

**South Dakota Science and Technology Authority**

**Annual Board Meeting  
June 20, 2019**



630 East Summit Street  
Lead, SD 57754



**Call to Order—Chairperson Casey Peterson**

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**Recommended Action:**  
*Informational.*

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**Approve Agenda—Chairperson Casey Peterson**

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Attached is the SDSTA Board agenda for the June 20, 2019 meeting.

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**Recommended Action:**

*Motion to approve agenda as presented.*

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**AGENDA**  
**South Dakota Science and Technology Authority**  
**630 East Summit Street, Lead, South Dakota**  
**Meeting of the Board of Directors**  
**Thursday, June 20, 2019 at 8:00 AM (MT)**

**\*\*Yates Education & Outreach Conference Room\*\***

**Public (Open) Session: 1-866-740-1260, Access Code: 7228650, [www.readytalk.com](http://www.readytalk.com)**

SDSTA Mission: *To advance compelling underground, multidisciplinary research in a safe work environment and to inspire and educate through science, technology and engineering.*

<b>Title</b>	<b>Report</b>	<b>Recommendations</b>
1. Call to Order A. Call roll B. Introduce guests C. Reminder request for public comment form	-- Chair Casey Peterson	<i>Informational</i>
2. Approve agenda	-- Chair Casey Peterson	Motion to approve agenda
3. Approve minutes	-- Chair Casey Peterson	<i>Motion to approve the March 21, 2019 minutes</i>
4. Conflict of Interest Disclosure	-- Mr. Tim Engel	
5. Disclosures and Waivers under SDCL CH. 3-23	-- Mr. Tim Engel	<i>Grant waiver or decline to grant waiver</i>
6. Report from nominating committee	-- Mr. Dana Dykhouse	<i>Reference nominating committee minutes in board packet</i>
7. Election of officers	-- Chair Casey Peterson	<i>Elect officers as described in procedure adopted August 2008</i>
8. Approval of SDSTA Maintenance Support Facility Contract	-- Mr. Mike Headley	<i>Motion to approve Maintenance Support Facility contract between SDSTA and Dean Kurtz Construction and to authorize SDSTA Executive Director to sign contract</i>
9. Approval of FY2020 Office of Risk Management Intergovernmental Agreement	-- Mr. Mike Headley	<i>Motion to approve FY2020 Intergovernmental Agreement between the Bureau of Administration, Office of Risk Management of the State of SD and SDSTA and authorize SDSTA Executive Director to sign agreement</i>
10. Approval of Mike Headley's service on SNOLABI Board of Directors	-- Mr. Tim Engel	<i>Motion to approve Mike Headley's service on the SNOLAB Institute as a member of the Board of Directors</i>
11. Update on implementation of SURF Foundation	-- Mr. Brian Bonde	<i>Informational</i>
12. Update on scoping study for potential STEM Institute	-- Ms. Elizabeth Freer	<i>Informational</i>

Please do not place or accept cell phone calls during this meeting. A copy of this agenda has been posted in a manner visible to the public at the entrance to the South Dakota Science and Technology Authority office located at 630 East Summit Street, Lead, South Dakota at least 72 hours prior to this meeting. Telephone: (605) 722-8650.

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Title	Report	Recommendations
13. Audit Committee	-- Chair Casey Peterson	
A. Annual appointment of members		<i>13A. Appoint committee member</i>
B. Annual review of Audit Charter	-- Ms. Pat Lebrun	<i>13B. Review Audit Charter dated June 19, 2014; reference board packet</i>
14. Financial Report	-- Mr. Mike Headley	
A. Update on internal control audit	-- Ms. Nancy Geary	
B. Financial summaries	-- Ms. Nancy Geary	<i>14B. Motion to accept financial report as presented</i>
C. FY2020 budget	-- Ms. Nancy Geary	<i>14C. Motion to approve FY2020 budget as presented</i>
D. Discuss Letter of Agreement	-- Mr. Mike Headley	<i>14D. Motion to accept the Letter of Agreement between the State of South Dakota, Governor's Office of Economic Development and SDSTA agreement, and to authorize the Executive Director to sign the Agreement</i>
15. Report from Executive Director	-- Mr. Mike Headley	
A. Declarations of Surplus (4)	-- Mr. Mike Headley	<i>Informational; reference board packet</i>
B. SDSTA Quarterly Update		<i>Informational</i>
• Introduce Artist-in-Residence	-- Mr. Mike Headley	
C. E&O Update and Davis-Bahcall Scholar Introductions at 10AM	-- Ms. Deb Wolf	<i>Presentation</i> <i>Motion to accept executive director's report</i>
16. SDSTA Policies and Procedures	-- Mr. Mike Headley	
A. Annual review of P&P		<i>16A. Motion to approve Firearms Policy and Sexual Harassment Investigation Policy as presented</i>
B. Annual statements affirming compliance with Financial Conflict of Interest policy		<i>16B. Each board member is to sign a copy of the financial conflict of interest statement</i>
17. Executive session (closed meeting)	-- Chair Casey Peterson	<i>Motion to enter executive session to discuss personnel matters and to consult with legal counsel concerning contractual matters</i>

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## AGENDA

**South Dakota Science and Technology Authority**  
**630 East Summit Street, Lead, South Dakota**  
**Meeting of the Board of Directors**  
**Thursday, June 20, 2019 at 8:00 AM (MT)**

**\*\*Yates Education & Outreach Conference Room\*\***

*Public (Open) Session: 1-866-740-1260, Access Code: 7228650, [www.readytalk.com](http://www.readytalk.com)*

<b>Title</b>	<b>Report</b>	<b>Recommendations</b>
18. Report from executive session	-- Chair Casey Peterson	<i>Motion to accept executive session report</i>
19. Confirm date & time of next meeting	-- Chair Casey Peterson	<i>Thursday, September 19 at 8:00am (MT)</i>
20. Public comments		
21. Board comments		
22. Adjourn	-- Chair Casey Peterson	<i>Motion to adjourn</i>

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**Meeting of the Board of Directors  
Thursday, June 20, 2019**

**SDSTA Board Member Terms of Service, Committees and Schedule**

<b>Board Members and Terms of Service</b>			
	<b>Board Members</b>	<b>Appointed</b>	<b>Term Expires</b>
1.	Dr. Ani Aprahamian	Re-appointed December 10, 2015	December 9, 2021
2.	Mr. Dana Dykhouse, Vice-Chair	Re-appointed August 1, 2014	August 14, 2020
3.	Ms. Patricia Lebrun, Secretary-Treasurer	Re-appointed August 5, 2016	August 8, 2022
4.	Mr. Roger Musick	Appointed September 19, 2018	August 21, 2022
5.	Mr. Casey Peterson, Chair	Re-appointed August 25, 2015	August 8, 2021
6.	Mr. Ron Wheeler, Vice-Chair	Re-appointed April 10, 2014	April 9, 2020
7.	Dr. Robert Wilson	August 24, 2015	August 8, 2021
8.	Dr. James Rankin, <i>ex-officio member</i>	SDSM&T President as of Jan 8, 2018	
<b>Committees and Members (June 2018-2019)</b>			
	Audit Committee Members:	Nominating Committee Members:	
	➤ Pat Lebrun-Chair	➤ Dana Dykhouse	
	➤ Dana Dykhouse	➤ Roger Musick	
	➤ Casey Peterson, <i>ex-officio</i>		
<b>2019 Board Schedule</b>			
	<i>February 21, 2019</i>	<i>9:30 am (MT)</i>	<i>Special Telephonic</i>
	Thursday, March 21 2019	8:00 am (MT)	E&O Bldg
	Thursday, June 20, 2019	8:00 am (MT)	E&O Bldg
	Thursday, September 19, 2019	8:00 am (MT)	E&O Bldg
	Thursday, December 12, 2019	9:00 am (MT)	E&O Bldg, lunch

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**Approve Minutes—Chairperson Casey Peterson**

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Attached is the SDSTA Board Minutes from the March 21, 2019 meeting.

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**Recommended Action:**

*Motion to approve the March 21, 2019 Minutes as presented.*

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**South Dakota Science and Technology Authority Board of Directors**  
**Meeting Minutes**  
**Thursday, March 21, 2019**  
**Lead, South Dakota**

The Board of Directors of the South Dakota Science and Technology Authority (SDSTA) convened at 8:02 AM Mountain Time (MT) on Thursday, March 21, 2019, in the Education and Outreach (E&O) Building Conference Room at the South Dakota Science and Technology Authority, 630 East Summit Street, Lead, South Dakota.

**MEMBERS OF THE BOARD IN ATTENDANCE**

Vice Chairperson Dana Dykhouse (by phone)  
Secretary/Treasurer Patricia Lebrun (by phone)  
Mr. Roger Musick (by phone)  
Chairperson Casey Peterson (in person)  
Dr. James Rankin, ex-officio (in person)  
Vice Chairperson Ron Wheeler (in person)

**MEMBERS OF THE BOARD ABSENT**

Dr. Ani Aprahamian  
Dr. Robert Wilson

**SDSTA STAFF**

Ms. Brooke Anderson, Technical Coordinator Support  
Mr. Tim Baumgartner, Facility Infrastructure Director  
Ms. Jaye Conrad, Technical Coordinator  
Mr. Tim Engel, Legal Counsel  
Ms. Nancy Geary, Chief Financial Officer  
Mr. Mike Headley, Executive Director  
Dr. Jaret Heise, Science Liaison Director  
Ms. Mandy Knight, Administrative Services Manager  
Mr. Dan Regan, Surface Operations Foreman  
Mr. KC Russell, Cultural Diversity Coordinator  
Mr. Allan Stratman, Engineering Director  
Ms. Constance Walter, Communications Director  
Ms. Natasha Wheeler, Administrative Assistant

**ALSO PRESENT DURING ALL OR PART OF THE MEETING**

Mr. Brian Bonde, Advanced Certified Fundraising, LLC President (by phone)  
Ms. Donna Job, Sanford Lab Homestake Visitor Center Executive Director  
Dr. Peggy Norris, Education and Outreach (E&O) Deputy Director (BHSU)  
Mr. Alex Portal, Black Hills Pioneer Journalist  
Ms. Debra Wolf, E&O Director (BHSU)

**ITEM 1. CALL TO ORDER**

Chairperson Casey Peterson called the meeting to order at 8:02 AM (MT). Roll call was held. Chair Peterson and Mr. Ron Wheeler were present in person. Mr. Dana Dykhouse, Ms. Pat Lebrun and Mr. Roger Musick joined by phone. Dr. Ani Aprahamian and Dr. Bob Wilson were absent.

Chair Peterson then asked audience members to introduce themselves.

He said if anyone from the audience had any questions they would like the board to address, to please complete the public comment form located at the sign-in table and time will be given at the end of the agenda to discuss.

## **ITEM 2. APPROVE AGENDA**

Chairperson Peterson asked if there were any modifications to the agenda. Hearing none, Chairperson Peterson asked for a motion to approve the agenda.

*Motion by Mr. Wheeler and seconded by Mr. Dykhouse to approve the agenda as presented. Motion passed unanimously on a roll call vote.*

## **ITEM 3. APPROVE MINUTES**

Chairperson Peterson asked for any comments on the December 13, 2018 and February 21, 2019 Minutes. There were none.

*Motion by Mr. Dykhouse and seconded by Mr. Wheeler to approve the Minutes of the December 13, 2018 and February 21, 2019 meetings as presented. Motion passed unanimously on a roll call vote.*

## **ITEM 4. GENERAL CONFLICT OF INTEREST DISCLOSURE**

SDSTA Legal Counsel Mr. Tim Engel invited members of the board to disclose anything that might be construed to be a conflict of interest to their role on the board.

No conflicts of interest were disclosed.

## **ITEM 5. DISCLOSURES AND WAIVER UNDER SDCL CH. 3-23**

Mr. Engel said in regard to disclosures and waivers under SDCL Ch. 3-23, he polled the board members prior to the meeting and there were none. No further action was required.

## **ITEM 6. AUDIT COMMITTEE REPORT & APPROVAL OF AUDIT REPORT FISCAL YEAR ENDED JUNE 30, 2018**

Ms. Lebrun said the audit report had been reviewed in December and the board members were given the opportunity to review it until the March 21, 2019 board meeting. There were no additional questions at the meeting, and Ms. Lebrun requested a motion to approve the audit report.

Ms. Lebrun also stated that a subcommittee has been investigating the process for an internal audit to create a benchmark for future reference, as SDSTA continues to grow and receive additional funding. She said most major labs have their own internal control audit team, which SDSTA does not have. She added, efforts are underway to find a firm that can help guide the process going forward. The board will receive additional information in the next few weeks for review and discussion and then an updated Request for Proposal will be released. Ms. Lebrun voiced these updates to keep the public aware of the board's support to undertake an audit of the SDSTA internal control.

*Dr. Jim Rankin, ex-officio board member, arrived at 8:12 AM (MT).*

*Motion by Mr. Musick and seconded by Mr. Wheeler to accept the Audit Report Fiscal Year Ended June 30, 2018 as reviewed and discussed at the December 13, 2018 board meeting. Motion passed unanimously on a roll call vote.*

## **ITEM 7. FINANCIAL REPORT - February Financial Report and Summaries**

Ms. Geary presented the financial report. She said SDSTA has received all funds from the South Dakota foundations for the xenon gas. There are still 240,000 liters to be received, with shipments scheduled between the current date and August 2019.

She added that work has begun on the maintenance support facility, and the asbestos abatement crew has begun their work.

*Motion by Mr. Wheeler and seconded by Mr. Dykhouse to accept the financial report as presented.  
Motion passed unanimously on a roll call vote.*

## **ITEM 8. REPORT FROM THE EXECUTIVE DIRECTOR**

### **ITEM 8A. SDSTA Quarterly Update**

Mr. Headley began with an Environment, Safety and Health (ESH) update. He said all supervisors are undergoing Reasonable Suspicion Training concerning drugs and alcohol, a new Explosive Management Chapter is being drafted and the rewrite of the Fall Prevention Chapter is still underway. He continued, the final report is being created from the latest Safety and Support Perceptions survey, new Emergency Response Team members are undergoing training, Fatigue Management training has been added to both General Safety Basic and Annual Refresher trainings, the Hazard Communications Plan is under review, and Crosby Rigging training has been conducted.

Mr. Headley then reviewed the incident report, showing a continued reduction in incidents involving first aid or greater treatment and reported 96 percent of the 67 recommended actions have been completed from the 2016/2017/2018 biannual ESH Oversight Committee (ESHOC) reviews.

Moving on to cultural activities, Mr. Headley announced the next Cultural Awareness Committee meeting is set for April 3, 2019. He said STARBASE in Rapid City has completed level 2 certification. Mr. Headley noted four classroom presentations have been given to the American Horse School in Allen, SD on the Oglala Lakota Nation. He said SDSTA met with the newly-selected director of SD Tribal Affairs Dave Flute and supplied curriculum module kits. Also, a Sanford Lab presentation was provided to the Pierre Indian Learning Center.

He then noted the addition of the Diversity and Inclusion statement on the Sanford Lab website.

In regard to the Long-Baseline Neutrino Facility/Deep Underground Neutrino Experiment (LBNF/DUNE), Mr. Headley said pre-excavation construction is now underway, with 31 separate work packages under the Kiewit Alberici Joint Venture (KAJV) contract. The KAJV team mobilized in December 2018, and construction is underway on the surface and underground on the 4850 Level.

Referencing the economic impacts of SDSTA in South Dakota through the end of Fiscal Year 2018 (FY18), Mr. Headley said spending in SD was \$201 million as of September 30, 2018. He said, the total Fiscal Year 2019 (FY19) budget for all sources and activities is \$28.1 million, the FY19 Sanford Underground Research Facility (SURF) operations budget from DOE funds is \$18 million, the annual payroll budget in SD for FY19 is \$14.6 million, and the annual non-payroll budget in SD for FY19 is \$13.5 million. Mr. Headley said SDSTA is directly responsible for 180 jobs in SD, with 27 active research groups, 21 of which include SD members. He also showed a graphic depicting the distribution of spending across the state for paid vendors and salaries, indicating a combined total of \$201,046,877 in FY18.

Reviewing the K-12 student impact of SURF Education and Outreach (E&O) programs, Mr. Headley said 25,778 students have attended school assemblies between 2015 and 2018, 8,265 students have used science curriculum units, and 2,305 students have been on field trips to Sanford Lab for a total impact to 36,348 students. He said 20.2 percent of students participating have been from schools with greater than 10 percent American Indian population and 6.4 percent have been from schools with greater than 50 percent American Indian population. Mr. Headley also shared a photo from a recent middle school robotics competition, involving students whose robots were sent underground for testing while they watched a live-video stream at the surface.

Mr. Headley provided the board with two Declarations of Surplus. The first was a list of items that including a Tsurumi pump, roof drains and a sewer roter/motor no longer needed and sold as surplus. The second was for two concrete buckets no longer in use and sold to KAJV.

Mr. Headley then introduced SDSTA Technical Coordinators Ms. Brooke Anderson and Ms. Jaye Conrad. An update was provided on the ManagerPlus asset management software program used by SDSTA to track the procurement and maintenance of assets on property. Ms. Anderson explained that multiple departments including Operations, Science, Engineering and Underground Access use the program to guide the completion of regularly scheduled, preventative and unscheduled maintenance. She said ManagerPlus provides a way to request assistance or additional purchases needed from SDSTA to maintain normal operations as well. The Business Services Department and Warehouse also use ManagerPlus to track purchases, contracts and inventory. Ms. Anderson briefly described the work order process and highlighted the benefits of using ManagerPlus.

In response to questions from the board, Ms. Anderson explained ManagerPlus tracks asset costs and contains calendar features for scheduling. SDSTA Facility Infrastructure Director Mr. Tim Baumgartner added that project timelines can be manipulated within the program, but the goal is to use it for accurate reporting.

### **ITEM 8B. Science Update**

Dr. Jaret Heise provided a presentation on the current experiments, beginning with the MAJORANA DEMONSTRATOR (MJD), an experiment investigating the properties of neutrinos. He said MJD continues to operate in production physics mode and mentioned the progress with the “electrowinning” installation (copper removal from electrolyte) at the Waste Water Treatment Plant. He noted that a DOE Critical Decision zero (CD-0) was issued in December of 2018 (*which documents material investments are justified*), and changes to germanium detectors within the experiment in the fall of 2020 will require new Memoranda of Understanding with SURF for expected continuation of the project.

In regard to Large Underground Xenon-ZEPLIN (LZ), the experiment searching for dark matter, Dr. Heise said there has been significant SURF (and contractor) efforts to restore Davis Campus cleanliness. He said multiple reviews have been completed, including a readiness review in October 2018 at Sanford Lab, a DOE independent project review in January 2019 at Lawrence Berkeley National Laboratory and a DOE LZ Operations review in March 2019 at Sanford Lab. Dr. Heise said an operational readiness review for cryogenics and xenon handling is planned in May at Sanford Lab. He highlighted the work progress of LZ on the surface and underground.

Dr. Heise reported on the Compact Accelerator for Performing Astrophysical Research (CASPAR), the experiment studying processes that occur in stars. He said the accelerator is performing well and the team is maximizing efficiency by staffing 24-hour coverage and minimizing periods when the accelerator is off. Along with other updates, he added a pre-proposal has been submitted for accelerator upgrade funding and if it is successful, a full proposal is expected in May 2019.

Dr. Heise said, at the Black Hills State University Underground Campus (BHUC) where materials are tested for radio-purity (*radiation levels*), refinements are continuing for the purge system, including increasing pressure in coordination with SURF cryogen and pressure experts and provided additional updates.

Dr. Heise concluded that proposed research efforts are occurring in the study-areas of physics, geology, biology and engineering.



## **ITEM 9. EXECUTIVE SESSION**

*Motion by Mr. Dykhouse and seconded by Mr. Musick to enter into executive session to discuss personnel matters and to consult with legal counsel concerning legal and contractual matters. Motion passed unanimously on a roll call vote.*

*The board recessed at 9:05 AM for a break and then entered into executive session.*

*Mr. Dykhouse left the meeting before entering executive session.*

*The board reconvened in open session at 10:14 AM. Mr. Engel confirmed a quorum was still in attendance at the reconvening of open session.*

## **ITEM 10. REPORT FROM EXECUTIVE SESSION**

Chairperson Peterson reported that the board discussed personnel matters and consulted with legal counsel concerning legal and contractual matters. No action was taken.

*Motion by Mr. Musick and seconded by Mr. Wheeler to approve the executive session report. Motion passed unanimously on a roll call vote with four in favor and none against.*

## **ITEM 11. DISCUSS CREATION OF SDSTA FUNDRAISING FOUNDATION**

Mr. Headley said there has been an interest in creating a foundation to increase funding, and a subcommittee of the board had met to discuss the scope of an overall fundraising campaign, focused on rehabilitating the E&O Building and additional funding for external communications and E&O efforts. He said the subcommittee has engaged the services of an outside consultant, Mr. Brian Bonde, to help structure and establish a fundraising campaign. Mr. Headley directed the board to the board packet for a summary on his findings.

By phone, Mr. Bonde introduced himself and briefly outlined his resume. He suggested creating a 501(c)(3) organization that is separate but connected to SDSTA, similar to other organization/foundation relationships such as the South Dakota Parks and Wildlife Foundation and South Dakota Game, Fish and Parks. Mr. Bonde identified three main steps: creating the foundation, obtaining the IRS 501(c)(3) designation, and creating a governance (board of directors) for the foundation. Mr. Bonde also explained that there are several ways a 501(c)(3) can be established, and said SDSTA would likely be most interested in connecting to the foundation through common board members and leadership-details will need to be worked out as the process moves forward.

Ms. Lebrun voiced concerns about an independent foundation with separate leadership, which she said can create difficulties in appropriating funds raised for the desired projects. Mr. Bonde concurred and said that conversations so far assume common leadership to help prevent those challenges.

*Motion by Mr. Wheeler and seconded by Mr. Musick to authorize the chairperson and executive director to work with legal counsel to form an appropriate foundation legal entity, to authorize the chairperson to execute the necessary organizational documents and to authorize the use of up to \$15,000.00 of SDSTA funds for said purposes. Motion passed unanimously on a roll call vote.*

## **ITEM 12. SELECT NOMINATING COMMITTEE**

Chairperson Peterson said he had asked Mr. Musick and Mr. Dykhouse to serve on the Nominating Committee for the June meeting officer election and they have agreed.

Election of officers will be held at the annual board meeting, Thursday, June 20.

### **ITEM 13. CONFIRM DATE AND TIME OF NEXT MEETING**

Chairperson Peterson asked if anyone had concerns with the board meeting scheduled for Thursday, June 20 at 8:00 AM (MT). No objections were made.

### **ITEM 14. PUBLIC COMMENTS**

Chairperson Peterson announced he did not receive any public comment request forms. There were no questions from the audience.

