



Award Specific Financial and Administrative Terms and Conditions (FATCs) for the Management and Operation of the National Radio Astronomy Observatory (NRAO) – NSF Cooperative Agreement AST-1519126

1.1. Award Interpretation

A. The General FATC link referenced above is outdated. Disregard this link and refer to 1.1.B.

B. Terms and Conditions Incorporated by Reference. At the time of award, all activities under this Cooperative Agreement (CA) are subject to NSF's Cooperative Agreement Financial and Administrative Terms and Conditions (CA-FATC) and the Cooperative Agreement Supplemental Financial and Administrative Terms and Conditions for Managers of Federally Funded Research and Development Centers (SFATC-FFRDC). The CA-FATC and SFATC-FFRDC were updated January 25, 2016 and are hereby incorporated by reference.

The CA-FATC and SFATC-FFRDC are available at:

http://www.nsf.gov/awards/managing/co-op_conditions.jsp

C. Order of Precedence. This Cooperative Agreement consists of the following terms and conditions in descending order of precedence:

1. The terms and conditions of the Cooperative Support Agreements (CSAs), as amended.
2. This Cooperative Agreement, as amended.
3. The Cooperative Agreement Supplemental Financial and Administrative Terms and Conditions for Managers of Federally Funded Research and Development Centers (SFATC-FFRDC), as amended.
4. The Cooperative Agreement Financial and Administrative Terms and Conditions (CA-FATC), as amended.
5. Other provisions incorporated by reference, as amended.

Should any inconsistency become apparent between any of the provisions of this CA, including any provisions incorporated by reference, the Grants and Agreements Officer and the Awardee will work to mutually resolve the matter.

D. Changes to Terms and Conditions:

1. NSF will notify the Awardee of any changes to the Terms and Conditions that result from changes in federal statute or changes in NSF wide policy and procedures.
2. Changes that are due to NSF-wide policy and procedures will be discussed with the Awardee prior to implementation, and issues that arise should be mutually resolved.

3. Changes to the Terms and Conditions of this Cooperative Agreement or a Cooperative Support Agreement that are not the result of NSF-wide policy and procedures shall be mutually agreed.
 4. Deviations from the CA-FATC and SFATC-FFRDC. To meet the specific needs and requirements of this CA, deviations are provided in full text herein. Any modifications to these deviations shall be incorporated by amendment after consultation with the Awardee.
- E. Applicability of Award Requirements:
1. The terms and conditions of this Cooperative Agreement, and any Cooperative Support Agreements issued under it, shall apply to the Awardee solely in its role operating and managing NRAO.

1.2. Funding

A. Funding for Management and Operations. The Awardee and NSF activities and responsibilities supported under this cooperative agreement are contingent on the availability of funds and on the performance of the Awardee on the management and operation of NRAO. NSF will provide funding for the management and operation of NRAO through at least three CSAs. The known CSAs will be designated as CSA-V, CSA-A and CSA-T, for the Very Large Array (VLA), Atacama Large Millimeter/submillimeter Array (ALMA) and for the initial transition period, respectively. Other CSAs may be created for other NRAO related activities.

B. In accordance with the National Science Board (NSB) Resolution NSB-2015-44 dated November 19, 2015 authorizing this CA, the NSB stipulated a cap on the amount of funding that could be awarded through the CA as follows:

“WHEREAS, the National Science Board was informed that international and interagency partners intend to contribute approximately \$44,000,000 toward the management and operation of the National Radio Astronomy Observatory (NRAO);

WHEREAS, NRAO is responsible for the Karl G. Jansky Very Large Array near Socorro, New Mexico; North American contributions to the international Atacama Large Millimeter/Submillimeter Array (ALMA) located in Chile; and associated development laboratories, including the Central Development Laboratory in Charlottesville, Virginia;

RESOLVED, that the National Science Board authorized the Director of the National Science Foundation, at her discretion, to make an award to Associated Universities, Inc. for the management and operation of the NRAO for a period of 126 months from April 1, 2016; the NSF appropriated amount is not to exceed \$864,142,800.”

C. Any NSF funding provided under this award is subject to cost review. At time of this award, the total funding and the initial funding increments have yet to be determined. Upon completion of the NSF cost review and resolution of any cost issues identified in the review process, actual funding will be provided through three CSAs as described in paragraph 1.2.A above.

D. Funding for other Cooperative Support Agreements. Additional support may be awarded under separate CSAs upon appropriate review and approval in accordance with established NSF merit review policy and procedures.

