

SUBCONTRACT NO. AFJ-8-77550-01

UNDER

PRIME CONTRACT NO. DE-AC36-99GO10337

CONTRACTING PARTY: MIDWEST RESEARCH INSTITUTE
NATIONAL RENEWABLE ENERGY LABORATORY
DIVISION

SUBCONTRACTOR: *****

ADDRESS: *****

SUBCONTRACT TITLE: "RESEARCH SUPPORT FACILITIES"
PHASE I – PRELIMINARY DESIGN
PHASE II – DESIGN DEVELOPMENT AND
CONSTRUCTION

TYPE OF SUBCONTRACT: DESIGN-BUILD FIRM-FIXED PRICE WITH AWARD FEE

PERIOD OF PERFORMANCE: EXECUTION THROUGH * (*) MONTHS

SUBCONTRACT AMOUNT: \$*****

PAYMENT TERMS: NET 30

**SUBCONTRACTOR'S
REMITTANCE NAME
AND ADDRESS** *****

**FUNDED AMOUNT AND
TASK CHARGE NUMBER:** \$*****

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SUBCONTRACT NO. AFJ-8-77550-01

BETWEEN

MIDWEST RESEARCH INSTITUTE

NATIONAL RENEWABLE ENERGY LABORATORY DIVISION

AND

SCHEDULE

INTRODUCTION

THIS SUBCONTRACT is effective upon execution by the Midwest Research Institute (MRI), National Renewable Energy Laboratory Division and is between the Midwest Research Institute, acting through its National Renewable Energy laboratory Division (hereinafter called "NREL") and ***** (hereinafter called "Subcontractor"), whose principal offices are located in *****, **.

Midwest Research Institute has entered into Contract No. DE-AC36-99GO10337 (hereinafter called "Prime Contract") with the Department of Energy (hereinafter called "DOE"), and 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 (FEB 2008)

- A. The Subcontractor shall perform the work generally described as "Phase I (Preliminary Design) and Phase II (Design Development and Construction) of the Research Support Facilities", and specifically provided for in Appendix A, Conceptual Documents (Part I, II, and III), 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.
- C. This Subcontract includes the design development and construction (Phase II) of the RSF and the option to incorporate site infrastructure scope into this subcontract outlined as follows:
 - 1. Phase II: Final Design and Construction of the Research Support Facilities (RSF). Upon completion of the preliminary design, NREL may at its discretion enter into negotiations for

the final design and construction of the Research Support Facilities with the Subcontractor. Upon successful negotiations for the final design and construction of the RSF, a modification to this Subcontract will be issued.

2. Add Alternate No. 1: Site Improvements. Site Improvements are generally defined as site improvements, including design services, infrastructure, utilities, roads, parking, grading and related site improvements. NREL may include site improvements scope, or any part of that scope, into this subcontract. Upon successful negotiations for any site improvements scope, a modification to this Subcontract may be issued to incorporate this Add Alternate 1 scope into this Subcontract.

ARTICLE 2 – COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (FEB 2008)

1. Phase I of this Subcontract (preliminary design):

The period of performance for Phase I under this subcontract shall commence upon the effective date of this subcontract and shall be completed ***** (*****) months after such date; provided, however that this period may be extended for additional period by mutual written agreement of the parties. NREL will make a decision, based on its sole judgment, whether or not to continue and fund Phase II, prior to the completion date of Phase I. If the decision is not to continue and fund Phase II, this subcontract shall be considered complete upon submittal of the preliminary design with comments specified by NREL, if any.

2. Phase II of this Subcontract (design development and construction):

A. The Subcontractor shall be required to (a) commence work under this subcontract within ten (10) calendar days of NREL's execution of this subcontract, which execution constitutes NREL's formal notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than ***** (***) days after such execution date. Such prosecution and completion are subject to the provisions of the Article "NEPA Compliance as a Condition Precedent to Work Performance" herein. The time for completion shall include final cleanup of the premises.

B. NREL will not execute the Subcontract until the Subcontract Administrator has received all of the following documents:

1. A fully executed version of this subcontract with original signatures of both parties;
 - a. Certificate(s) of insurance evidencing that required coverage and limits of insurance are in full force and effect;

Fully executed Performance and Payment Bonds shall be submitted within 14 calendar days after the execution of the Subcontract.

C. Subcontractor shall submit their site specific safety plan to NREL for acceptance prior to commencement of any on-site work.

D. The Subcontractor shall achieve Substantial Completion within ***** **calendar days** after receipt of the Notice of Award for Add Alternate No. 1 scope as outlined in Article 1 above, and shall achieve Final Completion of the entire work within ***** **calendar days** after receipt of the Notice of Award. Such Substantial Completion and Final Completion are subject to the

provisions of the Article “NEPA Compliance as a Condition Precedent to Work Performance” herein.

1. Substantial Completion is defined as “when the work or designated portion thereof is sufficiently complete, in accordance with the subcontract documents, so NREL may occupy the work or designated portion thereof for the use for which it is intended”. Additional prerequisite to Substantial Completion are listed in Part I of the Conceptual Documents.
 - b. Final Completion is defined as “when all work reasonably inferable from the subcontract documents has been completed, approved and accepted by NREL, including the final cleanup of the premises, completion of all final inspection punch list items, and submission of all required documents including warranties”. Additional prerequisites to Final Completion are listed in Part I of the Conceptual Documents.
 - c. Warranty Period is defined as “one year post occupancy”.

ARTICLE 3 – PRICE, PAYMENTS, AND INVOICES (FEB 2008)

- A. In full consideration of the Subcontractor’s performance of preliminary design (Phase I) of this design-build project covered by this subcontract, NREL shall pay the Subcontractor the firm fixed price of \$***** in accordance with this Article, the clause entitled “Payments Under Fixed Price Construction Subcontracts” of Appendix B-10, and other provisions of this subcontract. NREL may, at its sole discretion offer an Award Fee incentive payment.
- B. The Subcontractor is hereby authorized to use the NREL tax exempt number 98-03026-0000 for any use or sales tax which would otherwise apply for the acquisition of any materials or equipment that is required in the performance and delivery under this subcontract.
- C. 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 to the Subcontractor’s remittance name and address shown on the cover sheet of this subcontract.
- D. The payment terms of this subcontract shall mean net days from the date of receipt of an acceptable invoice (including appropriate certification(s) and payroll records). Final payment by NREL shall be contingent upon inspection and acceptance of the work effort required by this subcontract, and receipt by NREL of an appropriately signed “Release of Claims” form from the Subcontractor.
- E. Any payments made under this subcontract shall not be deemed to prejudice any rights that NREL may have by law or under other provisions of this subcontract.
- F. Invoices for work accomplished under this subcontract shall be submitted in an original and two copies, in a form satisfactory to the Subcontract Administrator, accompanied by the “Certificate for Payment” to:

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

An authorized representative of the Subcontractor shall sign the following certification on each invoice submitted for payment:

“I hereby certify, to the best of my knowledge and belief, that (1) the amounts requested are only for performance in accordance with the specification, terms, and conditions of the subcontract; (2) payments to lower-tier subcontractors and suppliers have been made from previous payments received under this subcontract, and timely payments will be made from the proceeds of the payment covered by this certification, in accordance with lower-tier subcontract agreements and the requirements of Chapter 39 of Title 31, United States Code; and (3) this request for progress payments does not include any amounts which the Subcontractor intends to withhold or retain from a lower-tier subcontractor or supplier in accordance with the terms and conditions of the lower-tier subcontract.

Authorized Official’s Signature

Authorized Official’s Typed or Printed Name

Authorized Official’s Title

Date”

ARTICLE 4 - AWARD FEE INCENTIVE STRUCTURE (FEB 2008)

NREL has established an award fee pool in a not-to-exceed amount of \$2,000,000.00 to promote excellent performance by the design-build team.

- A. NREL may, at its sole discretion, offer an Award Fee incentive payment for work performed under this subcontract. If exercised, such Award Fee incentive program shall be incorporated by modification to this subcontract. This subcontract provides the opportunity to achieve Award Fee incentives in the following categories:
 - 1. Safety
 - 2. Design Effort and Objectives
 - 3. Workmanship – Quality of All Work
 - 4. Responsiveness – Problem Solving
 - 5. Cooperation
 - 6. Communication – Professionalism
 - 7. Timeliness of Completion

- B. In addition to the categories above, the following items will also be evaluated as part of the Award Fee incentive in the fifth stage (completion of Closeout) under this subcontract:
 - 1. Issuance by NREL of a Certificate of Substantial Completion for the work under this subcontract and return of a signed copy of the Certificate by the subcontractor;

2. Final Completion of the work within 45 calendar days of Substantial Completion;
 3. Compliance with all requirements of the subcontract documents;
 4. Final inspection and acceptance of the work by NREL, and NREL approval of the subcontractor's final payment request including the subcontractor's Release of Claims, no later than 75 calendar days after the date of Substantial Completion for the subcontract.
- C. The award and payment of any portion of the Award Fee shall be at the sole discretion of NREL and is not subject to the disputes clause of this subcontract.
- D. Any Award Fee awarded to the subcontractor shall be incorporated by modification into the subcontract. Payment will be contingent upon the submission by the subcontractor of a properly prepared invoice. Award Fee shall be tracked and billed separately from progress payments.
- E. Evaluation stages are contemplated to be at the conclusion of the following stages:
1. Completion of Preliminary Design Milestone
 2. Completion of Design Development Milestone
 3. Completion of Construction Document Milestone
 4. Completion of Construction Milestone
 5. Completion of Closeout Milestone
 6. 12 month post occupancy
- F. Percentage of Award Fee available at each evaluation stage is contemplated as follows:
1. First evaluation – not more than 20% of Award Fee
 2. Second evaluation – not more than 15% of Award Fee
 3. Third evaluation – not more than 15% of Award Fee
 4. Fourth evaluation – not more than 25% of Award Fee
 5. Fifth evaluation – not more than 20% of Award Fee
 6. Final evaluation – not more than the balance of the Award Fee
- G. NREL reserves the right to “rollover” any unearned Award Fee if NREL determines (at NREL's sole discretion) that the Subcontractor may be able to recover from previous performance evaluations.

