestones to the DOE and its representatives, the AF, and Sheldon Jackson College.

The milestones were developed in coordination with the City and Borough of Sitka Electric Department, and other departments of the City and Borough of Sitka. The milestones were developed in coordination with the City and Borough of Sitka.

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Payment</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Project Report</td>
<td>$1,296,000</td>
<td></td>
</tr>
<tr>
<td>Project completion hydroelectric project</td>
<td>$80,000</td>
<td></td>
</tr>
<tr>
<td>Project completion electrical infrastructure project</td>
<td>$256,000</td>
<td></td>
</tr>
<tr>
<td>Bid award for hydroelectric project</td>
<td>$100,000</td>
<td></td>
</tr>
<tr>
<td>Bid award for electrical infrastructure project</td>
<td>$400,000</td>
<td></td>
</tr>
<tr>
<td>Complete project design</td>
<td>$66,000</td>
<td></td>
</tr>
<tr>
<td>Contract award for project design</td>
<td>$66,000</td>
<td></td>
</tr>
<tr>
<td>Project Plan</td>
<td>$320,000</td>
<td></td>
</tr>
</tbody>
</table>

3. Maintenance of the distribution system. The College and its management will take over ownership and operations of the distribution systems and the distribution systems will be maintained by the College and its management. The College and its management will also maintain the distribution systems and the distribution systems will be maintained by the College and its management. The College and its management will also maintain the distribution systems and the distribution systems will be maintained by the College and its management.

2. Campus Electrical Distribution System — This portion of the project was intended to continue the portion of the College's existing distribution system that was included in the original project proposal.
March 30, 2002.

The geotechnical investigation for soil and archaeological monitoring using a combination of backhoe pits and probing with an air-track drill was completed on March 1, 2002.

Sierra Technical Services, Inc. and HDR Alaska, Inc., were selected to perform the Phase I and II environmental site assessments of the project site. A project scope meeting was held on February 14, 2002, with the selected

The electrical and mechanical engineers for the project were selected in February. The project was designed to meet the electrical and mechanical requirements for the new building.

A conceptual design was prepared during the NEPA process. The design included the conceptual design and the NEPA process. The design included the conceptual design and the NEPA process.

Categorial Exclusion was received from EPA. An environmental assessment was prepared to EPA standards and NEPA standards.

On November 16, 2001, the College issued a Request for Proposals for a Construction Manager at Risk (CM/AR). The Request for Proposals was issued on December 1, 2001.

DIVISION 4 - Description of Activities Performed

Pre-Construction Timelines

3. Objectives: The objectives are reached in a timely manner by the contractor. The objectives are reached in a timely manner by the contractor. The objectives are reached in a timely manner by the contractor. The objectives are reached in a timely manner by the contractor.

Page 6 of 11

Sheldon Jackson College

Washington, D.C. 20010-6948

SHILOH JACSON COLLEGE

USOE GRANT: DE-FC03-99ER45531

AMENDMENT 2

Alaska Energy Authority (AEa)
U.S. Department of Energy (USDOE)
U.S. Environmental Protection Agency (USEPA)
ADEC)
Alaska Department of Environmental Conservation
Coastal Management Commission/Department of Natural Resources (Commission/DNR)
Alaska Division of Government Coordination (DGCO)

U.S. Corps of Engineers - Section 404 Permit

Agency Review Complete: 2/28/02

100% design documents delivered 3/15/03

Archaeological Monitoring Final Revised Plan completed 4/15/02

50% design delivered 7/1/02

Results of geo-technical exploration received 4/15/02

Design Study Report submitted 2/28/02

Schedule for Design - Actual:

Project negotiations with the contractor on June 23, 2003. The Notice to Proceed was issued, after bid award was made on May 28, 2003. The bids were reviewed by individual project during the last half of May 2003. The RFP for Construction was developed with the bid due date of May 17, 2003.

The final design documents were received March 15, 2003, with all agencies and said

bodies subsequenely reviewing and approving and concuring and said

The final design documents were received March 15, 2003 with all agencies and said

The Archaeological Monitoring Final Revised Plan was repeated address and refined with

and Public Works Departments, and Sheldon Jackson College.

The Archaeological Monitoring Final Revised Plan was repeated address and refined with

The 50% design was delivered July 10, 2002 and design analysis meetings, with

Pre-Construction Timeline...continued from Page 7
Conduits for telephone, cable, and fiber optics have been installed.

From Melaleuca Street to the Maintenance Area

College Drive, and from Sweetland Hall to Lincoln Street on College

Mainline electrical, as well as conduits for telephone, cable, and fiber

Status: Project complete

Final Report

Electrical close-out and Initialization period begins with AEA

Electrical systems punch list being fulfilled

CBS

Electrical system operational and provisionally accepted by

Electrical system substantially complete

Ground broken

Notice to proceed

Bid Award

Bid Review Period: Review by EPA

Bids due

Schedule for construction - actual:

1/07/05
9/07/04
9/30/04
6/15/04
12/31/03
7/09/03
6/23/03
5/28/03
5/17-27/03
5/17/03

Schedule...continued from Page 8

DIVISION 4 - Description of Activities Performed...continued from Page 8
DIVISION 6 - Lessons Learned

Programming.

For processing and for approval, should be included in the pre-construction project permitting time-frame for each agency based on individual agency pre-construction effort. For future similar projects should be included in the project timeline.

The length of time required to coordinate all the interrelated agencies exceeded.

The Alaska Energy Authority represents for this grant and project. Rebecca

5.

locations.

with the confidence gained that the assements accurately. Relate to installation.

New utility systems sharing the same main assements.

Additional compliance with high degree of interconnection to existing equipment was achieved, per design and contract guidelines for cordiniation of

3.

receivin the project as pr to their system.

was a key factor given that City and Borough of Skrka Electric Department is

2.

Design and implementation achieved stated goals.

DIVISION 5 - Conclusions and Recommendations

USDOE GRANT: DE-FG360128930356 (FORMERLY: DE-FG02-01PD42631) AR 5173-03 CC 2173116 SHELDON JACXSON COLLEGE
INFRASTRUCTURE REHABILITATION GRANT AGREEMENT NUMBER 22959067 SILVA DIESEL GENERATION PROJECT AMENDMENT 2
CYC AND BOUROUGH OF SKA ALEASKA INDIAN RIVER HYDROELECTRIC PROJECT GRANT - SHELDON JACXSON COLLEGE CERFAL
Page 10 of 11
Division 6 - Lessons Learned

Continued from Page 10

END OF SECTIONS 1-6