### **ITEM 15. BOARD COMMENTS**

Ms. Lebrun said she appreciates the ease of using ReadyTalk conferencing to access meetings by phone and thanked the SDSTA staff for facilitating its use. She said she looks forward to seeing the board in June.

Mr. Musick said the meeting was very interesting and appreciates how much he is learning.

Mr. Wheeler voiced his appreciation to the staff and echoed the improved safety record exhibited at SDSTA.

Mr. Engel said SDSTA provides fun and interesting work and expressed appreciation for the staff.

Mr. Headley also expressed appreciation for the staff, thanking Ms. Knight and SDSTA Administrative Assistant Ms. Natasha Wheeler for organizing and supporting the meeting. He especially thanked those who provided presentations at today's meeting to share advancements at Sanford Lab and also thanked the board for their support.

Dr. Rankin said he continues to be impressed by the professional nature of SDSTA.

Chairperson Peterson thanked everyone for their attendance.

### **ITEM 17. ADJOURN**

Chairperson Peterson called for a motion to adjourn.

*Motion by Mr. Wheeler and seconded by Mr. Musick to adjourn. Motion passed unanimously on a roll call vote.*

**Meeting adjourned at 10:33 AM.**

**Conflict of Interest Disclosure—Mr. Tim Engel**

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**Recommended Action:**  
*Informational.*

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Waiver Under SDCL CH. 3-23—Mr. Tim Engel

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**Recommended Action:**

*Motion to grant waiver or decline to grant waiver.*

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**Report on Nominating Committee—Mr. Dana Dykhouse**

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**Nominating Committee Report**

May 23, 2019

Participants:

Mr. Dana Dykhouse, SDSTA Board of Director and Nominating Committee Chair

Mr. Roger Musick, SDSTA Board of Director and Nominating Committee Member

Mr. Dykhouse and Mr. Musick communicated as the nominating committee on May 23, 2019 for the purpose of nominating the slate officers for the 2019-2020 board year. The slate of officers is as follows:

Chairperson: Mr. Casey Peterson

Vice-Chairperson: Mr. Dana Dykhouse

Vice-Chairperson: Mr. Ron Wheeler

Secretary Treasurer: Ms. Patricia Lebrun

The nominating committee has contacted all of the candidates and they are each willing to serve in this capacity for another year

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**Recommended Action:**  
*Informational.*

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**Election of Officers—Chairperson Casey Peterson**

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South Dakota Science and Technology Authority

Election Procedures Policy

Adopted 6/24/08

The Board of Directors shall follow the following procedure for the nomination and election of officers.

- A. The nomination and election process shall be held in open session.
- B. At the last meeting of the Board before the Annual Meeting, the Chairperson shall appoint a Nominating Committee.
- C. The following procedure shall be utilized at the Annual Meeting:
  1. The Chairperson shall call for the report of the Nominating Committee.
  2. After the Nominating Committee reports, the Chairperson shall ask if any Board member intends to make additional nominations.
  3. If no Board member indicates the intention to make additional nominations, the Chairperson shall call for a motion to elect the slate recommended by the Nominating Committee.
  4. If any Board member indicates the intention to make an additional nomination for any office, the slate recommended by the Nominating Committee shall be deemed rejected and the following procedure shall be utilized:
    - a. The Chairperson shall call for oral nominations for the office of Chairperson. Once it appears that all nominations have been made, a motion that nominations cease would be in order. This motion may be made with or without a call for such motion by the Chairperson.
    - b. If there is only one nominee, a motion that all nominations cease and that the nominee be elected Chairperson would be in order. This motion may be made with or without a call for such motion by the Chairperson.
    - c. If there is more than one nominee, nominations shall continue until there is a successful motion that nominations cease.
    - d. Upon passage of a motion that nominations cease, the Chairperson shall call for a vote. Each Board member shall announce his or her vote out loud. Counsel for the Authority shall tabulate the vote and announce the results.
    - e. The successful candidate shall immediately take office as Chairperson and conduct the remainder of the election and the meeting.
    - f. The Chairperson shall follow the procedure set forth above for each of the remaining offices.
- D. Pursuant to SDCL 1-16H-11, the affirmative vote of no less than four Board members is necessary to elect any officer. If no candidate receives four votes, the Board will vote twice more. If no candidate receives four votes after three attempts, the election for that office will be deemed adjourned until the next meeting of the Board. At the next meeting, the Board shall commence the election procedure set forth above in Section C.4, but only as to any office not filled at the prior meeting. This procedure shall continue from meeting-to-meeting until a candidate receives at least four votes. Pursuant to Article III, Section 1 of the Bylaws, the officers in office as of the commencement of the Annual Meeting shall remain in office until their successors are duly elected.

This policy shall remain in effect until specifically rescinded or modified.

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**Recommended Action:**

*Motion to accept the report from the nominating committee and to elect the slate of officers as discussed.*

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**Approval of Maintenance Support Facility—Mr. Mike Headley**

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Attached is the Maintenance Support Facility Contract between the SDSTA and Dean Kurtz Construction.

See suggested motion below.

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**Recommended Action:**

*Motion to approve Maintenance Support Facility contract between the SDSTA and Dean Kurtz Construction and authorize the SDSTA Executive Director to sign contract.*

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**SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY  
SANFORD UNDERGROUND RESEARCH FACILITY  
LEAD, SOUTH DAKOTA**

**AGREEMENT FOR CONSTRUCTION  
SDSTA CONTRACT #2019-07  
CONSTRUCTION MANAGEMENT AT RISK SERVICES FOR MAINTENANCE SUPPORT  
FACILITY**

This Agreement for Construction is made the **20<sup>th</sup> day of June 2019**, by and between **Dean Kurtz Construction, 1651 Rand Road Rapid City, SD 57702**, ("Contractor") and the **South Dakota Science and Technology Authority, 630 East Summit Street, Lead, SD 57754** ("SDSTA" or "Owner").

**WITNESSETH**, that the Contractor and the Owner for the consideration stated herein agree as follows:

**ARTICLE I  
CONTRACT DOCUMENTS**

The following documents and any other documents incorporated in them by reference constitute the Contract Documents:

1. This Agreement
2. Request for Proposal and Drawings (Phase I of scope of work contained therein)
3. General Conditions
4. Contractor EHS Questionnaire
5. Payment and Performance Bond
6. Construction EHS Manual
7. Exhibit A to General Conditions – Environment, Health and Safety Requirements
8. Exhibit B to General Conditions – Insurance Requirements
9. Exhibit C to General Conditions – Scope of Work
10. Exhibit D to General Conditions – Contractor's Proposal

These documents constitute the entire and integrated agreement between the parties hereto and supersede prior negotiations, representations, or agreements, either written or oral.

**ARTICLE II  
STATEMENT OF WORK**

To the extent not otherwise provided in the Contract Documents, Contractor shall furnish and pay for all professional services, other labor, tools, equipment, supplies, materials, appurtenances, utilities, charges, fees, permits, and all other construction accessories and services required to complete the work specified in the Contract Documents in strict compliance with the Contract Documents.

**ARTICLE III  
DATES OF COMMENCEMENT AND COMPLETION, LIQUIDATED DAMAGES**

- A. The work shall commence within ten (10) consecutive calendar days following the issuance of the Notice to Proceed by the Owner and shall be completed no later than **June 20<sup>th</sup>, 2020**, subject to adjustments of the contract time as provided in the Contract Documents.
- B. In the event Contractor fails to substantially complete the work within the time agreed to above, Contractor shall be liable for liquidated damages in the amount of \$200.00 (two hundred U.S. Dollars) per day, as more fully provided in Section 9.3.4 of the General Conditions.

**ARTICLE IV  
CONTRACT SUM**

- A. For the performance of the work specified in the Contract Documents, Owner will pay Contractor and Contractor will accept as full compensation the firm, fixed sum of \$411,863.00 (four hundred eleven thousand, eight hundred sixty-three U.S. Dollars) for Phase 1 Pre-construction Services and Demolition, subject to additions or deductions as provided in the Contract Documents;
- B. Contract Sum includes the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner: **None**

**ARTICLE V  
PROGRESS PAYMENTS**

The Owner shall make progress payments on a monthly basis for work accomplished in accordance with General Conditions, Article 10.

**ARTICLE VI  
ACCEPTANCE AND FINAL PAYMENT**

Final payment less amounts withheld to cover the cost of nonconforming work, shall be made by the Owner in accordance with General Conditions Article 10.7.

**ARTICLE VII  
NOTICE**

All notices, demands and other communications required by the Contract Documents shall be in writing and shall be deemed to have been duly given if personally delivered, mailed first class (postage prepaid), or e-mailed:

**If to Contractor:**

Kasey Kurtz  
Dean Kurtz Construction  
1651 Rand Road  
Rapid City, SD 57702  
[kasey@deankurtzconstruction.com](mailto:kasey@deankurtzconstruction.com)

**If to Owner:**

Mike Headley  
Executive Director  
SD Science and Technology Authority  
630 East Summit Street  
Lead, SD 57754  
605-722-8650  
[mheadley@sanfordlab.org](mailto:mheadley@sanfordlab.org)

Timothy M. Engel  
Counsel for the SDSTA  
May, Adam, Gerdes and Thompson LLP  
503 S. Pierre Street, P.O. Box 160  
Pierre, SD 57501  
605-224-8803

Either party may change the addresses set forth for notice herein upon written notice thereof to the other.

**IN WITNESS WHEREOF**, the parties hereto have caused this instrument to be executed in one original counterpart the day and year above first written:

**CONTRACTOR: DEAN KURTZ CONSTRUCTION**

By: \_\_\_\_\_ Date  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

(Affix Corporate Seal if Available)

**OWNER: SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

\_\_\_\_\_  
Mike Headley Date  
Executive Director  
SDSTA





**Approval of FY2020 Office of Risk Management Intergovernmental Agreement—  
Mr. Mike Headley**

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Attached is the FY2020 Intergovernmental Agreement between the Bureau of Administration, Office of Risk Management of the State of SD and SDSTA and authorize SDSTA Executive Director to sign agreement for approval.

See suggested motion below.

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**Recommended Action:**

*Motion to approve FY2020 Intergovernmental Agreement between the Bureau of Administration, Office of Risk Management of the State of SD and SDSTA and authorize SDSTA Executive Director to sign agreement.*

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INTERGOVERNMENTAL AGREEMENT  
BETWEEN THE  
BUREAU OF ADMINISTRATION,  
OFFICE OF RISK MANAGEMENT  
OF THE STATE OF SOUTH DAKOTA  
AND THE  
SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY

This INTERGOVERNMENTAL AGREEMENT (“AGREEMENT”) is made and effective the 1<sup>st</sup> day of July, 2019, between the South Dakota Bureau of Administration, Office of Risk Management, 1429 E. Sioux Avenue, Pierre, South Dakota 57501 (“ORM”), and the South Dakota Science and Technology Authority, 630 E. Summit, Lead, South Dakota, 57754 (“SDSTA”) pursuant to SDCL Ch. 1-24 and in particular SDCL 1-24-8.

Introduction and Purpose

The State of South Dakota established SDSTA to facilitate the development of the former Homestake gold mine into an underground science laboratory (the “Sanford Underground Research Facility” or “SURF”) and to lead the operation of SURF. The mission of the SDSTA is “to advance compelling underground, multidisciplinary research in a safe work environment and to inspire and educate through science, technology and engineering.”

When operating as an active mine, the Homestake gold mine was regulated by the U.S. Mine Safety and Health Administration (“MSHA”) and the South Dakota Department of Environment and Natural Resources (“DENR”). SDSTA received title to the Homestake site in 2006 from Homestake Mining Company of California after the 2003 closure of the mining facility.

MSHA and DENR continued to administer and enforce safety and environmental programs until 2008, at which time the SDSTA sought to clarify MSHA’s regulatory role. MSHA determined at that time it no longer had regulatory jurisdiction over the safety and health operations at the Homestake site due to the completion of mining reclamation and the new function of the site.

The U.S. Occupational Safety and Health Administration’s (“OSHA’s”) 29 CFR 1926<sup>1</sup> and 29 CFR 1910<sup>2</sup> are considered the most applicable of the available standards for safety and health for most activities conducted in support of the development of the underground laboratory. MSHA’s 30 CFR<sup>3</sup> standards are employed as a best practice for specified underground activities (see appendix A).

Although OSHA standards are being applied to the work conducted at SURF, OSHA does not have jurisdictional authority for enforcement of those regulations because SDSTA is for the purposes of OSHA standards and regulation a “political subdivision” as defined in 29 CFR 1975.5 because it is administered by individuals who are appointed by the Governor.

ORM has the responsibility to oversee the state’s risk management activities. Accordingly, ORM is the agency that is mandated to provide the inspection and audit of state institutions and

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<sup>1</sup> Title 29 Code of Federal Regulations Part 1926, “Safety and Health Regulations for Construction”

<sup>2</sup> Title 29 Code of Federal Regulations Part 1910, “Occupational Safety and Health Standards”

<sup>3</sup> Title 30 Code of Federal Regulations Parts 15, 49, and 57”

facilities and has been designated to serve as the agency having jurisdiction (“AHJ”) for occupational safety and health at SURF.

SDSTA has entered into a lease (the “Lease”) with the United States of America, acting through the Department of Energy (the “Government”), dated March 29, 2016, whereby SDSTA has leased to the Government certain surface and subsurface real estate for the purpose of constructing, operating and maintaining the Long-Baseline Neutrino Facility (“LBNF”) and the Deep Underground Neutrino Experiment (“DUNE”), and related infrastructure (the “Leased Space”). ORM’s jurisdiction hereunder shall not include the Leased Space, but SDSTA and ORM shall continue to consult and cooperate concerning occupational safety and health related to the Leased Space.

The purpose of this Agreement is to clarify the roles and responsibilities, expectations and communications for ORM to serve as the AHJ for SDSTA in the implementation of the occupational safety and health standards.

This Agreement is authorized pursuant to SDCL Ch. 1-24 and SDCL 1-16H-32.

### Agreement

#### A. Safety Standards Applicable to SDSTA.

Until amended in writing by ORM, the safety standards applicable to SDSTA’s facilities and operations shall be as set out in Appendix A, attached hereto and incorporated herein by this reference. The parties agree that ORM may unilaterally amend Appendix A at any time and in their sole discretion, and all such amendments shall be incorporated herein effective upon 30 days written notice to SDSTA. The parties further acknowledge and agree that the agency having jurisdiction over the enforcement of building (International Building Code) and fire safety (National Fire Protection Association) codes and standards is the City of Lead, South Dakota. ORM shall not have jurisdiction to apply or enforce any codes and standards.

#### B. Responsibilities of the ORM.

ORM shall:

1. Provide for safety, loss control and regulatory compliance audits and inspections of SDSTA’s documentation, records and facilities;
2. Review claims to identify trends or situations requiring loss prevention efforts;
3. Advise SDSTA on applicable laws, regulations and standards which contribute to a safe work environment at SURF;
4. Provide for loss control training;
5. Upon request, review contracts for appropriate risk management language;
6. Assist SDSTA with the selection of brokers and insurance companies and in negotiating to obtain the best product for the best price;
7. Provide enforcement of the safety standards made applicable to SDSTA’s facilities by this Agreement; and
8. Provide copies of the results of safety or compliance reviews, inspections or audits to SDSTA upon completion.

C. Risk Management Responsibilities of SDSTA.

SDSTA shall:

1. Be responsible for coordinating and implementing risk management programs within its departments and at its facilities with the assistance of ORM. SDSTA will provide a safe workplace and conduct operations in a manner that protects employees, contractors, visitors and the public from harm. The SDSTA shall conform to its safety policy: “Perform all work safely, with full regard to the well-being of all stakeholders and the environment.”
2. Perform all activities at SURF in a safe and environmentally sound manner.
3. Pursuant to Section 6.7 of the Property Donation Agreement<sup>4</sup> between SDSTA and Homestake, undertake all measures necessary to comply with federal, state, and local laws and regulations, including, without limitation, laws relating to workers’ compensation, mine health and safety, and all Environmental, Health and Safety Laws (as defined in the Property Donation Agreement), and shall apply in a timely manner for all Environmental Permits (as defined in the Property Donation Agreement) and all other permits, licenses and approvals necessary for its operations.
4. Assist ORM in identifying, measuring and minimizing exposures to loss by:
  - a. Conducting facility inspections to identify and address safety hazards;
  - b. Conducting services and operations in accordance with applicable laws, regulations and safety standards;
  - c. Properly reporting accidents, incidents and unsafe conditions;
  - d. Reviewing losses to identify trends or situations requiring loss prevention efforts;
  - e. Ensuring policies and procedures remain current, are communicated to all employees and enforced;
  - f. Drafting all contracts with the appropriate risk management language;
  - g. Communicating changes in exposures to ORM; and
  - h. Evaluating ORM’s recommendations.
5. Comply with all safety and enforcement directives and actions given by ORM.
6. Comply with requests from ORM for information and documents related to safety or compliance reviews, inspections or audits, including, to the extent available to SDSTA, any such reviews, inspections or audits related to activities in the Leased Space.

D. Agreement Administration.

The cooperative undertaking herein described shall be administered by the Parties through their risk management contact persons: ORM through its Director and SDSTA through its Executive Director or authorized designees as contemplated in SDCL 1-24-5.

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<sup>4</sup> Property Donation Agreement Between and Among Homestake Mining Company of California, The State of South Dakota and the South Dakota Science and Technology Authority, April 14, 2006.

E. Reporting.

SDSTA employees may contact ORM directly and without risk of retaliation if they feel there is substantial risk of harm to persons or the environment that is not being addressed by SDSTA management.

F. Site Access Rules.

1. SDSTA will provide reasonable accommodations for ORM to have unencumbered access to SDSTA facilities and operations.
2. The parties acknowledge and agree that representatives of ORM conducting activities relating to this Agreement are “Authorized Entrants” as that term as used in the Property Donation Agreement.
3. Access to underground and other hazardous environments shall be provided in a manner that is reasonable and safe.

G. Right to Inspect.

1. ORM has the right to inspect SDSTA facilities at will and with no advance notification when there is reasonable cause.
2. ORM will otherwise provide reasonable notification in advance of scheduled visits.
3. ORM may require SDSTA to undertake third party inspections or oversight visits, or may contract for such inspection and oversight visits in its own right.
4. SDSTA will provide timely notifications to ORM when third party inspections or oversight visits are scheduled, and ORM may observe such third-party inspections or oversight visits at ORM’s discretion.
5. Whether or not ORM participates in third party reviews or inspections, SDSTA will provide the results and any findings to ORM.

H. Payment of Costs.

SDSTA shall upon request reimburse ORM for extraordinary costs incurred by ORM in connection with ORM’s responsibilities hereunder. The term “extraordinary costs,” as used herein, means costs other than the fees and costs of third party consultants and inspectors, travel costs of ORM personnel, costs (including reasonable attorney fees) incurred in commencing or maintaining enforcement actions and other, similar costs and expenses, but includes costs incurred in connection with out-of-state travel expenses incurred by ORM personnel in connection with this Agreement. ORM shall provide SDSTA with a written invoice for costs incurred by ORM under this Agreement. SDSTA will contest any portions of the invoice it deems unreasonable and pay any uncontested amount within 30 days of receipt of the invoice. SDSTA agrees to pay all uncontested costs and expenses within 45 days of receipt of invoice.

I. Indemnification and Insurance.

SDSTA shall indemnify and hold the State of South Dakota and its officers, agents and employees (“Indemnified Parties”) harmless from and against any and all claims, causes,

actions or causes of action made or asserted against the Indemnified Parties arising out of related to ORM's duties and responsibilities under this Agreement. SDSTA shall cause the Indemnified Parties to be named as additional insureds under SDSTA's general liability policy. The limits of liability of SDSTA's general liability policy shall not be less than \$75 million. SDSTA shall provide such proof of the existence and enforceability of the insurance required by this paragraph as ORM may from time to time reasonably request. Nothing in this paragraph (I) shall require SDSTA to indemnify ORM or its officers, employees or agents against any claims or losses resulting solely from the negligence or intentional acts of ORM or its officers, employees or agents.

J. Exclusion of Leased Space.

ORM hereby acknowledges receipt of a copy of the Lease. For so long as the Lease remains in force or the parties agree otherwise, ORM's jurisdiction hereunder shall not include the Leased Space. ORM's jurisdiction hereunder shall not include the Leased Space, but SDSTA and ORM shall continue to consult and cooperate concerning occupational safety and health related to the Leased Space.

K. Duration of Agreement.

This Agreement shall be in effect from July 1, 2019, through June 30, 2020.

L. Remedies - Enforcement.

ORM is entitled to all remedies reasonably necessary to carry out the terms of this Agreement and enforcement of the safety standards made applicable to SDSTA and its facilities by this Agreement. Without limiting the generality of the foregoing, ORM may pursuant to the terms of this Agreement issue an administrative order directing SDSTA to cease operations and/or close all or any portion of its facilities until such time as the violation giving rise to the administrative order has been resolved to ORM's reasonable satisfaction.

M. Retention of Records.

Each party hereto agrees to retain all documentation and records relating to the services and inspections provided for hereunder and for payment and reimbursements for expenses under this Agreement for a period of three years after termination of this Agreement. Such records shall be available for inspection at any reasonable time by personnel authorized therefore by the State of South Dakota.

N. Funding Out.

This Agreement depends upon the continued availability of appropriate funds and expenditure authority from the Legislature for this purpose. If for any reason the Legislature fails to appropriate funds or grant expenditure authority, or funds become unavailable by operation of law or federal funds reductions, this Agreement will be terminated by ORM. Termination for any of these reasons is not a default by the ORM nor does it give rise to a claim against ORM.

O. Nature of Agreement.

This Agreement is intended to be an agreement for services by a public agency as contemplated by SDCL 1-24-8. The parties acknowledge that no separate entity as contemplated by SDCL 1-24-4 is being created to implement this Agreement. This Agreement is intended to only govern the rights and interest of the parties named herein. It is not intended to, does not and may not be relied upon to create any rights, substantial or procedural, enforceable at law by any third party in any matters, civil or criminal.

P. Governing Law-Venue.

This Agreement shall be governed by and construed in accordance with the laws of the State of South Dakota. Any lawsuit pertaining to or affecting this Agreement shall be venued in Circuit Court, Sixth Judicial Circuit, Hughes County, South Dakota.

Q. Notice.

Any notice or other communication required under this Agreement shall be in writing and sent to the address set forth above. Notices shall be given by and to the Director of ORM, and by and to the Executive Director of SDSTA, or such authorized designees as either party may from time to time designate in writing. Notices or communications to or between the parties shall be deemed to have been delivered when mailed by first class mail, provided that the notice of default or termination shall be sent by registered or certified mail, or, if personally delivered, when received by such party.

R. Filing of Agreement.

The parties acknowledge that the ORM will file a true copy of this Agreement with the Office of Attorney General and the Legislative Research Council within 14 days of the execution hereof, as required by SDCL 1-24-6.1.