ARTICLE 5 – DESIGN-BUILD – SUBCONTRACTOR'S FIRM-FIXED PRICE (FEB 2008)

- A. The Subcontractor shall, in accordance with the terms and conditions of this subcontract, provide the personnel, materials, supplies, and services (except as may be expressly set forth in this subcontract as furnished by NREL) and otherwise do all things necessary and incident to the designing and constructing the Research Support Facilities (RSF), as described in Appendix A, Conceptual Documents.
- B. If the Subcontractor is part of a consortium, joint venture, and/or other teaming arrangement, the team shall share in the firm fixed price of this subcontract and no separate additional “subcontractor fee” for teaming partners will be paid under the subcontract). If the Subcontractor, supplier, or lower-tier subcontractor is wholly owned, majority owned, or an affiliate of any team member, any fee or profit earned by such entity will be paid under this subcontract.
- C. The Subcontractor guarantees that the total price of the Phase I work to be performed under this subcontract is a firm-fixed price of “***** Dollars” (\$*****); the subcontract shall be subject to full compliance with the all requirements defined in the Conceptual Documents.

- D. Except for costs exceeding the Subcontractor’s Firm-Fixed Price that directly stem from an NREL-directed subcontract modification , the Subcontractor assumes the risk for all costs exceeding the Firm-Fixed Price necessary to meet NREL’s inspection and acceptance of the Design-Build effort; such inspection and acceptance shall not be unreasonably withheld by NREL.

ARTICLE 6 – NEGOTIATED RATES AND FACTORS FOR CHANGE (OCT 2007)

- A. For the purpose of expediting negotiation of equitable adjustments for subcontract modifications that may occur, the following rates and factors will be applied as and when appropriate for the entire period of performance:

Description	Design	Construction
Overhead Rate	%	%
G&A Rate	%	%
Profit Rate	%	%
Handling Fee on Materials	%	%
Handling Fee on Sub-tiers	%	%
Insurance and Bond	%	%
	Rate	Base
Small Tools		

- B. The following fully burdened hourly rates will apply to modifications for the entire period of performance:

Discipline	Base Rate	Overhead	G&A	Profit	Fully Burdened Rate
Project Manager	\$	%	%	%	\$
Superintendent(s)	\$	%	%	%	\$
Asst. Superintendent(s)	\$	%	%	%	\$
Project Engineer(s)	\$	%	%	%	\$
Safety Coordinator(s)	\$	%	%	%	\$
Administrative Support	\$	%	%	%	\$
Contract Administrator	\$	%	%	%	\$
Purchasing Agent	\$	%	%	%	\$
Cost Control/Estimating	\$	%	%	%	\$
Scheduling	\$	%	%	%	\$

ARTICLE 7 – APPLICABLE DOCUMENTATION (OCT 2007)

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 “Conceptual Documents”, including Part I, Part II and Part III, dated 2/6/08.

- B. Appendix B-10, entitled “Standard Terms and Conditions” dated 12/14/07.
- C. Appendix C-3, entitled “Intellectual Property Provisions” dated 10/22/98.
- D. Appendix D-1, entitled “Clauses for Subcontract in Excess of \$500,000” dated 11/01/03.
- E. Appendix E, entitled “Small Business (Lower Tier) Subcontracting Plan” dated *****.
- F. Appendix F, entitled “General Wage Decision No CO *****” dated *****.
- G. Appendix G, Other provisions of this subcontract whether incorporated by reference or otherwise.
- H. Appendix H, Subcontractor’s technical proposal number (none) dated ***** 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 provisions of this subcontract, the latter shall prevail.

ARTICLE 8 – ORDER OF PRECEDENCE (OCT 2007)

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

- A. This Schedule;
- B. Conceptual Documents (Appendix A)
- C. Standard Terms and Conditions (Appendix B-10);
- D. Intellectual Property Provisions (Appendix C-3);
- E. Clauses for Subcontracts in Excess of \$500,000 (Appendix D-1);
- F. Small Business (Lower Tier) Subcontracting Plan (Appendix E);
- G. General Wage Decision Number CO ***** (Appendix F)
- H. Other provisions of this subcontract whether incorporated by reference or otherwise (Appendix G);
and
- I. The Subcontractor’s technical proposal, if incorporated in this subcontract by reference or otherwise (Appendix H).

ARTICLE 9 - SUBCONTRACT ADMINISTRATION RESPONSIBILITIES (SUBCONTRACT FOR DESIGN-BUILD, CONSTRUCTION, A&E SERVICES, AND SERVICES – SITE OPERATIONS) (OCT 2007)

A. Signature Authority:

This Subcontract may only be modified or changed by a binding direction signed by an authorized official of the NREL.

B. Subcontract Administration Responsibilities:

1. The authorized official of NREL has designated Karen Leitner as the Subcontract Administrator for this Subcontract with the responsibilities for administering the subcontract and directing binding modifications and changes to this subcontract. The Subcontract Administrator's telephone number is (303) 275-4288.
2. The Subcontract Administrator is the only individual authorized to direct to the Subcontractor binding modifications and changes under this Subcontract and such authority shall remain solely with the Subcontract Administrator regardless of any other provisions of this Subcontract. With Project Manager's concurrence, the Subcontract Administrator shall direct such binding modifications and changes in writing to the Subcontractor. The Subcontractor shall address all contractual and administrative correspondence directly to the Subcontract Administrator.
3. Except for changes resulting from an emergency described in subparagraph 4 below, no written or verbal statement from the Project Manager or any other individual shall be construed to be a binding direction unless or until the Subcontract Administrator directs to the Subcontractor a written modification or change to this Subcontract. **The Subcontractor assumes the risk and sole expense of any such unauthorized changes and hereby waives all rights to costs and time extensions that stem directly from changes made without prior written direction from the Subcontract Administrator. NREL shall make no adjustment to the subcontract price and/or performance period for changes made by the Subcontractor without the binding direction of the Subcontract Administrator.**
4. In the event of an emergency, the Project Manager or any individual may direct the Subcontractor to make a change necessitated by such emergency. Except for unsafe work conditions as set forth in the Article "Worker Safety and Health Requirements," in the event that the Subcontractor is directed by the Project Manager or any individual to make a change resulting from an emergency that requires the Subcontractor to take immediate action, the Subcontractor shall be entitled to an equitable adjustment in subcontract price and performance period (if any) covering only that period up to and no later than the second working day after the date on which the change resulting from such emergency occurred.

C. Project Management Responsibilities:

1. The authorized official of NREL has designated ***** as the Project Manager for this Subcontract with the accountability for stewardship of the Subcontractor's technical project performance with respect to the scope, schedule, and budget under this Subcontract. The Project Manager's telephone number is *****. The Subcontractor shall address all technical project performance correspondence to the Project Manager, with an informational copy sent to the Subcontract Administrator.
2. The Project Manager is accountable for stewardship of the Subcontractor's technical project performance, but is not authorized to direct to the Subcontractor binding modifications and changes to the Subcontractor's technical project performance, including scope of work, schedule, budget, performance period, or terms and conditions under this Subcontract.
3. **Except for changes resulting from an emergency that requires the Subcontractor to take immediate action, any change made by the Subcontractor based on a statement from the Project Manager shall be at the risk and sole expense of the Subcontractor.** The Subcontractor shall immediately refer all such changes to the Subcontract Administrator designated in Paragraph B above.

ARTICLE 10 – KEY PERSONNEL AND LOWER TIER SUBCONTRACTORS (AUG 2004)

A. The key personnel listed below, or other personnel approved by the Subcontract Administrator as persons of substantially equal abilities and qualifications, are necessary and key to the successful performance of this subcontract. The Subcontractor agrees to assign such employees or persons to the performance of the work under this subcontract, and shall not reassign or remove any of them without prior written approval of the Subcontract Administrator. If, for any reason not the fault of the Subcontractor, one or more of these individuals are unavailable to work under this subcontract, the Subcontractor shall, with the approval of the Subcontract Administrator, replace such employee with an individual of substantially equal abilities and qualifications.

<u>Name</u>	<u>Project Title</u>	<u>Telephone No.</u>
*****	Executive Officer in Charge	(***) ***_****
*****	Project Manager	(***) ***_****
*****	General Superintendent/ Construction Manager	(***) ***_****
*****	Design Manager	(***) ***_****
*****	Safety Manager	(***) ***_****
*****	Lead Architect	(***) ***_****

B. It having been determined that the lower-tier subcontractors, whose names appear below, are necessary for the successful performance of this subcontract, the Subcontractor agrees to execute lower-tier subcontracts for the performance of work by these companies under this subcontract and shall not remove any of them without the consent of the Subcontract Administrator by modification to this subcontract:

Lower-Tier Subcontractors

*****	Mechanical	(***) ***_****
*****	Electrical	(***) ***_****
*****	MEP	(***) ***_****

The Subcontractor agrees to provide accession documents to each of the lower-tier subcontractors named in Article 10 and to have such documents executed and returned to the subcontractor. The Subcontractor shall provide NREL with copies of all such accession documents received, each of which shall identify that the respective lower-tier subcontractor has acceded to all requirements, terms and conditions of the subcontract.

