

Supporting Statement for Paperwork Reduction Submission

Grantee Reporting Requirements for National Facilities managed by the NSF Division of Materials Research (3145-0234)

A. Justification

A.1. Circumstances Requiring the Collection of Data

The National Facilities (NAFI) Program in the NSF Division of Materials Research (DMR) is the steward for two national user facilities: the Cornell High Energy Synchrotron Source (CHESS), and the National High Magnetic Field Laboratory (NHMFL), and partners with the National Institute for Standards and Technology (NIST) to support the user program at the Center for High Resolution Neutron Scattering (CHRNS) at the National Center for Neutron Research. Support for operation of these user facilities, facility upgrades, in-house research, and education ranges from approximately \$20-\$30M/year where DMR is the steward to \$3.5M per year for the partnership with NIST. Typical awards are for a five-year period. Because of the duration and size of these awards, it is necessary for NSF to ensure that its substantial investment is spent appropriately; that each of the facilities meets the goals stated in its own strategic plan, and that each facility's activities satisfy the goals and objectives of DMR. To enable effective oversight of its investment, NSF requires that each currently funded facility must submit an annual project report that describes all activities of the facility; each existing facility, in accordance with Foundation-wide requirements, began submitting an annual report in its first year of operation. Each facility also is expected to submit a final report at the end of the award.

The annual and final reports contain information that contributes to NSF's efforts to answer broad evaluative research questions:

- 1) What is the overall value-added of the DMR supported facilities?
- 2) What is the quality and impact of the research conducted at the facilities?
- 3) What is the quality and impact of education supported by the facilities?
- 4) What is the quality and impact of the knowledge transfer of the facilities?
- 5) Do the facilities effectively encourage the participation of US citizens, underrepresented minorities, women, and persons with disabilities in their activities?
- 6) Do the facilities create and sustain organizational connections and linkages within and among academia, government, and industry?

Each annual project report will be used to:

- **Evaluate annual progress of a facility.** The primary purpose of the annual report is to provide the information necessary for NSF to monitor and evaluate the progress and accomplishments, as well as, to identify problems of an individual facility. The annual report provides background information for site visit reviews/evaluations of each of the facilities that are conducted by teams of external reviewers and the NSF staff. The site visit review/evaluation provides feedback to NSF and the facility about its strengths and weaknesses. In cases of significant weaknesses a facility is provided advice and a time schedule for addressing any weaknesses.
- **Develop internal performance indicators and controls for a facility.** The annual report provides information that is used by the leadership of each facility to create and monitor metrics or performance indicators in the management of their facility.
- **Make funding decisions.** The facilities are funded via use of a cooperative agreement, and funds are allocated to each facility on an annual basis. The NSF staff uses each facility's annual report together with the written input from the external

reviewers responsible for the site visit review/evaluation of a facility to make decisions on the continuation and level of funding for the facility.

Final project reports will be used to:

- **Evaluate overall effectiveness of the NAFI program.** The final reports are used by NSF in evaluating the effectiveness of the NAFI Program on an ongoing basis.

A.2. Purpose and Use of Data

Facility specific reporting guidelines are needed to provide uniform reporting structure covering the required facility components, which include the strategic plan, user programs, facility upgrades, education, diversity strategic plan, and knowledge transfer to industry, national labs and international partners. The facilities are expected to provide both a review of past accomplishments and future plans. Pre-defined data tables provide uniform data collection across the facilities. The reports will be used in the:

- **External Reviewer Site Visits.** External site visit teams are convened by NSF on a regular basis to evaluate the individual facility. The external site visit team for a facility is selected by NSF program staff. Typically a site visit team will have 4-7 members who have scientific, educational, and management expertise that corresponds to the specific facility's activities. The teams use the information in the reports to assist in the on-site evaluation of each facility's progress relative to its stated goals and objectives and to its performance during the previous year. Upon reading the annual progress report, the site visitors spend time at the facility's site in discussion with the facility's researchers, educators, staff, and students to gauge the facility's progress. The external site visit team summarizes in writing the strengths

and weaknesses of the facility's progress and submits its report to NSF with copies provided to the facility.

