Office of Workforce Development for Teachers and Scientists (WDTS) Response to the Report of the Basic Energy Sciences Advisory Committee

Committee of Visitors (COV) Review of WDTS Laboratory Based Programs

Date of COV: December 6-8, 2016 (COV report approved by BESAC on February 24, 2017)

Date of Response: March 27, 2017

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COV Recommendation	WDTS Response
1. General	
Increase the number of participants in the SULI, CCI, and VFP programs, increase program budgets, and develop and implement a strategic plan for growth in collaboration with the National Laboratory Education Directors.	WDTS acknowledges the need for continued strategic planning, in collaboration with SC's research program offices, to identify the STEM workforce training needs that can best be addressed through WDTS programs. WDTS will continue its programmatic efforts to measure performance and to gauge capacity, in collaboration with DOE laboratories. Collectively these evidence-based efforts will inform potential program growth and support future budget requests.
That WTDS partner with appropriate STEM-related programs in the National Science Foundation to increase the number of underrepresented students in the STEM pipeline by developing a national campaign aimed at attracting an increased number of high school students to science, technology, engineering, and mathematics programs in college and universities.	Over the past 5 years, WDTS and other SC offices have engaged other agencies, for example, NSF, NIH, NASA, and others in ongoing interagency working groups focused on identifying and addressing key challenges in STEM education and training, including broadening participation. WDTS and the other federal agencies recognize the need to broaden participation of students majoring in STEM areas, and the potential impact that intervention during secondary education, or earlier, holds. In the context of a research mission agency, WDTS will build on its existing partnerships with other federal agencies to more aggressively address this challenge.
2. Science Laboratory Internships Program (SULI)	
That WDTS carry out a detailed evaluation of the SULI program to determine if the desired outcome of encouraging students to pursue careers in STEM is being achieved.	WDTS is committed to executing an in-depth, decadal longitudinal study of past participants to assess programmatic impacts and outcomes.
That the number of internships in the SULI program available to the National Labs be increased, consistent with the capacity of the National Lab staff to mentor an increased number of undergraduate interns.	WDTS is committed to supporting the SULI program in a manner that maximizes the numbers of students engaged in high quality internship experiences aligned with the Office of Science research missions.
That WDTS develop a SULI-like program for early Ph.D./M.S. students that would be combined with the existing SULI program. That the name of this expanded program be changed from Science Undergraduate Laboratory Internship to Science Laboratory Internship (SLI).	WDTS acknowledges the importance of graduate level research opportunities at the DOE laboratories and currently provides such opportunities for graduate students through its SCGSR program. The expansion of any WDTS program must be informed by an evidence-based assessment of the SC-mission related workforce

	training need and an assessment if such an expansion would duplicate or compete with other SC-funded programs. As part of its periodic assessments of SC mission-driven workforce training needs, in collaboration with the SC research program offices, WDTS will consider the need for short-term graduate level internships at DOE laboratories.
That all National Lab staff involved in the evaluation process of applicants for the SULI program be required to view an appropriate webinar on implicit bias.	WDTS agrees that laboratory staff involved in the application evaluation process should receive training on the topic of implicit bias and, in partnership with DOE labs, will develop and host an appropriate webinar with required viewing by all lab staff involved in the evaluation process of SULI, CCI, and/or VFP applicants.
3. Community College Internships Program (CCI)	
That WDTS leadership, in consultation with National Laboratory Education Directors, seek additional funding to grow this program**.**	WDTS is committed to support the CCI program in a manner that maximizes the number of community college students engaged in high quality internship experiences aligned with the Office of Science research missions and laboratory needs.
That the Laboratories increase their outreach to local community colleges as a means of increasing the number of under-represented minorities in the program.	WDTS recognizes that community colleges have a higher degree of diversity than the national science and engineering undergraduate population and will continue to encourage, and support, related outreach efforts by the DOE laboratories.
4. Visiting Faculty Program (VFP)	
That WDTS staff work with the LEDs to develop and implement more active outreach programs that would bring the VFP to the attention of more potential participants.	WDTS recently initiated a new opportunity to support outreach activities by the DOE labs to recruit participation in the WDTS supported programs, including VFP. WDTS will continue to encourage, and support, related outreach efforts by host laboratories, including encouraging the labs to work together to amplify the impact of their efforts.
That efforts be made to increase the breadth and impact of the program as well as the number of program participants.	WDTS is committed to assessing and developing options and program elements that facilitate the development of collaborative research relationships between potential faculty applicants and host laboratory co-Principal Investigators. Past-participant ambassadors, and/or related online alumni portals, across all WDTS lab-based programs, will be explored as possible means to encourage and enable peer-to-peer connections.
That students accompanying VFP faculty to National Labs should be offered career advice and mentoring to keep them engaged in Laboratory activities.	WDTS agrees that students accompanying VFP faculty in research opportunities at the DOE laboratory should have opportunities for professional development, including career advice. WDTS sponsored programs at labs are required to include a portfolio of professional development activities for all VFP student participants, as well as for all SULI and/or CCI participants. While this portfolio often includes career planning activities, WDTS will work with the labs to expand opportunities that provide career advice to participants.