ARTICLE 11 – SUBCONTRACTOR’S SAFETY MANAGER (OCT 2007)

The Subcontractor shall have a competent full-time Safety Manager, who is satisfactory to the Subcontract Administrator and has authority to act for the Subcontractor, on site at all times during the construction phase of this subcontract. The Subcontractor’s Safety Manager must be an employee of the Subcontractor.

ARTICLE 12 - WORKER SAFETY AND HEALTH REQUIREMENTS (JANUARY 2007)

- A. **The Subcontractor shall be responsible to ensure that all work performed under this subcontract or purchase order (inclusive of lower-tier subcontractors) is performed in accordance with the Department of Energy’s “Worker Safety and Health” rule codified AT 10 CFR 851. The Subcontractor shall ensure that all work is performed in accordance with NREL’s DOE-approved Safety Management System. The Subcontractor is subject to all applicable procedures for investigating violations, enforcing compliance with requirements, and assessing civil penalties or fee reductions for violations under the DOE’s “Worker Safety and Health” rule. When these “Worker Safety and Health Requirements” are made applicable to the work to be performed under an NREL subcontract or Purchase Order, the Subcontractor shall also comply with the Clause “Integration of Environment, Safety, and Health into Work Planning and Execution” (DEAR 970.5223-1). Such clause (DEAR 970.5223-1) is included in NREL subcontract Appendix B terms and Conditions and incorporated by reference in NREL Purchase Orders.**
- B. The Subcontractor shall have a structured approach to worker safety and health requirements that at a minimum include provisions for any of the following functional areas applicable to the work to be performed: (a) construction safety; (b) fire protection; (c) firearms safety; (d) explosives safety; (e) pressure safety; (f) electrical safety; (g) industrial hygiene; (h) occupational medicine; (i) biological safety; and (j) motor vehicle safety.
- C. The Subcontractor shall be responsible for full compliance (inclusive of its lower-tier subcontractors) with all applicable worker safety and health standards of DOE and NREL to provide subcontract work that is free from recognized hazards that are causing or have the potential to cause death or serious physical harm to workers. The Subcontractor shall comply with all Safety and Health Standards applicable to the hazards of the work to be performed, including but not limited to: (a) 29 CFR 1904 Recording and Reporting Occupational Injuries and Illnesses; (b) 29 CFR 1910 Occupational Safety and Health Standards and ACGIH Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices; (c) 29 CFR 1926 Safety and Health Regulations for Construction; (d) ANSI Z88.2 Respiratory Protection; (e) ANSI Z136.1 Safe Use of Lasers; (f) ANSI Z49.1 Welding, Cutting, and Allied Processes; (g) NFPA 70 National Electrical Code; and (h) NFPA 70E Standard for Electrical Safety in the Workplace. Nothing in this Paragraph (C) shall be construed as relieving the Subcontractor from complying with any additional specific safety and health requirements necessary to protect the safety and health of workers.
- D. In conforming to the worker safety and health requirements identified the Subcontractor shall provide at least worker safety and health supervision in the following areas : (a) management responsibilities; (b) worker rights and responsibilities; (c) hazard identification and assessment; (d) hazard prevention and abatement; (e) training and information; and (f) recordkeeping and reporting.
- E. NREL may inspect the Subcontractor's operation as work proceeds, from time to time, for compliance with worker safety and health requirements contained in this subcontract. The NREL Subcontract Administrator shall direct the Subcontractor to make the necessary corrections commensurate with deficiencies found. The Subcontractor shall make these corrections at no additional expense to NREL. The Subcontractor shall participate in NREL’s fact-finding investigations of accidents, injuries, occurrences, and near-misses. The Subcontractor shall participate in fact-finding investigations at no additional expense to NREL. The Subcontractor shall remove from the work site any employee that NREL identifies in writing as unsafe, incompetent, careless, or otherwise objectionable. The Subcontractor shall replace the removed employee at no additional expense to NREL. The NREL Technical or Project Manager, NREL Subcontract Administrator and NREL ESH&Q representatives have authority to stop work if unsafe conditions exist. The Subcontractor shall not be entitled to an extension of time or additional fee or damages by reason of or in connection with any unsafe conditions work stoppage. The Subcontractor's violation, refusal, or failure to abate violations, or applicable

deficiencies may be justification for subcontract termination in accordance with the termination or default clauses of Appendix B.

- F. The Subcontractor shall complete and post the Form DOE-F-5480.4 at the work site. The Subcontractor shall make available Form DOE-F-5480.4, "[Sub]Contractor Employee Occupational Safety or Health Complaint" to its employees. The Subcontractor shall maintain specific records and submit the information covering experience of both its direct employees and that of its lower-tier subcontractors: The Subcontractor shall immediately provide to the NREL Technical or Project Manager and the NREL Subcontract Administrator notification of any injury or property damage incident and provide sufficient information necessary for NREL to complete DOE-F-5484.3 "The Individual Accident/Incident Report." Such information shall be submitted, as appropriate, for any period of time prior to final payment and closeout of this subcontract.

ARTICLE 13 - SECURITY AND ACCESS REQUIREMENTS FOR SUBCONTRACT WORK PERFORMED AT NREL OPERATED FACILITIES (OCT 2007)

A Security requirements.

1. NREL has established security requirements to govern access onto NREL operated facilities by the Subcontractor's employees (and its lower-tier subcontractors' employees) and their officers, agents, and any other persons representing the Subcontractor.
The introduction of certain "controlled" commodities and/or activities on the NREL operated facilities is prohibited. Prohibited articles include cameras, copying machines, reproduction devices, recording devices, radio transmitters, firearms, explosive devices, incendiary devices, dangerous weapons or materials, controlled substances (illegal drugs), alcoholic beverages, and livestock. NREL operated facilities and DOE-owned or-leased property is closed to all hunting.
2. As a condition of entry to NREL operated facilities, the Subcontractor agrees to permit NREL Security personnel to search the Subcontractor's employees (and its lower-tier subcontractors' employees) and their officers and agents' vehicles, packages, tool boxes, or other containers for the purpose of preventing prohibited articles to be brought onto NREL operated facilities or to detect or deter the unauthorized removal of Government property from NREL operated facilities.
3. The Subcontractor is solely responsible for the security of the Subcontractor's employees (and its lower-tier subcontractors' employees) and their officers and agents' materials and equipment at the NREL operated facilities. Any security system the Subcontractor may elect to use (fences, keys, alarms, etc.) must be coordinated with the NREL Technical Monitor.
4. The Subcontractor is responsible to advise the NREL Technical Monitor promptly of any non-routine events, occurrences, incidents, accidents, etc., particularly in situations involving lost time accidents and ambulance runs, occurring under this subcontract.
5. NREL Security reserves the right to revoke site access authorization for any person violating NREL or DOE security policies and procedures.

B. Access requirements for U.S. citizens.

1. Access to NREL operated facilities is controlled in accordance with the DOE's security requirements. The Subcontractor shall ensure that any of the Subcontractor's employees (and its lower-tier subcontractors' employees) and their officers and agents who will enter onto the NREL operated facilities are specifically authorized site access under the NREL requirements set forth in the NREL Access Control Policy and Program, including identification, badging, and registration by NREL Security. A two-week advance notice to NREL Security processed through the NREL Subcontract Administrator is required prior to access by U.S. citizens.

C. Access requirements for persons who are not U.S. citizens.

1. The Subcontractor shall ensure that any of the Subcontractor's employees (or its lower-tier subcontractors' employees) and their officers, and agents who will enter onto NREL operated facilities and who are not U.S. citizens meet the requirements set forth in NREL's Foreign National Management Policy and Program, including: (a) appropriate work authorization documentation (i.e. Visa); (b) completion of an NREL Foreign National Data Card; and (c) NREL Manager-level approval.
2. Foreign Nationals from DOE-designated "Sensitive Countries" will be processed for a Federal background check. This process requires a minimum of two weeks. Foreign Nationals from DOE-designated "Terrorist Supporting Countries" will not be allowed. The Subcontractor should contact the NREL Subcontract Administrator to obtain the most current listing of "Sensitive Countries" and "Terrorist Supporting Countries."
It is the responsibility of the NREL Technical Monitor and the NREL Subcontract Administrator to assure that the Subcontractor provides all documentation and meets all requirements within the appropriate time frames for NREL Security to process and approve the request for access. Any person(s) denied access by NREL Security or DOE shall not be assigned by the Subcontractor to enter onto or perform subcontract work at NREL operated facilities.
3. Prior to the initiation of subcontract that requires entry onto NREL operated facilities, the Subcontractor shall provide to the NREL Subcontract Administrator advance notice and necessary evidence (including Visa types and expiration dates) that legally sufficient work permits have been obtained from the U.S. Immigration and Naturalization Service. Further, the Subcontractor is responsible to ensure that such permits are properly maintained for any of the Subcontractor's employees (and its lower-tier subcontractors' employees) and their officers and agents who are not U.S. citizens for the duration of subcontract work at NREL operated facilities.
4. After the Subcontractor (and its lower-tier subcontractors) has commenced work under the subcontract, the Subcontractor shall provide to the NREL Subcontract Administrator the same advance notice and necessary evidence (including Visa types and expiration dates) for all subsequently assigned individuals who are not U.S. citizens who will enter onto NREL operated facilities.

D. Access Requirements for all persons.

1. All persons entering NREL operated facilities must display a valid NREL (or DOE) issued identification badge. The Subcontractor is responsible to coordinate badge requirements for entrance onto NREL operated facilities for all the Subcontractor's employees (and lower-tier subcontractors' employees) and their officers and agents to ensure the display and return of all issued badges.
2. The Subcontractor is responsible to coordinate with the NREL Technical Monitor all vehicle parking requirements needed to perform the subcontract work on the NREL operated facilities. Vehicle access by Subcontractors and other visitors to the NREL operated facilities are controlled on a 24-hour, 7-day per week basis.
3. The Subcontractor is cautioned that effective January 1, 2007, the Colorado Revised Statutes (CRS 8-2-122) require employers that transact business in Colorado to comply with employment verification requirements to affirm that the employer has examined the legal work status of newly-hired employees and has retained file copies of the documents required by the Federal Immigration Reform and Control Act (8 USC 1324a).

