FY2019 Guidelines for MRSEC Annual Progress Reports and Continuation Requests

NSF transitioned to a new reporting system through research.gov, requiring NSF to comply with guidance about report content and specifies what information can be collected by the agency. This information is specified in the Research Performance Progress Report (RPPR) resulted from an initiative of the Research Business Models (RBM) Subcommittee of the Committee on Science (CoS), a committee of the National Science and Technology Council (NSTC).

The ***Annual Progress Report*** contains specific information including, but not limited to, the following:

a. *A summary description of the MRSEC; description of scientific and engineering accomplishments and plans; progress and plans in the area of education and human resources; progress and plans in outreach and knowledge transfer to industry and other sectors and groups; shared experimental facilities; MRSEC administration and management; and a data base of indicators of activity and progress, as required by the Government Performance and Results Act (GPRA).*

b. *Personnel and financial reports containing: a statement of funds estimated to remain unobligated as of the anniversary date; a current year budget based on actual funds spent and a continuation request budget for the ensuing year in accordance with NSF Form 1030; estimated budgets for the current and ensuing year by area of activity according to the Summary Table of Requested NSF Support; names of senior personnel by interdisciplinary research group; current information about other support of senior personnel and a statement of institutional and other support for the MRSEC.*

c. *An updated long-range plan, including projected activities, long-range budget expectations, and priorities through the expiration of this Agreement.*

These guidelines spell out the format for Annual Progress Report for the Materials Research Science and Engineering Centers (MRSECs). **Unless otherwise directly communicated given the upcoming 2019-2020 MRSEC Competition, annual progress reports are due no later than May 15, 2019.**

Prepare the report using the headings, instructions, and the table templates provided, in the order indicated in the following guide. ***The narrative sections are to be written in third person***. The report must be submitted through the annual report option of Research.gov (Note, that annual report due dates in the Research.gov system are based on the initial award date and may not coincide with the continuation date of the award). Please submit the entire report as a single pdf file including the budget pages and tables. If the pdf file exceeds the research.gov pdf file size limit, the file may be broken into several pdfs.   In addition, report only those publications/patents that explicitly acknowledge the appropriate MRSEC support (DMR-17ZZZZZ or DMR-14XXXXX) in the acknowledgement section; these publications should be (a) listed in section 14 of the annual report, and (b) counted in Appendix E. It is further encouraged that the NSF MRSEC Program and the local Center name be acknowledged as well (see later for recommended language).

The Final Report is the Last Annual Report; identical guidelines, not cumulative.

Checklist for MRSEC Annual Progress Reports

- ❏ The Annual Report is not cumulative.

- ❏ Ensure that you are working from the current Guidelines.

- ❏ Ensure that you comply with the page limitations (when stated) in a given section

- ❏ Annual progress reports are typically due at NSF six weeks before the continuation date of the MRSEC award. However, in 2019, Annual Progress Reports are due no later than May 15.

- ❏ Prepare the PDF file as normal per the Annual Progress Report Guidelines.

- ❏ Research.gov: insert the following text into all Annual Project Report module sections: "See attached PDF of Annual Report". Do not upload or enter publications in the Products Module.

- ❏ Submit the entire PDF report, including the narrative sections; budget pages and tables, as a single PDF file via the file upload function in the Accomplishments module on Research.gov.

- ❏ Submit the Breakout Budget Excel spreadsheets via e-mail to mrsec@nsf.gov; **also include a PDF these spreadsheets in the budget section of the annual report** (see section 17 below).

- ❏ The Sponsored Project Office needs to submit Certification of Cost Sharing documented on an annual and cumulative basis via Research.gov, if applicable.

- ❏ Send **all** Highlights in **PowerPoint format** to mrsec@nsf.gov. One Highlight per ppt file, using the following filename: 'University' MRSEC 'cooperative agreement number' 'IRG-#' 'author name' 'Highlight title.' For example, a Highlight on patterned proteins by Mary Smith from the Epsilon MRSEC would read: Epsilon MRSEC 1720565 IRG-1 Smith Patterned Proteins. Please ensure that Highlights created on an Apple computer open properly on a Windows machine before transmitting them to NSF. Also, **PDF copies of the highlights must be included in the appropriate section of the Annual Report**.