E. A Common Cost Recovery rate shall be negotiated with NSF annually as a provisional to final indirect cost rate and included in a Negotiated Indirect Cost Rate Agreement. NSF will conduct additional review and approval of rates within the year if there are significant changes as a form of risk mitigation for AUI. Subject to AUI providing indirect cost rate proposals with supporting data of an adequate quality to NSF, in accordance with 2 CFR 200, Appendix IV-Indirect (F&A), and responding to requests for clarification of issues in a timely way, NSF shall respond to rate change requests within 30 days.

1.3. Management Fee

A. As used herein, management fee or fee means an amount of money paid to an Awardee in excess of a Cooperative Agreement's or Cooperative Support Agreement's allowable costs. Use of management fee is to be consistent with NSF policy as set forth in the NSF Large Facilities Manual, Section 4.2.2.2; version 15-89, June 2015 or subsequent revisions. Management fee is not to be awarded as a means to reimburse costs incurred by an Awardee that have been questioned as the result of an audit or other similar engagement or costs considered unallowable as the result of any agency administrative action. The Awardee can request an exception to this restriction if it can demonstrate that the particular expenses incurred are an appropriate use of management fee.

B. Amount of Management Fee: The fee for each year of performance will be negotiated annually at the beginning of each funding year. [Reserved: This section will state the specific management fee amount established, the period covered by the management fee, and provide reference to the Recipient's proposal setting forth planned use of the management fee.]

C. Awardees may draw down the management fee in proportion to the amount incurred during the performance period. Fee established for a period longer than one year may be subject to adjustment in the event of a significant change to the budget or work scope. Awardees shall include in their fee proposal a Schedule for drawing fee, based on the organization's approved use of fee and approximately when those needs are expected to arise or must be met. The schedule will state the specific amount needed and approximate timing of draw(s) on approved fee amounts. Unless specifically justified and approved, a one-time draw on the entire fee amount for the period shall not be allowed.

D. The Awardee is not prohibited from charging a fee to other agencies or organizations for work ordered through NSF or accepted directly by the Awardee. NSF will neither negotiate nor provide justification for such fees.

E. The Awardee shall not seek additional fee from NSF for work performed using resources provided under this award, whether as a primary awardee or subawardee, under any other NSF assistance agreements. Where an award may have additional funding sources, paragraph D of this article applies to that portion of funding provided by other agencies.

F. NSF will consider the Awardee's actual use of management fee in its evaluation and determination of any future management fee amounts under this award, which are subject to future agreement between the parties. Accordingly, the Awardee agrees to provide NSF with information on its use of all management fee expended under this agreement, 60 days prior to the end of the performance period

covered by the management fee. This information may take the form of a detailed narrative, however, it must include a full listing (itemized schedule) of all expenditures, amounts, purposes, and dates for each expenditure based on the Awardee's records. For management fee expenditures that were incurred prior to the incorporation of this provision into the award, if the Awardee has not retained such information or if information is incomplete or otherwise does not provide sufficient details on the use of management fee under the award, the Awardee will provide all information that is available, and include a satisfactory explanation of the circumstances to the Grants and Agreements Officer.

G. Prohibited Use of Management Fees. Although not an exhaustive list, the following are examples of expenses that are not appropriate uses of a management fee:

- Alcoholic beverages
- Tickets to concerts, sporting and other events
- Vacation or other travel for non-business purposes
- Social or sporting club memberships
- Meals or social activities for non-business purposes
- Meals or social activities for business purposes that are so extravagant as to constitute entertainment
- Luxury or personal items
- Lobbying as set forth at 2 CFR § 200.450 and FAR 31.205-22, as appropriate to the recipient type

In addition, costs incurred under the award that are otherwise allowable under the governing cost principles must be classified as direct or indirect charges to the award and shall not be included as proposed management fee elements.

H. NSF will perform fee reviews on a periodic basis (typically annually) to assess the extent to which the Awardee's prior representations and justifications have proven reliable. Reviews on the use of management fee shall be in accordance with Section 4.2.2.2 of the NSF Large Facilities Manual. Failure to reasonably adhere to planned fee uses may result in reduction of agreed management fee amounts under this award.

