

M. Wise (log)
1634

SUBCONTRACT NO. ZXE-9-18080-01

UNDER

PRIME CONTRACT NO. DE-AC36-98-GO10337

CONTRACTING PARTY: MIDWEST RESEARCH INSTITUTE
NATIONAL RENEWABLE ENERGY LABORATORY
DIVISION

SUBCONTRACTOR: VOGELBUSCH U.S.A., INC.

ADDRESS: 10810 OLD KATY ROAD, SUITE 107
HOUSTON, TX 77043

SUBCONTRACT TITLE: BUILDING A BRIDGE TO THE CORN ETHANOL
INDUSTRY

TYPE OF SUBCONTRACT: COST SHARING

PERIOD OF PERFORMANCE: EXECUTION DATE THROUGH NINE (9) MONTHS

SUBCONTRACT AMOUNT:	SUBCONTRACTOR'S	NREL'S	
	<u>COST SHARE</u>	<u>COST SHARE</u>	<u>TOTAL</u>
	\$31,496.08	\$94,488.24	\$125,984.32

PAYMENT TERMS: NET 30

**SUBCONTRACTOR'S
REMITTANCE NAME
AND ADDRESS:** VOGELBUSCH U.S.A., INC.
10810 OLD KATY ROAD, SUITE 107
HOUSTON, TX 77043

**FUNDED AMOUNT AND
TASK CHARGE NUMBER:** \$94,488.24 - BF770101

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TO
SUBCONTRACT SCHEDULE

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SUBCONTRACT NO. ZXE-9-18080-01

BETWEEN

MIDWEST RESEARCH INSTITUTE

NATIONAL RENEWABLE ENERGY LABORATORY DIVISION

AND

VOGELBUSCH U.S.A., INC.

SCHEDULE

INTRODUCTION

THIS SUBCONTRACT is effective upon execution by the Midwest Research Institute, National Renewable Energy Laboratory Division and is between the Midwest Research Institute, acting through its National Renewable Energy Laboratory Division (hereinafter called "NREL") and Vogelbusch U.S.A., Inc. (hereinafter called "Subcontractor"), whose principal offices are located in Houston, TX.

Midwest Research Institute has entered into Contract No. DE-AC36-98-GO10337 (hereinafter called "Prime Contract") with the Department of Energy (hereinafter called "DOE"), an agency of the U.S. Government (hereinafter called "Government"), for the operation and management of the National Renewable Energy Laboratory.

This subcontract is entered into in furtherance of the performance of the work provided for in the Prime Contract.

AGREEMENT

NOW, THEREFORE, the parties hereto agree to the following terms and conditions:

ARTICLE 1 - THE WORK TO BE PERFORMED

- A. The Subcontractor shall perform the work generally described as "Building a Bridge to the Corn Ethanol Industry", and specifically provided for in Appendix A, Statement of Work, attached hereto and made a part hereof, pursuant to the provisions of this subcontract.
- B. Specific deliverables, quantities, due dates, reporting requirements, and addresses are set forth in Appendix A hereto.

ARTICLE 2 - THE PERIOD OF PERFORMANCE

The period of performance for this subcontract shall commence upon the execution date of this subcontract and shall be completed nine (9) months after such date; provided, however, that this period may be extended for additional periods by mutual written agreement of the parties.

ARTICLE 3 - ESTIMATED COST AND COST SHARING

- A. Estimated Cost -- The estimated cost for the performance of the work conducted under this subcontract is \$125,984.32. It is agreed by the parties hereto that said total cost shall be shared as follows:

COST SHARING FORMULA		
ESTIMATED NREL SHARE	\$94,488.24	75%
ESTIMATED SUBCONTRACTOR SHARE	\$31,496.08	25%
TOTAL:	\$125,984.32	100%

This cost sharing formula shall also apply (on the percentage basis shown above) to any increase or decrease in the estimated total cost of subcontract performance, changes under the "Changes" clause and/or terminations under the "Terminations" clause contained in Appendix B.

- B. The Subcontractor shall be paid for the work conducted under this subcontract in accordance with the clause entitled "Allowable Cost and Payment" and the article entitled "Invoices." The Subcontractor is cautioned that, subject to the provisions of the clause entitled "Limitation of Costs" of Appendix B, NREL is not obligated to reimburse the Subcontractor for costs incurred in excess of the estimated NREL share set forth in Paragraph A above.