- ❏ Post <u>two</u> of the above Highlights (the best two) on the mrsec.org website before or coincident with the submission of this annual report. This can be done directly or by sending the Highlights to webmaster@mrsec.org.

- ❏ Update your MRSEC website at least annually

- ❏ All narrative sections are to be written in the third person.

- ❏ Primarily describe the accomplishments/progress; a short section with future plans in narrative sections 4-9 is acceptable/desirable.

- ❏ Address diversity at **all** academic levels in the Diversity Strategic Plan.

- ❏ Double check the numbers in budget pages;
  - o For the requested budget include justifications; in case of foreign travel include destination country(s),

- ❏ **Use of a more consistent, clearer list of Center participants at the faculty level in Narrative Section 2(i), Primary Participants, and in Appendices A and B**. **See definitions. Participants**

roles are also defined in accordance to the upcoming solicitation. Definitions aligned with newest MRSEC solicitation.

❏ The numbers entered in Appendix G should be consistent with those in the budget pages.

❏ The numbers entered in Appendix H should be consistent with those in appendices D and G.

❏ **Round numbers in the Appendices to thousands**.

❏ Feel free to mail a memory stick including copies of the publications reported in Section 14 of the Annual Report. Please mail it to MRSEC Program Director, Division of Materials Research, National Science Foundation, 2415 Eisenhower Ave., Alexandria, VA 22314. **Alternatively, provide a link to a "box" for us to download the publications. Only publications that explicitly acknowledge the award can be included**.

MRSEC PROGRAM
ANNUAL PROGRESS REPORT GUIDELINES

REPORTING PERIOD: XX/2018 - YY/2019

CONTENTS

<u>**NARRATIVE SECTIONS**</u>:

1. **Executive Summary (Limit 5 pages in length; You may wish to divide the page limit as suggested below)**

This is a high level report to NSF of primarily major accomplishments, activities, as well as future plans for the continuation years.

   1a. Vision and Overview (recommended at most 2 pages)
   - State the vision of the MRSEC and how the MRSEC is organized into IRGs and Seeds.
   - Provide a Director's overview of the Center, including education activities, the MRSEC diversity effort, industrial outreach, international collaborations, shared facilities, and MRSEC management.

   1b. MRSEC Accomplishments for Current (Closing) Reporting Period (most of the section)
   - Provide a narrative of the **past year's Key Accomplishments**, addressing the NSF criteria on Intellectual Merit and Broader Impacts in **separate** sections.
   - Discuss the MRSEC's response to any site visits and external advisory committee recommendations.
   - Briefly describe progress made with supplemental funding, if applicable.
   - Briefly comment on any long-range plans, change in priorities, or other unusual circumstances that are pertinent for the continuations of this award.

2. **List of MRSEC Faculty Participants** (*faculty rank or equivalent*) by academic departments; categories (i) plus (ii) should add to the number of participants by department entry reported in Appendix B. For MRSEC participants from industry or National Laboratories list the "equivalent" academic department.
   - (i)   **Primary Participant (PP):** Receives NSF/MRSEC support (not necessarily *salary* support). Please state full names. Support is from NSF provided funds.
   - (ii)   **Primary National Labs and/or International Participants (PNIP):** primary contributors that cannot be supported from NSF/MRSEC funds; they play an important role in the IRG.
   - (iii) **Secondary Participant (SP):** supported from other than NSF/MRSEC sources.
   - (iv)   **Affiliated Participant (AP):** not receiving support.
   - (v)   **User of shared facilities (USF).**

3. **List of Center Collaborators**.
   Alphabetized list of names of collaborators that contributed during this reporting period (not including those listed as MRSEC Participants), their institutional affiliation, email address, area of expertise, and reference to the appropriate IRG and Seed and/or the use of shared facilities. This provides more detailed information than the numbers entered in Appendix F.