S. Alterations and Entire Agreement.

Except as provided in section A. of this Agreement, no amendment, alteration or variation of the terms of this Agreement shall be valid unless made in writing and signed by both parties. No oral understanding or agreement not incorporated herein may be binding on any of the parties hereto. Terms expressly stated within the Agreement constitute the entire agreement between ORM and SDSTA. All other prior discussions, communications and representations concerning the subject matter of this Agreement are superseded by the terms of this Agreement, except as specifically provided herein.

T. Partial Invalidity.

In the event that any court of competent jurisdiction shall hold any provision of this Agreement unenforceable or invalid, such holding shall not invalidate or render unenforceable any other provision hereof.



U. Authorization of Agreement.

By the signature of their representatives below, ORM and SDSTA certify that approval of this Agreement by ordinance, resolution or other appropriate means has been obtained by that governmental body's governing body or officer pursuant to SDCL 1-24-3 and 1-24-6, and that the representative is authorized to sign on the party's behalf. A copy of any SDSTA authorizing resolution or ordinance is attached to this Agreement and incorporated herein by reference.

In Witness hereto the parties signify this Agreement by signatures affixed below:

\_\_\_\_\_  
Mike Headley                      Date  
Executive Director  
South Dakota Science and Technology  
Authority

\_\_\_\_\_  
Scott Bollinger                      Date  
Commissioner  
Bureau of Administration  
State of South Dakota

## Appendix A – SURF Environmental, Safety and Health Standards

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### 1.0 Work Place Safety

29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1926	Safety and Health Regulations for Construction
30 CFR 15	Requirements for Explosives
30 CFR 49	MSHA Mine Rescue Teams
30 CFR 56/57	MSHA Safety and Health Standards – Underground Metal/Non-Metal Mines
30 CFR 57.3200-3401	Ground Control
30 CFR 7.5060 - .5075	Diesel Particulate Matter
30 CFR 57.8518 -.8535	Ventilation – Surface and Underground
30 CFR Part 57.19000 - .19119	Personnel Hoisting, Wire Ropes, Headframe and Sheaves, Conveyances, Hoisting Procedures, Shafts, Inspection and Maintenance
OSHA 1910 / 1926	Fall Prevention & Protection
29 CFR 1910, Subpart D	Walking-Working Surfaces
29 CFR 1910, Subpart F	Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms
29 CFR 1910, Subpart I	Personal Protective Equipment
29 CFR 1910 / 1926, Subpart M	Fall Protection
29 CFR 1926, Subpart L	Scaffolds
29 CFR 1926, Subpart X	Stairways and Ladders
29 CFR 1910, Subpart N, OSHA General Industry Standards - Materials Handling and Storage.	Cranes & Hoists
29 CFR 1926 Subpart N, OSHA Construction Standard - Helicopters, Hoists, Elevators, and Conveyers	
OSHA 1910 / 1926, ASME B30.20	Below-the-Hook Lifting Devices & Slings/Rigging Hardware
OSHA 1926.901	Blaster Requirements
ATF Federal Explosives Law and Regulations	Explosives Safety
30 CFR 57 Subpart E	Explosives, Underground
OSHA 1910.109	Explosives and Blasting Agents, Surface
OSHA 1926 Subpart U	Blasting and the Use of Explosives, Surface Transport and Storage, Underground
MSHA 57.6160 - .6205	Commerce and Explosives / Licenses & Permits
ATF 27 CFR 555	

South Dakota Public Safety (State Fire Marshal)

Department of Transportation in 49 CFR 173

DOE STD 1212-2012

ANSI Z358.1-2009

30 CFR 57.11050- .11059

30 CFR 57.22212 - .22229 (b)

NFPA 72

OSHA 1910.1200

## 2.0 Building Codes

ANSI/ASHRAE 62-2004

ASME

ASME B31.1 (i)

ASME B31.2 (ii)

ASME B31.3 (iii)

ASME B31.4 (iv)

ASME B31.5 (v)

ASME

IBC 2015

NFPA 101

NFPA 110

NFPA 45

NFPA 520

NFPA 70 B

NFPA 70 E

NFPA 70

NFPA 780

SD Lead City Ordinance

Fermilab Policy

## 3.0 Environmental and Waste Management

10 CFR 1021

New Explosive Storage, Permitting

Transport of Explosives, Public Roadways

General Reference Material (Explosives)

Emergency Eyewash and Shower Equipment  
(Installation, Inspection, Maintenance and Use)

Escapeways and Refuges

Ventilation and Ventilation Plan

National Fire Alarm Code

Hazard Communication (Employees)

Ventilation for Acceptable Indoor Air Quality

Boilers and Pressure Vessel Code (Sections I  
through XII including applicable Code Cases)

Power Piping

Fuel Gas Piping

Process Piping

Pipeline Transportation Systems for Liquid  
Components

Refrigeration Piping and Heat Transfer Components

Cranes and Hoist Standards

Building Codes

Life Safety Code

Emergency and Standby Power Systems

Fire Protection for Laboratories Using Chemicals

Standard on Subterranean Spaces

Recommended Practice for Electrical Equipment  
Maintenance

Standard for Electrical Safety in the Workplace

National Electrical Code

Standard for the Installation of Lightning Protection  
Systems (and UL86A)

Occupational Noise Exposure

Oxygen Deficiency Hazards (ODH)

40 CFR 112	Spill Prevention, Control and Countermeasure Procedures
40 CFR 260-279	Protection of Environment – Hazardous Waste Management System (Hazardous Waste Regulations)
40 CFR 262.11	Hazardous Waste Determination
40 CFR 273	Standard for Universal Waste Management
40 CFR 761	Polychlorinated Biphenyls (PCB)
40 CFR 280	Underground Storage Tanks
40 CFR 302 (CERCLA)	Designation, Reportable Quantities, and Notification
40 CFR 370	Hazardous Chemical Reporting, Community Right to Know
40 CFR 61, Subpart A	National Emissions Standards for Hazardous Air Pollutants
40 CFR 122	NPDES system Guidelines Establishing Test Procedures for the Analysis of Pollutants
49 CFR 171-180	Hazardous Materials Transportation Act
SD Article 12:62	Weed and Pest Control

**4.0 SD-DENR: Codified Law**

34-44	Asbestos Abatement Training Project
34A-1	Air Pollution Control
34A-2	Water Pollution Control
34A-3A	Safe Drinking Water
34A-6	Solid Waste Management
34A-9	Environmental Impact of Government Actions
34A-11	Hazardous Waste Management
34A-13	Petroleum Inspection and Release Compensation
46-1	Definitions and General Provisions (Water Rights)
46-2A	Administrative Procedure for Appropriate Water
46-5	Appropriation of Water
46-6	Groundwater and Wells

**5.0 SD Administrative Rule:**

74:36	Air Pollution
74:31	Asbestos Control Program
74:50	Compliance Procedures for Water Pollution
74:54	Groundwater Quality
74:28	Hazardous Waste
74:32	Petroleum Inspection and Release Compensation
74:34	Regulated Substance Discharge
74:27	Solid Waste
74:51	Surface Water Quality
74:52	Surface Water Discharge Permits

74:55	Underground Injection Control
74:04	Water Hygiene
74:50	Compliance Procedures for Water Pollution Control
74:53	Water Supply and Treatment Systems
74:21	Water Systems Operators
74:02	Water Rights

## 6.0 Reference Standards

ASME 31.9	Building Services Piping
ANSI C2	National Electrical Safety Code
NFPA 10	Portable Fire Extinguishers
NFPA 13	Automatic Sprinklers
NFPA 14	Standpipe and Hose Systems
NFPA 30	Flammable and Combustible Liquids Code
NFPA 55	Standard for the Storage, Use, and Handling of Compressed Gases and Cryogenic Fluids in Portable and Stationary Containers, Cylinders, and Tanks

## 7.0 Additional Standards

The following are a selection of additional trade organizations and standards that may govern the SDSTA's selection and installation of products.

ACGIH Threshold Limit Values  
American Concrete Institute (ACI) – ACI-318  
American Industrial Hygiene Association (AIHA)  
American Institute of Steel Construction (AISC) – Manual of Steel Construction  
American National Standards Institute (ANSI)  
American Society for Testing and Materials (ASTM)  
American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)  
American Society of Mechanical Engineers (ASME)  
American Water Works Association (AWWA)  
Institute of Electrical and Electronics Engineers (IEEE)

National Electrical Manufacturers Association (NEMA)  
National Fire Protection Association (NFPA)  
National Institute for Occupational Safety and Health (NIOSH)  
National Institute of Standards & Technology (NIST)

Sanford Underground Research Facility Subterranean Design Criteria (EHS-1000-L3-05)

Underwriters Laboratories, Inc. (UL)



**Approval of Mike Headley's Service on the SNOLABI Board of Directors—Mr. Tim Engel**

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See suggested motion below.

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**Recommended Action:**

*Motion to approve Mike Headley's service on the SNOLAB Institute as a member of the Board of Directors.*

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**Update on Implementation of SURF Foundation—Mr. Brian Bonde**

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**Recommended Action:**  
*Informational.*

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**Update on Scoping Study for Potential STEM Institute—Ms. Elizabeth Freer**

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**Recommended Action:**  
*Informational.*

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**Audit Committee—Chairperson Casey Peterson**

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Attached is the Audit Committee Charter dated June 19, 2014.

13A. Annual appointment of committee members per Audit Charter.

13B. Annual review of Audit Charter.

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**Recommended Action:**  
*Informational.*

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# **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY AUDIT COMMITTEE CHARTER**

## **STATEMENT OF MISSION**

The mission of the South Dakota Science and Technology Authority (SDSTA) Audit Committee is to be the pro-active steward for oversight of the financial reporting and disclosure process for SDSTA, including the investigation of claimed breaches of ethics, theft, fraud, embezzlement and reports of whistle-blowers. Our responsibility is to the SDSTA Board of Directors to report independently on the results of the oversight so as to assist in maintaining and enhancing the quality of the financial reporting. The Audit Committee is committed to communication between and among directors, the external auditor and Chief Financial Officer (CFO).

### **A. The Audit Committee has the following responsibilities and duties:**

#### **1. Appointment**

- Annually be appointed by the SDSTA Board of Directors at their annual meeting in June.
- At least one member will be deemed a “financial expert,” as defined by applicable law and regulation.

#### **2. Review**

- Annually review and update this Charter.
- Annually determine the independence of Audit Committee members through a certification by the SDSTA Board of Director’s Chairperson.
- Review the SDSTA’s annual financial statements and any reports or other financial information submitted to or from any governmental body, or the public, including any certification, report, opinion or review rendered by the external auditor or the SDSTA CFO.
- Review any report or memo or other communication from Federal and State regulators and reviewers, and attend as many entrance and exit conferences as possible.

#### **3. External Auditors/CFO/Independent Counsel/Other Advisors**

- The Audit Committee shall have the independent authority to engage any legal counsel or other advisors it deems necessary to carry out its duties.
- Periodically consult with the external auditor out of the presence of management about internal controls and the fullness and accuracy of the company’s financial statements.
- Make the selection, retention, and review the performance of, the external auditor, considering independence and effectiveness and approve the fees paid to the external auditor as well as the proposed fee. On an annual basis, the Audit Committee should review and discuss with the external auditor all significant relationships the external auditor has with the company to determine the auditor’s independence and consider the appropriateness of the non-audit services prior to their engagement.
- Periodically meet with the CFO on the results of exams, and be available to CFO for appropriate communications at any time they desire the meeting.

#### **4. Financial Reporting Process**

- In consultation with the external auditor, review the integrity of the SDSTA’s financial reporting processes.

# **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

## **AUDIT COMMITTEE CHARTER**

- Consider the external auditor's judgments about the quality and appropriateness of the SDSTA's accounting principles, as applied in its financial reports and as promulgated by the Governmental Accounting Standards Board.
- Consider and forward to the SDSTA Board of Directors, if appropriate, recommendations for major changes to the SDSTA's auditing and accounting principles and practices as suggested by the external auditor, management or the CFO.
- Establish regular and separate systems of reporting to the Audit Committee by management and the external auditor regarding any significant judgments made in management's preparation of the financial statements and the Audit Committee's view of each as to appropriateness of such judgments.
- Following completion of the annual audit, review separately with management and the external auditor any significant difficulties encountered during the course of the audit, including any restrictions on the scope of work, or access to required information.
- Review and resolve any significant disagreement among management and the external auditor in connection with the preparation of the financial statements. Review in detail the passed audit adjustments and the materiality levels used by the external auditor, and the impact of Management's estimates used in the financial statement preparation.
- Review with the external auditor and management the extent to which changes or improvements in financial or accounting practices, as approved by the Audit Committee in prior reports or meetings, have been implemented.

### **5. Ethical and Legal Compliance**

- Establish, review and update periodically a Conflict of Interest Policy and ensure that management has established a system to enforce this Policy.
- Review management's monitoring of compliance with the SDSTA's Conflict of Interest Policy, and verify that management has the proper review system in place to ensure that financial statements, reports, and other financial information disseminated to governmental organizations, and the public, satisfy legal requirements.
- Review with SDSTA's retained legal counsel any legal matter that could have a significant impact on the SDSTA's financial statements.
- Periodically review individual committee member education and obtain resources, seminars and materials to keep the level of member's education current.
- Perform any other activities consistent with this Charter, the SDSTA's By-Laws and governing law, as the Audit Committee or the SDSTA Board of Directors deems necessary or appropriate.

### **6. Reporting**

In order to facilitate the proper execution of its duties and responsibilities, the Audit Committee shall conduct its reviews and investigations in a confidential manner. The Audit Committee shall report to the SDSTA Board the results of the Financial Reporting Process, consultations with External Auditors, the CFO or other Advisors, or any other issues they deem important for the SDSTA Board to meet its responsibilities. These reports shall include, but not be limited to, the results of the annual external audit or any internal audit on financial reports or compliance (including difficulties or disagreements encountered, if any, past



# SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY

## AUDIT COMMITTEE CHARTER

adjustments, materiality defined by the auditor, any legal matter having a material impact on the report, management letter comments, etc.), the integrity of the financial reporting system, the appropriateness of the accounting principles applied to the financial reports, the status of internal controls, any suggested change to any of the above systems the Audit Committee thinks should be made, any significant report or communication from any other matter that the Audit Committee deems critical information needed by the SDSTA Board. To the extent permitted by applicable law, the Audit Committee's reports to the Board of Directors shall be delivered in closed session.

The Audit Committee shall strive to provide the Board with the information it needs to manage the reporting and accounting for the SDSTA as well as utilize the reports to manage all of the other risks it faces. These reports will be made when information is received and available. The Annual Schedule below outlines some of the reporting dates anticipated.

### **7. Budget Process**

The Audit Committee will meet with the CFO in March to establish the annual budget for the Audit Committee to cover costs for audit fees, legal fees, consulting fees, continuing education travel and costs and miscellaneous costs.

### **B. Annual Schedule**

The Audit Committee will meet at its discretion but the following is a guideline for business to be conducted during the year:

December-January – Meet with external auditors to discuss preliminary audit findings, letters to management, passed adjustments, materiality, management estimates, and quality and appropriateness of accounting principles.

March-June – Present audit findings, letter of comments and other appropriate information to the SDSTA's Board of Directors at SDSTA annual meeting. Meet to update issues on hiring other outside auditors for review, as deemed necessary, of such areas as EDP, compliance, etc.

September – Request proposal for external audit. Meet with CFO.

October/November/December – Meet with CFO to review any issues regarding the audit. Meet to engage external financial auditor on entrance conference. Review all SDSTA regulators' reports (State and/or Federal). Certify as to committee member's independence.

### **C. Limitations on the Committee's Role:**

While the Audit Committee has the responsibilities and powers as stated above, it is not the Committee's duty to audit the SDSTA's financial statements or to determine that the SDSTA's financial statements are complete and accurate in accordance with generally accepted accounting principles (GAAP), as promulgated by the Governmental Accounting Standards Board. These are the responsibilities of management and the independent auditors.



**Financial Report—Mr. Mike Headley**

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Financial Report:

- 14A. Update on internal control audit. (informational)
- 14B. Financial Summaries for May 2019, attached. (see suggested motion below)
- 14C. FY2020 Budgets, attached. (see suggested motion below)
  - 1. FY2020 Budget Summary
  - 2. FY 2020 CAPEX Budget
  - 3. FY2020 SDSTA Budget
- 14D. Discuss Letter of Agreement, attached. (see suggested motion below)

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**Recommended Action:**

*14B. Motion to accept the Financial Report as presented.*

*14C. Motion to approve SDSTA fiscal year 2020 budget.*

*14D. Motion to accept the Letter of Agreement between the State of South Dakota, Governor's Office of Economic Development and SDSTA agreement, and to authorize the Executive Director to sign the Agreement.*

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DIVISION: ALL

## BALANCE SHEET

## ASSETS

	AS OF
	05/31/19
	-----
<b>CURRENT ASSETS</b>	
First Interstate Checking	\$ 1,092,569.56
First Interstate Other	4,019.18
	-----
Total in Local Checking	1,096,588.74
SD Treas: Indemnification	7,500,000.00
SD Treas: Mine Closure	1,432,739.47
SD Treas: Operating	582,758.01
SD Treas: Sanford Gift #2	49,920.97
SD Treas: Spec Sess - Lab	3,927,954.00
SD Treas: Experiments	1,930,610.35
	-----
Total with SD Treasurer	15,423,982.80
Billed A/R	3,656,426.40
Unbilled A/R	501,582.79
Other A/R	36,392.98
Inventory - Supplies	2,320,588.01
Inventory - Warehouse	29,306.70
Other Current Assets	384,663.69
	-----
Total Current Assets	23,449,532.11
<b>FIXED ASSETS</b>	
Land, Underground & Other	12,633,473.13
Bldgs & Infrastructure	10,079,478.68
Improvements	62,661,312.62
Computer Equipment	447,815.17
Equipment & Fixtures	10,971,944.11
Accum Depr & Amort	(16,360,140.09)
	-----
Total Fixed Assets	80,433,883.62
<b>OTHER ASSETS</b>	
Work in Process	1,986,525.15
Pension Deferred Outflows	4,839,927.07
Xenon Purchased	6,513,900.39
	-----
Total Other Assets	13,340,352.61
<b>TOTAL ASSETS</b>	
	=====
	\$ 117,223,768.34
	=====

DIVISION: ALL

BALANCE SHEET

LIABILITIES & EQUITY

AS OF  
05/31/19

CURRENT LIABILITIES

Accounts Payable	\$	658,357.95
Other Payables		5,641.00
		-----
Total Accounts Payable		663,998.95
Accrued Payroll Liab		1,642,564.33
		-----
Total Current Liabilities		2,306,563.28

OTHER LIABILITIES

LT Xenon Notes Payable		6,000,000.00
Pension Deferred Inflows		851,741.96
		-----
Total Other Liabilities		6,851,741.96

EQUITY

Restricted: Indemnificati		7,500,000.00
Restricted: Lab		3,927,954.00
Restricted: Mine Closure		1,432,739.47
Restricted: Sanford Gift2		49,920.97
Restricted: Pension		3,988,185.11
Restricted: Experim. Int.		1,831,064.00
		-----
Total Restricted Funds		18,729,863.55
Investment in Gen FA		80,433,883.62
Unrestricted Funds		8,901,715.93
		-----
Total Equity		108,065,463.10

TOTAL LIABILITIES & EQUITY

\$	117,223,768.34
	=====

ALL

## STATEMENT OF INCOME

FOR THE PERIOD ENDING 05/31/19

	YR-TO-DATE
	-----
REVENUE	
DOE Subcontracts	\$ 23,675,829.21
NSF/NASA Subcontracts	37,600.84
State Revenue	4,004,092.42
Contributions & Donations	125,000.00
Checking Interest	2,945.99
Interest Income	133,988.82
	-----
TOTAL REVENUE	27,979,457.28
DIRECT COSTS	
Direct Labor	5,980,882.61
Board of Directors	10,373.65
Capital Outlay >\$5K	2,746,700.90
Contractual Svcs	1,773,526.15
Inventory	181,121.70
Supplies	1,035,521.56
Travel - Domestic	30,849.42
Travel - Foreign	16,234.01
Utilities	1,836,211.47
Other Direct Costs	29,536.89
Unallow/Unbill Costs	316,352.79
	-----
TOTAL DIRECT COSTS	13,957,311.15
INDIRECT COSTS	
Fringe Benefits	4,348,812.14
Overhead	6,317,349.43
	-----
TOTAL INDIRECT COSTS	10,666,161.57
	-----
GROSS PROFIT/LOSS ( )FROM OPERATIONS	3,355,984.56
	-----
OTHER INCOME	
Water Treatment	151,751.19
Miscellaneous Income	74,073.95
Other Operating Income	11,785.58
	-----
TOTAL OTHER INCOME	237,610.72
OTHER EXPENSES	
Loss (Gain) on Sale of FA	46,756.39
Reclass Incr Net Assets	(1,677,518.78)
	-----
TOTAL OTHER EXPENSES	(1,630,762.39)
	=====
NET INCOME/LOSS ( )	\$ 5,224,357.67
	=====

DIVISION: ALL

## COMPARATIVE BALANCE SHEET

## ASSETS

	AS OF 05/31/19	AS OF 05/31/18	\$ CHANGE	% CHANGE
<b>CURRENT ASSETS</b>				
First Interstate Checking	\$ 1,092,569.56	\$ 893,895.45	\$ 198,674.11	22.23%
First Interstate Other	4,019.18	10,771.06	(6,751.88)	-62.69%
Total in Local Checking	1,096,588.74	904,666.51	191,922.23	21.21%
SD Treas: Indemnification	7,500,000.00	7,500,000.00	-	0.00%
SD Treas: Mine Closure	1,432,739.47	1,415,782.17	16,957.30	1.20%
SD Treas: Operating	582,758.01	480,685.27	102,072.74	21.23%
SD Treas: Sanford Gift #2	49,920.97	322,567.97	(272,647.00)	-84.52%
SD Treas: Spec Sess - Lab	3,927,954.00	-	3,927,954.00	100.00%
SD Treas: Experiments	1,930,610.35	2,935,505.86	(1,004,895.51)	-34.23%
Total with SD Treasurer	15,423,982.80	12,654,541.27	2,769,441.53	21.88%
Billed A/R	3,656,426.40	2,744,384.24	912,042.16	33.23%
Unbilled A/R	501,582.79	125,597.98	375,984.81	299.36%
Other A/R	36,392.98	142,841.67	(106,448.69)	-74.52%
Inventory - Supplies	2,320,588.01	2,379,248.40	(58,660.39)	-2.47%
Inventory - Warehouse	29,306.70	30,566.09	(1,259.39)	-4.12%
Other Current Assets	384,663.69	423,165.61	(38,501.92)	-9.10%
Total Current Assets	23,449,532.11	19,405,011.77	4,044,520.34	20.84%
<b>FIXED ASSETS</b>				
Land, Underground & Other	12,633,473.13	12,633,473.13	-	0.00%
Bldgs & Infrastructure	10,079,478.68	10,079,478.68	-	0.00%
Improvements	62,661,312.62	63,427,334.26	(766,021.64)	-1.21%
Computer Equipment	447,815.17	431,565.17	16,250.00	3.77%
Equipment & Fixtures	10,971,944.11	10,805,396.09	166,548.02	1.54%
Accum Depr & Amort	(16,360,140.09)	(14,448,176.60)	(1,911,963.49)	13.23%
Total Fixed Assets	80,433,883.62	82,929,070.73	(2,495,187.11)	-3.01%
<b>OTHER ASSETS</b>				
Work in Process	1,986,525.15	2,200,262.17	(213,737.02)	-9.71%
Pension Deferred Outflows	4,839,927.07	4,174,730.00	665,197.07	15.93%
Xenon Purchased	6,513,900.39	5,040,356.11	1,473,544.28	29.23%
Total Other Assets	13,340,352.61	11,415,348.28	1,925,004.33	16.86%
<b>TOTAL ASSETS</b>	<b>\$ 117,223,768.34</b>	<b>\$ 113,749,430.78</b>	<b>\$ 3,474,337.56</b>	<b>3.05%</b>