ARTICLE 4 - WAIVER OF FACILITIES CAPITAL COST OF MONEY

The Subcontractor did not include facilities capital cost of money as a proposed cost of this subcontract. Therefore, it is an unallowable cost under this subcontract.

ARTICLE 5 - APPLICABLE DOCUMENTATION

In addition to the terms and conditions contained in this Schedule, the following documents are attached hereto and made a part of this subcontract:

- A. Appendix A, entitled "Statement of Work" dated July 27, 1998;
- B. Appendix B-7, entitled "Standard Terms and Conditions" dated 05/01/93;
- C. Appendix C-2, entitled "Intellectual Property Provisions" dated 10/22/98; and
- D. Subcontractor's technical proposal number "RXE-8-18080A" dated "November 13, 1998" together with any revisions, is hereby incorporated by reference. In the event there is a conflict between the Subcontractor's technical proposal and any other provision of this subcontract, the latter shall prevail.

ARTICLE 6 - ORDER OF PRECEDENCE

Any inconsistency in this subcontract, shall be resolved by giving precedence in the following order:

- A. This Schedule;
- B. Statement of Work (Appendix A);
- C. Standard Terms and Conditions (Appendix B-7);

- D. Intellectual Property Provisions (Appendix C-2);
- E. Other provisions of this subcontract whether incorporated by reference or otherwise; and
- F. The Subcontractor's technical proposal, if incorporated in this subcontract by reference or otherwise.

ARTICLE 7 - RIGHTS TO PROPOSAL DATA

Except for technical data contained on pages (None) of the subcontractor's proposal dated November 13, 1998 which are asserted by the Subcontractor as being proprietary data, it is agreed that, as a condition of the award of this subcontract, and notwithstanding the provisions of any notice appearing on the proposal, the Government and NREL shall have the right to use, duplicate, disclose and have others do so for any purpose whatsoever, the technical data contained in the proposal upon which this subcontract is based.

ARTICLE 8 - SUBCONTRACT ADMINISTRATION RESPONSIBILITIES

- A. Signature Authority: This subcontract may only be modified by a formal modification signed by an authorized official of NREL.
- B. Subcontract Administration Responsibilities: The authorized official of NREL has designated John W. Enoch, Jr., as the Subcontract Administrator for this subcontract with the responsibilities for subcontract administration and negotiation of any modifications to this subcontract. The Subcontract Administrator's telephone number is 303-275-2941.
- C. Technical Monitoring Responsibilities: The authorized official of NREL has designated Art Wiseloge, as the Technical Monitor for this subcontract with the responsibilities of monitoring the technical work or services to be performed under this subcontract. The Technical Monitor does not have the authority to make any commitments or authorize any changes which may affect the subcontract's cost, scope of work, terms, or conditions. Any such changes shall be referred to the Subcontract Administrator designated in Paragraph B above. The Technical Monitor's telephone number is 303-275-4466.

ARTICLE 9 - INVOICES

Invoices for work accomplished under this subcontract shall be submitted in an original and one copy to:

National Renewable Energy Laboratory
Attn: Pat Weitzel, MS 1632
1617 Cole Boulevard
Golden, CO 80401-3393

To facilitate processing and payment each invoice must reference the subcontract number which appears on the cover sheet of this subcontract. Payments under this subcontract shall be made in accordance with the payment terms and to the Subcontractor's remittance name and address shown on the cover sheet of this subcontract. Final payment under this subcontract shall be made upon execution of the closeout modification by both parties hereto (including receipt of an appropriately signed Release of Claims, appropriately signed Assignment of Refunds, Rebates, Credits and Other Amounts, final property disposition, and patent clearances, if required).

The payment terms of this subcontract shall mean net days from the date of receipt of an acceptable invoice or the date of receipt and acceptance of all deliverables or reporting requirements for the period covered by the invoice, whichever is later.

The Subcontractor shall submit its invoices in reasonable detail, broken down by category, showing the total cost incurred both currently and cumulatively less the Subcontractor's cost share and the resultant NREL cost share. An authorized official of the Subcontractor shall sign the following certification on each invoice submitted for payment:

"I certify that this invoice is correct and proper for payment, and reimbursement for these costs has not and will not be received under any other Government contract or subcontract or other source of Government funds.