   We suggest a table format with the following entries:

Collaborator	Institution	e-mail	Area of expertise	IRG # or seed association	User of Shared Facilities
John Doe	Biomet	jdoe@biomet.com	polymers	2	Yes
Jane Smith	State University	jsmith@state.edu	structural mechanics	1	No
James Wall	Private Institution	jwalker@pi.org	Metals	NA	Yes

4. **Strategic Plan** (Limit 2 pages).
   Restate the vision of the MRSEC. In separate paragraphs, identify the research, education, and diversity goals of the MRSEC. Describe activities used to develop a MRSEC's vision and mission, which is shared by MRSEC participants. Also describe how the MRSEC plans to achieve the goals, what process is used to monitor progress, and what mechanisms of assessment or evaluation metrics are used. If no changes please state "same as in original proposal or as in previous year."

5. **Research Accomplishments and Plans** (Limit 5 pages per IRG, 1 page per Seed project, 2 pages for a Super Seed)
   A synthesis of scientific **accomplishments** and challenges **for this reporting period only**, and plans for the upcoming years. List faculty and senior participants by full name, and include the numbers of students and postdocs involved in the work before the narrative for each IRG and Seed or SuperSeed. **To reiterate, this is not cumulative from the start of the award; you must only describe what has been done from the end of the previous report**.

6. **Education and Human Resources** (Limit 5 pages)
   (a) Describe activities that took place during this **current reporting period** as well as activities planned during the continuation year. Provide a detailed narrative of REU and RET activities, including the student selection process, names of students and teachers with titles of their projects. (b) Describe efforts/assessment/evaluations to measure the impact of the education and outreach activities.

7. **Post-doc Mentoring Plan** (Limit 1 page) **and Data Management Plan** (Limit 2 pages)
   For MRSECs supporting Postdoctoral Researchers, describe the current MRSEC-wide Postdoctoral mentoring activities and planned activities for future years, see NSF Proposal & Award Policies & Procedures Guide (PAPPG), NSF 15-1. If no changes, simply state "same as in original proposal" or "same as previous year". Repeat for the Data Management Plan

8. **Center Diversity – Progress and Plans**

    MRSEC Diversity Strategic Plan: (Limit 3 pages)

    (a) **Current status and progress** since the previous reporting period. How effective was the MRSEC's plan to increase the diversity of the MRSEC's leadership, faculty, undergraduate, graduate students, and postdoctoral associates, as well as the REU and RET programs associated with the MRSEC?

    (b) **Plans for the next reporting period**. Describe goals and intended actions to increase the diversity of the Center's leadership, faculty, undergraduate, graduate students, and postdoctoral associates, as well as the REU and RET programs associated with the Center. The updated Diversity Strategic Plan should highlight key deficiencies identified in the previous year's plan and new strategies to rectify them. The focus of these diversity efforts will be on achieving a demonstrated impact by benchmarking vs. national science and engineering averages* for the involvement of underrepresented groups in STEM.

    * In compliance with the requirements of federal law, no university receiving federal funds will employ quotas or set-asides based on gender, race, or ethnicity.

9. **Knowledge Transfer to Industry and Other Sectors** (Limit 2 pages)
    Describe current and planned collaborations and interactions with industry and national labs; workshops; and, others as appropriate. **Again, this is not cumulative to the start of the award.**

10. **International Activities** (Limit 2 pages)
    Describe current and planned international activities such as collaborations, faculty / student exchanges, workshops, use of user facilities, etc. **As before, this is not cumulative to the start of the award.**

11. **Shared Experimental/Computational Facilities** (Limit 2 pages)
    Describe what they are, their use and accessibility, supervision, cost recovery, and planned acquisitions. If the Center is a member of the Materials Research Facilities Network, describe the progress and plan.

12. **Administration and Management** (Limit 2 pages)
    Organization chart, list membership of MRSEC internal and external committees.

13. **Graduated Trainees:** List Ph.D. students graduated with MRSEC support (full or partial) over the past year, with placement, if known. Please state full names. Also, list MRSEC supported (full or partial) postdocs who left during the past year, with placement if known. Please state full names. Indicate underrepresented minorities and women.