1.4. Requirements for Contractual Arrangements

A. Article 58 entitled "Subaward, Subcontracts, or other Contractual Arrangements" of the SFATC-FFRDC is modified to include the following requirements:

1. Definition: As used in this article, the term "contractual arrangement" includes subawards made to sub-recipients regardless of form, all contracts, purchase orders, orders issued under blanket purchase agreements or similar devices and modifications to all the aforementioned to be issued by the Awardee under this agreement with a value that exceeds \$250,000. The Awardee shall not artificially segregate its contractual agreements to lesser dollar amounts for the purpose of circumventing this requirement.

2. Prior Approval and Notification: The Awardee shall obtain the written approval of the NSF Program Officer and Grants and Agreements Officer prior to placing any new contractual arrangement (including subawards) exceeding \$250,000 that was not included in the approved budget. In addition, if any action causes the total amount of an existing contractual agreement to exceed \$250,000 or if any single action results in a change of more than \$250,000 to an existing contractual agreement, the Awardee

must notify the NSF Program Officer and Grants and Agreements Officer by email with a brief explanation of the change.

3. Process for Notification & Request for Approval:

i. The Awardee shall submit electronically, via the FastLane Notifications/Requests module, a request for approval at least 30 calendar days in advance of the anticipated start date for any prior approval required by 1.4.A.2, unless otherwise determined by the NSF Program Officer and Grants and Agreements Officer. Incomplete or insufficient requests will be returned without approval, for proper completion by the Awardee. The documentation will include the proposed contractual document and a memorandum of negotiation which sets forth the principal elements of the purpose, selection procedures and price negotiation, including items, as appropriate, below:

- a. A description of the supplies or services required.
- b. Identification of the proposed vendor or subawardee, an explanation of why and how the proposed vendor or subawardee was selected, and the details of the competition process for the selection.
- c. The proposed price of the contractual arrangement, together with the Awardee's cost or price analysis thereof (e.g., adequate price competition, established catalog or market prices or commercial items sold in substantial quantities to the general public, prices set by law or regulation, and/or some other method).
- d. Identification of the type of contractual arrangement to be issued.
- e. A table showing all applicable flow-down terms and conditions.
- f. Where the agreement will be made without competition, the memorandum shall include a detailed justification.
- g. Identification of required project (e.g. ALMA management and governance) approvals, if applicable.

ii. Assignment. The Awardee shall insert a clause in all contractual arrangement reserving its right to assign the contractual arrangement to any third party should a successor Awardee be selected by the NSF.

iii. Prompt Notification of Claims: The Awardee shall give the NSF Grants and Agreements Official immediate notice in writing of any legal action or suit filed, and prompt notice of any claim made against the Awardee by any vendor or subawardee which in the opinion of the Awardee may result in litigation, related in any way to this CA, with respect to which the Awardee may be entitled to reimbursement from the Government.

1.5. Non-Binding for Third Party Agreements.

A. The Awardee shall make all commitments in its own name and shall not bind or purport to bind the Government. Except as noted below, the following language shall be included in all agreements with third parties:

"This Agreement does not bind or purport to bind the U.S. Government or the National Science Foundation (NSF), an independent agency of the U.S. Government. Consequently, any claims or disputes arising from or in performance of this Agreement shall solely be between the Parties of this Agreement and no others."

B. This language shall not be required for any agreements that incorporate liability clauses from the Federal Acquisition Regulation (FAR).

C. This language shall not be required for any agreements that do not contain funding, or for which the funding originates from a federal source.

D. The Awardee may submit a request to waive this requirement to the Grants and Agreements Officer on a case-by-case basis. NSF will respond to the Awardee within 30 days of the Awardee's submission of a request to waive this provision.

1.6. Property

A. Real Property and Personal Property:

1. Except for AUI's ownership of intellectual property, NSF shall maintain transferability rights over all real and personal property with a purchase cost over \$25,000 purchased with funds provided by this cooperative agreement or transferred pursuant to 1.6.A.2 of this clause, to either transfer title to the Federal Government or to an eligible third party upon NSF's determination. For equipment funded entirely from Federal award funds, the Awardee shall maintain property standards in accordance with the SFATC-FFRDC Article entitled "Equipment" and as set forth in the 2 CFR Part 200 "OMB Uniform Guidance". For equipment with mixed federal and non-federal funding, the Awardee shall maintain property standards in accordance with 2 CFR 200.313. This clause shall also not be construed to amend the rights and responsibilities granted pursuant to Articles 25 (Copyrighted Material) and 29 (Patent Rights) of the CA-FATC; the Awardee's right to retain the entire right, title and interest to any subject inventions provided under 35 USC 200 et seq. implementing the Bayh-Dole Act; or Awardee's retention of rights, title and interest in applicable Trademarks and Mask Works (as defined by the Semiconductor Chip Protection Act of 1984, and implemented by 17 USC Ch. 9). The government's irrevocable, nonexclusive, paid up, worldwide license includes allowing other Federal awardees to use, but not commercialize, the associated intellectual property.