E. The Subcontractor shall include this clause, including this Paragraph (E), in all lower-tier subcontracts that require entry onto NREL operated facilities."

ARTICLE 14 – PARTNERING (OCT 2007)

The term "partnering" and "partnership" used in conjunction with this subcontract shall mean a relationship of open communication and close cooperation that involves both NREL and Subcontractor

personnel working together for the purpose of establishing a mutually beneficial, proactive, cooperative environment within which to achieve subcontract objectives, resolve issues, and implement actions as required. Such relationship shall in no event be deemed to modify the subcontract between the Subcontractor and NREL, nor shall it be deemed to create a contractual relationship between NREL and any “partner”.

Partnering is expected to disclose the intentions of NREL, the Subcontractor, lower-tier subcontractors and the design-build team as each understands its contractual obligations to other “partners”, but is not intended to change any of the contractual obligations of the “partners”. Sustained commitment to the design-build process is essential to assure success of the relationship. This partnership will be structured to draw on the strengths of each organization to identify and achieve mutual objectives. The objectives are intended to complete the subcontract requirements at the firm-fixed amount and on schedule.

ARTICLE 15 – PERFORMANCE OF CONSTRUCTION WORK BY THE SUBCONTRACTOR (OCT 2007)

The Subcontractor shall perform on the site, and with its own organization, construction work equivalent to at least twenty (20) percent of the total amount of work to be performed under the subcontract. This percentage may be reduced by a modification to this subcontract if, during performing the work, the Subcontractor requests a reduction and the NREL Subcontract Administrator determines that the reduction would be to the advantage of NREL.

ARTICLE 16 – SUBCONTRACT DELIVERABLES (FEB 2008)

The Subcontractor shall submit the following deliverables for the Subcontract Administrator’s approval, as listed or as further defined in the subcontract documents for each Phase of the subcontract work as follows:

Phase I (Preliminary Design)

Item No.	Deliverable	Due Date
1.	All requirements outlined in Appendix A, Conceptual Documents, Part 1 – Procedures, Design and Construction Procedures, Quality Requirements	As outlined in Appendix A, Conceptual Documents
2.	Insurance Certificate	All but All-Risk
3.	Release of Claims and Certificate of Final Payment	Prior to submitting a final invoice for subcontract
4.	Small Business Subcontracting Reports	As Applicable
5.	Revised Small Business Subcontract Plan	As Applicable
6.	LEEDs Documentation	As outlined in Appendix A, Conceptual Documents
7.	Project Management Deliverables	As specified in the Article “Schedules, Breakdowns, Lower-tier Subcontracts, and Payments of this subcontract

Phase II (Design Development and Construction)

Item No.	Deliverable	Due Date
1.	Performance and Payment Bonds	Within 14 calendar days after award of Phase II work
2.	All requirements outlined in Appendix A, Conceptual Documents	As outlined in Appendix A, Conceptual Documents
3.	Employer's First Report of Injury or Illness	Within 24 hours after injury or illness
4.	Accident or Incident Report	Within 24 hours of any accident or incident
5.	Safety Notifications	Verbal notifications required once incident/accident is in a safe configuration or affected personnel have been attended to.
6.	Monthly Manhours Report	Within 5 calendar days after the end of each month
7.	Schedule of Exposure Sampling and Daily S&H Inspections	Upon Request from NREL
8.	Insurance Certificate	Prior to Phase II work
9.	Release of Claims and Certificate of Final Payment	Prior to submitting a final invoice for subcontract
10.	Certified Payrolls	Weekly
11.	Small Business Subcontracting Reports	As Applicable
12.	Revised Small Business Subcontract Plan	As Applicable
13.	Project Record Documents	At Completion of Construction
14.	Site Specific Erosion Control and Sediment Plan	Due 28 days prior to the start of construction
15.	Construction Waste Management Plan	Due 28 days prior to the start of construction
16.	Waste Diversion and Recycling Quantity Data	Due quarterly
17.	LEEDs Documentation	As outlined in Appendix A, Conceptual Documents
18.	Project Management Deliverables	As specified in the Article "Schedules, Breakdowns, Lower-tier Subcontracts, and Payments of this subcontract

ARTICLE 17 – SCHEDULES, BREAKDOWNS, LOWER-TIER SUBCONTRACTS, AND PAYMENTS (OCT 2007)

A. Description

1. The Subcontractor shall develop a Critical Path Method (CPM) network plan and schedule for the project demonstrating complete fulfillment of all subcontract requirements, shall keep the CPM network up to date in accordance with the requirements of this section and shall utilize the CPM in planning, coordinating, performing and reporting the work under this subcontract, including all activities of lower-tier subcontractors, equipment vendors, and suppliers, and in assisting the Subcontract Administrator and Project Manager in monitoring the progress of the work.
2. The time scaled Activity-on-arrow Diagramming Method (ADM) or the Precedence Diagramming Method (PDM) shall be utilized in preparing the CPM Schedule network

diagrams.

3. The principles and definition of CPM in terms used herein shall be as follows:

CPM network: a graphic description of the preliminary design, design development, construction documents, commissioning, and closeout plan, showing the sequential steps needed to reach the completion of the work. It shall depict events and jobs, and their interrelationships, and shall recognize the progress that must be made in one task before subsequent tasks can begin. It shall be comprehensive and shall include all interdependencies and interactions required to perform the work of the project.

B. Submittals

1. Within ten (10) calendar days following receipt of Notice of Award, and prior to engaging a consultant or commencing performance of the work specified in this article with its own forces, the Subcontractor shall submit to the Subcontract Administrator for approval:
 - a. The name and the address of the proposed consultant or Subcontractor.
 - b. Information sufficient to show that the proposed consultant or the Subcontractor's own organization has staff and computer facilities meeting the requirements herein.
 - c. A list of projects for which the proposed consultant or the Subcontractor's own organization or staff thereof has performed services similar to those required for this subcontract.
2. Within ten (10) calendar days following receipt of the Notice to proceed, the Subcontractor shall submit a preliminary Subcontract Schedule. The Subcontractor shall use a software program compatible with Microsoft Project without the need for NREL to perform conversion. Microsoft Project or Primavera (with conversion capabilities to Microsoft Project performed by the Subcontractor), or equal shall be used.
3. Within thirty (30) calendar days of acceptance of the preliminary Subcontract Schedule, the Subcontractor shall submit a Detailed Subcontract Schedule.
4. Before final acceptance of the work, the Subcontractor shall submit a final As-Built Subcontract Schedule.
5. The Subcontractor shall submit all other required reports referenced herein when required by this provision.
6. The Subcontractor shall submit one (1) reproducible and six (6) blueline prints of each required Subcontract Schedule and reports to the Subcontract Administrator, including required revisions thereof. The Subcontractor shall also submit to the Subcontract Administrator on a compact disk (CD) the computer data used to produce hard copy submittals.
7. The Subcontractor shall submit the monthly updated Subcontract Schedules (hereinafter "Baseline Schedules") and reports referenced herein concurrently in a single package.

- C. Breakdown of Schedule of Values. Within fifteen (15) calendar days after receipt of the Notice to Proceed and prior to payment of any invoices by NREL, the Subcontractor shall submit a breakdown of schedule of values (in the form, detailed and numbered prescribed by the Subcontract Administrator), totaling the subcontract price, to the Subcontract Administrator for approval.

1. The breakdown (hereinafter referred to as the “schedule of values”) shall correspond to the phases or items indicated in the progress schedule showing separate amounts for labor, materials and equipment necessary to complete the work, including quantities and unit prices as requested by the Subcontract Administrator.
2. Mobilization, preparatory work, overhead and profit shall be included in each of the several items to which they are applicable and will not be stated as separate items. The cost of bonds, however, should be stated in a separate line item.
3. The Subcontract Administrator shall have the right to revise the schedule of values submitted, prior to the Subcontract Administrator’s approval, if, in the Subcontract Administrator’s opinion the items indicated do not conform to their true value. The breakdown shall be revised at the same time revisions become necessary in the progress schedule.

D. Lower-tier Subcontracts

1. The Subcontractor shall submit the names of all lower-tier subcontractors involving on-site labor, together with a summary of the extent, character, and dollar amount of the work to be done by each lower-tier subcontractor. Upon request, the Subcontractor shall also furnish the Subcontract Administrator with copies of all lower-tier subcontracts for performance of the work under this subcontract.
2. Immediately after issuance of the Notice to Proceed, and any time thereafter the Subcontract Administrator may request submittal of purchase orders or lower-tier subcontracts for materials or equipment (including those issued by lower-tier subcontractors). The submittal to the Subcontract Administrator shall be made immediately after the Subcontractor has received confirmation of the various items. The promised date(s) of shipment, point(s) of delivery, quantity and name of items to be furnished and unit prices will be clearly indicated. The date each purchase order or lower-tier subcontract is placed will be furnished to the Subcontract Administrator.
3. Monthly Manhours Reports.

E. Changes Affecting Delivery. The Subcontractor shall notify the Subcontract Administrator immediately of any changes or circumstances which would affect timely delivery of any item.

F. Basis for Payment

1. Progress payment shall be computed on a basis of the percentage of completion of the work in place, multiplied by the lump-sum subcontract price, the percentage of completion representing the ratio of the value of that portion of the work completed to the total price, as determined by the application of prices shown in the approved schedule of values.
2. No payment(s) will be made to the Subcontractor until a schedule of values and progress schedule revised to reflect all changes in Subcontract work have been submitted to and approved by the Subcontract Administrator.