Authorized Official

Date"

The Subcontractor is hereby notified that NREL may withhold payment on invoices submitted, if the Subcontractor has failed to comply with or is delinquent in the submission of the reporting or deliverable requirements under this subcontract, until such time as the Subcontractor has complied or submitted such reporting or deliverable requirements.

ARTICLE 10 - PUBLIC DISCLOSURE

- A. Publicity release of any nature in connection with this subcontract shall not be made by the Subcontractor without prior review and approval of the NREL Subcontract Administrator.
- B. The Subcontractor should particularly note that all papers and documents which are required for submittal and distribution for patent clearance under this subcontract should first be submitted to the Department of Energy, Intellectual Property Law Division, Chicago Operations Office, 9800 South Cass Avenue, Argonne, Illinois 60439 prior to distribution to the public. This requirement of patent clearance prior to publication of all Subcontractor's reports is specifically required and set forth in Appendix C hereof.

ARTICLE 11 - ALTERATIONS TO TERMS AND CONDITIONS

- A. Wherever the terms "Midwest Research Institute, Solar Energy Research Institute Division" or "SERI" appear in any of the attached appendices to this subcontract, the name is hereby changed to the current name of "Midwest Research Institute, National Renewable Energy Laboratory Division" or "NREL," respectively.
- B. Appendix B-7, Standard Terms and Conditions is hereby modified by deleting all FAR and DEAR references in titles and clauses.
- C. Appendix B-7 Standard Terms and Conditions is hereby modified by deleting the following clauses:
 - Clause 2 - Officials Not to Benefit (APR 1984)
 - Clause 3 - Gratuities (APR 1984)
 - Clause 5 - Covenant Against Contingent Fees (APR 1984)
 - Clause 8 - Audit - Negotiations (DEC 1989)
 - Clause 10 - Utilization of Women-Owned Small Businesses (AUG 1986)
 - Clause 11 - Protecting the Government's Interest when Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment (NOV 1992)
 - Clause 12 - Utilization of Labor Surplus Area Concerns (APR 1984)
 - Clause 13 - Convict Labor (APR 1984)
 - Clause 19 - Hazardous Material Identification and Material Safety Data (DEC 1989)
 - Clause 21 - Competition in Lower-Tier Subcontracting (APR 1984)

Clause 24 - Protest After Award (AUG 1989)

Clause 25 - Protection of Government Buildings, Equipment, and Vegetation (APR 1984)

Clause 31 - Notice of Labor Disputes (APR 1984)

D. Appendix B-7 is hereby modified by inserting the following clause:

Clause 50 - Clean Air and Water (APR 1984)

A. "Air Act," as used in this clause, means the Clean Air Act (42 U.S.C. 7401 et seq.).

"Clean air standards," as used in this clause, means --

1. Any enforceable rules, regulations, guidelines, standards, limitations, orders, controls, prohibitions, work practices, or other requirements contained in, issued under, or otherwise adopted under the Air Act or Executive Order 11738;
2. An applicable implementation plan as described in section 110(d) of the Air Act (42 U.S.C. 7410(d));
3. An approved implementation procedure or plan under section 111(c) or section 111(d) of the Air Act (42 U.S.C. 7411(c) or (d)); or
4. An approved implementation procedure under section 112(d) of the Air Act (42 U.S.C. 7412(d)).

"Clean water standards," as used in this clause, means any enforceable limitation, control, condition, prohibition, standard, or other requirement promulgated under the Water Act or contained in a permit issued to a discharger by the Environmental Protection Agency or by a State under an approved program, as authorized by section 402 of the Water Act (33 U.S.C. 1342), or by local government to ensure compliance with pretreatment regulations as required by section 307 of the Water Act (33 U.S.C. 1317).

"Compliance," as used in this clause, means compliance with --

1. Clean air or water standards; or
2. A schedule or plan ordered or approved by a court of competent jurisdiction, the Environmental Protection Agency, or an air or water pollution control agency under the requirements of the Air Act or Water Act and related regulations.

"Facility," as used in this clause, means any building, plant, installation, structure, mine, vessel or other floating craft, location, or site of operations, owned, leased, or supervised by a Subcontractor or lower-tier subcontractor, used in the performance of a subcontract or lower-tier subcontract. When a location or site of operations includes more than one building, plant, installation, or structure, the entire location or site shall be deemed a facility except when the Administrator, or a designee, of the Environmental Protection Agency determines that independent facilities are collocated in one geographical area.