2. Transfer of Government-owned Equipment from Previous Award. All Government-owned equipment for which the Awardee had accountability under NSF Cooperative Agreement Nos. AST-0223851 and AST-0836064 are hereby transferred to this CA on 1 October 2016, except for equipment specifically associated with the Green Bank and Very Long Baseline Array facilities and identified in the Awardee's transition proposal.

3. Title to Vehicles: Title to motorized vehicles, the cost of which has been funded entirely from funds provided to the Awardee through this CA or transferred pursuant to 1.6.A.2 of this clause, vests with the Government. The Awardee acknowledges that NSF must satisfy its compliance obligations under federal motor vehicle policies. In cases where Government-owned vehicles are purchased, the Awardee must adhere to Federal Management Regulation 41 CFR 102-34, Motor Vehicle Management.

4. Financial Statement Disclosure: If the Awardee anticipates having Government owned Real and Personal Property in aggregate value of over \$100 Million, the Awardee must disclose the total book value of individual NSF-Government-owned Real and Personal Property assigned to its custody under this award as a separate line item in the balance sheet or as a footnote in the audited financial statements. The listing should include all NSF-Government-owned Real and Personal Property purchased or constructed, including land and buildings under the award or acquired by screening excess

through the General Services Administration (GSA). Book value is defined as the original cost of the asset less any depreciation or amortization expense incurred as of the audited Balance Sheet date. A copy of the organization's most recent audited financial statements should be submitted electronically to fsrpts@nsf.gov and must be received no later than August 15 each year, effective August 2014. If financial statements are not available electronically, a paper copy should be submitted to:

National Science Foundation
Division of Financial Management
Attention: Accounting Operations Branch
4201 Wilson Boulevard, II-605
Arlington, VA 22230

B. Awardee-Owned Real Property and Personal Property in Chile:

1. Awardee Obligations. All contractual agreements for the purchase and operation of buildings and land without limitation are listed as follows:

- a) AUI's share of the ownership of the Chilean company, Radioastronomy Chajnantor Limitada (RCL), which has been granted a land concession by the Government of Chile for the right to use the site on which the ALMA Array Operation Site is located.
- b) AUI's share of the ownership of the land on which the ALMA Operations Support Facility (OSF) is located.

2. Transfer of Awardee-Owned Property. All buildings, building improvements, land and its improvements described in paragraph 1.6.B.1 of this clause are owned by the Awardee and are subject to the terms of the respective financing agreements. In the event that this CA is not renewed, these properties shall be transferred to a successor awardee at the request of NSF, subject to the mutual agreement of the Awardee and the successor awardee on the terms of the transfer agreement (such agreement shall not be unreasonably withheld and shall be made in recognition that the Awardee's share of the initial purchase was funded entirely with NSF award funds), notification to the Government of Chile, and with the consent of the co-owners of RCL.

C. Lease or Purchase of Additional Space. Article 55 entitled "Lease or Purchase of Additional Space" of the SFATC-FFRDC is hereby deleted in its entirety and replaced with the following:

a. Approval by the NSF Program Officer and the Grants and Agreements Officer is required prior to:

1. The lease or purchase of additional space whose total purchase price, or annual lease cost, is in excess of \$50,000;
2. Acquiring real property or interest therein with direct or indirect Federal funds provided under this Agreement;
3. Issuing, refinancing or altering bonds used to finance the acquisition of real property; or
4. Establishing new facilities.

b. A lease/purchase analysis for proposed space must be conducted in accordance with the requirements of 2 CFR 200.318 "General Procurement Standards."

Requests for NSF approval shall include justifying documentation sufficient to assess the request, as applicable.

1.7. Public Availability of Data Produced Solely for Scientific Activities

Data produced solely for scientific purposes, whether by staff or visiting scientists, will become publicly available within a reasonable time limit. Awardee will determine and impose appropriate conditions on users of the facility to assure public availability of all such data.