14. **List (and number) of MRSEC-supported publications and patents** covering the current award period. List published papers separately by IRG and Seeds, alphabetically by first

faculty participant author. List papers only once, even if they report research results of more than one IRG. Only include papers actually published since the last annual report. **DO NOT INCLUDE SUBMITTED, IN-PRESS, OR ACCEPTED ENTRIES*.** In addition, separate the publications according to the following categories:

IRG-1
a. Primary MRSEC support that acknowledge the MRSEC award – *approximately 50% or more support from MRSEC*. Emphasize publications with 100% MRSEC support.
b. Partial MRSEC support that acknowledge the MRSEC award – *less than 50% of support from MRSEC*

IRG-2
a.   Primary MRSEC support that acknowledge the MRSEC award. Emphasize publications with 100% MRSEC support.
b. Partial MRSEC support that acknowledge the MRSEC award

IRG-3
a.   Primary MRSEC support that acknowledge the MRSEC award. Emphasize publications with 100% MRSEC support.
b. Partial MRSEC support that acknowledge the MRSEC award

Seeds / Initiatives
a. Primary MRSEC support that acknowledge the MRSEC award. Emphasize publications with 100% MRSEC support
b. Partial MRSEC support that acknowledge the MRSEC award

Shared facilities
a. no direct MRSEC support but research and subsequent publication directly impacted by use of shared facilities. MRSEC award explicitly acknowledged.

Patents - List patents according to the following categories:

a. Patents granted during the current reporting period.

b. Patent applications (excluding provisional applications) during the current reporting period.

c. Patents and Patent Applications Licensed during the current reporting period.

14.b   OPTIONAL: List Invited Presentations by MRSEC Primary Participants at Conferences. These may include APS, ACS, AVS, MRS, Gordon Conferences among others. Provide a numbered list. Include name of presenter, title, based on IRGX or Seed, name and date and location of Conference. Do not include contributed talks or talk at other institutions.

15. **Biographical information for each new investigator** (faculty member or equivalent). **It is recommended to use the NSF typical format.** (Limit 1 page each).

16. **Honors and Awards** - List and briefly describe **significant** honors and awards given to MRSEC participants during the current reporting period.

17. **Highlights:** Research and Education Highlights are a crisp one-page summary of a recent **significant** result with an interesting and informative image highlighting your NSF funded work. Include a title, list of authors with affiliation(s), an appropriate color image (avoid graphs), and an acknowledgement of support with award number(s) for each highlight. We plan to use these highlights to illustrate the work that MRSEC supports. They might be used in NSF documents and presentations or posted on NSF and MRSEC.org web pages, for example. The text and graphics should capture the essence of the activity you wish to highlight. The graphics are particularly important and can include images or photographs. The text and graphics should be at the level of a press release, explaining briefly and in non-technical language what has been accomplished and why it is significant. **Please include a technical description of the work in the notes section of the PowerPoint slide.**

MRSEC Highlights will be made available to the public on the Division of Materials Research website and in CD format. By sending us a Highlight you grant NSF the right to reproduce and disseminate your images for various possible uses. If you are planning to patent your work it is your responsibility to consult with the appropriate person at your institution to ensure that sending us the requested material does not jeopardize your intellectual property rights.

Observe the following guidelines:
- Provide no more than two science Highlights per IRG.
- Provide no more than two Seed related Highlights from all Seed projects.
- Provide no more than two Education related Highlights.
- Provide no more than two other Highlights on shared facilities and/or partnerships including industry, national lab, international or other.

Send all Highlights in PowerPoint format to <u>mrsec@nsf.gov</u>. One Highlight per file, using the following file name: 'University' MRSEC 'cooperative agreement number' 'IRG#' 'contact last name' 'Highlight title.' For example, a Highlight on patterned proteins from IRG-1 by Mary Smith from Epsilon University would read: Epsilon MRSEC 0520565 IRG-1 Smith Patterned proteins.

Please post at least **two** of the above Highlights on the mrsec.org website before or coincident with the submission of this annual report. This can be done directly or by sending the Highlights to webmaster@mrsec.org.

Note: The annual report will not be approved until Highlights are received at NSF and are posted on the mrsec.org website.

Highlights must be compliant with the amended Section 508 of the United States Rehabilitation Act of 1973. This is accomplished by adding "Alt text" to an image to provide a textual alternative to visual information.

To add Alt text:
1. Right click the image or object, and then click **Format**. **Note:** For tables, click **Table Properties**.
2. Click **Alt Text**.
3. Enter a description of the image or object into the **Title** and **Description** text boxes. **Tip:** Use clear, but concise descriptions. For example, "a red Ferrari" tells the reader more about the image than "a car."
4. Click **Close**.