"Water Act," as used in this clause, means Clean Water Act (33 U.S.C. 1251, et seq.).

B. The Subcontractor Agrees --

1. To comply with the requirements of section 114 of the Clean Air Act (42 U.S.C. 7414) and section 308 of the Clean Water Act (33 U.S.C. 1318) relating to inspection, monitoring, entry, reports, and information, as well as other requirements specified in section 114 and section 308 of the Air Act and the Water Act, and all regulations and guidelines issued to implement those acts before the award of this subcontract;
2. That no portion of the work required by this prime subcontract will be performed in a facility listed on the Environmental Protection Agency List of Violating Facilities on the date when this subcontract was awarded unless and until the EPA eliminates the name of the facility from the listing;

- 3. To use best efforts to comply with clean air standards and clean water standards at the facility in which the subcontract is being performed; and
- 4. To insert the substance of this clause into any nonexempt lower-tier subcontract, including this subparagraph B.4.

ARTICLE 12 - INTEGRATION

This subcontract contains the entire understanding between the parties, and there are no understandings or representations except those set forth or incorporated by reference herein. No subsequent modifications of this subcontract shall be of any force or effect unless in writing signed by a duly authorized official of NREL.

IN WITNESS WHEREOF, the parties hereto have executed this subcontract as of the date fully signed below.

ACCEPTED: VOGELBUSCH U.S.A., INC.

AUTHORIZED: MIDWEST RESEARCH INSTITUTE
NATIONAL RENEWABLE ENERGY LABORATORY DIVISION

SIGNED: *G. S. Broad*
NAME: Gunter B. Broad
TITLE: PRESIDENT
DATE: 2/5/99

SIGNED: *John W. Enoch, Jr.*
NAME: JOHN W. ENOCH, JR.
TITLE: SENIOR ADMINISTRATOR I
DATE: 2/8/99

APPENDIX A

STATEMENT OF WORK

BUILDING A BRIDGE TO THE CORN ETHANOL INDUSTRY

July 27, 1998

1.0 INTRODUCTION

The Biofuels Program at the National Renewable Energy Laboratory (NREL), under guidance from the Department of Energy's (DOE) Office of Fuels Development (OFD), is working to facilitate the commercialization of lignocellulosic biomass, i.e. corn fiber, corn stalks, and wood to ethanol for use as a transportation fuel. OFD's ultimate vision is the large-scale production of ethanol from biomass to serve the nation's transportation needs.

To make this vision a reality, OFD supports research of process technologies, feasibility studies, and related commercialization activities by national laboratories, universities, private industry, research foundations, and other government entities. In addition to technical achievement, substantial market development must also occur with the expectation that industry leaders will emerge as the route to commercialization is clarified.

Building the Bridge

OFD recognizes the leadership potential of the existing grain processing industry. Their resources and experience provide the grain processing industry with the ability to lead commercialization of biomass to sugars and ethanol. The grain processing industry is the largest contributor to current ethanol and sugar production. To better determine the commercialization possibilities for the industry, site-specific engineering feasibility studies are desired. NREL will fund up to 80% of the feasibility study cost. Cost sharing can be in-kind expenses of the offeror.

Recent feasibility studies for the production of sugars and ethanol from biomass at Greenfield sites have shown that capital expenditures contribute a large fraction of the cost, and must be reduced if the conversion process is to be economically viable in the near term. Adding on to an existing ethanol plant or other site with compatible processes may reduce capital and operating cost. Roads, utilities other process and operational infrastructure may be able to support increased operations and reduce the cost of sugar and ethanol production. Increased process utilization may also be possible. For example, wet millers ethanol production equipment is often idle during the summer to meet sweetener requirements for beverage customers.

Some process equipment modifications may be required for biomass conversion. Equipment modifications are often expensed rather than capitalized. Expensing costs for equipment modification may be a more favorable approach to financing a biomass conversion facility.

Process Technology

Individual companies may not have access to lignocellulosic biomass conversion technology. To address this need and facilitate interest NREL will supply a description of process technology including process flow diagrams, material and energy balances, and equipment list. Information includes the performance of cellulose hydrolysis and hexose and pentose fermentations. Alternatively, respondents may use independent technology for their economic evaluation. This solicitation is intended to help qualify respondents to evaluate the potential of the conversion technology not to assess the value of any particular process technology.