G. Approvals

1. Acceptance of the Detailed Subcontract Schedule will be a condition precedent to the making of any progress payment for work performed beyond sixty (60) calendar days from receipt of the Notice of Proceed.
2. Monthly updating of all particulars, including labor, resources and cost loading of the Baseline Schedule and reports shall be an integral part, and basic element of the estimate upon which progress payments will be made. Submittal, review and approval by the Subcontract Administrator of these items shall be a condition precedent to the making of

progress payments. If, in the judgment of the Subcontract Administrator, the Subcontractor fails or refuses to provide a complete updated Baseline Schedule or reports, as specified, the Subcontractor will be deemed to have not provided the required estimate upon which progress payments may be made, and shall not be entitled to such progress payments unless or until it has furnished the aforesaid schedules.

H. Preliminary design, design development, construction documents, commissioning, and closeout plan. The Subcontractor shall use a computerized critical path scheduling system capable of producing computer generated reports with the following minimum information:

1. Activity identification code keyed to Summary and Detailed Contract Schedule activities;
2. Activity description;
3. Status date and remaining duration;
4. Activity percentage complete;
5. Activity duration;
6. Early start/finish and late start/finish;
7. Total float;
8. Free float;
9. The predecessor and successor activities for each individual activity;
10. A comparison between the current update and the baseline schedule;
11. Designation of the planned work day/work week for each activity;
12. A critical item list of activities with ten (10) calendar days or less total float;
13. Scheduled and actual labor loading for each activity;
14. Scheduled and actual resource loading for each activity; and
15. Scheduled and actual cost loading for each activity.

I. Quality Assurance

To assist in the preparation and for the production of the required submittal of Schedules and reports outlined in this provision, the Subcontractor shall utilize a Critical Path Method (CPM) of scheduling as required under Paragraph A above.

J. Deliverables

1. Preliminary Subcontract Schedule

(a) Submission

- (1) Within ten (10) calendar days of receipt of the Notice to Proceed, the Subcontractor shall submit a preliminary Subcontract Schedule to the Subcontract Administrator.
- (2) Any revisions deemed necessary by the Subcontract Administrator as a result of the Subcontract Administrator's review shall be re-submitted to the Subcontract Administrator for review within six (6) calendar days after the Subcontractor's receipt of the Subcontract Administrator's comments.
- (3) A two (2) week Look-Ahead Schedule shall also be submitted to the Subcontract Administrator at the time of submission of the Preliminary Subcontract Schedule.

(b) Form

- (1) The Subcontractor shall prepare the Preliminary Subcontract Schedule as a time-scaled bar chart showing continuous flow from left to right. Durations and specific calendar dates shall be clearly and legibly shown for the start

and finish of each work activity.

- (2) The preliminary Subcontract Schedule shall be prepared in sufficient detail to demonstrate preliminary planning for the work and to represent a practical plan to complete the work within the subcontract period of performance.
- (3) The Preliminary Subcontract Schedule shall include, but not be limited to:
 - i. A legend of scheduled activities;
 - ii. Scheduled work activities which clearly indicate the scope of work to be completed; and
 - iii. Major milestones which are critical to the completion of the work, including but not limited to the following:
 - . Preliminary Design
 - b. Design Development
 - c. Construction Documents
 - d. Commissioning
 - e. Closeout

2. Detailed Subcontract Schedule

- (a) These schedules shall indicate the sequence and interdependency of work activities. They shall include, but not be limited to, the following items:
 - (1) Mobilization;
 - (2) Submittal preparation by the Subcontractor and review and accepted by NREL representative, including preliminary and final design, Shop Drawings, technical manuals, and other submittals and resubmittals as required;
 - (3) Order, manufacture, fabrication, delivery, installation, and check out of long lead and major construction material and major construction material and major equipment.
- (b) The above schedule components shall be organized into logical groupings by location, responsibility, Specification sections, etc.
 - (1) The Subcontractor shall submit a combined two (2) week Look-Ahead Schedule with a two (2) week As-Built Schedule for previous two weeks (derived from the Baseline Schedule) to the Subcontract Administrator for review and acceptance each week.
 - (2) Critical work activities are defined as work activities which, if delayed or extended, will delay the scheduled completion of milestones or the work, or both. All other work activities are defined as non-critical work activities and are considered to have float.
 - (3) Float is defined as the time that a non-critical work activity can be delayed or extended without delaying the scheduled completion of milestones specified in this provision or the scheduled completion of the work, or both. Float or slack time is not for the exclusive use or benefit of either NREL or the Subcontractor. Neither the Subcontractor nor NREL shall have an exclusive right to the use of float. The Subcontractor shall document the effect on the updated Subcontract Schedule whenever float has been used.
 - (4) The Subcontractor shall not sequester float through strategies including extending activity duration estimates to consume available float, using preferential logic, using extensive or insufficient crew/resource loading, use of float suppression techniques, special lead/lag logic restraints or imposed dates. Use of float time disclosed or implied by the use of alternate float suppression techniques shall be shared, and be to the benefit of both NREL

and the Subcontractor.

- (5) It is acknowledged that NREL caused time savings (i.e., critical path submittal reviews returned in less time than allowed by the subcontract documents, approval of substitution requests which result in a savings of time to the Subcontractor, etc.) create shared float.
- (6) A schedule showing the work completed in less than the subcontract completion date, which is found to be practical by the Subcontract Administrator, shall be acceptable only if the Subcontractor and NREL execute a binding subcontract modification revising the subcontract completion date to that shown on the proposed schedule. A schedule extending beyond the subcontract completion date will not be acceptable.
- (7) Once approved by the Subcontract Administrator, the Subcontractor's Detailed Subcontract Schedule shall be known as the Baseline Schedule and shall be used by the Subcontractor for executing the work of the subcontract including planning, organizing and directing the work, and reporting its progress until subsequently revised.

3. Baseline Schedule Updating and Progress Payments

- (a) The Baseline Schedule, shall be updated in all particulars, including labor, resource and cost loading on a monthly basis (or at lesser intervals if deemed necessary by the Subcontract Administrator without additional cost to NREL for reasons such as work activities being fourteen (14) calendar days or more behind schedule) for the purpose of recording and monitoring the progress of the work. The Subcontractor shall meet with the Subcontract Administrator each month to review actual progress made to date, activities started and completed to date, and the percentage of work completed to date on each activity started but not completed. Upon completion of the joint review, the Subcontractor shall prepare the updated Baseline Schedule and submit it to the Subcontract Administrator.
- (b) The updated Baseline Schedule shall incorporate all changes mutually agreed upon by the Subcontractor and NREL during preceding periodic reviews and all changes resulting from approved subcontract modifications.
- (c) Acceptance of the Updated Baseline Schedule will be a condition precedent to the making of any progress payments for work performed.

4. Reports: The Subcontractor shall submit the monthly reports listed below and any Schedule Updates regardless of the approval status of the subcontract Baseline Schedule.

- (a) The Subcontractor shall prepare and submit to the Subcontract Administrator a Variance Report each month which compares the approved Baseline and the Updated Baseline Schedules.
 - (1) The report shall include a description of all activities completed during the preceding month, a description of progress made and planned for activities listed as started but not completed on the updated Subcontract Baseline Schedule, and shall report non-critical activities which have been delayed ten (10) or more calendar days and critical activities (eight [8] calendar days or less total float) which have incurred any delay. The format of this Report shall include:
 - i. Activity code and description;
 - ii. Baseline scheduled early start/finish dates;
 - iii. Current anticipated early start/finish dates;
 - iv. Working days remaining to complete the activity;

- v. Percentage complete of the activity;
 - vi. Total float of the activity; and
 - vii. Corrective Action Plan to complete work within the Subcontract time period.
- (b) The Subcontractor shall prepare and submit to the Subcontract Administrator, within thirty-five (35) calendar days after receipt of the Notice to Proceed, the first Progress Curves Report. The curves shall show the cumulative schedule percentage complete, time-scaled in calendar days from Notice to Proceed to the Detailed Subcontract Schedule completion date. The curves shall be derived from the Cash Flow Curve. The Progress Curves shall be updated monthly showing actual progress. They shall be submitted to the Subcontract Administrator with each monthly progress payment request. The updated curves shall include scheduled, actual and forecasted progress plotted as a time-scaled curve from 0 to 100 percent. The scheduled, actual, and forecasted progress shall be derived from the Cash Flow Curve.
- (c) **Equipment Schedule**
- (1) The Subcontractor shall prepare and submit to the Subcontract Administrator, within thirty-five (35) calendar days after receipt of the Notice to Proceed, a schedule showing dates when key construction equipment will be brought to the project site in order to accomplish the work in accordance with the Detailed Subcontract Schedule. This schedule shall list the quantity of equipment by type and capacity (excluding small tools) in a bar chart form.
 - (2) The Equipment Schedule shall be updated monthly showing actual equipment on-site at time of reporting period and forecasted equipment requirements necessary to achieve the subcontract Baseline Schedule.
- (d) **Material Status**
- (1) The Subcontractor shall prepare and submit to the Subcontract Administrator, within thirty-five (35) calendar days after receipt of the Notice to Proceed, a Material Status report showing the planned delivery of long-lead and major construction materials, by activity, that are required to maintain the Detailed Subcontract Schedule. Items in this report shall include:
 - i. Activity and description of the type of material;
 - ii. Total quantity required;
 - iii. Required delivery schedule; and
 - iv. Scheduled order date.
 - (2) The Material Status Report shall be updated and resubmitted monthly showing:
 - i. Actual order date;
 - ii. Scheduled delivery date to site;
 - iii. Actual delivery to site, date, and quantity;
 - iv. Total quantity delivered to site to date;
 - v. Remaining quantity to be delivered; and
 - vi. Estimated delivery date of remaining materials.
- (e) **Cash Flow Curve**
- (1) The Subcontractor shall prepare and submit to the Subcontract Administrator, within thirty-five (35) calendar days after receipt of the