That WDTS consider the suggestion by the LEDs that the outcomes of the VFP might be significantly enhanced by extending the allowable term of these appointments.	The goal of VFP is to increase the research competitiveness of faculty members and their students at institutions of higher education historically underrepresented in the research community. WDTS agrees that additional efforts can be taken to help advance the desired outcomes for the program, as defined by the program's logic model. WDTS will assess possible efforts, including, but not limited to providing informational resources and coaching at different stages of the 3 year opportunity, and connecting participants with SC program managers to explore SC programmatic supplemental funding possibilities supporting further collaboration. Any decision to expand the eligibility for VFP support beyond three years will need to be informed by evidence that such a decision will have the desired impact, as well as any trade-off of decreasing opportunities for new participants.
5. Office of Science Graduate Student Research Program (SCGSR)	
Extend the SCGSR program period to better match a typical Ph.D. timescale (3-5 years).	WDTS recognizes there is value in expanding the length of the SCGSR award term beyond 12 months. However, this is a *supplemental* award to provide research opportunities at the DOE laboratories and is not intended to replace or be a substitute for the ongoing/long-term support for the graduate student's dissertation research. WDTS will assess the prospects for, and trade-offs of, expanding the maximum cumulative award length to 24 months.
That the SCGSR program assess the potential impact of multi-year awards on the program and to increase the program budget to accommodate some multi-year awards.	WDTS recognizes there is value in expanding the length of the SCGSR award term beyond 12 months. WDTS will assess the opportunities for considering a streamlined "renewal" application process for past awardees, and for expanding the maximum cumulative award length to 24 months. In doing so, WDTS will need to consider the trade-off of decreasing opportunities for new participants.
That WDTS evaluate the interest and potential impact of including Master's degree students from a targeted set of SCGSR disciplines.	WDTS acknowledges that there may be SC mission-critical workforce training needs that could be best addressed through research opportunities for Master's degree students at the DOE laboratories. As part of its periodic assessments of SC mission-driven workforce training needs, in collaboration with the SC research program offices, WDTS will consider scientific disciplines where research during a Master's degree program may be most effective.
That additional structure be put in place in the SCGSR program that would result in a more standardized approach to identifying National Lab mentors for graduate student researchers.	WDTS is committed to improving the processes by which interested graduate students and potential mentoring laboratory scientists may find identify mutually beneficial opportunities for collaborations. WDTS will explore developing online information resources as well as processes to identify and recruit appropriate laboratory staff

	to serve a role on connecting students and laboratory scientists.
That staff scientists and engineers at the National Labs who have mentored and collaborated with graduate student researchers in the SCGSR program be asked to provide any information they might have on the professional activities of the graduate students, including place of employment, once they have received their M.S. or Ph.D. degrees.	WDTS agrees with the need follow-up with past graduate students participants in the SCGSR program to assess the impact the program has had on their career choices. WDTS, enabled by the WARS system, will be conducting periodic longitudinal assessments that will survey past student participants directly. WDTS will also explore the use of engaging past laboratory collaborators to encourage SCGSR alumni to respond to those surveys.
6. Laboratory Equipment Donation Program (LEDP)	
That the LEDP program be better advertised at the National Laboratories and at universities and colleges, particularly those institutions historically underrepresented in the research community.	WDTS agrees that the LEDP program could be better advertised and will work accomplish this in partnership with the SC Office of Scientific and Technical Information (OSTI), who currently hosts LEDP's online access portal.