DIVISION: ALL

COMPARATIVE BALANCE SHEET

LIABILITIES & EQUITY

	AS OF 05/31/19	AS OF 05/31/18	\$ CHANGE	% CHANGE
<b>CURRENT LIABILITIES</b>				
Accounts Payable	\$ 658,357.95	\$ 1,122,679.30	(464,321.35)	-41.36%
Other Payables	5,641.00	3,437.06	2,203.94	64.12%
	-----	-----	-----	-----
Total Accounts Payable	663,998.95	1,126,116.36	(462,117.41)	-41.04%
Accrued Payroll Liab	1,642,564.33	1,124,516.45	518,047.88	46.07%
	-----	-----	-----	-----
Total Current Liabilities	2,306,563.28	2,250,632.81	55,930.47	2.49%
<b>OTHER LIABILITIES</b>				
LT Xenon Notes	6,000,000.00	5,000,000.00	1,000,000.00	20.00%
Pension Deferred Inflows	851,741.96	1,698,193.00	(846,451.04)	-49.84%
	-----	-----	-----	-----
Total Other Liabilities	6,851,741.96	6,698,193.00	153,548.96	2.29%
	-----	-----	-----	-----
<b>TOTAL LIABILITIES</b>	<b>9,158,305.24</b>	<b>8,948,825.81</b>	<b>209,479.43</b>	<b>2.34%</b>
<b>EQUITY</b>				
Restricted: Indemnificati	7,500,000.00	7,500,000.00	-	0.00%
Restricted: Lab	3,927,954.00	-	3,927,954.00	100.00%
Restricted: Mine Closure	1,432,739.47	1,415,782.17	16,957.30	1.20%
Restricted: Sanford Gift2	49,920.97	322,567.97	(272,647.00)	-84.52%
Restricted: Pension	3,988,185.11	2,476,537.00	1,511,648.11	61.04%
Restricted: Experim. Int.	1,831,064.00	2,873,584.00	(1,042,520.00)	-36.28%
	-----	-----	-----	-----
Total Restricted Funds	18,729,863.55	14,588,471.14	4,141,392.41	28.39%
Investment in Gen FA	80,433,883.62	82,929,070.73	(2,495,187.11)	-3.01%
Unrestricted Funds	8,901,715.93	7,283,063.10	1,618,652.83	22.22%
	-----	-----	-----	-----
<b>TOTAL EQUITY</b>	<b>108,065,463.10</b>	<b>104,800,604.97</b>	<b>3,264,858.13</b>	<b>3.12%</b>
	=====	=====	=====	=====
<b>TOTAL LIABILITIES &amp; EQUITY</b>	<b>\$ 117,223,768.34</b>	<b>\$ 113,749,430.78</b>	<b>\$ 3,474,337.56</b>	<b>3.05%</b>
	=====	=====	=====	=====

## COMPARATIVE STATEMENT OF INCOME

FOR THE PERIOD ENDING 05/31/19

	YEAR TO DATE	PRIOR YEAR TO DATE	\$ CHANGE	% CHANGE
<b>REVENUE</b>				
DOE Subcontracts	\$ 23,675,829.21	\$ 20,335,867.65	\$ 3,339,961.56	16.42%
NSF/NASA Subcontracts	37,600.84	27,466.19	10,134.65	36.90%
State Revenue	4,004,092.42	1,226.96	4,002,865.46	326242.54%
Contributions & Donations	125,000.00	125,000.00	-	0.00%
Checking Interest	2,945.99	1,519.00	1,426.99	93.94%
Interest Income	133,988.82	116,214.10	17,774.72	15.29%
<b>TOTAL REVENUE</b>	<b>27,979,457.28</b>	<b>20,607,293.90</b>	<b>7,372,163.38</b>	<b>35.77%</b>
<b>DIRECT COSTS</b>				
Direct Labor	5,980,882.61	6,125,514.91	(144,632.30)	-2.36%
ERT Labor	-	62,758.22	(62,758.22)	-100.00%
Board of Directors	10,373.65	7,269.17	3,104.48	42.71%
Capital Outlay >\$5K	2,746,700.90	475,753.33	2,270,947.57	477.34%
Contractual Svcs	1,773,526.15	3,492,492.72	(1,718,966.57)	-49.22%
Inventory	181,121.70	152,122.04	28,999.66	19.06%
Supplies	1,035,521.56	829,559.06	205,962.50	24.83%
Travel - Domestic	30,849.42	56,080.27	(25,230.85)	-44.99%
Travel - Foreign	16,234.01	17,967.38	(1,733.37)	-9.65%
Utilities	1,836,211.47	1,863,913.13	(27,701.66)	-1.49%
Other Direct Costs	29,536.89	165,063.56	(135,526.67)	-82.11%
Unallow/Unbill Costs	316,352.79	309,015.31	7,337.48	2.37%
<b>TOTAL DIRECT COSTS</b>	<b>13,957,311.15</b>	<b>13,557,509.10</b>	<b>399,802.05</b>	<b>2.95%</b>
<b>INDIRECT COSTS</b>				
Fringe Benefits	4,348,812.14	3,904,708.29	444,103.85	11.37%
Overhead	6,317,349.43	4,384,024.75	1,933,324.68	44.10%
<b>TOTAL INDIRECT COSTS</b>	<b>10,666,161.57</b>	<b>8,288,733.04</b>	<b>2,377,428.53</b>	<b>28.68%</b>
<b>GROSS PROFIT/LOSS ( )</b>	<b>3,355,984.56</b>	<b>(1,238,948.24)</b>	<b>4,594,932.80</b>	<b>517.81%</b>
<b>OTHER INCOME</b>				
Water Treatment	151,751.19	97,965.36	53,785.83	54.90%
Miscellaneous Income	74,073.95	306,632.94	(232,558.99)	-75.84%
Other Operating Income	11,785.58	7,567.54	4,218.04	55.74%
<b>TOTAL OTHER INCOME</b>	<b>237,610.72</b>	<b>412,165.84</b>	<b>(174,555.12)</b>	<b>-42.35%</b>
<b>OTHER EXPENSES</b>				
Loss (Gain) on Sale of FA	46,756.39	107,361.46	(60,605.07)	-56.45%
Reclass Incr Net Assets	(1,677,518.78)	(1,851,028.95)	173,510.17	-9.37%
<b>TOTAL OTHER EXPENSES</b>	<b>(1,630,762.39)</b>	<b>(1,743,667.49)</b>	<b>112,905.10</b>	<b>-6.48%</b>
<b>NET INCOME/LOSS ( )</b>	<b>\$ 5,224,357.67</b>	<b>\$ 916,885.09</b>	<b>\$ 4,307,472.58</b>	<b>469.79%</b>

**South Dakota Science & Technology Authority**  
**Available Resources**  
**5/31/2019**

Cash Total Checking	\$	1,092,570
Cash With State Treasurer	\$	<u>15,423,983</u>
Total Cash	\$	16,516,553
Less: Restricted Funds		
Indemnification/Mine Closure/Special Session Lab	\$	(12,860,693)
Experiments (Xenon, Interest, Infrastructure)	\$	<u>(1,930,610)</u>
 Total Cash Available for Infrastructure Upgrades and Authority Operations	 \$	 1,725,250
Plus: Accounts Receivable Billed	\$	3,656,426
Accounts Receivable Unbilled	\$	501,583
Less: Current Liabilities (Accounts Payable & Accrued Payroll)	\$	<u>(2,209,675)</u>
(not including accts. pay. for Experiment funding)		
Available Cash	\$	<u><u>3,673,583</u></u>

**SDSTA Operating Budget Summary FY2019**  
**Actual vs Budget**  
**May 2019 & YTD**

	May 2019	Budget	\$ Over/Under Budget	% of Budget	Actual YTD	YTD Budget	\$ Over/Under Budget	% of Budget	% Remaining
100%									
<b>SDSTA (Authority) Direct Charges</b>									
Board of Directors	\$23,491.00	\$19,900.00	-\$3,591.00	118.05%	\$220,306.00	\$218,900.00	-\$1,406.00	100.64%	-0.64%
Executive Office	\$21,999.00	\$8,399.00	-\$13,600.00	261.92%	\$134,566.00	\$100,389.00	-\$34,177.00	134.04%	-34.04%
Science Center E & O	\$937.00	\$1,000.00	\$63.00	93.7%	\$9,497.00	\$11,800.00	\$2,303.00	80.48%	19.52%
Science Liaison	\$60.00	\$0.00	-\$60.00	100.0%	\$796.00	\$0.00	-\$796.00	100.00%	100.00%
<b>Subtotal</b>	<b>\$46,487.00</b>	<b>\$29,299.00</b>	<b>-\$17,188.00</b>	<b>158.66%</b>	<b>\$365,165.00</b>	<b>\$331,089.00</b>	<b>-\$34,076.00</b>	<b>110.29%</b>	<b>-10.29%</b>
<b>Federal/State Funding - Direct Charges</b>									
Fermi P.O.#641665 Prof. Services	\$0.00	\$0.00	\$0.00	0.0%	\$89,959.00	\$90,472.00	\$513.00	99.43%	0.57%
Fermi P.O.#649934 Prof. Services	\$39,857.00	\$40,862.00	\$995.00	97.55%	\$326,628.00	\$327,828.00	-\$798.00	100.24%	-0.24%
Fermi C#629760 SURF Services	\$905,977.00	\$1,041,321.00	\$135,344.00	87.0%	\$9,467,954.00	\$11,232,808.00	\$1,764,854.00	84.29%	15.71%
Fermi C#630223 Ross Rehab	\$159,826.00	\$184,646.00	\$24,820.00	86.56%	\$2,123,651.00	\$3,141,447.00	\$1,017,796.00	67.60%	32.40%
Fermi C#654406 Ross Logist.Supp	\$133,539.00	\$165,094.00	\$31,555.00	80.89%	\$217,472.00	\$301,308.00	\$83,836.00	72.18%	27.82%
Fermi Misc. Contracts	\$0.00	\$0.00	\$0.00	0.0%	\$51,208.00	\$53,000.00	\$1,792.00	96.62%	3.38%
LBNL LUX/Zepplin C#7255146	\$87,512.00	\$94,554.00	\$7,042.00	92.55%	\$3,207,980.00	\$3,287,632.00	\$79,652.00	97.58%	2.42%
LBNL LZ Constr.C#7351116	\$0.00	\$0.00	\$0.00	0.0%	\$119,238.00	\$184,680.00	\$65,442.00	64.56%	35.44%
LBNL LZ Operations C#7355157	\$24,530.00	\$25,507.00	\$977.00	96.17%	\$193,560.00	\$220,098.00	\$26,538.00	87.94%	12.06%
LBNL SIGMA-V C#7371823	\$7,851.00	\$10,000.00	\$2,149.00	78.51%	\$79,904.00	\$127,983.00	\$48,079.00	62.43%	37.57%
MJD (Majorana) ORNL144149	\$1,955.00	\$2,600.00	\$645.00	75.19%	\$21,157.00	\$28,600.00	\$7,443.00	73.98%	26.02%
BHSU-UGCampus Gen.Serv.	\$0.00	\$200.00	\$200.00	0.0%	\$2,752.00	\$2,200.00	-\$552.00	125.09%	-25.09%
Sanf.Sci.Ed.Center - GOED Funded	\$0.00	\$33,333.00	\$33,333.00	0.0%	\$311,792.00	\$366,663.00	\$54,871.00	85.04%	14.96%
SDSM&Tech CASPAR Gen.Serv.	\$1,357.00	\$2,666.00	\$1,309.00	50.9%	\$25,286.00	\$29,231.00	\$3,945.00	86.50%	13.50%
* Kiewit/Alberici JV	\$0.00	\$0.00	\$0.00	0.0%	\$100.00	\$100.00	\$0.00	100.00%	0.00%
* Liberty Biosecurity LLC	\$0.00	\$0.00	\$0.00	0.0%	\$1,356.00	\$1,356.00	\$0.00	100.00%	0.00%
* Xilinx, Inc. P.O.#732495	\$211.00	\$300.00	\$89.00	70.33%	\$6,470.00	\$9,238.00	\$2,768.00	70.04%	29.96%
<b>Subtotal</b>	<b>\$1,362,415.00</b>	<b>\$1,600,873.00</b>	<b>\$238,458.00</b>	<b>85.11%</b>	<b>\$16,248,465.00</b>	<b>\$19,404,644.00</b>	<b>\$3,156,179.00</b>	<b>83.73%</b>	<b>16.27%</b>
<b>Indirect Expenses</b>									
Indirect Charges Personnel	\$469,574.00	\$485,107.00	\$15,533.00	96.80%	\$3,828,680.00	\$3,824,772.00	-\$3,908.00	100.10%	-0.10%
Indirect Charges Other	\$336,487.00	\$297,324.00	-\$39,163.00	113.17%	\$3,969,921.00	\$4,012,379.00	\$42,458.00	98.94%	1.06%
<b>Subtotal</b>	<b>\$806,061.00</b>	<b>\$782,431.00</b>	<b>-\$23,630.00</b>	<b>103.02%</b>	<b>\$7,798,601.00</b>	<b>\$7,837,151.00</b>	<b>\$38,550.00</b>	<b>99.51%</b>	<b>0.49%</b>
<b>Totals</b>	<b>\$2,214,963.00</b>	<b>\$2,412,603.00</b>	<b>\$197,640.00</b>	<b>91.81%</b>	<b>\$24,412,231.00</b>	<b>\$27,572,884.00</b>	<b>\$3,160,653.00</b>	<b>88.54%</b>	<b>11.46%</b>
* Private Corporations (Commercial Group)									

SDSTA CAPEX Budget Summary FY18/19  
Actual vs Budget  
May 2019 & YTD

<u>Budget Area</u>	<u>Actual Month</u>	<u>FY2019 Monthly Budget</u>	<u>\$ Over/Under Budget</u>	<u>% of Budget</u>	<u>Actual YTD</u>	<u>FY2019 YTD Budget</u>	<u>\$ Over/Under Budget</u>	<u>% of Budget</u>	<u>% Remaining</u>
									100.00%
Operational CAPEX	\$ 97,361.38	\$ 100,500.00	\$ 3,138.62	96.88%	\$ 1,986,525.15	\$ 4,563,053.00	\$ 2,576,527.85	43.54%	56.46%
TOTAL CAPEX	\$ 97,361.38	\$ 100,500.00	\$ 3,138.62	96.88%	\$ 1,986,525.15	\$ 4,563,053.00	\$ 2,576,527.85	43.54%	56.46%

SD Science & Technology Authority  
Operational CAPEX Budget  
YTD FY2019 Actual vs Budget

Project #	Project Description	May 2019 YTD	FY2019 Budget	\$ Over/UnderBudget	% of Budget	% Remaining
						100%
CAP2014-01	Sanford Visitor Center Sign/Display	\$ 60,998.34	\$ 5,400.00	\$ (55,598.34)	1129.60%	-1029.60%
CAP2016-02	LX Surface/UG Facility Upgrades	\$ -	\$ 153.00	\$ 153.00	0.00%	100.00%
CAP2016-03	LZ Xenon Gas	\$ 1,756,685.33	\$ 2,557,500.00	\$ 800,814.67	68.69%	31.31%
CAP2019-01	Maintenance Support Facility	\$168,841.48	\$ 2,000,000.00	\$ 1,831,158.52	8.44%	91.56%
	Totals	\$ 1,986,525.15	\$ 4,563,053.00	\$ 2,576,527.85	43.54%	56.46%

SD Science & Technology Authority  
Operational CAPEX Budget  
Monthly Actual vs Budget

Project #	Project Description	May-19	Budget	\$ Over/UnderBudget	% of Budget
CAP2014-01	Sanford Visitor Center Displays/Monitoring	\$ 92.93	\$ -	\$ (92.93)	0.00%
CAP2016-02	LX Surface/UG Facility Upgrades	\$ -	\$ -	\$ -	0.00%
CAP2016-03	LZ Xenon Gas	\$ 473.45	\$ 500.00	\$ 26.55	94.69%
CAP2019-01	Maintenance Support Facility	\$ 96,795.00	\$ 100,000.00	\$ 3,205.00	0.00%
	Monthly Totals	<u>\$ 97,361.38</u>	<u>\$ 100,500.00</u>	<u>\$ 3,138.62</u>	<u>96.88%</u>





**SDSTA Operating Budget Summary FY2020**  
July 2019 - June 2020

	Sources of Revenue		Budget \$ FY19/20	Budget \$ FY18/19	Difference	
	Federal Funding	SDSTA Funds				
<b>Administration Budgets</b>						
Board of Directors		\$253,300	\$253,300	\$236,800	\$16,500	
Executive Office		\$269,446	\$269,446	\$126,496	\$142,950	
Science Liaison		\$0	\$0	\$0	\$0	
*** Science Center E & O		\$82,200	\$82,200	\$78,040	\$4,160	
	<b>Total</b>	\$604,946	\$604,946	\$441,336	\$163,610	
*** Science C.E & O (Approx. \$6,000 from Chris B. Memorial)						
<b>Total Authority Operating Budgets</b>		<u>\$0</u>	<u>\$604,946</u>	<u>\$ 604,946</u>	<u>\$441,336</u>	<u>\$163,610</u>
Federal Funding & State GOED Fundin Xilinx	\$26,313,091		\$26,313,091	\$29,494,420	(\$3,181,329)	
CAPEX Budget 7/2019 - 6/2020 Additional Approval Beyond Carryover		\$2,160,000	\$ 4,701,844 Includes carry over	\$2,562,900 Total for year	\$ 2,138,944	
<b>Total for Approval</b>	<u>\$26,313,091</u>	<u>\$2,764,946</u>	<u>\$ 31,619,881</u>	<u>\$32,498,656</u>	<u>(\$878,775)</u>	
<b>Total FTE</b>						
Approximate Carryover CAPEX Projects				SDSTA Funds	6 summer interns	
Grand Total with Carryover	<u>\$26,313,091</u>	<u>\$2,764,946</u>	<u>\$29,078,037</u>	Other & Indirect	169	
<b>SDSTA Funds includes funding from GOED/Foundation for Xenon</b>				<b>Total FTE</b>	<u>169</u>	

SDSTA FY2020 CAPEX Budget

6/15/19

	<u>Proj. Mng</u>	<u>Project #</u>	<u>Project Description</u>	<u>New Proj. \$'s</u>	<u>Estimated Carry Over Proj.\$'s</u>	<u>Total Proj. \$'s</u>
*	M. Headley	CAP2014-01	Sanford V.Center Ground Monitoring	\$ 10,000	\$ -	\$ 10,000
**	M. Headley	CAP2016-03	LZ - Xenon Gas/Foundation Interest	\$ 150,000	\$ 775,685	\$ 925,685
***	M. Headley	CAP2019-01	Maintenance Support Facility	\$ 2,000,000	\$ 1,766,159	\$ 3,766,159
TOTAL ALL PROJECTS				<u>\$2,160,000</u>	<u>\$ 2,541,844</u>	<u>\$ 4,701,844</u>
Total FY19 Budget				<u>\$ 2,160,000</u>	<u>\$ 2,541,844</u>	<u>\$ 4,701,844</u>

- \* Sanford Gift Funding
- \*\* GOED and Foundation Funding
- \*\*\* Future Funds

Column labeled "New Proj. \$'s" consists of funding for ongoing ground monitoring and display changes at the Sanford Lab Homestake Visitor Center, yearly interest to be paid to the (3) Foundations for Xenon loans, as well as balance of \$4M of Future Funds for the Maintenance Support Facility.

SDSTA  
FY2020Budget

<u>Funding Source</u>	<u>P.O/Subc.</u>	<u>FY20 Amount</u>
CA Cooperative Agreement	TBD	16,312,500
LBNL LUX/Zeplin Eng. Project/Operations Sup	7355157/7255146	1,023,512
SIGMA-V	7371823	74,943
Fermi (SURF OPS Services)	629760	4,485,617
Fermi Ross Logistics Support (Ross Rehab Fin	630223/654406	3,797,725
Fermi Engineer Supp	649934	512,505
SDSM&Tech. - CASPAR	PHY-1615197	48,887
BHState Univ. UG Campus	FOP 636610	8,900
Oak Ridge N.L. MJD	144149	38,215
Xilinx	735935	10,287
Totals		\$ 26,313,091



## **LETTER OF AGREEMENT**

This Agreement is entered into as of the 20<sup>th</sup> day of June 2019, by and between the State of South Dakota, Governor's Office of Economic Development, and the South Dakota Science & Technology Authority.

### **Scope of Agreement**

The State of South Dakota has placed significant emphasis on the economic development and research impact of the Sanford Underground Research Facility (SURF) and the work being done there. Through previous Future Fund Agreement #1640, the State of South Dakota provided funding to assist in the construction of a new Maintenance Support Facility to accommodate SURF's present and future goals. In order to continue support for SURF and the research done there, the State of South Dakota has determined it will provide additional funding through this Agreement to ensure the Maintenance Support Facility is completed on schedule.

The term of this Agreement shall commence July 1, 2019 and end December 31, 2020.

### **South Dakota Science & Technology Authority**

South Dakota Science & Technology Authority commitments:

- To fulfill all commitments agreed to in Future Fund grant #1640 with respect to funds advanced previously as well as those advanced under this Agreement;
- To return to the Governor's Office of Economic Development any and all unused funds at the completion of the project.

### **Governor's Office of Economic Development**

Governor's Office of Economic Development commitments:

- To issue a single payment of two million five hundred thousand dollars (\$2,500,000.00) within 30 days of the return of this signed document.

Reports are to be submitted to: Dale Knapp, Governor's Office of Economic Development, 711 E. Wells Avenue, Pierre, SD 57501-3369.