The feasibility study can assume cellulase enzyme cost on a per gallon of ethanol produced basis utilizing a range of costs from 5¢ to 45¢ per gallon of ethanol. On site cellulase production technology can be utilized if available to the proposer.

Raw Materials

Biomass feedstocks comprise one of the largest sustainable resources on earth. They are produced in quantity from agricultural and forestry activities, and are largely considered to be residue and waste. Locating a biomass conversion facility close to the feedstock can minimize the cost of transporting the materials. Facilities that produce their own biomass materials and are in the area of crop production already have access to low-cost biomass feedstocks.

Grain processing sites are located near grain and agricultural residues. Corn stover is the single largest agricultural residue. Most grasses, hays, and straws have cellular structures similar to corn stover, so a conversion technology that will work with corn stover will also work with these other potential feedstocks.

Processing starch to ethanol produces corn fiber and spent grain, which are sold for animal feed because of their protein and fiber contents. Animal feed markets and value have been in decline, and other outlets for the corn fiber are desired. One possible use for corn fiber is conversion to ethanol.

In 1997 NREL performed an assessment of agricultural residue for feedstock. Sustainable corn stover collection estimates are between 60 and 120 million tons per year, equivalent to at least 5 billion gallons of ethanol and possibly as much as 12 billion gallons per year. Cost per dry ton delivered to the processor was \$32/dry ton for 50,000 acres contracted by a custom harvester for the '97-'98 crop year. The successful operation is being expanded to 100,000 acres this year. Productivity improvements are expected to reduce the costs to less than \$30/dry ton, or about 35¢/gallon ethanol.

Cellulase Enzymes

The costs of cellulase enzymes are also important to the commercial viability of a biomass conversion facility. In 1997 NREL performed an assessment of cellulase enzymes utilizing world-wide industry and academia input. The consensus position captured by the assessment showed cellulase enzyme costs can be lowered 5 to 10 fold by using proven biotechnology tools, reducing the cellulase enzyme cost from 45¢ to 5¢ per gallon ethanol. NREL is working with industry, universities, and other national labs to facilitate this cost reduction.

Purpose

The goals of this project are:

- Provide the grain processing industry the opportunity to explore the business potential provided by converting biomass to sugars via hydrolysis and fermentation to products such as ethanol.
- Take advantage of the grain processing infrastructure by investigating the co-location of biomass conversion facilities at existing plant sites.
- Obtain feedback from the grain processing industry to guide the research and development activities for biomass conversion commercialization..

Scope

The subcontractor will develop a feasibility study for a biomass conversion facility co-located at an existing grain processing facility to evaluate the business opportunity. This facility will hydrolyze biomass to sugars and ferment the sugars to products, including ethanol. The feasibility study will consist of the tasks outlined in section 3.0.

2.0 OBJECTIVES

The technical objectives of the work are designed to evaluate the business opportunity for lignocellulosic biomass conversion for a specific processing site. Additionally, the information generated should provide an overall perspective to the grain processing industry on biomass conversion. This should allow the subcontractor to provide the Biofuels Program's Ethanol Project feedback on actions to improve the business opportunity.

- Specify a process flow diagram and utility requirements for the biomass conversion facility.
- Identify typical capital equipment located at an extant grain processing site; determine its availability and necessary modifications for use by a co-located biomass conversion facility.
- Identify additional infrastructure requirements of a co-located biomass conversion facility.
- Determine the production capacity of a co-located biomass conversion facility.
- Determine equipment needs for a co-located biomass conversion facility.
- Produce a Pro forma and perform sensitivity analysis on the effects of added capacity, capital required, cellulase enzyme, and feedstock cost on the production costs of sugars and ethanol.

3.0 TASK SPECIFICATIONS

The subcontractor shall assemble a team with the expertise to address these tasks in some detail. NREL will provide technical support to the project (see task for details).

Task 1 Feedstock Description

Describe the types of feedstocks to be used. This description should include:

- Percentage of each feedstock
- Total sugar content/lignin content/ash content
- Estimate of feedstock cost.

NREL will provide access to corn stover and agricultural residue collection, storage, and harvesting models on request. Also, NREL will provide total carbohydrate, lignin, and ash percentages for corn stover and corn fiber.

Task 2 Facility Description

Subtask 2.1 The subcontractor shall supply specifications about the grain processing facility as they relate to the proposed biomass conversion facility.