FISCAL SECTIONS AND APPENDICES:

18. **Statement of Unobligated Funds** for this award. Provide a $ figure, not a percentage of the total.

19. **Budget**

    Closing Year Budgets:

    A. Closing year budget on NSF Form 1030 reporting **actual $s spent from the last reporting period to present.**
    B. Budget Explanation Page based on A.
       Include the following information:
           Section A – continuation of faculty receiving salary support
           Section D – Equipment purchased (itemized per GPG)
           Section F – Foreign travel including destination country(s) and purpose (International Conference, Workshops, Research outside US, education outside US, etc.)
           Section G – explanation for subawards and other additional information as necessary
    C. No subaward or supplement budgets are necessary.
    D. One page PDF of completed MRSEC Breakout Budget Excel spreadsheet for the closing year using **actual** amounts reported on Form 1030. The columns in the spreadsheet show how MRSEC funds are distributed according to:

1. Research (IRGs and Seeds), Section 5 of the narrative (accomplishments and plans).
2. Education Activities and Human Resources, Sections 6 and 7 of the narrative.
3. Outreach and Knowledge Transfer, Section 8 of the narrative.
4. Shared Equipment and Computational Facilities, Section 9 of the narrative
5. Administration, Section 10 of the narrative.
6. Automatic sum of Columns 1-5. The totals will equal those reported on Form 1030.

This data is also used in Appendix G.

Continuation Request or Next Year Budget:

A. Total requested MRSEC budget on NSF Form 1030.
B. Budget Explanation Page for requested MRSEC budget.

      Section A – continuation of faculty receiving salary support.

      Section D – Equipment to be purchased (itemized)

      Section F – Foreign travel including destination country(s) and purpose (International Conference, Workshops, Research outside US, education outside US, etc).

      Section G – explanation for subawards and other additional information as necessary.

C. Subaward budgets on NSF Form 1030, as needed.
D. One page PDF of completed MRSEC Breakout Budget Excel spreadsheet for the requested year **increment**. The columns in the spreadsheet show how MRSEC funds are distributed according to:
1. Research (IRGs and Seeds)
2. Education Activities and Human Resources
3. Outreach and Knowledge Transfer
4. Shared Equipment and Computational Facilities
5. Administration
6. Automatic sum of Columns 1-5. The totals will equal those reported on Form 1030.

This data is also used in Appendix G.

In addition to being part of the Annual Progress Report, please send the completed MRSEC Breakout Budget Excel spreadsheets to mrsec@nsf.gov.

18. APPENDICES - Please complete the Tables/Templates that follow.

APPENDIX A: Summary Table of **faculty** support (annual basis) showing person-months (MRSEC, other NSF, other federal, other non-university) for each MRSEC faculty member, *by academic department* (current, closing year). **NOTE**: (1) The total dollar support columns ($k) should include salary of faculty member and share of faculty member's support for students, postdocs, materials/supplies, etc., including overhead. (2) The names listed in this table should be consistent with the List of MRSEC Primary Participants in Section 2(i).

Support of NSF-MRSEC Faculty, Primary Participant (or equivalent for nonacademic participants) for the Current Award Period. List faculty names by academic department (or equivalent). Add rows as needed for additional faculty and/or departments.

		Person-Months of Support (Academic Year and Summer)			
	NSF MRSEC Funds ($K)	NSF MRSEC	Other NSF	Other Fed. Gov.	Other Non-University
Dept.					
Chemistry					
Electrical Engineering					
Materials Science					
Physics					

APPENDIX B: Number of faculty (or equivalent for nonacademic participants), the participants' departmental affiliation, postdocs, graduate students, undergraduates, and support staff in the MRSEC, showing number of women and members of underrepresented minority groups (URMs). For information on which ethnic and minority groups constitute URMs, see for example: http://www.nsf.gov/mps/broadening_participation/index.jsp. **NOTE**: (1) The (a) salaried primary participants are those receiving NSF salary support; they may receive additional NSF support. (b) primary participants supported by NSF excluding salary. (2) The sum of faculty participants by department will be the same as the sum faculty participants in the top of the table and listed at the beginning of the annual report. Chose a single departmental affiliation for faculty with multiple appointments.