*This Agreement may be renewed, amended or terminated upon mutual consent of all parties. In the event the South Dakota Science and Technology Authority fails to utilize the funding in accordance with the terms hereof GOED may unilaterally terminate this Agreement, at which time any funding provided to South Dakota Science & Technology Authority hereunder will be subject to refund at the discretion of GOED.*

The parties signify their agreement effective the date above first written by their signatures affixed below.

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Mike Headley, Executive Director  
SD Science & Technology Authority  
630 E. Summit Street  
Lead, SD 57754

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Steve Westra, Commissioner  
Governor's Office of Economic Development  
711 E. Wells Avenue  
Pierre, SD 57501-3369

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**Executive Director’s Report—Mr. Mike Headley**

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The Executive Director’s Report includes the following:

- 15A. Declarations of Surplus (4)—miscellaneous items, informational.
- 15B. SDSTA Quarterly Update—informational.
  - Introduce Artist-In-Residence, Gina Gibson
- 15C. E&O—Update and Davis Bahcall Scholar introductions at 10AM (Ms. Deb Wolf).

**2019 Davis-Bahcall Scholars**

<b>Name</b>	<b>Hometown</b>	<b>High School or College</b>
Ann Madson	Sioux Falls	Augustana
Nolan Maher	Bismarck, ND	BHSU
Grayson Nelson	Box Elder	William & Lee
Curtis Petersen	Parade	BHSU
Amy Pham	Sioux Falls	Roosevelt High
Samuel Schleich	Alexandria	Hanson High
Maycee Wiczorek	Piedmont	Stevens High
Abbie Woodard	Spearfish	Spearfish High

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**Recommended Action:**

*Motion to accept the Executive Director’s Report as presented.*

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## DECLARATION OF SURPLUS PROPERTY

The South Dakota Science and Technology Authority (SDSTA) owns a small Flygt pump (SDSTA Asset No. PU-XXB99-12/Serial No.: 3085.7183.1510392). The pump was used underground on the 5000L but is no longer operational. It is not cost effective to rebuild the pump and is considered scrap (100lbs). SDSTA has no further use for the Flygt pump and wishes to surplus it.

Having no further use for this property, I hereby declare the Flygt pump to be Surplus Property.

Dated at Lead, South Dakota this 22<sup>nd</sup> day of March, 2019.



Mike Headley  
SDSTA Executive Director

## DECLARATION OF SURPLUS PROPERTY

The South Dakota Science and Technology Authority (SDSTA) owns two Flygt pumps (Serial No. 9930001 and No.: 8570053, total value \$15,975.46). The pumps were used underground but recently were in need of repair. Northern Dewatering, Inc. confirmed the two pumps are unrepairable and has applied an \$8,000 credit to the SDSTA account.

Having no further use for this property, I hereby declare the Flygt pumps to be Surplus Property.

Dated at Lead, South Dakota this 16<sup>th</sup> day of April, 2019.



Mike Headley  
SDSTA Executive Director

## DECLARATION OF SURPLUS PROPERTY

The South Dakota Science and Technology Authority (SDSTA) was gifted a Delta Optical Comparator (Model No. EPIC220) from Los Alamos National Lab in 2009. It is being stored at the old machine shop but has no operational use and no value to the SDSTA. SDSTA wishes to surplus it.

Having no further use for this property, I hereby declare the Optical Comparator to be Surplus Property. Shoener Machine and Tool Supply Inc. will haul it away at no cost to SDSTA.

Dated at Lead, South Dakota this 16<sup>th</sup> day of April, 2019.



Mike Headley  
SDSTA Executive Director

## DECLARATION OF SURPLUS PROPERTY

The South Dakota Science and Technology Authority (SDSTA) wishes to surplus shotcrete items listed below. South Dakota School of Mines & Technology (SDSM&T) originally purchased these items in August of 2010 for the Deep Underground Science and Engineering Lab (DUSEL) project. The items were transferred to SDSTA in 2015 and are stored on property. SDSTA has no further use for the items and wishes to surplus them.

Trans Crete Concrete Pump  
Portable Batch Plant  
Remote Crane  
Miscellaneous Hoses & Nozzles

Having no further use for this property, I hereby declare these items to be Surplus Property.

Dated at Lead, South Dakota this 4<sup>th</sup> day of June 2019.



Mike Headley  
SDSTA Executive Director

**May Monthly Progress Report**  
*Submitted June 12, 2019*

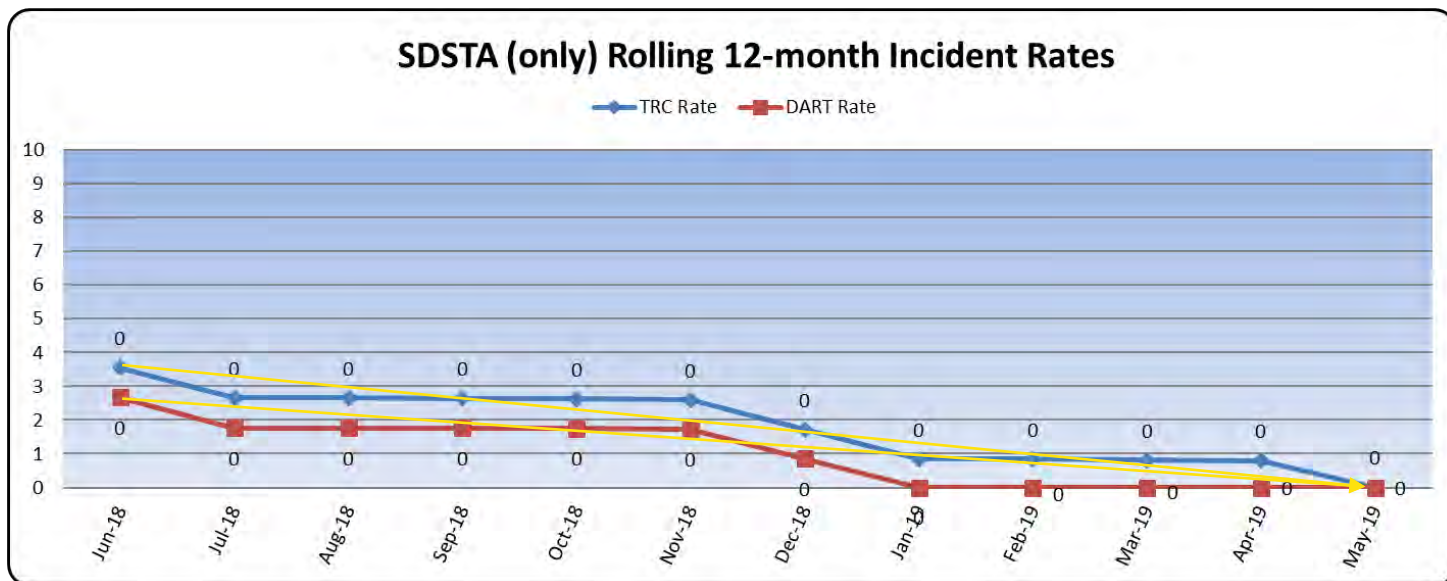
*Submitted to:*  
*Fermi Research Alliance, LLC*  
*Fermi National Accelerator Laboratory*  
*Subcontract No. 629760*  
*and*  
*South Dakota Science and Technology Authority Board of Directors*

*Submitted by Mike Headley*  
*SDSTA Executive Director*  
*Sanford Underground Research Facility Laboratory Director*



## Environment, Safety and Health Status

### Health and Safety Status



Note: Recordable incident monthly totals are shown in chart above

**TRC (Total Recordable Case)** = more than first aid treatment was given.

**DART (Days Away Restricted Transferred)** = more than first aid treatment was given AND restrictions were job-limiting or the employee could not work (subset of a TRC). \*Rates are subject to change

#### May 2019 DARTS/TRC

- No events to report

#### May 2019 First Aid Cases

- 5/5: Material drop on foot (above steel toe section of boot); ice and wrap applied

#### May 2019 Category 1 or 2 Events

- No events to report

#### May 2019 Category 3 Events

- No events to report

### Health and Safety Support

- Ten of 12 Emergency Response Team (ERT) full-time positions have been filled
- A Quality Control Specialist candidate has accepted the position pending a pre-employment medical and background check
- One of two Security Gate Guard full-time positions has been filled

### Work Accomplishments

- SDSTA hosted a Department of Homeland Security (DHS) workshop. A multi-agency emergency preparedness exercise is being planned which will include the DHS, Federal Bureau of Investigation (FBI), South Dakota National Guard and local and regional emergency support services.
- The team performed a major re-write of the Fall Prevention and Protection ESH Chapter which has been approved by the Configuration Control Board.
- The ESH team participated in the LZ Operational Readiness Review for xenon (Xe) circulation held at SURF on May 7–9.

- In support of SDSTA Health and Wellness initiative, ESH organized a “20 Days of Gratitude” Mental Wellness Challenge. This initiative was well received with participation from many employees.
- The Human Performance Improvement investigation was finalized on the Violation of Procedure for CASPAR.
- The Explosives Management ESH Chapter workshop continued.
- In support of SDSTA hearing conservation efforts, ESH continues to trial Noise Cancelling Hearing Protection.
- All SDSTA supervisors are participating in OSHA 30-hour training; 1 of 2 classes has been completed.
- SDSTA hosted the Environmental, Health and Safety Advisory Committee (ESHAC) Review on June 4–6.

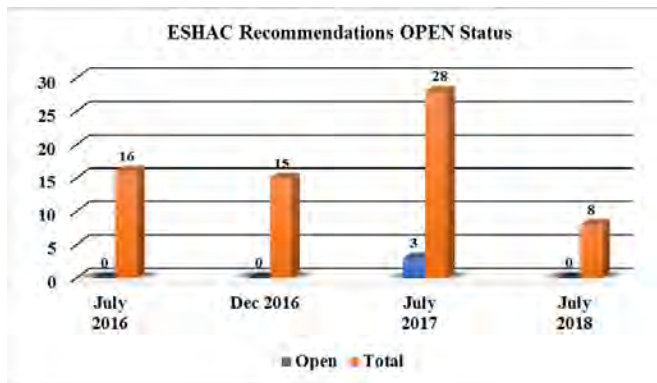
### Upcoming Activities/Trainings

- A second OSHA 30-hour training will be held onsite on June 18–20.
- ESH will continue to trial Noise Cancelling Hearing Protection in support of SDSTA hearing conservation efforts.

### Environmental, Safety and Health

- The April 2019 Discharge Monitoring Report (DMR) was prepared, loaded into NetDMR and signed. There were no violations.
- The draft National Pollution Discharge Elimination System (NPDES) Permit from South Dakota Department of Environment and Natural Resources (SD-DENR) has not been received.
- The ESH Waste Management Chapter continues to be revised to accommodate new formatting for ESH chapters.
- The first quarter storm water inspection was completed. A second storm water inspection was completed due to 1-inch of rainfall.
- The asbestos and lead abatement project in the Machine Shop continues and is approximately 85% complete.
- In support of the projected Capitol Projects through 2024, a draft Environmental Evaluation Notification Form and draft Categorical Exclusion exemption projects were finalized with DOE.

### Third Party Review Recommendations Status



### Facility Operations Status

#### Yates Shaft

##### Work Accomplishments

- SDSTA Infrastructure Technician Pat Urbaniak has assumed the permanent roll of Yates Shaft Foreman.
- A total of 177 loads were handled through the shaft.
- Top Down Maintenance corrected 310 conditions for the month with a focus near the 4100L station.
- Ground support installation started at the 4100L station.
- Air door and water wall were inspected at every station.

##### Upcoming Activities

- Installation of turnbuckles will continue.
- Planning will continue for beginning Top Down Maintenance in the utility compartments later in the year.



- A risk assessment it being planned for this August.

## **Underground Hazard Mitigation**

### Work Accomplishments

- Ground support installation in the 4850L No. 17 Ledge drift continued.
- Crews continued maintaining the 4850L No. 17 Ledge shop area and ramp.
- Removal of the former neutrino experiment tanks in No. 9 Ledge has been completed to enhance ventilation.

### Upcoming Activities

- Installation of ground support will continue in the 4850L No. 17 Ledge drift.
- Work will also continue in the 4850L No. 9 Ledge exhaust ventilation pathway.

## **Davis and Ross Campus**

### Work Accomplishments

- Quarterly air handling equipment and fire alarm preventive maintenance activities continued with vendors.
- Oxygen monitors in the Davis Campus have been calibrated to ensure any low oxygen events are detected and alarm notifications are sounded.

### Upcoming Activities

- Work with engineers and vendors to define cooling and humidity requirements.
- Maintenance activities will be ongoing.

## **Surface Facilities**

### Work Accomplishments

- The SDSTA completed all seven (7) day, thirty (30) day, and annual (360) day preventative maintenance activities. Boart drill and jackleg repairs continue.
- In support of our recycling efforts, nine gaylords of material were accumulated and shipped off site. An additional seven gaylords were filled with recycle material.
- Remediation efforts in the surface machine shop are near completion in preparation for the new Maintenance Support Facility.
- The motor generator bearing on the Yates Ore Hoist was replaced.
- Crews cleared snow after a heavy snowfall in May. All storm water control points were inspected after heavy moisture events.

### Upcoming Activities

- Preventive maintenance activities will continue.

## **Dewatering**

### Work Accomplishments

- Preventative maintenance was performed on pumps and pumping apparatus. Installation of the six-inch Yates sump discharge line continued. Installation of the pressure reducing manifolds on the 4850L continued.

### Upcoming Activities

- Trouble shooting pressure reducing manifold will continue.
- Scheduled preventative maintenance activities will continue.
- Planning and preparations for the Yate sump pump vertical discharge line will continue.
- A 100- horse power pump will be installed on the 2600L.

## **Waste Water Treatment Plant (WWTP)**

### Work Accomplishments

- At the end of April, the water level in the underground pool was at 5,688 feet. The net loss for the month was twenty-nine feet due to large snow and rainfall events in May. Underground water infiltration was high during

May at over 1200 gpm. A large portion of the infiltration was captured on the 2000L and pumped to the surface thereby reducing the amount of water that could be taken from the underground pool.

- Modifications to the control system to allow specific functions to be operated from off-site advanced as planned—there were three off hour call-outs in May. The WWTP has not discharged any water to the sanitary sewer for over 1,106 days. The team continues to balance water sources to manage temperatures.
- The 2<sup>nd</sup> Quarter Whole Effluent Toxicity (WET) test was conducted and passed.

#### Upcoming Activities

- Monitoring and sample collection at the underground wastewater treatment plant located on the 4850L will continue.
- Anthracite coal media in the Yardney filters will be replaced.

### **Transportation and Mobile Equipment**

#### Work Accomplishments

- The team performed vehicle preventative maintenance actions and repairs to fleet vehicles. In addition, the team maintained underground locomotives, support equipment including air compressors, loaders and rail cars.

#### Upcoming Activities

- Repairs on the walk behind skid steers and two-yards loader located on the 4850L will continue.
- Fletcher Bolter hydraulic hose groups will be assembled, and repairs will continue.

### **Electrical and Cyber Infrastructure**

#### Work Accomplishments

- The team continues review and modify the underground communications infrastructure to ensure each level has voice over IP (VoIP) and FEMCO (i.e. twisted pair) phones at each underground facility level. Various preventative maintenance activities were performed.
- The team continued to work with KAJV to establish construction power on the 4850L near the Ross station.
- Upgrades to Yates 4100L station have started.

#### Upcoming Activities

- Aging fiber optic cable will be replaced in the Ross and Yates Shafts.
- Camera upgrades to the pump rooms and the Waste Water Treatment Plant will continue.
- Upgrades to Yates 4100L station will continue.

### **Engineering Support**

#### Work Accomplishments

- The Ross Crusher Building Roof Strengthening project was turned over to LBNF for pricing by Kiewit Alberici Joint Venture (KAJV) sub-contractor. This work is closely linked to the LBNF Crusher installation which is within their scope and KAJV could coordinate more efficiently both scopes of work.
- A detailed SURF-wide Statement of Work for an Arc Flash Study was developed in accordance with industry and OSHA recognized methods & standards. Also, the Engineering team gathered potential bidders and developed a project synopsis/pre-solicitation notice to be used when advertising the project to potential bidders and the public. A request for proposals has been released for industry response to perform the study.
- Engineering has developed a tracking system to start collecting data for moisture content readings taken in the Yates Shaft, as well as new wood guides that are being delivered. Balancing moisture content throughout the shaft and reducing fluctuation is important for long term maintenance.

#### Upcoming Activities

- The Scope of Work for the upgrade of the Davis Campus chiller will be completed and the contract bid. Also, and the Arc-Flash Consultant Study will be completed.

## **Science Support Status**

- The Conference on Science at SURF was held at South Dakota School of Mines and Technology (SDSM&T) May 15-17, preceded by a Low-Background Workshop May 14. SDSTA Science Director Jaret Heise presented a SURF overview. The conference was attended by 79 people (down from 118 in 2017 and 130 for the 2015 inaugural), with 17 participants taking advantage of the opportunity to visit the underground laboratories on the 4850L.
- Jaret attended the Low Radioactivity Techniques workshop May 20-23, presenting on SURF status and visiting the Laboratorio Subterráneo de Canfranc (LSC), which is a relatively small lab with horizontal access via a traffic tunnel and roughly half the overburden of SURF (2450 mwe). A follow-on satellite meeting was held after the workshop: Strategy and technical aspects in deep underground laboratories.
- Facility highlights: Regular alarm system maintenance and inspections were performed by the service contractor. Corrosion monitoring coupons were swapped at both underground campuses and a new monitoring location was added outside of the clean spaces. Additional self-contained self-rescuers were distributed to both the Davis and Ross Campuses. Underground laboratory oxygen sensor calibrations were completed. Faulty sensors were replaced at the Ross Campus, namely a temperature sensor in the BHUC air handling unit and a carbon monoxide (CO) sensor in the drift outside the CASPAR laboratory. Additional filters were installed by SDSTA personnel to mitigate dust propagation through the BHUC supply fans.
- Interruptions: The laboratory was closed for one day due to inclement winter weather. Similar to previous months, power issues were also experienced during the winter storm (nine power blips over period of ~7 hours), affecting HVAC systems at the Davis and Ross Campuses as well as the compressed air supply at the Davis Campus. There was a separate power blip earlier in the month after which Davis Campus exhaust fans unexpectedly activated and reduced differential pressure in MJD spaces (as well, the MJD fume hood exhaust turned off, increasing differential pressure). The surface radon reduction system was inadvertently offline for approximately one hour when water flow as part of the annual fire suppression testing affected the system cooling causing it to shut down. Further stabilization was required after the BHUC temperature sensor was replaced by the HVAC service contractor. A faulty CO sensor caused the HVAC systems for the Ross Campus laboratories to be offline for about 20 hours.

## **LUX-ZEPLIN—LZ**

- Two of the four detector high-voltage grids have been delivered to SURF, with the remaining units expected at SURF in late June.
- Final assembly of the inner detector in the Surface Lab has started with good progress and onsite support and oversight by the LZ chief engineer.
- Cryogenics systems underground are nearing readiness. Radon emanation measurements showed good results following some additional cleaning. There was progress on the xenon test circulation cryostat. Commissioning with the cryocooler vendor is planned for mid-June, and members of the SURF Cryogen Safety Subcommittee conducted a walk-through inspection of the liquid nitrogen hardware to support authorization for the associated cryogen use.
- An operational readiness review of the Xe circulation tests was completed at SURF on May 8-9, preceded by an ESH inspection including LBNL subject matter experts May 7. Action items are being addressed.
- The underground radon reduction system was successfully tested to deliver reduced radon air to the Davis Cavern; a few additional design adjustments are being considered.
- SURF convened a meeting with LZ personnel to focus on recent incidents involving minor LZ worker injuries.

## **MAJORANA DEMONSTRATOR—MJD**

- Regular electroforming operations and maintenance continued.
- The MJD machinist returned for several days to produce copper plates from previously electroformed copper as well as to re-surface mandrels for future electroforming use. After acid etching, six copper plates were prepared for shipment for LEGEND-200 (will ship to Europe from Oak Ridge National Lab with germanium in ~20-ton steel container to reduce cosmic-ray muon activation). The Machine Shop tools were inspected, and one of the lathes needs repair (was also noticed to be leaking small amount of oil) and new cutting bits were ordered as replacements.
- Issues were encountered with the water-cooling circulation loop of the helium cooler.

- Some items in surface storage encountered water due to building leaks.

## **Low-Background Counting**

Black Hills State University Underground Campus—BHUC:

- Assays of LZ samples continue using three low-background counters (LBCs). SDSTA personnel assisted with several sample swaps during the month.
- The Lawrence Berkeley National Lab (LBNL) dual-crystal system continues commissioning calibrations.
- USD personnel returned to SURF to perform calibrations using a suite of eight sources. Following calibrations, samples were loaded for long-term counting. Sensitivity estimates for this low-background counter are expected to be ~5 ppt (U) and ~10 (Th).
- Personnel associated with the USD/UNC/SDSMT MALBEK LBC were onsite to locate some storage items, and a metal frame that was in surface storage will need to be re-surfaced due to water damage.
- Implementation paperwork was received from Lawrence Livermore National Lab researchers planning to install a dual-crystal system that uses mechanical cooling (instead of liquid nitrogen) and is optimized for low-energy backgrounds such as decays from Pb-210.

## **SIGMA-V**

- Stable operations for chemical tracer and chilled water flow tests. Biology samples were also collected on a regular basis.
- The main experiment pump was successfully repaired and resumed operation underground in the West Drift. Regular maintenance was performed on other pumps that are in use.
- A kick-off meeting with representatives from the LBNL drilling contractor was held at SURF. Two holes will be drilled on the 4100L: 50-m vertical and 10-m subhorizontal. Logistics and lessons learned from the initial 4850L SIGMA-V drilling campaign were also reviewed.

## **Annual Work Plan Variances**

- SURF Services continues to be under budget in the month of May by \$198k. The labor portion was \$133k, and nonlabor was \$65k.
- There was one holiday in May (Easter Monday), which contributes to the labor underrun.
- The annual DENR permit was budgeted in May (\$52 including indirect) but was paid in early June.
- The full time ERT continues to underrun on both labor and nonlabor (\$72k total underrun) as the team gets up to speed.

## **Financial Status**

Included in the Financial Report are the following:

- SDSTA SURF Services FY2019 SPA Curve as of May 2019 (included as Appendix B at the end of the report)
- SDSTA Staffing Plan by Funding Source as of May 2019 (included as Appendix C at the end of the report)
- Financial Summary (included as Appendix D at the end of the report)
  - 1) Balance Sheet as of May 2019
  - 2) Comprehensive Statement of Income May 2019
  - 3) Comparative Balance Sheet – May 2019 vs. May 2018
  - 4) Comparative Statement of Income – May 2019 vs. May 2018
  - 5) Available Resources as of May 2019
  - 6) Operating Budget Summary
  - 7) CAPEX Budget Summary
  - 8) May 2019 and YTD CAPEX Budget – actual vs. budget

## **SDSTA SURF Services FY2019 Scheduled Performed Actual (SPA) Curve**

- This graph represents an analysis of the SURF Services subcontract No. 629760 scheduled funding compared to actual. The report shows funding through September 2019 along with information related to Funded-to-Date dollars, Scheduled dollars, Performed dollars and Actual dollars by month. The subcontract has been extended through June 2019 with the option to continue through September 2019. Actual dollars represent actual invoices

for the months sent to Fermi Research Alliance LLC (FRA) for reimbursement. For May, the invoices totaled \$1,347,187 which is lower than the anticipated reimbursements of \$1,545,156 by \$197,969. Cumulative expenses are at \$40,472,142 which is lower than the budgeted \$42,601,582 by \$2,129,440.