1.8. Rights in Data Necessary for the Operation and Management of the NRAO facilities:

A. Rights in Data Necessary for Operation and Management. Notwithstanding CA-FATC Article 25, entitled "Copyrighted Material," or any other clause of this agreement, the Awardee grants to the NSF in perpetuity the right to use and reproduce data that originated under this award or prior awards subsumed into or superseded by this CA without charge or additional expense (except for whatever reasonable costs are incurred by the awardee to reproduce the data) as necessary for the operation and management of the NRAO facilities. This includes the right to make such data available to any party interested in competing for any subsequent award to operate and manage the NRAO facilities, and any Awardees the National Science Foundation selects as a result of these competitions.

B. Data Types. The types and kinds of data deemed necessary for the operation and management of the NRAO facilities, includes, but is not limited to:

1. Preventive maintenance and calibration guides, histories, and agreements
2. Operating manuals, policies, and similar plans
3. NSF reports and annual work plans
4. Schedules
5. Data repository, and all supporting documentation and software
6. Software and manuals
7. Inventories
8. Document indexes
9. Subawards, subcontracts, and vendor agreements
10. Operations reports, including data on performance metrics
11. Safety Manuals
12. Memoranda with third parties
13. Facility and instrument drawings (including design, shop and as-built drawings), designs and specifications
14. Schematics
15. Warranty data

C. Data Produced Solely for Scientific Purposes. Rights acquired by the NSF under this clause do not include rights to any data produced solely for scientific purposes.

D. Prior Approval for Data Not Originating Under the Award. The Awardee must seek NSF approval to introduce data that was not originated under this award if such data will be critical to operating and/or managing NRAO. In part, NSF will consider any limitations on transferability of the data to a future awardee, as well as potential complications of any proprietary claims to the data prior to approving its use.

E. Flow-down Requirements. The Awardee shall ensure that the requirements of this clause flow down to all subawardees, subcontractors and vendors at all tiers.

1.9. Collaboration and Outside Funding Sources

A. It is sometimes appropriate for funding to be provided to the Awardee by other NSF Programs or other organizations, including Federal and State agencies in support of their missions or in support of mission-related staff research. It is also recognized that it may be appropriate for Awardee personnel or Awardee-managed facilities to be used for NSF and non-NSF projects that are compatible with NSF strategy, or otherwise deemed to be in the broad national interest. Such activities, however, shall be approved by NSF as described below, and not impact negatively on NSF-sponsored activities to be performed under this Agreement, as described in the annual Program Operating Plan. FAR 35.017(a) (2) states that it is not the Government's intent that an FFRDC use its privileged information or access to its facilities to compete with the private sector. Accordingly:

1. New Collaborative and Partnership Effort Notification. The Awardee shall contact the NSF Program Officer prior to any Awardee commitments being made concerning new collaborative or partnership efforts, where such commitments could affect activities performed under this agreement, or impact or involve NRAO personnel or facilities.

2. Other Funding Source Notification. The Awardee shall request written approval from the NSF Program Officer prior to submitting to any other NSF program or any other organization (including Federal, State, or local agencies) any proposal exceeding \$100,000 per year or a total amount of \$250,000 or more that involves or impacts NRAO personnel or facilities, and prior to making any Awardee commitments with regard to any new collaborative and partnership efforts, where such commitments could affect activities performed under this agreement, or impact or involve NRAO personnel and facilities.

The request shall include:

- i. The proposal or collaborative title
- ii. Name of the agency, program, or organization
- iii. Name of the cognizant official at the agency, program, or organization
- iv. Reasons for seeking outside funds or collaborations
- v. Impact of the project on NRAO personnel, facilities and/or activities under this agreement
- vi. Number of person months devoted to the project by the Awardee Key and Other Personnel, senior scientists and senior engineers
- vii. Total level of outside support being sought
- viii. Level of NSF/Awardee co-sponsorship, if any
- ix. Copies of the transmittal letter to the potential sponsor, the associated budget, and an abstract of the proposed work

3. Upon notification from the sponsor that the proposed work is to be funded, the Awardee shall forward to NSF a final statement of work, a final budget and any modifications to the documentation of the criteria described in paragraph 1.9.A.2 of this clause in response to the review. NSF may conduct retrospective reviews of such proposals; the Awardee shall maintain files of all such proposals to be available to NSF on request.