MRSEC PARTICIPANTS   **MRSEC:_____ Current Year 2018-2019**

Designation	Total	Female	URMs	Disability
Primary Participants(tenure track)				
(a) Receiving NSF-MRSEC salary support				
(b) Receiving NSF-MRSEC support (not salary)				
(c) Secondary Participants: other than MRSEC support				
(d) Primary National Labs & Int. Participants				
(e) Affiliated Participant, no MRSEC support				
Primary Participants(non-tenure track)				
(f) Receiving NSF-MRSEC salary support				
(g) Receiving other than salary NSF-MRSEC support				
Participants by Department (tenure & non-tenure track) (a+b+d+f); use only integers				
Physics				
Materials Science				
Chemistry				
Biological Sciences				
Mathematics				
Electrical Engineering				
Chemical Engineering				
Mechanical Engineering				
Other Engineering				
Other Science				
Postdocs				
Graduate Students (do not include PREM)				
Undergraduate Students (do not include REU / PREM)				
Technical Support Staff – Shared Facilities				
Technical Support Staff – non Shared Facilities				
IRG Leaders				
Education Staff not reported elsewhere				
Administrative Support Staff				

APPENDIX C: Education and Outreach: Use the Template provided below to list the total number of REU students and RET teachers supported by the MRSEC. Also, list the total number of K-12 students, and pre-college teachers and faculty from predominantly undergraduate institutions. Provide information for two groups of K-12 students: (1) *Active* participants that generally receive financial support (stipends, not materials and supplies) from MRSEC, and (2) the wider group of *impacted* participants (museum attendees, classroom students, etc.).

Breakout MRSEC financial support **($K)** devoted for: K-12, MRSEC REU, other undergraduate programs, RET, Informal (outreach) Science. The total of these five categories must equal what is reported on the Education Breakout Budget. List additional NSF REU and RET Site support (separate NSF awards) which is affiliated with the MRSEC, and REU and RET Supplements. List the total MRSEC support of underrepresented minority programs.

Round dollar amounts to thousands.

EDUCATION & OUTREACH

MRSEC:_____ Current Year Period: 2018-2019

Designation	Number of Active Participants	Number funded by NSF MRSEC
REU Students total		
Female		
underrepresented minority		
disability		
RET Teachers total		
Female		
underrepresented minority		
disability		
Other Pre-College Teachers total		
Female		
underrepresented minority		
disability		
Undergraduate Faculty total		
Female		
underrepresented minority		
disability		
	Number of K-12 students receiving MRSEC funds for stipend (not supplies)	*Number of K-12 students Impacted Participants*
K-12 Students total		
Female		
underrepresented minority		
disability		
		$K
Breakout of MRSEC Educational Funds (do not include supplies)		
(a) K-12		
(b) MRSEC REU support		
(c) Other Undergraduate support		
(d) RET support, not supplement		
(e) Informal Science		
Total Education Outreach (same as Total as MRSEC Education Budget column)(a+b+c+d+e)		
REU and RET Site support (separate NSF award)		
REU and RET supplements		

APPENDIX D: Summary Table of annual dollar levels of support (or dollar equivalent):

Cost contributions; i.e. complementary support for MRSEC activities not listed on line M in the budget. The MRSEC effort can be augmented by other sources, which may include cash contributions, sponsored projects to the MRSEC, equipment donations, laboratory renovations, etc. Note: **Do not include** sponsored projects to the individual faculty members, even if they are related to the core mission of the MRSEC.

COST CONTRIBUTIONS

Center:_____

	Current Year	*Proposed Year*
Reporting Period		
Designation	*$K*	*$K*
Cost Contributions (support not on line M)		
Other NSF (include supplements to the MRSEC)		
Other Federal		
State		
Local		
Foundation		
Industry		
University		
International		
Other		
Total *Cost Contributions*		

Cost contribution explanation page: Please attach a brief list of cost contributions (i.e., how cost funds were spent: faculty salary, student support, equipment, etc). **Do not include buildings.**

APPENDIX E: Output

Numerical data on Publications, Patents and MRSEC graduates. Only publications with explicit acknowledgement of MRSEC support may be included. PP= Primary Participant; PNIP= Primary National Lab or International Participant; SP= Secondary Participant; AP= Affiliated Participant.