### Balance Sheet Items

- Cash in Local Checking—Total on hand at May 31, 2019 was \$1,096,589; up from last month by \$455,456. Funds on hand were necessary to pay employee medical/life/vision insurance due June 1. The balance also contains funds received from federal contracts late in the month on open accounts receivable.
- Cash with State Treasurer—Total balance of \$15,423,983. This balance has decreased from last month by \$648,025 as this amount was drawn down during May.
- Billed Accounts Receivable (A/R)—Billed A/R represents any open invoices based on contracts from sources such as LBNL, Fermilab, other smaller contracts from other universities and Barrick (Homestake Mining Company). Total is at \$3,656,426; down from last month by \$502,466. Included in the balance are open invoices to LBNL for \$302,441; representing invoices for the LUX-ZEPLIN (LZ) engineering support, (LZ) Operations contract, the SIGMA-V experiment support, and LZ Construction contract. Additional open invoices include \$3,320,687 from Fermilab primarily from the SURF Services subcontract, the Ross Shaft Rehabilitation work, and a new contract for Ross Shaft Logistics Support. Additionally, there are open receivables for \$10,175 from small university subcontracts, \$20,332 from Barrick, and \$2,791 from three commercial organizations—Xilinx, Kiewit/Alberici Joint Venture (KAJV) and Liberty Biosecurity, LLC.
- Unbilled A/R—Balance at \$501,583. Unbilled A/R represents items that have not been billed on various contracts. The payroll from pay end date May 31 (paid on June 7, 2019) was not invoiced in May on various contracts. The amounts will be invoiced in June. May's balance has increased by \$401,326.
- Other A/R—Current balance of \$36,393. This balance represents any Interest Receivable and Miscellaneous Accounts Receivable. The balance increased by \$27,353. This balance includes the adjusting entry on the unrealized depreciation on undistributed earnings on the funds held with the State as of June 30, 2018. Activity for this month includes recording the interest accrual for May as well as a small amount of activity for miscellaneous invoices.
- Inventory/Supplies—Balance at \$2,320,588, for fixed assets being stored but not in service. This balance has increased by \$10,909 from last month. This increase represents the purchase of a Nexus 10 GigE switch that was purchased but not yet being used. It will be installed very soon.
- Inventory Warehouse/Personal Protective Equipment (PPE)—Current balance of \$29,307. This balance represents the warehouse inventory that was purchased by SDSTA prior to federal funding. The balance is unchanged from the previous month.
- Other Current Assets—This listing on the balance sheet represents the balances of both prepaid insurance—\$273,034 and prepaid other—\$111,630. Total balance of \$384,664 is lower from last month by \$10,183. This decrease represents the monthly insurance expense and the expensing of various prepaid items in May.
- Fixed Assets—Total of \$80,433,884 (net of depreciation through May 2019). The net decrease of \$144,545 is for the current month's depreciation and for the capitalization of two Nexus switches.
- Work in Progress—This balance represents the current fiscal year progress being made using Sanford/SDSTA Funds to support the budgeted projects on the CAPEX budget less any items that are being capitalized within the Fixed Asset designation or Xenon Purchased. Current balance has increased by \$97,361 to \$1,986,525.
- Pension Deferred Outflows—This designation on our Balance Sheet reflects the requirements related to the Governmental Accounting Standards Board (GASB) No. 68 and No. 71 in reference to pensions. SDSTA is required to report the net pension asset or liability on the face of our financials along with related deferred inflows and outflows. The State's retirement system is now fully funded. The Net Pension Asset is a restricted asset. Thus, the equity created is also restricted. The balance Pension Deferred Outflows shown as a noncurrent asset is \$4,839,927 created by FY2018 final entries.
- Xenon Purchased—Balance of \$6,513,900 represents the value of xenon purchased for future use by experiments. The xenon inventory is considered a non-current asset and includes all the purchases through fiscal year end 2018. The balance is unchanged from last month.
- Total Assets—Total of \$117,223,768. This balance has decreased from last month by \$312,815 which represents the net activity as listed above.



- Accounts Payable—Our Total Accounts Payable balance of \$663,999 at the end of the month compared to last month has decreased by \$690,775. This decrease is primarily attributed to no longer owing for 100,000 liters of xenon from Praxair and no longer owing for brattice panels from TruNorth Steel.
- Accrued Payroll Liabilities—Current balance of \$1,642,564 has increased by \$346,462 from last month. This represents the net change between earned vacation and vacation taken and other changes in employee benefit-related liabilities.
- Long Term Xenon Notes Payable—This designation represents \$2M of funding received from the South Dakota Community Foundation (SDCF), \$2M received from the University of South Dakota Foundation (USDF) and \$2M received from the South Dakota State University Foundation (SDSUF). The \$6,000,000 balance is designated for purchasing xenon for experiment use at Sanford Lab. The balance is unchanged from last month.
- Pension Deferred Inflows—This classification reflects the requirements of GASB No. 68 and No. 71, as discussed earlier. The balance of \$851,742 represents our portion of the difference between projected and actual earnings on pension plan investments with the South Dakota Retirement System.
- Total Liabilities—Total Liabilities decreased by \$344,313 (from \$9,502,618 to \$9,158,305), which reflects the net activity listed above.
- Total Equity—Increase to \$108,065,463 from the previous month \$108,033,966.
- Total Liabilities & Equity—Decrease to \$117,223,768 from the previous month of \$117,536,583.

### Statement of Income Items

- On the SDSTA's Statement of Income, the DOE Subcontracts are consolidated into one line on the report. Included in this amount are various subcontracts from LBNL, Fermi National Accelerator Laboratory (FNAL), as well as a small contract for the MAJORANA project with Oak Ridge National Laboratory. Total revenue through May 2019 is \$23,675,829 (increase from April of \$2,413,445).
- National Science Foundation (NSF)/National Aeronautics & Space Administration (NASA) Subcontracts—Total revenue through May 2019 from this funding is \$37,601 (increase from April of \$2,017). The balance represents revenue from the South Dakota School of Mines and Technology (SDSM&T) for CASPAR.
- State Revenue—Year-to-date State Revenue equals 4,004,092. This includes the \$4,000,000 received in October from State Future Funds for construction of a new maintenance support facility as well as funds received from a small subcontract from Black Hills State University.
- Contributions & Donations—The Great Plains Education Foundation contributed \$125,000 in July for the education efforts at the SDSTA.
- Interest income recorded for the current fiscal year on State Funds is at \$133,989. This represents interest accruing at 1% on the cash held by the state on behalf of the SDSTA.
- Direct Costs are then listed on the Statement of Income. The classifications for Unallowable Costs and Indirect Costs are listed as well on this report to follow the federal contracting format. Direct Costs/Unallowable Costs are at \$13,957,311 for the current fiscal year. Indirect Costs including fringe benefits are at \$10,666,162. Costs are lower than revenue by \$3,355,985 primarily because of the \$4,000,000 receipt from State Future Funds.
- Other Income is at \$237,611, which represents miscellaneous income received from Xilinx, KAJV, and Liberty Biosecurity, LLC and small amounts from Barrick.
- Net income through May after Reclass Increase in Net Assets is at \$5,224,358; \$4,000,000 of this relates to the Future Funds that will be spent later.

### Comparative Balance Sheet

- Total Cash with State Treasurer is higher by \$2,769,442 from this time last year as we received State Future Funds of \$4,000,000 (as discussed earlier) as well as the final \$1,000,000 for xenon from South Dakota State University Foundation.
- Billed A/R is higher by \$912,042 when comparing the two-time frames. This increase is primarily the result of our indirect cost rate increase from 26% to 48.7%. This change was requested by FRA and the DOE Site Office. They have requested that we shift the Executive Director, the ESH Department including Security, and the positions of General Maintenance and Warehouse Specialist to the Indirect Cost category.
- Total Fixed Assets are lower by \$2,495,187 when comparing the two-time frames, primarily for the donation of the CASPAR Experiment Development and for additional depreciation.
- Xenon Purchased has increased by \$1,473,544 for the purchases made during fiscal year 2018.
- In summary, Total Assets have increased by \$3,474,338.

- Total LT Xenon Notes Payable are higher by \$1,000,000 for the additional notes from foundations.
- Total Equity has increased by \$3,264,858 from this time last year.
- Restricted Funds and Unrestricted Funds are higher when comparing the two-time frames. Yet, Investment in General Fixed Assets is lower than this same time last year primarily due to the finalization of the CASPAR Experiment Development agreement during the 2018 fiscal year. This amount of \$994,989 is no longer being carried as Improvements in Progress.
- In summary, Total Liabilities & Equity have increased by \$3,474,338.

### **Comparative Profit/Loss**

- Total Revenue for year-to-date May 2019 compared to year-to-date May 2018 has increased by \$7,372,163. DOE subcontract revenue has increased by 16.4%. This reflects the increase in the indirect cost rate as discussed earlier. State Revenue has increased by slightly over \$4,000,000 for the receipt of State Future Funds. Direct Labor has decreased when comparing the two-time frames because of the shift of some personnel (as discussed earlier) to indirect labor. Consequently, overhead has increased for this change. Direct Costs and Indirect Costs for year-to-date May 2019 compared to this time last year show a combined increase of \$2,777,231 (a 12.7% increase). This increase includes \$1,794,000 of xenon purchased for LBNL that is funded by Berkeley. Other Income is lower for the comparative time periods as last year SDSTA received funding for the Davis Bahcall education program early in the year as well as shared funding from Barrick for asbestos abatement at the Ellison property. Net Income/Loss for the comparative time periods shows an increase in income of \$4,307,473 (primarily due to the Future Funds receipt).

### **Available Resources**

- This report reflects our available cash/accounts receivable after noting the restricted cash balances in the Indemnification, Mine Closure, and Special Session Lab accounts, and funds held for Experiments—xenon purchase, experiment infrastructure upgrades and interest for investors. This report has been restructured to better reflect our available cash and (short term) accounts receivable as compared to our current liabilities including accrued payroll liabilities. It is important to include receivables as many of the items in accounts payable are invoiced on our current contract. \$3,673,583 is available after noting our current obligations. It is also important to note that our accrued payroll liabilities include accrued vacation and sick pay. Therefore, the report reflects our available resources compared to current obligations.

### **Operating Budget Analysis**

- This report is separated into three sections: SDSTA-funded activities, Federal & State funded activities and Indirect expenses that benefit various activities. Total operating expenses are under budget for May 2019 by \$197,640.
- Year-to-date figures are under budget by \$3,160,653. This Year-to-date underrun is partially due to the budget not being rebaselined with the shift of personnel to indirect until the month of October. The budget has been rebaselined as of October 2018—the start of the 2019 federal fiscal year.

### **Capital Expenditure Budget Analysis**

- Our current capital expenditure projects have been condensed and are listed from CAP2014-01—CAP2019-01 with various breaks in the numbering sequence. The additional project for the Maintenance Support Facility (funded by the \$4M Future Funds) was added this month. Total project dollars have increased to \$4,563,053 with the addition of \$2M to be expended this fiscal year on this new project. A small amount remains for the Sanford Lab Homestake Visitor Center project particularly for continuing to monitor the ground movement.
- Funding for the LZ Surface & Facility Upgrades and LZ Xenon Gas Purchase was secured from the GOED granting \$6,000,000. Loan documents have been executed for \$2,000,000 each from the South Dakota Community Foundation, the South Dakota State University Foundation and the University of South Dakota Foundation for xenon purchases. Approximately 140,000 liters of xenon are still to be received.
- In May we spent \$97,361 on our CAPEX projects with a budget for the month of \$100,500. Year-to-date we have spent \$1,986,525 on these projects.

## **Human Resources**

There are currently 146 full time employees and 18 temporary staff, primarily Emergency Response Team members. The number of temporary staff has increased by seven reflecting our summer intern program. Security Guard Alvin Burns and Property Maintenance Technician Steven Whiton retired on May 3. Infrastructure Technician Nathan Landers was terminated on May 15. Yates Shaft Foreman William Stratton passed away on May 13. A new Security Guard Taylor Knottnerus was hired on May 28 to fill one of the two open positions. Part time Communications Specialist Erin Broberg has now transitioned to full time. Positions are being recruited for the following: Laboratory Custodian, Procurement Specialist, Quality Control Specialist, Security Guard, Environment/Property Technician, Infrastructure Technician, Yates Shaft Foreman and an additional 24/7 Emergency Response Team (ERT) member.



**Ross Shaft Rehabilitation - Subcontract No. 630223**

**PO No. 645509—hoist motor testing**

**PO No. 645673—rock resistivity**

## **Ross Shaft Rehabilitation**

### Work Accomplishments

- Installation of brattice continued (panel No. 5 and No. 6 - sets 109-110, 112-113, 115-116, 128-129, 149-150 and panel No. 12 - sets 151 to 300).
- Site visits by KAJV-FRA were conducted for design and project purposes.

### Upcoming Activities

- Brattice installation will continue.
- Support KAJV.

## **Rock Resistivity**

### Work Accomplishments

- None.

### Upcoming Activities

- None.

## **Professional Staff Services - Subcontract No. 607915**

## **Long-Baseline Neutrino Facility (LBNF) and Deep Underground Neutrino Facility (DUNE)**

- A change in direction from refurbishment to replacement for the Ross Crusher resulted in many changes in both Pre-Excavation final design drawings, specifications and equipment. The Engineering team is working with KAJV and Arup to identify and capture the issues created by the change in crusher plans to include eliminating switchgear at the Ross Headframe, relocating the electric room at the Ross Headframe, relocating switchgear from the Headframe to the 4850L and revising how power will be fed to the mill reservoir and portal areas and to the new conveyor.
- The new Oro Hondo Variable Frequency Drive (VFD)/E-house was inspected at Border States Electric in Rapid City to reconcile equipment and critical spares against the invoice submitted to FRA. Planning is ongoing for installation this summer.
- The 4850L Ross Shaft Waste Dump Rehabilitation Project is progressing with completion of the dump collar foundation final concrete pour and pouring of the 4700L to 4850L raise back wall.
- The Ross Hoist Drives, Brakes and Clutches conceptual design was delivered and comments were generated and sent back to Siemag-Tecberg. The next phase is an ~60% submittal.

**LZ - Subcontract No. 7255146**

**LZ Operations - Subcontract No. 7355146**

**LZ Davis Infrastructure Construction - Subcontract No. 7351116**

## **Other Experiment Support LUX-ZEPLIN (LZ)**

- As part of the Cryogen Safety Committee, the Engineering team completed a walkthrough of the LZ liquid nitrogen handling system and provided comments. This is part of the Authority To Proceed process for circulation testing.
- The Liquid Nitrogen Storage Room was completed from a mechanical and electrical standpoint. Additional effort is required to pressure test the piping systems within the room. Also, the liquid nitrogen storage vessel and cryocooler were completed from an electrical and a mechanical standpoint.
- Cablework on the PMT array(s) has been ongoing. Damage during shipping was noted in cables and connectors throughout the assembly of the bottom array and were repaired.
- The first grid on the bottom array was installed and the reverse field region (RFR) is starting to be built. This is a cylinder of Teflon and titanium that is built on top of the bottom grid. It is sandwiched between the bottom grid and the cathode grid. This section is responsible for the stabilization of HV and giving electrons motion upwards to the extraction region.
- Cryo on Wheels (COW) tank was moved into the Davis Cavern and installed under platform. The test cryostat vacuum pumping station was installed and the cryostat vessels were leak checked.
- To address potential safety issues, shelving units with bins were erected in order to properly inventory misc. equipment and tools with in the Davis Cavern. This alleviated many tripping hazards and reduced the general clutter throughout the cavern.
- The LBNL Electrical Authority Having Jurisdiction was on-site and developed an updated equipment punch list.

## Indirect Funded Activities Status

## Contracts Status

### Department of Energy (DOE) subcontracts to SDSTA

#### Fermi Research Alliance

- Subcontract No. 629760 – Modification No. 20; revised square footage allocation
- Subcontract No. 630223 – Sub Award No. 28; additional funds (\$330,105) for washer weld inspections
- Purchase Order (PO) No. 649934 – Rev 1; additional funding for services not included in the original scope of work

#### Lawrence Berkeley National Laboratory

- Xenon – 10 cylinders delivered from Praxair.

### Summary of Contracts Awarded by SDSTA in May:

Contract No.	Contractor/Vendor	Type	Project
2019-04	Black Hills Disposal	New	Dumpster Services
2016-03	Black Hills Urgent Care	CO#6	HR Physicals, Immunizations

**Purchase Orders (POs):** 193 POs were issued in May totaling **\$618,435.97**.

**Warehouse Inventory:** Warehouse inventory on May 31, 2019 totaled **\$199,616.28**.

## Education and Outreach (E&O) Status

### Cultural and Diversity

- SDSTA Cultural Diversity Coordinator KC Russell met with the new SD Secretary for Tribal Relations David Flute. Secretary Flute has appointed a new Director of the Office of Indian Education, which has been moved from the Education Department, and plans are underway for an Indian Education Summit in September.

### K-12 Education and Outreach

#### Curriculum units

- Table 1 below lists the details for the 401 students who completed units in May. Work continues on the development of two new curriculum units.

**Table 1. Curriculum Units Completed – May 2019**

Unit	School	City	Grade or Course (high school)	Total No. of students
Ghost Particles (pilot)	Ipswich	Ipswich	5	32
	Lead-Deadwood	Deadwood	5	55
May the Force Be With You	St. Thomas More	Rapid City	6	68
The Search for Dark Matter	Hill City High	Hill City	Phys Sci, Physics	28
	Lead-Deadwood	Lead	Physics	22
Seismic Science	West Middle	Rapid City	8	106
Waterworks	St. Joseph's	Pierre	5	28
'We are Made of Starstuff'	Chamberlain High	Chamberlain	Chem / Phys	62
	<b>8 schools</b>		<b>8 teachers</b>	<b>401 students</b>

#### Classroom presentations

- Table 2 below lists details for the 31 presentations given by staff and contract teachers in May.

**Table 2. Classroom Presentations – May 2019**

School/City	Presenter	Grade(s)	No. of presentations	Total No. of students
Women in Science, Pierre (various schools)	PN	6-12	4	43
John Paul II / Mitchell	RA	K-6	8	129



Washington Elem / Huron	RA	4	8	207
Huron Middle / Huron	RA	8	2	57
Women in Science, Spearfish (Sturgis, Spearfish, Newcastle)	PN	6-8	3	66
Grandview Elem / Rapid City	JD	3	3	75
Hanson Schools / Alexandria	KG	4-5	3	60
<i>7 schools</i>			<i>31 programs</i>	<i>637 students</i>

*RA = Roxie Albrecht    JD = Julie Dahl    KG = Ken Graupman    PN = Peggy Norris*

**Field trips to Sanford Lab**

- Ten K-12 field trips took place in May for Knollwood (RC) and Newell elementary schools, Lead-Deadwood, Newcastle and Sturgis middle schools, the YES House from Gillette, WY, and Killdeer, ND and McIntosh high schools.

**Other K-12**

- In addition to the E&O presentations at the BHSU Women in Science Day, Communications Director Constance Walter gave presentations about Science Communication. Sanford Lab also had an exhibit table.
- E&O provided programming for the final Starbase field trip of the year (Whitewood) at the Sanford Lab Homestake Visitor Center (SLHVC).

**Professional Development (PD)**

- Final planning for our summer institute for returning teachers (Level 2) continues. Fifty-four teachers will attend the institute at BHSU on June 10-14.
- Planning also continues for three Level 1 institutes to take place in July in Rapid City, Pierre and Sioux Falls. The SD Department of Education has contracted with the team to present these institutes.

**Future Planning**

- A meeting took place in St. Paul, MN with the Science Museum of Minnesota’s IDEAL Center leadership team. The discussion informed planning for future E&O initiatives, diversity and equity work.

**Undergraduate**

- Seven interns arrived on site on May 20. After a few days of safety training and orientation tours, they are now fully integrated into their departments.

**Table 3. Total Impact – May 2019**

Group	Students						Educators			Public	
	Pre-K	K-5	6-8	9-12	Undergrad	Graduate	K-12 Educator	Univ. Faculty / Staff	Informal	Parents	General Public
<i>Field Trips / Onsite Activities</i>											
<b>McIntosh High</b>	0	0	0	18	0	0	1	0	0	0	1
<b>Killdeer, ND High</b>	0	0	0	4	0	0	1	0	0	0	0
<b>Newell Elem</b>	0	16	0	0	0	0	1	0	0	7	0
<b>Knollwood Elem</b>	0	78	0	0	0	0	4	0	0	2	2
<b>Sturgis Middle (x3)</b>	0	0	139	0	0	0	10	0	0	0	2
<b>Newcastle Middle</b>	0	0	87	0	0	0	10	0	0	0	0
<b>L-D Middle</b>	0	0	59	0	0	0	3	0	0	0	0
<b>Intern Orientation</b>	0	0	0	0	7	0	0	0	0	0	0
<b>YES House</b>	0	0	3	4	0	0	0	0	3	0	0
<b>Subtotal</b>	<b>0</b>	<b>94</b>	<b>288</b>	<b>26</b>	<b>7</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>3</b>	<b>9</b>	<b>5</b>

<i>Curriculum Units</i>											
<i>Subtotal</i>	<b>0</b>	<b>115</b>	<b>174</b>	<b>112</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<i>Assembly Presentations</i>											
<i>Subtotal</i>	<b>0</b>	<b>462</b>	<b>166</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<i>Other Offsite Activities</i>											
<b>Whitewood (SB)</b>	0	14	0	0	0	0	1	0	2	0	0
<b>WIS (BHSU)*</b>	0	0	80	0	0	0	0	0	0	0	0
<i>Subtotal</i>	<b>0</b>	<b>14</b>	<b>80</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>
<b>Total</b>	<b>0</b>	<b>685</b>	<b>708</b>	<b>147</b>	<b>7</b>	<b>0</b>	<b>39</b>	<b>0</b>	<b>5</b>	<b>9</b>	<b>5</b>
<b>GRAND TOTAL: 1,605 students, educators and members of the public</b>											

\* with Communications Department

## **Communications Status**

- Preparations continue for Neutrino Day activities and promotions.
- Communications is moving forward with the Artist-in-Residence (AiR) program; the Memorandum of Understanding (MOU) is in progress.
- An RFP is being developed to rebrand the headframes using SURF logos.
- Communications is developing multimedia pieces to accompany Deep Thoughts articles.
- The Communications intern Nick Hubbard began working in May.
- Communications is documenting construction and installation of LUX-ZEPLIN.
- Updates to the SLHVC exhibits are being discussed.
- Work on the Communications section of the Strategic Plan is going forward.
- An internal communications plan is being developed.
- Updates to the website and digital signage continue.
- Regular communications meetings with Fermilab and LBNF/DUNE are being attended.