- Notice to Proceed, a Cash Flow Curve of expected progress payments over the time of the project. The curve shall be plotted against the Detailed Subcontract Schedule using the Subcontractor's bid/proposal amounts.
- (2) The Subcontractor shall update the curve with actuals from the approved progress payments and forecasted progress payments and submit it to the Subcontract Administrator monthly. The total of approved progress payments and forecasted progress payments shall be equal to the Subcontractor's bid/proposal amounts plus approved subcontract modifications. The updated curve shall be plotted against the Baseline Schedule.
- (f) Labor
- (1) The Subcontractor shall prepare and submit to the Subcontract Administrator, within thirty-five (35) calendar days after receipt of the Notice to Proceed, a Labor Curve of the labor requirements per calendar week over the time of the Project. The curve shall be plotted against the Detailed Subcontract Schedule. The curve shall show the number of persons in each craft for each week.
 - (2) The Subcontractor shall update the curve with the actual labor employed and forecasted labor requirements necessary to achieve the Baseline Schedule and submit it to the Subcontract Administrator monthly. The updated curve shall be plotted against the Baseline Schedule.
- (g) Submittal Schedule
- (1) The Subcontractor shall prepare and submit to the Subcontract Administrator, within thirty-five (35) calendar days after receipt of the Notice to Proceed, a comprehensive Submittal Schedule which will maintain the Detailed Subcontract Schedule. The Subcontractor shall identify on the Submittal Schedule all of the submittal items required by the subcontract documents governing the work, listing shop drawings and product data or literature separately. The subcontractor shall indicate for each submittal item on the Submittal Schedule:
 - i. The date by which that item will be submitted to the Subcontract Administrator.
 - ii. Whether the submittal is for review, substitution, or for record only.
 - iii. The date by which response by the Subcontract Administrator is required.
 - iv. The date by which the material or equipment must be on the site in order not to delay the progress of the work.
 - (2) In preparing the Submittal Schedule, the Subcontractor shall consider the nature and complexity of each submittal item and shall allow ample time for review, revision and/or correction
 - (3) The Submittal Schedule shall be updated monthly showing actual submittal status at the time of reporting period and forecasted submittal requirements necessary to achieve the Subcontract Baseline Schedule.
 - (4) The Subcontract Administrator will review the Subcontractor's updated Submittal Schedule to determine its completeness and compatibility with the Baseline Schedule. A Submittal Schedule which is incompatible with the Detailed Subcontract or Baseline Schedule, or which creates an unreasonable labor demand on NREL for review of said submittals will be sufficient reason to reject the Submittal Schedule.

- (h) Responsibility for Completion. The Subcontractor agrees that, at the sole judgment of the Subcontract Administrator, whenever it becomes apparent from the current monthly updated Subcontract Baseline Schedule that the subcontract completion date will not be met, it will take some or all of the following actions, as approved by the Subcontract Administrator, at no additional cost to NREL:
- (1) Increase construction labor in such quantities and crafts as will substantially eliminate, in the judgment of the Subcontract Administrator, the backlog of work.
 - (2) Increase the number of working hours per shift, shifts per working day, working days per week, or the amount of construction equipment, or any combination of the foregoing, sufficiently to substantially eliminate, in the judgment of the Subcontract Administrator, the backlog of work. This paragraph shall not be construed to permit the Subcontractor to violate the work hour restriction specified in the subcontract.
 - (3) Reschedule activities to achieve maximum practical concurrence of accomplishment of activities.
- (i) Adjustment of Times for Completion
- (1) In addition to the Terms and Conditions, the time for completion of the work will be adjusted in accordance with these procedures.
 - (2) Any request for an adjustment of the period of performance submitted by the Subcontractor for changes or alleged delays shall be accompanied by complete Time Impact Analysis (TIA), which shall be submitted for review at the time the request is made or, if necessary, no less than twenty (20) calendar days after the request by the Subcontractor. Time extensions will not be granted unless substantiated by the CPM Schedule, and then not until the CPM project contingency becomes zero.
 - (3) Each TIA shall provide information justifying the request and stating the extent of the adjustment requested for each specific change or alleged delay. Each TIA shall be in form and content acceptable to the Subcontract Administrator, and shall include, but not be limited to, the following:
 - (a) A fragmentary CPM type network (Fragnet) illustrating how the Subcontractor proposes to incorporate the change or alleged delay into the current updated Baseline Schedule; and
 - (b) Identification of activities in the current updated Baseline Schedule which are proposed to be amended due to the change or alleged delay, together with engineering estimates and other appropriate data justifying the proposal.
 - (4) The TIA shall be determined on the basis of the date or dates when the change or changes were issued, or the date or dates when the alleged delay or delays began. The status of the construction project and TIA shall include vent time computations for all affected activities.
 - (5) The Subcontract Administrator may require that TIA be provided in order to demonstrate the time impact upon the overall project and the time for completion, at no additional cost to NREL.
 - (6) If the Subcontract Administrator finds after review of the TIA that the Subcontractor is entitled to any extension of time for completion, the time for completion will be adjusted accordingly by the Subcontract Administrator, and the Subcontractor shall revise the Baseline Schedule accordingly.
 - (7) The accepted updated Baseline Schedule will be used in the calculation of

liquidated damages or compensable delay for each day of delay after the subcontract completion date, as adjusted, until the work is accepted.

- (j) **Final As-Built Schedule**
As a condition precedent to final acceptance of the project, the Subcontractor shall submit to the Subcontract Administrator a final As-Built Construction Schedule and all final reports which accurately reflect the manner in which the project was constructed and include actual start and completion dates for all work activities on the Baseline Schedule.

ARTICLE 18 – SCHEDULES FOR CONSTRUCTION SUBCONTRACTS (OCT 2007)

- A. The Subcontractor shall, within ten (10) calendar days after the work commences on the subcontract or another period of time determined by the NREL Subcontract Administrator, prepare and submit to the NREL Subcontract Administrator for approval three copies of a practicable schedule showing the order in which the Subcontractor proposes to perform the work, and the dates on which the Subcontractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion by any given date during the period. If the Subcontractor fails to submit a schedule within the time prescribed, the NREL Subcontract Administrator may withhold approval of progress payments until the Subcontractor submits the required schedule.
- B. The Subcontractor shall enter the actual progress on the chart as directed by the NREL Subcontract Administrator, and upon doing so shall immediately deliver three copies of the annotated schedule to the NREL Subcontract Administrator. If, in the opinion of the NREL Subcontract Administrator, the Subcontractor falls behind the approved schedule, the Subcontractor shall take steps necessary to improve its progress, including those that may be required by the NREL Subcontract Administrator, without additional cost to NREL. In this circumstance, the NREL Subcontract Administrator may require the Subcontractor to increase the number of shifts, overtime operations, calendar days of work, and/or the amount of construction equipment, and to submit for approval any supplementary schedule or schedules in chart form as the NREL Subcontract Administrator deems necessary to demonstrate how the approved rate of progress will be regained.
- C. Failure of the Subcontractor to comply with the requirements of the NREL Subcontract Administrator under this clause shall be grounds for a determination by the NREL Subcontract Administrator that the Subcontractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the subcontract. Upon making this determination, the NREL Subcontract Administrator may terminate the Subcontractor's right to proceed with the work, or any separable part of it, in accordance with the default terms of this subcontract.

ARTICLE 19 – COORDINATION OF WORK WITH LABORATORY SCHEDULE AND AVERAGE ADVERSE WEATHER DAYS (FEB 2008)

- A. Unless otherwise approved in writing by the Subcontract Administrator, the Subcontractor's work shall be performed during NREL work days. In addition, the Subcontractor shall plan its work in recognition of the historic average of adverse weather days experienced in Golden, Colorado, kept by the National Oceanic and Atmospheric Administration (NOAA).
- B. A NREL work day means Monday through Friday of each week, except as specified below:

1. The days designated as NREL holidays (i.e., New Year’s Day, Presidents’ Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day) are not NREL work days;
 2. If a NREL holiday falls on a Saturday or Sunday, the preceding Friday or the following Monday may not be a NREL work day;
 3. The Friday after Thanksgiving is not a NREL work day;
 4. Any day that NREL closes unexpectedly will not be a NREL work day.
- C. The recorded historic average of adverse weather days experienced in Golden, Colorado each month is as follows:
- | | | |
|-----------|----------|------|
| January | <u>1</u> | days |
| February | <u>2</u> | days |
| March | <u>2</u> | days |
| April | <u>3</u> | days |
| May | <u>3</u> | days |
| June | <u>2</u> | days |
| July | <u>2</u> | days |
| August | <u>2</u> | days |
| September | <u>2</u> | days |
| October | <u>2</u> | days |
| November | <u>2</u> | days |
| December | <u>1</u> | days |
- D. The Subcontractor’s progress schedule should reflect these anticipated adverse weather days in all weather dependent activities. In order for NREL to award a non-compensable time extension due to adverse weather: (1) the number of adverse weather days experienced at the project site during the subcontract period must exceed any given month; and (2) actual adverse weather days must prevent work on critical activities for more than 50% of the Subcontractor’s work day.
- E. Any and all claims for non-compensable time extensions for weather delays shall be reported within 30 calendar days of the adverse weather date.