OUTPUT

MRSEC:_____ **Current Year Period: 2018-2019**

Designation	*Number Current Year*	*Award Cumulative Totals*
Publications		
IRGs: Primary Publications that explicitly acknowledge MRSEC DMR-17YYYYY support		
IRGs: Partial Publications that explicitly acknowledge MRSEC DMR-17YYYYY Support		
IRGs: Number of Primary and Partial Publications that explicitly acknowledge MRSEC DMR-17YYYYY support co-authored by 2 or more Primary participants (PP or NIP) as defined in Sections 2(i) and 2(ii).		
IRGs: Number of Primary and Partial Publications that explicitly acknowledge MRSEC DMR-17YYYYY support co-authored by 2+ Participants as defined in Sections 2(i) to 2(iv) (PP/PNIP with SP or AP)		
Seeds / SuperSeeds: Primary Publications that explicitly acknowledge MRSEC DMR-17YYYYY support		
Seeds / SuperSeeds: Partial Publications that explicitly acknowledge MRSEC DMR-17YYYYY support		
Seeds / SuperSeeds: Number of Primary and Partial Publications that explicitly acknowledge MRSEC DMR-17YYYYY support co-authored by 2 or more Primary participants as included in Sections 2(i) and 2(ii) only		
Shared Facilities: Number of Publications that used the MRSEC Shared Facilities and explicitly acknowledge the SF support by MRSEC DMR-17YYYYYY		
Patents		
Awarded		
Pending		
Licensed		

Next position	Terminal Masters Students Graduated		Ph.D. Students Graduated		Post-doctors Completed Study	
	Number Current Year	Cumulative Totals for this Award	Number Current Year	Cumulative Totals for this Award	Number Current Year	Cumulative Totals for this Award
Academic Inst.						
National Labs						
Industry						
Non-science						
No data/no job						
Total						
Women						
URM (All) *						
URM (US or PRA) *						

* URM = Under-Represented Minorities in Science Technology Engineering and Mathematics (STEM). Please report two numbers for graduate students and post-docs: all URM and those that are US citizens or Permanent Resident Aliens. For information on which ethnic and minority groups constitute URMs, see for example:

http://www.nsf.gov/mps/broadening_participation/index.jsp

APPENDIX F : Collaborations - see definitions in Section 3.

COLLABORATIONS

MRSEC:_____ **Current Year Period : 2018 - 2019**

Designation	Numbers
Collaborators (not including MRSEC participants)	
Academic Institutions	
Academic collaborators	
National Labs	
National Lab collaborators	
Industry (# of companies)	
Industry collaborators (# of individuals)	
Users of Shared Facilities (not including MRSEC participants; including those supported by the Materials Research Facilities Network or MRFN)	
Academic Institutions	
Academic collaborators	
National Labs	
National Lab collaborators	
Industry (# of companies)	
Industry collaborators (# of individuals)	
Users of Shared Facilities supported by MRFN	
Academic Institutions	
Academic collaborators	
National Labs	
National Lab collaborators	
Industry (# of companies)	
Industry collaborators (# of individuals)	

APPENDIX G: NSF MRSEC support by IRG and other activities for both the current (closing) and the requested (continuation) award period. **Note:** For each entry in the Table, include indirect costs. Subtotals for Research, Education Activities and Human Resources, Outreach and Knowledge Transfer, Shared Equipment and Computational Facilities, and Administration should be the same as those reported in the breakout budget Excel Spreadsheet. Include major capital equipment under shared experimental facilities. Support for graduate students should normally be included under research, not under education and human resources.

MRSEC SUPPORT

Center:_____

Designation	$K Current, closing award period	% of total budget	$K requested, next, award period	% of total budget
IRG 1				
IRG 2				
IRG 3				
Total: IRGs				
Seeds and Emerging Areas				
Total Research: IRG's + Seeds				
Education Activities and Human Resources				
Knowledge Transfer (industry and others)				
Shared Experimental and Computational Facilities				
MRSEC Administration				
Total		100		100
Shared equipment facilities				
Other equipment				
Total equipment				
SEF Technical staff supported by Center				

APPENDIX H: Additional support that leverages NSF MRSEC support and how this additional support is spent in the Center on an annual basis (Total MRSEC award / 6). This additional support consists of cost contributions as defined in Appendix D. The numbers provided in this table should be consistent with those in appendices D and G.