B. Special Projects. It is recognized that NSF may approach the Awardee to request NRAO take on additional projects and work tasks outside the scope of this cooperative agreement, which are funded by AST or other sources. Upon receiving written approval from the NSF Program Officer, these special projects and work tasks will be proposed to NSF, will be reviewed under established NSF merit review policy and procedures, and if funded, will be awarded through additional CSAs under this cooperative agreement.

C. Foreign Commitments. CA-FATC Article 51 entitled "Partnerships with Foreign Collaborators" is hereby deleted in its entirety and replaced with the following:

1. The Awardee shall provide written notification to the NSF Program Officer prior to entering into any mutually agreed arrangements with foreign collaborators, including foreign governments, corporations, non-profit organizations, universities or other organizations.

2. The Awardee shall maintain a list identifying all such written commitments to foreign governments, corporations, non-profit organizations, universities and other foreign organizations that involve the use of NRAO personnel, facilities and /or services. The form and functionality of this list will be determined by the parties to this CA. The NSF Program Officer and Grants and Agreements Officer shall have access to this list and may require reporting as necessary.

3. This provision is not intended to require notifications to NSF of the routine use of Awardee services and facilities by foreign investigators or foreign students, or the routine use of foreign facilities by NRAO personnel in accordance with the Awardee's standard policies and procedures.

D. Purchase of Services. The Awardee will notify the NSF Program Officer for review and comment of its intent to purchase business, administrative, and technical services from NRAO to support any additional project that will be funded outside of this CA and conducted outside NRAO. The notification will include sufficient information to allow the NSF Program Officer and the Grants and Agreements Officer to assess the impact of the service purchase arrangement on NRAO operations. Any services that are purchased with outside funding must include full cost recovery for NRAO. The Awardee will include in its Annual Management Report to NSF a report of any active arrangements to purchase services outside of this CA, and this report will be used to monitor the ongoing impact of service purchase arrangements on NRAO.

E. Acceptance and Monitoring. As part of NSF's oversight obligations, NSF will monitor the extent of the Awardee's obligations involving use of NRAO personnel and/or facilities for non-AST funded projects.

1.10. News Releases

CA-FATC Article 28 entitled "Publications", paragraph b. "News Releases", is deleted and replaced with the following:

The Awardee shall notify the NSF Program Officer or designee prior to issuing news releases concerning NSF-supported activities.

1.11. Awardee Policies and Procedures, Records and Document Management

A. Consistency. The Awardee's policies and procedures shall comply with the terms of this agreement.

B. Electronic Access. The Awardee shall develop and maintain a records and document management system that is web based with secure access. This system shall contain all important records and documents, including but not limited to management and operations policies and procedures manuals that are accessible to the NSF Program Officer and the Grants and Agreements Officer. The content of the system shall be mutually agreed among the Awardee and the NSF Program Officer, and the NSF Grants and Agreements Officer.

Changes. Any substantive changes to the Awardee's policies in the areas of: (a) personnel matters, such as employment and recruitment, salaries and benefits, and outside employment; (b) visitors; (c) use of NRAO facilities and services; (d) intellectual property; and (e) other policies related to scientific programs and staff shall be forwarded, with a statement of the reasons for the proposed changes, to the NSF Program Officer for review and comment. The NSF Program Officer shall provide comment to the Awardee within thirty (30) days of receipt of the proposed changes to the policies and procedures. Should NSF fail to respond within that period, Awardee may assume that the changes are acceptable to NSF without further review. The NSF Program Officer shall be notified electronically when the policy is issued in its final form and is accessible on the Internet.

1.12. Notice to the Government of Labor Disputes

A. If the Awardee has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this agreement, the Awardee shall immediately give notice, including all relevant information, to the Grants and Agreements Officer.

B. The Awardee agrees to insert the substance of this clause, including this, in any subcontract to which a labor dispute may delay the timely performance of this agreement; except that each subcontract shall provide that in the event its timely performance is delayed or threatened by delay by any actual or potential labor dispute, the subcontractor shall immediately notify the next higher tier subcontractor or the prime Awardee, as the case may be, of all relevant information concerning the dispute.

1.13. Health, Safety and Security

A. The Awardee shall take all reasonable precautions in the performance of the work under this CA to protect the health and safety of employees and of members of the public from all hazards and to minimize danger to life and property, and shall comply with all applicable health, safety, and fire protection laws, regulations, and requirements.