## **Community Outreach/Media/Site Visits/Presentations/site visits**

- Deep Talks was held May 9 at SLHVC; 72 people attended.
- KOTA-TV completed and ran a seven-part series on Sanford Lab.
- Keloland Living filmed segments for three videos about Sanford Lab.
- Communications led site visits for Black Hills Energy and Black Hills Community Bank.
- Presentations were given to the Black Hills Energy Ambassadors in Rapid City, Yankton Interchange Women, the Great Plains Network Conference in Kansas City and Black Hills Area County Commissioners.
- Constance attended a meeting as part of the Black Hills Energy Citizen Advisory Council.
- Communications participated in the Lawrence County Emergency Preparedness Fair in Spearfish.

## **Upcoming Community Outreach/Media/Site Visits/Presentations/tours**

- Neutrino Day will take place on Saturday, July 13, in locations around Lead, South Dakota. South Dakota Public Broadcasting (SDPB) will broadcast live from underground on July 12.
- Communications will assist with site visits for the Artist-in Residence, Black Hills Energy, SD Ag and Rural Leadership, Graduate Women in Science and a community group.
- Communications will attend the Teacher of the Year banquet in Pierre on behalf of Sanford Lab.

## **Video, Web, Graphics**

- New features are being created and all experiment pages are being updated for the Sanford Lab website.
- Fresh content is being created weekly for all social media platforms.
- Albums in the Sanford Lab Photo Gallery may be viewed at: <http://pics.sanfordlab.org>.
- Stories for Deep Thoughts, updates to the website, general web maintenance, digital signage content; media assistance, and science collaborations and educational institutions assistance with photographic and information needs are ongoing.

The May Communications Photos are included as Appendix A.

## News coverage

Note: The Rapid City Journal and Black Hills Pioneer continue to re-run Deep Thoughts stories weekly.

- [Sanford Underground Research Lab Preparing Major Expansion](#), WNAX radio, May 21, 2019
- [Sanford Science Series Part 7: Into the future](#), by Nick Reagan and Kayleigh Schmidt, KOTA TV, May 20, 2019
- Sanford Science Series Part 6: [Award-winning water treatment plant](#), by Nick Reagan, May 13, 2019
- Sanford Science Series Part 5: [The Black Hills State University Underground Campus](#), by Nick Reagan, May 5, 2019
- [Sanford Science Series Part 3: CASPAR](#), by Nick Reagan and Kayleigh Schmidt, KOTA-TV, April 22, 2019

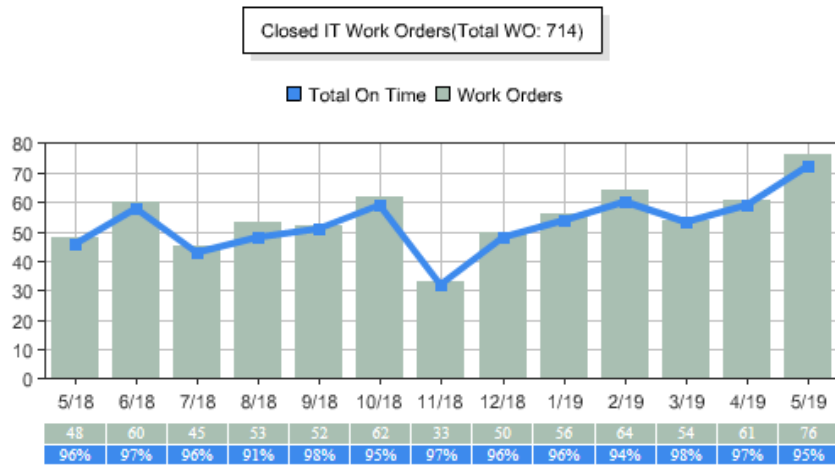
## Information Technology Status

### Projects

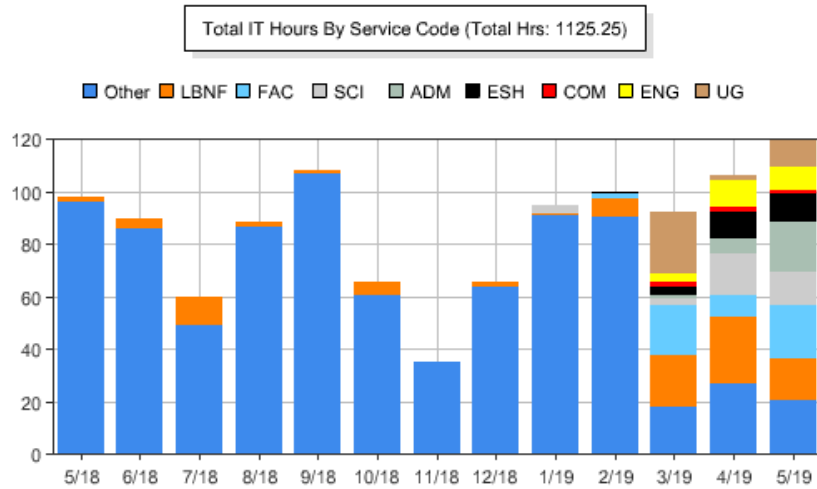
- SDSTA Network Administrator Mike Rechtenbaugh was onsite this month along with LZ's Network Administrator Steffen Luitz to implement two SURF 10GigE switches to satisfy LZ's 10Gig data requirements. These switches serve as the interface for the LZ experiment and will also become an upgrade to SURF's Core switch.
- Mike presented a network overview both present and future upgrades for the Campus Cyberinfrastructure (CC\*) visit. This was to provide insight on technology and timelines to align with this National Science Foundation's grants implementation for Black Hills State University (BHSU) and South Dakota School of Mines and Technology's (SDSM&T's) switch upgrades to support science. The CC\* program invests in coordinated campus-level networking and cyberinfrastructure improvements, innovation, integration and engineering for science applications and distributed research projects.
- IT worked with Fermilab IT in May to assist with bandwidth latency issues at the LBNF offices at the Ross.
- IT Manager Deb Meyer met with Fermilab South Dakota Services Division Head Patrick Weber to discuss logistics of providing WiFi for KAJV at the Ross during the construction phase prior to Fermilab / KAJV running fiber for their own WiFi.
- IT is designing a training module for the learning management system (LMS) on network acceptable use, security and passwords and phishing campaign awareness. It should be ready by late June or early July. This will be a required training module for all SDSTA employees.
- IT met with the ESH Department to assist with requests for hardware and software to enhance several areas within that department.

### Daily Activities

In addition to work order activity, IT monitors and reviews wireless and general network activity and counts, network hardware readiness, VPN Remote Access logs, Firewall logs, and establishes new VPN and DocuShare accounts for individuals and user groups, as requested.



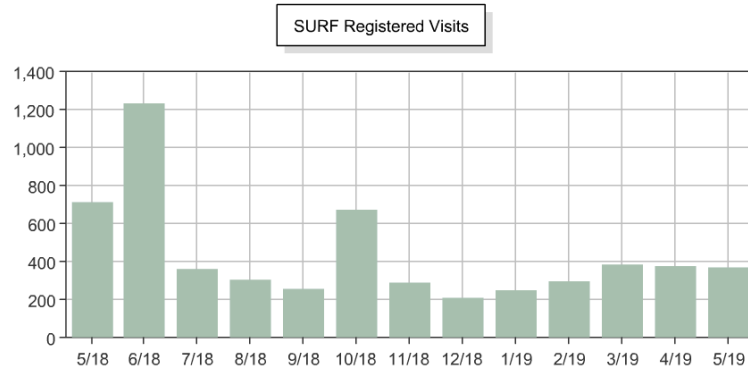
**Help Desk Activities (measured in closed Work Orders)**



**Help Desk Activities (measured in hours by department)**

## May Events

- In May, the Administrative Services team registered 72 visits and issued 73 access badges. New badges were mostly issued to KAJV subcontractors and LZ members. The May Visitor Log Report was submitted electronically to the SD Fusion Center/Homeland Security utilizing the SURF database reporting tool.



**Number of New Visitors, Users and Contractors On-Site**

Logistical and administrative support were provided for the following events and meetings in May:

- May: Various school field trips (D. Wolf); OSHA-30 Training for supervisors (P. Girtz)
- May 2: DOE HEP Site Visit (teleconference due to bad weather) (M. Headley)
- May 7-8: KeloLand Site Visit (C. Walter)
- May 8-9: LZ Xe Circulation Testing Review (M. Gilchriese)
- May 8: Rep. Borglum and DSU guests Site Visit (M. Headley)
- May 29: Black Hills Energy Leadership Site Visit (Group 1 of 2) (C. Walter)

#### **Administrative Activities**

- Monthly Researcher hours were tracked, and Science training records entered; packing slips were matched to invoices; purchase orders were invoiced and closed in ManagerPlus; digital display information was updated; monthly office supply order was received and sorted; scanning, filing and copyediting was completed for various departments; Bridge training courses were reviewed and new learners added to the system; assisted with a safety evacuation drill; monthly Safety Committee Meeting was conducted; safety training courses and first aid training were completed.
- Mandy continued to work with Communications Director Constance Walter and Executive Director Mike Headley to finalize guidelines to help determine whether site visits are warranted. A form is being developed to capture site visit requests and route the form for approval. The SoloPlus software used to program badges for access to SURF, specifically to set expiration dates on new access badges for LBNF/KAJV contractors, was discussed with the ESH Department. Discussions continued in regard to office space in the Administration and Education & Outreach Buildings as new employees are being hired.
- The Neutrino Day planning committee met in May to discuss logistics and review assignments/actions in Wrike, a project management tool. Volunteer registrations continued to be tracked. Neutrino Day will be held on July 13. The Administrative team finalized logistics and provided administrative support for the LZ Xenon Circulation Test Readiness Review held May 8-9 at Sanford Lab.
- May monthly progress reports for FRA and SDSTA were compiled, edited and distributed. Preparations began for the SDSTA annual board meeting and election of officers to be held June 20. Two new SDSTA policies were written for approval at the June meeting: Firearms, Explosives and Other Weapons Policy and Sexual Harassment Review Policy. The PPE Reimbursement Procedure was updated and approved by the Mike.

**Support Status  
(Non-SURF Services Funded Activities)**

## **Compact Accelerator System for Performing Astrophysical Research—CASPAR**

- Preparations continued for the gas target system, including vacuum tests and the construction of a detector stand.
- The National Science Foundation (NSF) Research Infrastructure 2 (RI-2) accelerator upgrade proposal was submitted, which includes a carbon-12 beam using a new special ion source.

## **Other Current Research Activities**

### Physics

- Other: A support letter was prepared for a xenon-based low-mass dark matter project.

### Geology

- Extensometers: Implementation documentation is being received from the Utah group planning to resume data collection from existing extensometers on the 3350L and 4850L.
- DTRC Mining: Documentation is under review regarding the core archive and log request.
- Other: A support letter was provided for a geothermal/stress project affiliated with KISMET/SIGMA-V (Principal Investigator with LLNL). Another mining group is also interested in core samples.

### Biology

- BHSU Biodiversity: Artificial surfaces including rock slabs, open plates of media, and closed plates with dilutions of cave silver in place at the 4850L 17 Ledge area were temporarily removed and inspected in the BHUC space (a faulty CO sensor shut down the air handling system so the laboratory room was not used).
- DeMMO (formerly NASA Astrobiology Institute): Sampling is planned on multiple levels for June 10-13.
- BuG ReMeDEE: Researchers are planning their next trip to SURF July 11-12 and will visit additional areas.

### Chemistry

- BHSU Water Sampling: Documentation was finalized mainly in conjunction with the BHSU multi-disciplinary REU program.

### Engineering

- Thermal Breakout: Updated documentation was prepared following a second reconnaissance trip that confirmed that the DUSEL overcore holes should work well. A subcontract for SURF to provide additional power is advancing.

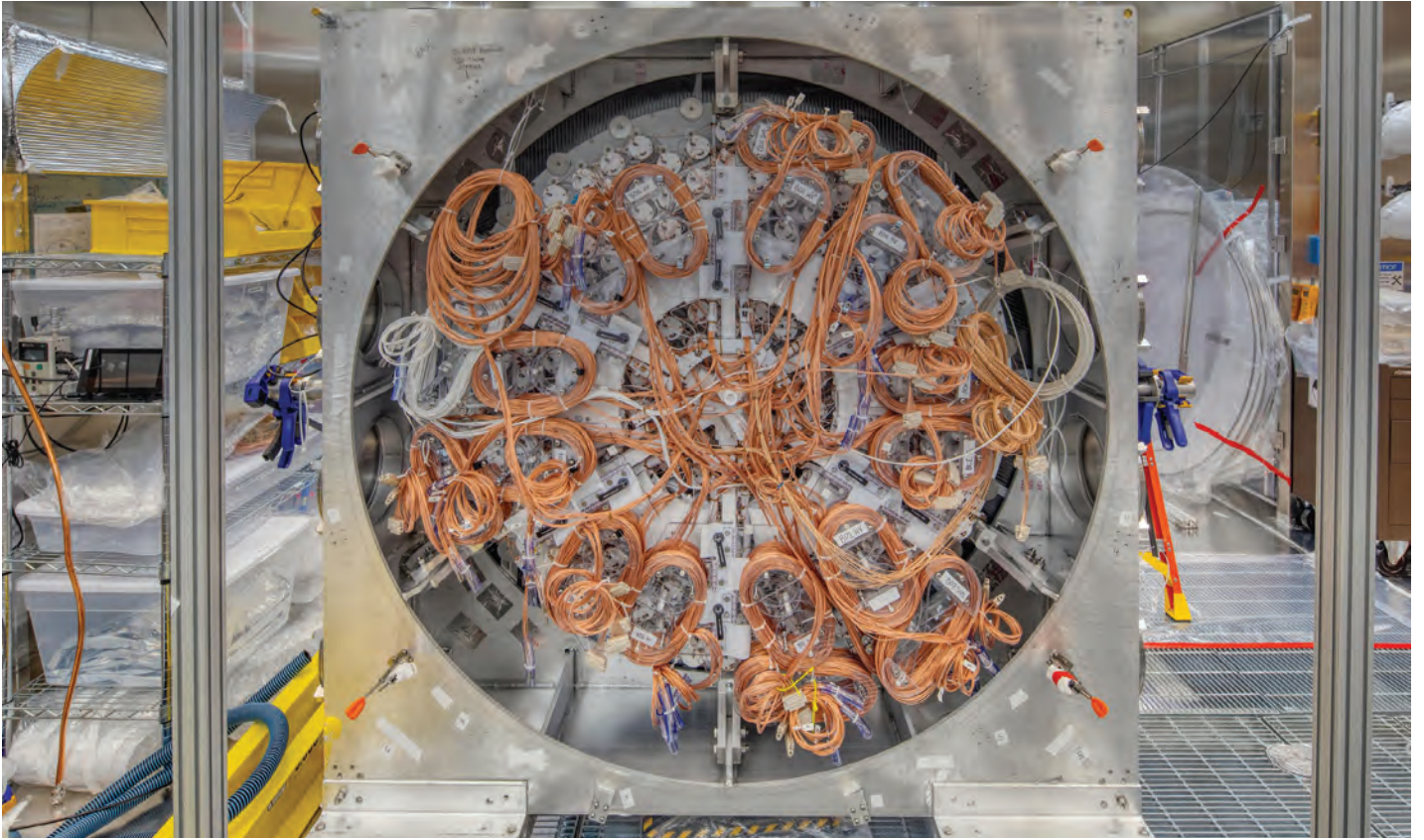
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## APPENDIX

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## Communications Department Photo Appendix A



*Top: The rear of one of the photo-multiplier tube (PMT) arrays for the LZ dark matter detector.*

*Center left: Derek Lucero assembles components for LZ in the Surface Assembly Laboratory.*

*Center right: A worker takes notes near a PMT array in the clean-room.*

*Bottom: A detailed shot of cables in the rear of a PMT array.*





## Communications Department Photo Appendix A

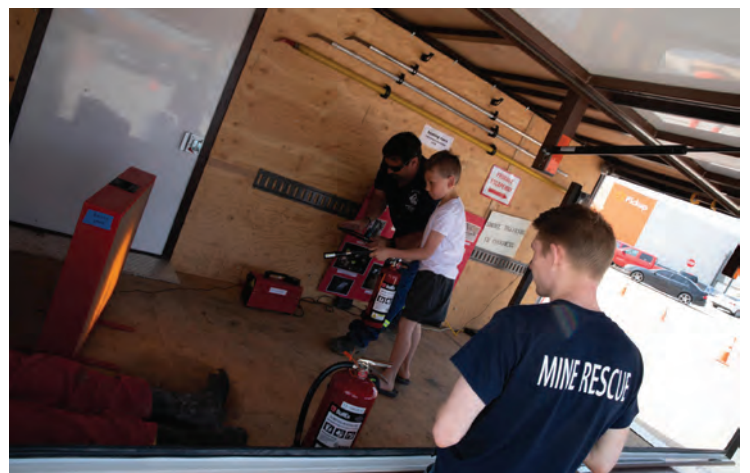


*Top: Machinist Randy Hughes returns to the underground machine shop to cut some electroformed copper.*

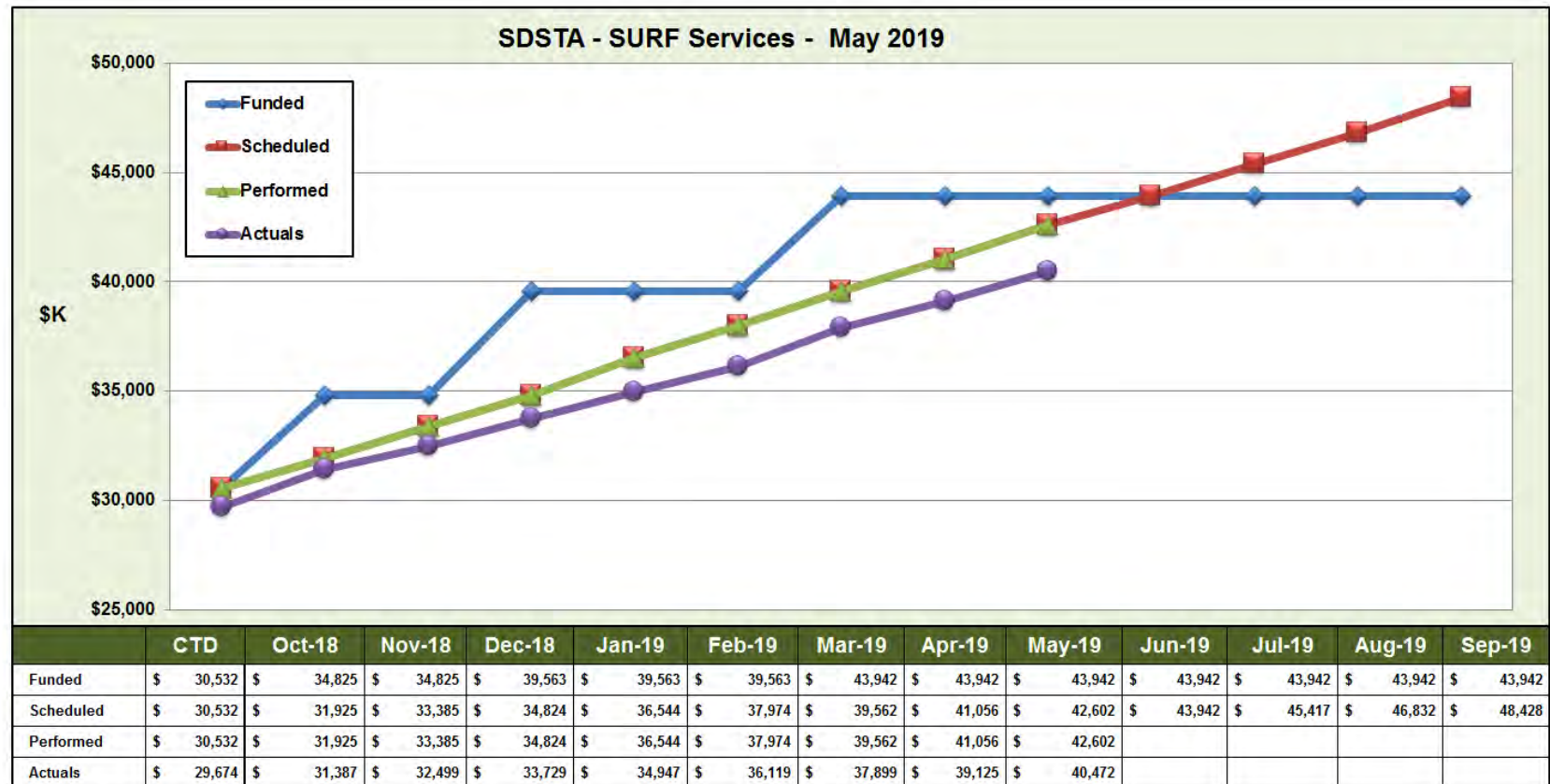
*Center Left: KELOLand reporter Kayleigh Schmidt interviews physicist Bonny Fleming underground as part of a series taped for KELOLand Living.*

*Center right: Employees from major Neutrino Day sponsor Black Hills Energy toured Sanford Lab.*

*Bottom: Sanford Lab Emergency Response Team Member trains a child on what to do in case of fire. The Sanford Lab set up the activity at the safety fair in Spearfish.*



**Finance & HR Department  
Appendix B**



**DOE SDSTA Fiscal Year 2019 SPA Curve  
May 2019**

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**Finance & HR Department  
Appendix C**