ARTICLE 20 – LAYOUT OF WORK (OCT 2007)

The Subcontractor shall lay out its work from established base lines and bench marks indicated on the drawings, and shall be responsible for all measurements in connection with the layout. The Subcontractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials and labor required to lay out any part of the work. The Subcontractor shall be responsible for executing the work to the lines and grades that may be established or indicated by NREL. The Subcontractor shall also be responsible for maintaining and preserving all stakes and other marks established by NREL until authorized to remove them. If such marks are destroyed by the Subcontractor or through its negligence before their removal is authorized, NREL may replace them and deduct the expense of the replacement from any amounts due or to become due to the Subcontractor.

ARTICLE 21 – PERFORMANCE AND PAYMENT BONDS – CONSTRUCTION

A. *Definitions.* As used in this clause.

“Original contract price” means the award price of the subcontract; or, for requirements contracts, the price payable for the estimated total quantity; or, for indefinite-quantity contracts, the price payable for the specified minimum quantity. Original subcontract price does not include the price of any options, except those options exercised at the time of subcontract award.

B. *Amount of required bonds.* Unless the resulting subcontract price of \$30,000 or less, the successful offeror shall furnish performance and payment bonds to the Subcontract Administrator as follows:

1. *Performance Bonds.* The penal amount of performance bonds at the time of subcontract award shall be 100 percent of the subcontract amount.

2. *Payment Bonds.* The penal amount of payment bonds at the time of subcontract award shall be 100 percent of the subcontract amount.

3. *Additional bond protection*

(a) NREL may require additional performance and payment bond protection if the subcontract price is increased. The increase in protection generally will equal 100 percent of the increase in subcontract price.

(b) NREL may secure the additional protection by directing the Subcontractor to increase the penal amount of the existing bond or to obtain an additional bond.

C. *Furnishing executed bonds.* The Subcontractor shall furnish all executed bonds, including any necessary reinsurance agreements, to the NREL Subcontract Administrator, within the time period specified in the Bid Guarantee provision of the solicitation, or otherwise specified by the NREL Subcontract Administrator, but in any event, before starting work under this subcontract.

D. *Surety or other security for bonds.* The bonds shall be in the form of a firm commitment, supported by corporate sureties whose names appear on the list contained in Treasury Department Circular 570, individual sureties, or by other acceptable security such as postal money order, certified check, cashier’s check, irrevocable letter of credit, or, in accordance with Treasury Department regulations, certain bonds or notes of the United States. Treasury Circular 570 is published in the *Federal Register* or may be obtained from the:

U.S. Department of Treasury
Financial Management Service
Surety Bond Branch
401 14th Street, NW, 2nd Floor, West Wing
Washington, DC 20227

E. *Notice of lower-tier subcontractor waiver or protection (40 U.S.C. 270b(c)).* Any waiver of the right to sue on the payment bond is void unless it is in writing, signed by the person whose right is waived, and executed after such person has first furnished labor or material for use in the performance of the subcontract.

ARTICLE 22 – PROGRESS MEETINGS AND REPORTS (APR 2004)

- A. Preconstruction Meeting: A meeting shall be conducted prior to the start of construction activities. The Subcontractor and its principal lower-tier subcontractors, if any, shall attend this meeting. The purpose of the meeting is to coordinate all aspects of the construction phase including the construction schedule and the special requirements for environmental, safety and security associated with performance of the construction project on a Government-owned or leased facility.
- B. Daily Log Reports: The Subcontractor shall prepare, and require its lower-tier subcontractors to prepare, daily reports to be kept on file until subcontract closeout, recording all construction activities at the construction project site including any safety issues or concerns. The NREL Subcontract Administrator or the NREL Project Manager may review these daily log reports, as requested, and may require the Subcontractor to submit two (2) copies of any daily log report to NREL (One copy for the Subcontract Administrator and one copy for the Project Manager).
- C. Verbal Reports: The Subcontractor shall provide verbal reports to the NREL Project Manager, as requested, to ensure that NREL is informed of all progress made and any problems that might cause a delay in the completion of this construction project. These verbal reports will ensure that NREL is afforded the opportunity to take appropriate action to avoid or mitigate any problems as they arise under the construction project.

ARTICLE 23 – NEPA COMPLIANCE AS CONDITION PRECEDENT TO WORK PERFORMANCE (OCT 2007)

The Subcontractor shall not commence, and shall not authorize its lower-tier subcontractors to commence, any construction work under this Subcontract without written notification from the NREL Subcontract Administrator authorizing commencement of construction work determined by the U.S. Department of Energy to be compliant with National Environmental Policy Act requirements.

ARTICLE 24 – LIQUIDATED DAMAGES (CONSTRUCTION)(JAN 2008)

- A. If the Subcontractor fails to substantially complete the work within the time specified in the subcontract, or any extension, the Subcontractor shall, in place of actual damages, pay to NREL liquidated damages in the amount of “Eleven Thousand Nine Hundred Dollars and No Cents” (\$11,900.00) for each calendar day of delay.
- B. If NREL terminates the Subcontractor’s right to proceed, the resulting damage will consist of liquidated damages until such reasonable time as may be required for final completion of the work together with any increased costs by NREL in completing the work.

ARTICLE 25 – RESPONSIBILITY FOR RISK OF LOSS OR DAMAGE (CONSTRUCTION)(JAN 2008)

- A. Except as otherwise provided in this subcontract, the risk of loss of or damage to supplies or materials delivered and work performed under this subcontract shall remain with the Subcontractor until completion, inspection, and acceptance of the construction project or completion, inspection, and acceptance of any segregable unit of the construction project.
- B. Under paragraph (A) above, the Subcontractor shall not be liable for loss of or damage to supplies or materials caused by the negligence of NREL or the Government’s officers, agents, or employees.

ARTICLE 26 – ALLOCATION OF LIABILITY AND RESPONSIBILITY FOR VIOLATIONS OF SAFETY AND ENVIRONMENTAL REQUIREMENTS (CONSTRUCTION)(JAN 2008)

- A. NREL and the Subcontractor commit to full cooperation with regard to safety and environmental requirements applicable to the performance of work under this subcontract. This article allocates the liability and responsibility for violations of safety and environmental requirements applicable to the performance of work under this subcontract. For purposes of this subcontract, the term “safety requirements” means requirements imposed by the Department of Energy’s “Worker Safety and Health” rule codified at 10 CFR 851 and “environmental requirements” means requirements imposed by applicable Federal, State, and local environmental laws and regulations, including without limitation, statutes, ordinances, regulations, court orders, consent decrees, administrative orders, compliance agreements, permits and licenses.
- B. Liability and responsibility for civil fines or penalties arising from or related to violations of safety or environmental requirements shall be borne by the party causing the violation. In the event that the Subcontractor causes a violation of safety or environmental requirements, the Subcontractor shall not be entitled to reimbursement or equitable adjustment from NREL, MRI, or the Government for civil fines or penalties associated with such violation.
- C. Liability and responsibility for civil fines or penalties shall be borne by the causing party irrespective of the fact that the cognizant regulatory authority may assess any such fine or penalty upon either party or both parties (or the Government) without regard to the allocation of responsibility or liability under this subcontract. This allocation of liability and responsibility for any such fine or penalty is effective regardless of which party signs permit application’s manifests, reports or other required documents, is a permittee, or is the named subject of an enforcement action or assessment of a fine or penalty.
- D. In the event that the Subcontractor is deemed to be the primary party causing the violation, then the Subcontractor shall be afforded the opportunity to participate in negotiations to settle or mitigate the fines and penalties with the regulatory authority. If the Subcontractor is the sole party of the enforcement action, the Subcontractor shall take the lead role in the negotiations and NREL shall have sole discretion regarding its participation in such negotiations.

ARTICLE 27 – SUBCONTRACTOR QUALITY REPRESENTATIONS (APRIL 2006)

- A. The Subcontractor represents that: (1) suspect or counterfeit supplies and components and (2) misrepresented parts or items are not provided as part of this subcontract. The Subcontractor further represents that original equipment manufacturer’s parts or factory authorized non-OEM parts will be used for repair or maintenance services as a part of this subcontract.
- B. The Subcontractor represents that the supplies and components are new, including recycled (not new or reconditioned) and are not of such an age or so deteriorated as to impair their usefulness or safety. Furthermore, the Subcontractor shall not furnish any item that is residual inventory resulting from terminated Government contracts/subcontracts or former Government surplus property. All items or components furnished under this procurement action shall comply with the terms and specifications herein.

ARTICLE 28 – EXISTING SERVICES AND UTILITIES - (CONSTRUCTION) (FEB 2008)

- A. The term "services and utilities" as used here is defined as including, but not limited to, roads, ditches, electrical, phone/data, sewer, water, fencing, etc.
- B. If applicable to the performance of work under this subcontract, the locations of existing underground services and utilities as indicated on the drawings are approximate.
- C. The Subcontractor shall be responsible for the actual necessary connection(s) to any existing service or utility required in the performance of this subcontract.
- D. **The Subcontractor is hereby notified that all underground electrical systems and other systems covered by the lockout/tagout program shall be de-energized and locked out during excavations within 5 feet of those systems.** Exceptions to this requirement must be approved in writing by the NREL Subcontract Administrator, after concurrence by the NREL Project Manager and NREL ES&H representative. Such outage shall be coordinated with NREL's Project Manager in accordance with Paragraph (E) below.
- E. No planned outage will be permitted without prior consent of the NREL Project Manager. The Subcontractor shall coordinate with NREL's Project Manager five (5) full NREL normal working days prior to any approved planned interruption of existing services and utilities required for performance of this subcontract. Interruption of existing services and utilities includes, but is not limited to, existing equipment, piping, electrical service or other utilities, which must be disconnected, shut off, relocated or otherwise modified. The Subcontractor shall be responsible for reconnecting and restoring to the original operating conditions any equipment that was disconnected or put out of service as a result of any interruption (planned or otherwise), unless specified under this subcontract. If significant fire protection system(s) will be impaired longer than eight (8) hours, specific approval shall be obtained from the NREL Project Manager, who shall coordinate with the NREL ES&H representative. The Subcontractor shall attach a safety tag to the device which de-energizes the service (breakers, etc.) and lock or otherwise secure the device in the "off" position so as to prevent accidental reactivation. All utilities tie-in costs and premium time, if any, shall be included in the total subcontract price.