<div align="center">

TEMPLATE

MRSEC Leveraged SUPPORT: current (closing) award period

</div>

Center:_____ **Current Year Period   2018 - 2019**

Designation	NSF MRSEC (Same as in Appendix G)	Cost contributions (same as in Appendix D)	Total all sources of Support (sum of 2 columns)
	$K	$K	$K
IRG 1			
IRG 2			
IRG 3			
Total IRGs			
Seeds and Emerging Areas			
Total Research: IRGs + Seeds			
Education Activities and Human Resources			
Knowledge Transfer (industry and others)			
Shared Experimental and Computational Facilities			
MRSEC Administration			
Total			
Shared facilities equipment			
Other equipment			
Total equipment			
SEF Technical staff supported by Center			

APPENDIX I: Partnering Institutions

Many MRSECs have associations with a number of universities in the US and abroad, as well as with other types of research, education, and industrial organizations. These partnerships may or may not involve financial arrangements between the MRSEC and the partner. Partnerships generally imply **significant** participation in the planning and execution of activities of the MRSEC. They can include minority-serving institutions that have substantial research and / or educational interactions with the Center. <u>DO NOT INCLUDE ONE-ON-ONE COLLABORATIONS</u>.

Partnering institutions may be associated with NSF awardees under the programs designed to enhance minority participation such as the Louis Stokes Alliances for Minority Participation (LSAMP), Alliances for Graduate Education Program (AGEP), Centers for Research Excellence in Science and Technology (CREST), and the Tribal Colleges and Universities Program (TCUP). List for each of these programs the lead institution of each awardee with which the Center has formal relationships.

The table distinguishes between partnerships with academic institutions and non-academic institutions. Academic partners generally include domestic and foreign universities/colleges.   K-12 institutions are not included in this list unless they have significant input into the education outreach activities of the Center.   Non-academic partners include those from industry, National Laboratories or other federal government agencies, State supported institutions, Museums, etc.

APPENDIX I: Partnering Institutions (with examples shown)

Center:_____ **Current Year Period** _____

Indicate nature of financial support and type of partnering institution (more than one box may be checked)

	Name of Institution	Receives Financial Support from MRSEC	Contributes financial support to the MRSEC	Minority Serving institution Partner	Female Serving Institution Partner	National Lab/ other govt Partner	Industry Partner	Museum Partner	International Partner
I. Academic Partnering Institutions	University A								
	University B	X		X					
	University C								X
Total Number Academic Partners	**3**	**1**		**1**					**1**
II. Non-academic Partnering Institutions	Company D		X				X		
	National Lab E					X			
	Museum F	X						X	
	Company G						X		X
Total Number Non-academic Partners	**4**	**1**	**1**	**1**		**1**	**2**	**1**	**1**
Total Number of academic and	**7**								

non-academic partners												

APPENDIX J: SEEDS

The NSF seeks to support transformative research, http://www.nsf.gov/pubs/2007/in130/in130.jsp. The MRSEC Seed program should in particular pursue high impact, high risk projects.

Please list the titles of all Seed projects since the start of the current award. Indicate the expectations for the seed at the time of award, the result of this investment, and whether or not the work can be categorized as transformative.   If transformative, add a footnote describing why. See examples shown. Make sure that the titles are the same as those listed in Section 5.

Title of Seed Projects	Date started (mm/yy)	Date ended (mm/yy)	Expectation(s)					Outcomes				
			Integrate into IRG	Nucleate new IRG	Bring new faculty into the center	Other (Specify)	Transformative science?	Integrated into IRG	Nucleated new IRG	Attracted external funds	Discontinued	Other (Specify)
			x				x					
				x			x		x			
						x						
Totals			1	1	0	1	2	0	1	0		0

23

Appendix K

Please list the name of all start-up companies based on MRSEC research from this and previous MRSEC, MRL, and MRG award periods.

Company Name	Year of establishment	Brief Name of IRG or SEED where research originated	Estimated Number of Employees	City, State, Zip	Website