- **NSF Staff Evaluation of Facility's Progress and Funding Decision for Following Year.** The NSF staff overseeing each facility consists of program officers that co-fund a given award. The NSF staff jointly monitors facility activities, in part through data recorded in the annual reports, and make decisions about external reviewers and facility funding.

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- **Evaluate overall effectiveness of the NAFI program.** The final reports are used by NSF in evaluating the effectiveness of the NAFI Program on an ongoing basis.

A.3. Use of Automation

All reports are submitted electronically via e-mail to the cognizant program officer.

A.4. Efforts to Identify Duplication

No other federal agencies or organization within NSF collects the same data submitted in annual and final facility reports.

A.5. Small Business Consideration

Not Applicable.

A. 6. Consequences of Less Frequent Collection

The reports generated by the annual data collection comprise one of the primary mechanisms used by NSF for approving funding for the facility on an annual basis. Less frequent data collection would preclude NSF's annual monitoring and documentation of the progress of each facility and, thus, would not allow for informed decisions about funding and timely correction of any weaknesses identified in a facility's activities. The consequence of less

frequent collection would manifest itself in lack of an effective way to continuously monitor the large investments of resources and time that DMR has committed to the NAFI Program.

A.7. Special Circumstances for Collection

N/A

A. 8. Federal Register Notice and Outside Consultation

The agency's notice, as required by 5 CFR 1320.8(d), was published in the *Federal Register* on December 19, 2016, and no comments were received.

The reporting requirements and estimates on the hourly burden were discussed with the management of CHESS and the NHMFL. The primary respondents to this data collection, were consulted for feedback on the availability of data, frequency of data collection, the clarity of instructions, and the data elements. Their feedback confirmed that the frequency of data collection was appropriate and that they did not provide these data in other data collections.

A. 9. Gifts or Remuneration

Not applicable.

A.10. Assurance of Confidentiality

The contents of annual reports submitted to NSF will not be made public. Facilities may make sections of their annual reports publicly available through their websites.

A. 11. Questions of a Sensitive Nature

No questions of a sensitive nature are used.

A. 12. Estimate of Burden

This request pertains to CHESS, CHRNS, and the NHMFL. Each facility will be required to submit an annual or final report. Based on discussions with CHESS and the NHMFL, we

estimate the average burden of preparing annual and final reports, in terms of man-hours per facility, as given in the following table:

Expense category	\$/hr	hours	Cost
1. Facility Director	105.35	36	\$3,792
2. Associate Director	62.45	169	\$10,554
3. User Facility Admin	49.37	494	\$24,389
4. Education Director	37.28	31	\$1,156
5. Students (undergraduate)	6.00	60	\$360
6. Fringe benefits			\$12,075
Average hours and cost per Facility		790	\$52,326

Total hours per facility are estimated to be on average approximately 790 hours; Total number of hours for 3 facilities: **approximately 2,370 hours**. The total cost per year for all three facilities is \$156,978.

ANNUALIZED COST TO RESPONDENTS

Estimated average cost per facility to prepare annual and final report, based on a survey of three of the Facility, is provided in the above table.

A. 13. Annual cost burden [not included in hour cost]

There are no additional costs beyond the estimated hours of burden shown above. The average annual funding rate for the two facilities polled is \$25M. The annual burden of preparing annual and final reports is less than 0.4% of funds provided.

A. 14. Annualized Cost to the Federal Government

The reports submitted by the Facility will be analyzed by the NSF staff. The following estimates of the anticipated effort are based on pilot trials of analyzing report data.

Expense category	Unit cost	Units	Total cost
Program Officer	\$80/hour	12 hours/facility	\$960
<i>Total cost for 3 facilities</i>			<i>\$2,880</i>

A. 15. Changes in Burden

There is no change in burden.

A. 16 Publication of Collection

Not applicable.

A. 17 Approval to Not Display OMB Expiration Date

Not applicable.

A. 18 Exception to Item 19 of OMB Form 83-I Certification Statement

Not applicable.

B. STATISTICAL METHODS

Not applicable

Attachments

Attachment I. Detailed description of information required in annual reports

Attachment II. Detailed description of information required in final reports