ARTICLE 29 - TEMPORARY STRUCTURES, OFFICES AND WORK AREAS (OCT 2007)

- A. The Subcontractor shall be responsible for providing at its own expense, all temporary structures, utilities, and services required by it for use as offices, warehouses, shops, etc. The location and type of any temporary structure shall be approved and coordinated with the NREL Project Manager. Such temporary structures shall be removed by the Subcontractor at its own expense upon the completion of the construction effort. The Subcontractor shall hold and save NREL and the Government, their officers, employees, and agents free and harmless from liability of any nature associated herewith.
- B. Only materials, appliances, and plans to be used for the performance of the subcontract work may be stored in stockpile areas or in warehouses and shop facilities (whether erected by the Subcontractor or not) located on the NREL site. If the Subcontractor abandons the performance of the subcontract work or if the Subcontractor's right to proceed is terminated pursuant to the clause entitled "Default (Fixed Price Construction)," the Subcontractor shall hold and save NREL and the Government and their officers and agents free and harmless from any liability of any nature or kind, arising from NREL's or the Government's entry into such stockpile areas, warehouses, or shop facilities and from NREL's or the Government's taking possession of and utilizing such materials, appliances, and plant in completing the subcontract work.
- C. All operations of the Subcontractor, including storage of construction materials and equipment, upon the NREL site shall be confined to areas authorized or approved by NREL. No unauthorized or unwarranted entry upon or passage through, or storage or disposal of materials shall be made upon

the NREL site. The Subcontractor shall hold and save NREL and the Government, its officers and agents free and harmless from liability of any nature or kind arising from any use, trespass, or damage occasioned by its operations on premises of third persons.

- D. The Subcontractor shall use only established roadways or construct and use such temporary roadways as may be authorized by NREL. Where materials are transported in the prosecution of the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicles or prescribed by an applicable Federal, state, or local law or regulation. When it is necessary to cross curbs or sidewalks or to operate heavily loaded vehicles on surfaced streets, sidewalks or developed areas, protection against damage shall be provided by the Subcontractor, and any damaged roads, curbs, sidewalks or developed areas shall be repaired by, or at the expense of the Subcontractor.
- E. The Subcontractor shall provide and maintain during the entire period covered by this subcontract a weather-tight bulletin board approximately 7 feet high by 8 feet long. It shall be mounted in a conspicuous place, as approved by the Project Manager, accessible to all employees of the Subcontractor and lower-tier subcontractors. The bulletin board will remain the property of the Subcontractor. All NREL or Government posters or notices, the subcontract's Davis-Bacon Wage Rate decision, Subcontractor's safety programs, and any publications in the interest of workmen shall be displayed on this bulletin board.

ARTICLE 30 – WASTE DISPOSAL

In accordance with the clause entitled “Cleaning Up” of Appendix B-10 the Subcontractor shall be responsible for maintaining a clean and neat construction site and for removing and disposing of all scrap and waste from the construction site in accordance with all applicable laws or regulations at no additional cost to NREL. The Subcontractor shall be responsible for disposing of all excess soil or waste material from excavations and concrete work made by the Subcontractor, unless otherwise specified in this subcontract. The disposal of toxic or hazardous waste is to be coordinated with NREL.

ARTICLE 31 – RIGHTS TO PROPOSAL DATA

Except for technical data contained on pages (None) of the subcontractor’s proposal dated ***** 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 32 – PUBLICITY RELEASE AND PUBLIC AFFAIRS

- A. Publicity release of any nature in connection with this subcontract shall be coordinated as provided in the “Public Affairs” clause of Appendix B. The Subcontractor shall not make without prior review and approval of the NREL Subcontract Administrator, any publicity release of any nature of general, non-technical information in connection with this subcontract. For purposes of this subcontract, general, non-technical information means any information concerning the existence of the subcontract, the identity of the parties, and the scope and general character of the research or technical activity. As used in this Article, “publicity release” does not include a lawful inspection of the Subcontractor’s records conducted pursuant to Federal or State public records access statutes. The Subcontractor may report specifics regarding the formation and execution of this subcontract in its internal publications without prior review and approval of the NREL Subcontract Administrator.

B. Data rights are set forth in Appendix C hereof.

ARTICLE 33 – SMALL BUSINESS (Lower-Tier) SUBCONTRACTING PLAN (FEB 2007)

The Subcontractor's Small Business (Lower-tier) Subcontracting Plan dated **/**/** is incorporated as Appendix E in this subcontract. The Subcontractor shall electronically submit the “Individual Subcontract Report” (ISR) semi-annually during subcontract performance for the periods ended March 31st and September 30th, based on the Government's fiscal year (October 1 through September 30). The ISR is due on or before the twenty-fifth (25th) day of the month following the close of the applicable period. The Subcontractor shall also electronically submit the “Summary Subcontract Report” (SSR) annually for the twelve months ended September 30th, at the close of each Government fiscal year. The ISR and SSR submissions shall be made electronically through the Electronic Subcontracting Reporting System (eSRS) at www.esrs.gov.

Additional instructions can be found at http://www.nrel.gov/business_opportunities/related_docs.html, under the document entitled “Instructions for Submitting Small Business Subcontracting Reports through the Electronic Subcontracting Reporting System (eSRS)”.

ARTICLE 34 – ALTERATIONS TO TERMS AND CONDITIONS

Appendix C-3, Intellectual Property Provisions for Large and Small Business, Nonprofit Organizations, Educational Institutions and Others (Non Research and Development) is hereby modified to delete Clause 4. Rights in Data – General and replace it with the following:

CLAUSE 4 – RIGHTS IN DATA – SPECIAL WORKS

A. *Definitions.*

“Data,” as used in this clause, means recorded information regardless of form or the medium on which it may be recorded. The term includes technical data and computer software. The term does not include information incidental to subcontract administration, such as financial, administrative, cost or pricing or management information.

“Unlimited rights,” as used in this clause, means the right of NREL/Government to use, disclose, reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, in any manner and for any purpose whatsoever, and to have or permit others to do so.

B. *Allocation of Rights.*

1. The Government shall have –

- (i) Unlimited rights in all data delivered under this subcontract, and in all data first produced in the performance of this subcontract, except as provided in paragraph C of this clause for copyright.
- (ii) The right to limit exercise of claim to copyright in data first produced in the performance of this subcontract, and to obtain assignment of copyright in such data, in accordance with subparagraph C(1) of this clause.
- (iii) The right to limit the release and use of certain data in accordance with paragraph D of this clause.

2. The Subcontractor shall have, to the extent permission is granted in accordance with subparagraph C(1) of this clause, the right to establish claim to copyright subsisting in data first produced in the performance of this subcontract.

C. *Copyright* –

1. Data first produced in the performance of this subcontract.
 - (i) The Subcontractor agrees not to assert, establish, or authorize others to assert or establish, any claim to copyright subsisting in any data first produced in the performance of this subcontract without prior written permission of the DOE Contracting Officer. When claim to copyright is made, the Subcontractor shall affix the appropriate copyright notice of 17 U.S.C. 401 or 402 and acknowledgment of NREL/Government, as well as when the data are published or deposited for registration as a published work in the U.S. Copyright Office. The Subcontractor grants to NREL/Government, and others acting on its behalf, a paid-up nonexclusive, irrevocable, worldwide license for all such data to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the Government.
 - (ii) If the Government desires to obtain copyright in data first produced in the performance of this subcontract and permission has not been granted as set forth in subdivision C(1)(i) of this clause, the DOE Contracting Officer may direct the Subcontractor to establish, or authorize the establishment of, claim to copyright in such data and to assign, or obtain the assignment of, such copyright to the Government or its designated assignee.
2. Data not first produced in the performance of this subcontract. The Subcontractor shall not, without prior written permission of the DOE Contracting Officer, incorporate in data delivered under this subcontract any data not first produced in the performance of this subcontract and which contain the copyright notice of 17 U.S.C. 401 or 402, unless the Subcontractor identifies such data and grants to the Government, or acquires on its behalf, a license of the same scope as set forth in subparagraph C(1) of this clause.

D. *Release and use restrictions.* Except as otherwise specifically provided for in this subcontract, Subcontractor shall not release, reproduce, distribute, or publish any data first produced in the performance of this subcontract, nor authorize others to do so, without written permission of the DOE Contracting Officer.

C. *Indemnity.* The Subcontractor shall indemnify NREL and the Government and its officers, agents, and employees acting for NREL or the Government against any liability, including costs and expenses, incurred as the result of the violation of trade secrets, copyrights, or right of privacy or publicity, arising out of the creation, delivery, publication, or use of any data furnished under this subcontract; or any libelous or other unlawful matter contained in such data. The provisions of this paragraph do not apply unless NREL/Government provides notice to the Subcontractor as soon as practicable of any claim or suit, affords the Subcontractor an opportunity under applicable laws, rules, or regulations to participate in the defense thereof, and obtains the Subcontractor's consent to the settlement of any suit or claim other than as required by final decree of a court of competent jurisdiction; nor do these provisions apply to material furnished to the Subcontractor by the NREL/Government and incorporated in data to which this clause applies.”

ARTICLE 35 – 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:

AUTHORIZED: MIDWEST RESEARCH INSTITUTE
NATIONAL RENEWABLE ENERGY LABORATORY
DIVISION

By: _____

By: _____

Title: _____

Title: _____

Date: _____

Date: _____