B. The Awardee shall maintain an accurate record of all cases of death, occupational disease or injury arising out of, or in the course of, employment incident to performance of the work under this CA. In addition, the Awardee shall promptly furnish the NSF Program Officer and the Grants and Agreements Officer with the details of any deaths, serious occupational diseases, injuries resulting in permanent handicaps, and major accidents occurring in connection with this CA.

C. The Awardee shall maintain an accurate record of all security incidents. In addition, the Awardee shall promptly furnish the NSF Program Officer and the Grants and Agreements Officer with the details of any major security incidents that involve facilities or personnel.

1.14. Information Security

In accordance with SFATC-FFRDC Article 63 entitled "Information Security" the Awardee shall submit a written summary of its IT security program to the NSF Program Officer within six months of the effective date of this agreement. Any significant changes to this IT security program shall be summarized in the Awardee Annual Management Report submitted per the requirements of the CSA.

1.15. Energy Conservation

A. In accordance with Executive Order (EO) 13693, the Awardee shall provide complete, legible electronic copies of invoices for utilities and waste disposal and recycling services on an annual basis to the NSF Sustainability Officer, at nfsustainability@nsf.gov. Invoice copies are due by March 31 each year and should cover twelve months, from October 1 through September 30 of the prior year, or sufficient to account the twelve consecutive month period most closely approximating the U.S. Government Fiscal Year. This requirement applies to all federally-owned buildings that are: 1) located in the United States or its territories; 2) more than 10,000 square feet in size; and 3) currently used as office, laboratory, information technology room or center, or dormitory space.

B. Utility invoices include consumption and costs for gas, electricity, steam, hot water, and chilled water. The awardee should not provide utility invoices for warehouse space, or any other building that does not meet the criteria above, unless the charges are not separate, or unless the building is also used as occupied office space. The awardee shall indicate whether each building has one or more separate utility meters specific to that building only.

C. Waste disposal invoices shall include the amount and cost of waste removed by waste disposal services for disposal in landfills or by incineration. For reporting purposes, material collected for recycling is not counted as disposed waste; invoices for recycling may be provided, or the costs may be itemized, separately. Waste disposal and recycling invoices may cover services for the facility as a whole, rather than for individual buildings.

D. NSF will use the data for internal monitoring of sustainability activities and shall retain the data as part of the mandated reporting and property management operational cost records. The data may also be provided to the Office of Management and Budget (OMB) and the Council on Environmental Quality (CEO/OFEE) to document cost savings from facility improvements.

1.16. Environmental Compliance

Before engaging in any activity that the Awardee reasonably believes may result in environmental impacts that were not previously assessed by NSF, the Awardee must alert NSF of the proposed activity to allow NSF to determine whether NSF has any environmental compliance obligations under federal environmental laws, including the National Environmental Policy Act, 42 U.S.C. §§ 4321, et seq., the National Historic Preservation Act, 54 U.S.C. § 306108 (previously codified at 16 U.S.C. §§ 470, et seq.), and the Endangered Species Act, 16 U.S.C. §§ 1531, et seq. If NSF determines an environmental compliance obligation exists, the Awardee shall:

1) cooperate to the fullest extent possible with NSF's efforts to meet those obligations; and 2) undertake no proposed activity unless NSF has satisfied the NSF environmental compliance obligation(s) and authorized the Awardee to proceed.

1.17. Master Site Plan

A. The Awardee shall develop and furnish the NSF Program Officer with a Master Site Plan pertaining to each geographic location of NRAO facilities. The Plan should include the information listed under Article 55 entitled, "Master Site Plan" of the SFATC-FFRDC. This Plan shall be updated on an annual basis and revised copies forwarded to the NSF Program Officer on October 1 of each year as an Interim Report in Research.gov. If there are no changes, the Awardee shall provide the NSF with a statement that no Master Site Plan changes have occurred during the past year.

B. Proposed construction of buildings and facilities or major modifications thereto and plans for acquisition of additional lands must be referenced in the Master Site Plan prior to the Awardee's submission of a request for funding such actions.

1.18. Applicability of Chilean Labor Laws

No provision of this CA is intended to negate the duty of the Awardee to comply with Chilean laws applicable to personnel working on NRAO programs in Chile.

1.19 Self-insurance

NSF acknowledges that the Awardee is requesting consideration of losses incurred in excess of its insurance coverage as an allowable cost under this article. This article is still under consideration by the parties. NSF will make a reasonable effort to understand the Awardee's concerns and will consider reasonable and justified requests. However, it is understood that NSF is under no obligation to accept any provision under the proposed article.