- Facility production capacity (annual sugar and ethanol production).
- Site description
- Infrastructure description (utilities, water, waste disposal, roads, rail)
- Size, required modifications, production parameters, and availability of capital equipment and infrastructure that will be shared.

Subtask 2.2 The subcontractor shall specify process-related requirements for the biomass conversion facility. These shall include:

- Minimum feedstocks supply quantities and expected quality mix
- Ethanol production rate in gal/day and solid by-product rate
- Environmental emission characteristics, in terms of quantity emitted per ton of feedstock processed
- Area requirements (acres) and preferred shape

- Utility and chemical requirements (water, steam, fuel, power, chemicals)
- Special transportation requirements (truck, water, rail line)
- Special storage requirements for feedstock, by-products, and chemicals.
- NREL will supply feedstock composition, process technology for hydrolysis and hexose, pentose fermentation, flow diagrams, material and energy balance, equipment list, and operating parameters for a typical biomass conversion facility upon request.
- Cellulase production is not required.
- Other available process technology may be used.

Subtask 2.3 The subcontractor shall develop capital and operating costs based on process considerations.

The subcontractor shall provide annualized capital and operating costs for the island of process equipment (exclusive of site-specific costs) for a biomass conversion facility sized to fit the constraints of the existing facility, and shall define feedstock quality and cost assumptions used in the analysis.

Task 3 Capital and Operating Cost Refinement

The subcontractor shall review and refine the capital and operating costs defined in Subtask 2.3. The subcontractor shall provide a list of major process equipment specifications and prepare a capital cost estimate accounting for direct and indirect costs. An example of direct and indirect costs follows:

<u>Direct Costs</u>	<u>Indirect Costs</u>
Site Work	Construction Indirects
Concrete Work	Startup
Structural Steel	Construction Management
Equipment	Engineering
Piping	Contingency
Electrical	Environmental Permitting
Buildings	Insurance
Instrumentation	Taxes
Insulation/Piping	Plant Closure

It is anticipated that the estimating effort shall lead to a capital cost estimate with an accuracy of $\pm 30\%$. The subcontractor shall prepare an operating cost estimate based on the anticipated specific operating costs at the preferred site.

Task 4 Financial Pro Forma Preparation

The subcontractor shall prepare a financial Pro Forma for the construction and long-term operation of the biomass conversion facility. All assumptions in the Pro Forma shall be clearly identified and a rationale given for each assumption. The Pro Forma shall be prepared for 10 years of plant operation. The financial evaluation shall incorporate the site-specific capital, equipment modifications, startup cost, and operating costs as determined in Task 3 and shall determine the feedstock cost and the market value of the ethanol and other possible by-products that provide for a financially attractive return on equity.

Task 5 Sensitivity Analysis

A sensitivity analysis shall be performed for varying ethanol prices and capacity-added capital required feedstock costs, ethanol yield, and cellulase cost. The subcontractor shall provide anticipated best- and worst-case scenarios based on the sensitivity analysis. The projected profit over 10 years per gallon of ethanol shall be included in the Pro Forma.

Task 6 Monthly Status Reports

The subcontractor shall submit monthly status reports in letter form summarizing the progress of Task 1 to Task 5, during the previous month.

Task 7 Final Report

The subcontractor shall submit a final report that contains an executive summary, a synopsis of Task 1 - Task 5 results, conclusions, and recommendations for further work.

4.0 DELIVERABLES

DELIVERABLES	
#	DESCRIPTION
1	Task 1. and 2. Biomass conversion plant size, and equipment and infrastructure requirements
2	Task 3. Capital and operating cost refinement
3	Task 4. Financial Pro forma
4	Task 5. Sensitivity analysis
5	Task 6. Monthly status reports
6	Task 7. Final report

Copies of all deliverables shall be sent to the Technical Monitor and the Subcontract Administrator as follows:

Original Copy to the Technical Monitor:

National Renewable Energy Laboratory
Attn: Art Wiselogel, MS 1634
1617 Cole Boulevard
Golden, CO 80401-3393

One Copy to the Subcontract Administrator:

National Renewable Energy Laboratory
Attn: John W. Enoch, Jr., MS 1632
1617 Cole Boulevard
Golden, CO 80401-3393

5.0 PERIOD OF PERFORMANCE

The period of performance for the proposed work shall not exceed 9 months.