*FTE Report - All Fund Sources - FY19*

*Revised: June 10, 2019*

Source/WBS	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19
<b>DOE SURF SERVICES</b>	<b>64.35</b>	<b>70.35</b>	<b>70.35</b>	<b>70.85</b>	<b>75.85</b>	<b>75.85</b>	<b>75.85</b>	<b>76.85</b>	<b>76.85</b>	<b>76.85</b>	<b>76.85</b>	<b>76.85</b>
ERT	1.00	7.00	7.00	7.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Engineering	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Science	4.15	4.15	4.15	4.15	4.15	4.15	4.15	5.15	5.15	5.15	5.15	5.15
Operations												
Management	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Ross Shaft	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Yates Shaft	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
Hoist Operations	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Hoist Maintenance	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
Ventilation	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Underground Maintenance	7.50	7.50	7.50	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Water Treatment	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40
Dewatering	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Electrical Power Distribution	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Cyberinfrastructure	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Buildings and Grounds	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Equipment Maintenance	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40
Davis Campus	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
<b>ROSS SHAFT (DOE)</b>	<b>26.00</b>	<b>26.00</b>	<b>30.00</b>	<b>30.00</b>	<b>30.00</b>	<b>30.00</b>	<b>30.00</b>	<b>30.00</b>	<b>30.00</b>	<b>30.00</b>	<b>30.00</b>	<b>30.00</b>
<b>LZ Project</b>	<b>4.15</b>	<b>4.15</b>	<b>4.15</b>	<b>2.75</b>	<b>2.75</b>	<b>2.75</b>	<b>2.75</b>	<b>4.30</b>	<b>4.30</b>	<b>4.30</b>	<b>4.30</b>	<b>4.30</b>
<b>LZ Operations</b>	<b>2.10</b>	<b>2.10</b>	<b>2.10</b>	<b>2.10</b>	<b>2.10</b>	<b>2.10</b>	<b>2.10</b>	<b>2.10</b>	<b>2.40</b>	<b>2.40</b>	<b>2.40</b>	<b>2.40</b>
<b>LBNF / DUNE</b>	<b>2.60</b>	<b>2.60</b>	<b>2.60</b>	<b>2.60</b>	<b>2.60</b>	<b>2.60</b>	<b>2.60</b>	<b>2.60</b>	<b>2.60</b>	<b>2.60</b>	<b>2.60</b>	<b>2.60</b>
<b>INDIRECT</b>	<b>36.40</b>	<b>36.40</b>	<b>36.40</b>	<b>37.40</b>	<b>37.40</b>	<b>37.40</b>	<b>37.40</b>	<b>39.40</b>	<b>39.40</b>	<b>39.40</b>	<b>39.40</b>	<b>39.40</b>
<b>Grand Total</b>	<b>135.60</b>	<b>141.60</b>	<b>145.60</b>	<b>145.70</b>	<b>150.70</b>	<b>150.70</b>	<b>150.70</b>	<b>155.25</b>	<b>155.55</b>	<b>155.55</b>	<b>155.55</b>	<b>155.55</b>

**SDSTA Staffing Plan by Funding Source  
May 2019**

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# Financial Summaries—Appendix D

REPORT DATE 06/10/19

SOUTH DAKOTA SCIENCE & TECHNOLOGY

12:11

PAGE 0001

DIVISION: ALL

## BALANCE SHEET

### ASSETS

		AS OF 05/31/19
<b>CURRENT ASSETS</b>		
First Interstate Checking	\$	1,092,569.56
First Interstate Other		4,019.18
		-----
Total in Local Checking		1,096,588.74
SD Treas: Indemnification		7,500,000.00
SD Treas: Mine Closure		1,432,739.47
SD Treas: Operating		582,758.01
SD Treas: Sanford Gift #2		49,920.97
SD Treas: Spec Sess - Lab		3,927,954.00
SD Treas: Experiments		1,930,610.35
		-----
Total with SD Treasurer		15,423,982.80
Billed A/R		3,656,426.40
Unbilled A/R		501,582.79
Other A/R		36,392.98
Inventory - Supplies		2,320,588.01
Inventory - Warehouse		29,306.70
Other Current Assets		384,663.69
		-----
Total Current Assets		23,449,532.11
<b>FIXED ASSETS</b>		
Land, Underground & Other		12,633,473.13
Bldgs & Infrastructure		10,079,478.68
Improvements		62,661,312.62
Computer Equipment		447,815.17
Equipment & Fixtures		10,971,944.11
Accum Depr & Amort		(16,360,140.09)
		-----
Total Fixed Assets		80,433,883.62
<b>OTHER ASSETS</b>		
Work in Process		1,986,525.15
Pension Deferred Outflows		4,839,927.07
Xenon Purchased		6,513,900.39
		-----
Total Other Assets		13,340,352.61
<b>TOTAL ASSETS</b>	<b>\$</b>	<b>117,223,768.34</b>
		=====

DIVISION: ALL

BALANCE SHEET

LIABILITIES & EQUITY

AS OF  
05/31/19

CURRENT LIABILITIES

Accounts Payable	\$	658,357.95
Other Payables		5,641.00
		-----
Total Accounts Payable		663,998.95
Accrued Payroll Liab		1,642,564.33
		-----
Total Current Liabilities		2,306,563.28

OTHER LIABILITIES

LT Xenon Notes Payable		6,000,000.00
Pension Deferred Inflows		851,741.96
		-----
Total Other Liabilities		6,851,741.96

EQUITY

Restricted: Indemnificati		7,500,000.00
Restricted: Lab		3,927,954.00
Restricted: Mine Closure		1,432,739.47
Restricted: Sanford Gift2		49,920.97
Restricted: Pension		3,988,185.11
Restricted: Experim. Int.		1,831,064.00
		-----
Total Restricted Funds		18,729,863.55
Investment in Gen FA		80,433,883.62
Unrestricted Funds		8,901,715.93
		-----
Total Equity		108,065,463.10

TOTAL LIABILITIES & EQUITY

	\$	117,223,768.34
		=====

ALL

## STATEMENT OF INCOME

FOR THE PERIOD ENDING 05/31/19

	YR-TO-DATE
	-----
REVENUE	
DOE Subcontracts	\$ 23,675,829.21
NSF/NASA Subcontracts	37,600.84
State Revenue	4,004,092.42
Contributions & Donations	125,000.00
Checking Interest	2,945.99
Interest Income	133,988.82
	-----
TOTAL REVENUE	27,979,457.28
DIRECT COSTS	
Direct Labor	5,980,882.61
Board of Directors	10,373.65
Capital Outlay >\$5K	2,746,700.90
Contractual Svcs	1,773,526.15
Inventory	181,121.70
Supplies	1,035,521.56
Travel - Domestic	30,849.42
Travel - Foreign	16,234.01
Utilities	1,836,211.47
Other Direct Costs	29,536.89
Unallow/Unbill Costs	316,352.79
	-----
TOTAL DIRECT COSTS	13,957,311.15
INDIRECT COSTS	
Fringe Benefits	4,348,812.14
Overhead	6,317,349.43
	-----
TOTAL INDIRECT COSTS	10,666,161.57
	-----
GROSS PROFIT/LOSS ( )FROM OPERATIONS	3,355,984.56
	-----
OTHER INCOME	
Water Treatment	151,751.19
Miscellaneous Income	74,073.95
Other Operating Income	11,785.58
	-----
TOTAL OTHER INCOME	237,610.72
OTHER EXPENSES	
Loss (Gain) on Sale of FA	46,756.39
Reclass Incr Net Assets	(1,677,518.78)
	-----
TOTAL OTHER EXPENSES	(1,630,762.39)
	=====
NET INCOME/LOSS ( )	\$ 5,224,357.67
	=====

DIVISION: ALL

## COMPARATIVE BALANCE SHEET

## ASSETS

	AS OF 05/31/19	AS OF 05/31/18	\$ CHANGE	% CHANGE
<b>CURRENT ASSETS</b>				
First Interstate Checking	\$ 1,092,569.56	\$ 893,895.45	\$ 198,674.11	22.23%
First Interstate Other	4,019.18	10,771.06	(6,751.88)	-62.69%
Total in Local Checking	1,096,588.74	904,666.51	191,922.23	21.21%
SD Treas: Indemnification	7,500,000.00	7,500,000.00	-	0.00%
SD Treas: Mine Closure	1,432,739.47	1,415,782.17	16,957.30	1.20%
SD Treas: Operating	582,758.01	480,685.27	102,072.74	21.23%
SD Treas: Sanford Gift #2	49,920.97	322,567.97	(272,647.00)	-84.52%
SD Treas: Spec Sess - Lab	3,927,954.00	-	3,927,954.00	100.00%
SD Treas: Experiments	1,930,610.35	2,935,505.86	(1,004,895.51)	-34.23%
Total with SD Treasurer	15,423,982.80	12,654,541.27	2,769,441.53	21.88%
Billed A/R	3,656,426.40	2,744,384.24	912,042.16	33.23%
Unbilled A/R	501,582.79	125,597.98	375,984.81	299.36%
Other A/R	36,392.98	142,841.67	(106,448.69)	-74.52%
Inventory - Supplies	2,320,588.01	2,379,248.40	(58,660.39)	-2.47%
Inventory - Warehouse	29,306.70	30,566.09	(1,259.39)	-4.12%
Other Current Assets	384,663.69	423,165.61	(38,501.92)	-9.10%
Total Current Assets	23,449,532.11	19,405,011.77	4,044,520.34	20.84%
<b>FIXED ASSETS</b>				
Land, Underground & Other	12,633,473.13	12,633,473.13	-	0.00%
Bldgs & Infrastructure	10,079,478.68	10,079,478.68	-	0.00%
Improvements	62,661,312.62	63,427,334.26	(766,021.64)	-1.21%
Computer Equipment	447,815.17	431,565.17	16,250.00	3.77%
Equipment & Fixtures	10,971,944.11	10,805,396.09	166,548.02	1.54%
Accum Depr & Amort	(16,360,140.09)	(14,448,176.60)	(1,911,963.49)	13.23%
Total Fixed Assets	80,433,883.62	82,929,070.73	(2,495,187.11)	-3.01%
<b>OTHER ASSETS</b>				
Work in Process	1,986,525.15	2,200,262.17	(213,737.02)	-9.71%
Pension Deferred Outflows	4,839,927.07	4,174,730.00	665,197.07	15.93%
Xenon Purchased	6,513,900.39	5,040,356.11	1,473,544.28	29.23%
Total Other Assets	13,340,352.61	11,415,348.28	1,925,004.33	16.86%
<b>TOTAL ASSETS</b>	<b>\$ 117,223,768.34</b>	<b>\$ 113,749,430.78</b>	<b>\$ 3,474,337.56</b>	<b>3.05%</b>

DIVISION: ALL

## COMPARATIVE BALANCE SHEET

## LIABILITIES &amp; EQUITY

	AS OF 05/31/19	AS OF 05/31/18	\$ CHANGE	% CHANGE
<b>CURRENT LIABILITIES</b>				
Accounts Payable	\$ 658,357.95	\$ 1,122,679.30	(464,321.35)	-41.36%
Other Payables	5,641.00	3,437.06	2,203.94	64.12%
	-----	-----	-----	-----
Total Accounts Payable	663,998.95	1,126,116.36	(462,117.41)	-41.04%
Accrued Payroll Liab	1,642,564.33	1,124,516.45	518,047.88	46.07%
	-----	-----	-----	-----
Total Current Liabilities	2,306,563.28	2,250,632.81	55,930.47	2.49%
<b>OTHER LIABILITIES</b>				
LT Xenon Notes	6,000,000.00	5,000,000.00	1,000,000.00	20.00%
Pension Deferred Inflows	851,741.96	1,698,193.00	(846,451.04)	-49.84%
	-----	-----	-----	-----
Total Other Liabilities	6,851,741.96	6,698,193.00	153,548.96	2.29%
	-----	-----	-----	-----
<b>TOTAL LIABILITIES</b>	<b>9,158,305.24</b>	<b>8,948,825.81</b>	<b>209,479.43</b>	<b>2.34%</b>
<b>EQUITY</b>				
Restricted: Indemnificati	7,500,000.00	7,500,000.00	-	0.00%
Restricted: Lab	3,927,954.00	-	3,927,954.00	100.00%
Restricted: Mine Closure	1,432,739.47	1,415,782.17	16,957.30	1.20%
Restricted: Sanford Gift2	49,920.97	322,567.97	(272,647.00)	-84.52%
Restricted: Pension	3,988,185.11	2,476,537.00	1,511,648.11	61.04%
Restricted: Experim. Int.	1,831,064.00	2,873,584.00	(1,042,520.00)	-36.28%
	-----	-----	-----	-----
Total Restricted Funds	18,729,863.55	14,588,471.14	4,141,392.41	28.39%
Investment in Gen FA	80,433,883.62	82,929,070.73	(2,495,187.11)	-3.01%
Unrestricted Funds	8,901,715.93	7,283,063.10	1,618,652.83	22.22%
	-----	-----	-----	-----
<b>TOTAL EQUITY</b>	<b>108,065,463.10</b>	<b>104,800,604.97</b>	<b>3,264,858.13</b>	<b>3.12%</b>
	=====	=====	=====	=====
<b>TOTAL LIABILITIES &amp; EQUITY</b>	<b>\$ 117,223,768.34</b>	<b>\$ 113,749,430.78</b>	<b>\$ 3,474,337.56</b>	<b>3.05%</b>
	=====	=====	=====	=====

## COMPARATIVE STATEMENT OF INCOME

FOR THE PERIOD ENDING 05/31/19

	YEAR TO DATE	PRIOR YEAR TO DATE	\$ CHANGE	% CHANGE
<b>REVENUE</b>				
DOE Subcontracts	\$ 23,675,829.21	\$ 20,335,867.65	\$ 3,339,961.56	16.42%
NSF/NASA Subcontracts	37,600.84	27,466.19	10,134.65	36.90%
State Revenue	4,004,092.42	1,226.96	4,002,865.46	326242.54%
Contributions & Donations	125,000.00	125,000.00	-	0.00%
Checking Interest	2,945.99	1,519.00	1,426.99	93.94%
Interest Income	133,988.82	116,214.10	17,774.72	15.29%
<b>TOTAL REVENUE</b>	<b>27,979,457.28</b>	<b>20,607,293.90</b>	<b>7,372,163.38</b>	<b>35.77%</b>
<b>DIRECT COSTS</b>				
Direct Labor	5,980,882.61	6,125,514.91	(144,632.30)	-2.36%
ERT Labor	-	62,758.22	(62,758.22)	-100.00%
Board of Directors	10,373.65	7,269.17	3,104.48	42.71%
Capital Outlay >\$5K	2,746,700.90	475,753.33	2,270,947.57	477.34%
Contractual Svcs	1,773,526.15	3,492,492.72	(1,718,966.57)	-49.22%
Inventory	181,121.70	152,122.04	28,999.66	19.06%
Supplies	1,035,521.56	829,559.06	205,962.50	24.83%
Travel - Domestic	30,849.42	56,080.27	(25,230.85)	-44.99%
Travel - Foreign	16,234.01	17,967.38	(1,733.37)	-9.65%
Utilities	1,836,211.47	1,863,913.13	(27,701.66)	-1.49%
Other Direct Costs	29,536.89	165,063.56	(135,526.67)	-82.11%
Unallow/Unbill Costs	316,352.79	309,015.31	7,337.48	2.37%
<b>TOTAL DIRECT COSTS</b>	<b>13,957,311.15</b>	<b>13,557,509.10</b>	<b>399,802.05</b>	<b>2.95%</b>
<b>INDIRECT COSTS</b>				
Fringe Benefits	4,348,812.14	3,904,708.29	444,103.85	11.37%
Overhead	6,317,349.43	4,384,024.75	1,933,324.68	44.10%
<b>TOTAL INDIRECT COSTS</b>	<b>10,666,161.57</b>	<b>8,288,733.04</b>	<b>2,377,428.53</b>	<b>28.68%</b>
<b>GROSS PROFIT/LOSS ( )</b>	<b>3,355,984.56</b>	<b>(1,238,948.24)</b>	<b>4,594,932.80</b>	<b>517.81%</b>
<b>OTHER INCOME</b>				
Water Treatment	151,751.19	97,965.36	53,785.83	54.90%
Miscellaneous Income	74,073.95	306,632.94	(232,558.99)	-75.84%
Other Operating Income	11,785.58	7,567.54	4,218.04	55.74%
<b>TOTAL OTHER INCOME</b>	<b>237,610.72</b>	<b>412,165.84</b>	<b>(174,555.12)</b>	<b>-42.35%</b>
<b>OTHER EXPENSES</b>				
Loss (Gain) on Sale of FA	46,756.39	107,361.46	(60,605.07)	-56.45%
Reclass Incr Net Assets	(1,677,518.78)	(1,851,028.95)	173,510.17	-9.37%
<b>TOTAL OTHER EXPENSES</b>	<b>(1,630,762.39)</b>	<b>(1,743,667.49)</b>	<b>112,905.10</b>	<b>-6.48%</b>
<b>NET INCOME/LOSS ( )</b>	<b>\$ 5,224,357.67</b>	<b>\$ 916,885.09</b>	<b>\$ 4,307,472.58</b>	<b>469.79%</b>

**South Dakota Science & Technology Authority**  
**Available Resources**  
**5/31/2019**

Cash Total Checking	\$ 1,092,570
Cash With State Treasurer	<u>\$ 15,423,983</u>
Total Cash	\$ 16,516,553
Less: Restricted Funds	
Indemnification/Mine Closure/Special Session Lab	\$ (12,860,693)
Experiments (Xenon, Interest, Infrastructure)	<u>\$ (1,930,610)</u>
Total Cash Available for Infrastructure Upgrades and Authority Operations	\$ 1,725,250
Plus: Accounts Receivable Billed	\$ 3,656,426
Accounts Receivable Unbilled	\$ 501,583
Less: Current Liabilities (Accounts Payable & Accrued Payroll)	<u>\$ (2,209,675)</u>
(not including accts. pay. for Experiment funding)	
Available Cash	<u><u>\$ 3,673,583</u></u>

SDSTA Operating Budget Summary FY2019  
Actual vs Budget  
May 2019 & YTD

	May 2019	Budget	\$ Over/Under Budget	% of Budget	Actual YTD	YTD Budget	\$ Over/Under Budget	% of Budget	% Remaining
100%									
SDSTA (Authority) Direct Charges									
Board of Directors	\$23,491.00	\$19,900.00	-\$3,591.00	118.05%	\$220,306.00	\$218,900.00	-\$1,406.00	100.64%	-0.64%
Executive Office	\$21,999.00	\$8,399.00	-\$13,600.00	261.92%	\$134,566.00	\$100,389.00	-\$34,177.00	134.04%	-34.04%
Science Center E & O	\$937.00	\$1,000.00	\$63.00	93.7%	\$9,497.00	\$11,800.00	\$2,303.00	80.48%	19.52%
Science Liaison	\$60.00	\$0.00	-\$60.00	100.0%	\$796.00	\$0.00	-\$796.00	100.00%	100.00%
Subtotal	\$46,487.00	\$29,299.00	-\$17,188.00	158.66%	\$365,165.00	\$331,089.00	-\$34,076.00	110.29%	-10.29%
Federal/State Funding - Direct Charges									
Fermi P.O.#641665 Prof. Services	\$0.00	\$0.00	\$0.00	0.0%	\$89,959.00	\$90,472.00	\$513.00	99.43%	0.57%
Fermi P.O.#649934 Prof. Services	\$39,857.00	\$40,862.00	\$995.00	97.55%	\$326,628.00	\$327,828.00	-\$798.00	100.24%	-0.24%
Fermi C#629760 SURF Services	\$905,977.00	\$1,041,321.00	\$135,344.00	87.0%	\$9,467,954.00	\$11,232,808.00	\$1,764,854.00	84.29%	15.71%
Fermi C#630223 Ross Rehab	\$159,826.00	\$184,646.00	\$24,820.00	86.56%	\$2,123,651.00	\$3,141,447.00	\$1,017,796.00	67.60%	32.40%
Fermi C#654406 Ross Logist.Supp	\$133,539.00	\$165,094.00	\$31,555.00	80.89%	\$217,472.00	\$301,308.00	\$83,836.00	72.18%	27.82%
Fermi Misc. Contracts	\$0.00	\$0.00	\$0.00	0.0%	\$51,208.00	\$53,000.00	\$1,792.00	96.62%	3.38%
LBNL LUX/Zepplin C#7255146	\$87,512.00	\$94,554.00	\$7,042.00	92.55%	\$3,207,980.00	\$3,287,632.00	\$79,652.00	97.58%	2.42%
LBNL LZ Constr.C#7351116	\$0.00	\$0.00	\$0.00	0.0%	\$119,238.00	\$184,680.00	\$65,442.00	64.56%	35.44%
LBNL LZ Operations C#7355157	\$24,530.00	\$25,507.00	\$977.00	96.17%	\$193,560.00	\$220,098.00	\$26,538.00	87.94%	12.06%
LBNL SIGMA-V C#7371823	\$7,851.00	\$10,000.00	\$2,149.00	78.51%	\$79,904.00	\$127,983.00	\$48,079.00	62.43%	37.57%
MJD (Majorana) ORNL144149	\$1,955.00	\$2,600.00	\$645.00	75.19%	\$21,157.00	\$28,600.00	\$7,443.00	73.98%	26.02%
BHSU-UGCampus Gen.Serv.	\$0.00	\$200.00	\$200.00	0.0%	\$2,752.00	\$2,200.00	-\$552.00	125.09%	-25.09%
Sanf.Sci.Ed.Center - GOED Funded	\$0.00	\$33,333.00	\$33,333.00	0.0%	\$311,792.00	\$366,663.00	\$54,871.00	85.04%	14.96%
SDSM&Tech CASPAR Gen.Serv.	\$1,357.00	\$2,666.00	\$1,309.00	50.9%	\$25,286.00	\$29,231.00	\$3,945.00	86.50%	13.50%
* Kiewit/Alberici JV	\$0.00	\$0.00	\$0.00	0.0%	\$100.00	\$100.00	\$0.00	100.00%	0.00%
* Liberty Biosecurity LLC	\$0.00	\$0.00	\$0.00	0.0%	\$1,356.00	\$1,356.00	\$0.00	100.00%	0.00%
* Xilinx, Inc. P.O.#732495	\$211.00	\$300.00	\$89.00	70.33%	\$6,470.00	\$9,238.00	\$2,768.00	70.04%	29.96%
Subtotal	\$1,362,415.00	\$1,600,873.00	\$238,458.00	85.11%	\$16,248,465.00	\$19,404,644.00	\$3,156,179.00	83.73%	16.27%
Indirect Expenses									
Indirect Charges Personnel	\$469,574.00	\$485,107.00	\$15,533.00	96.80%	\$3,828,680.00	\$3,824,772.00	-\$3,908.00	100.10%	-0.10%
Indirect Charges Other	\$336,487.00	\$297,324.00	-\$39,163.00	113.17%	\$3,969,921.00	\$4,012,379.00	\$42,458.00	98.94%	1.06%
Subtotal	\$806,061.00	\$782,431.00	-\$23,630.00	103.02%	\$7,798,601.00	\$7,837,151.00	\$38,550.00	99.51%	0.49%
Totals	\$2,214,963.00	\$2,412,603.00	\$197,640.00	91.81%	\$24,412,231.00	\$27,572,884.00	\$3,160,653.00	88.54%	11.46%
* Private Corporations (Commercial Group)									



SDSTA CAPEX Budget Summary FY18/19  
 Actual vs Budget  
 May 2019 & YTD

<u>Budget Area</u>	<u>Actual Month</u>	<u>FY2019 Monthly Budget</u>	<u>\$ Over/Under Budget</u>	<u>% of Budget</u>	<u>Actual YTD</u>	<u>FY2019 YTD Budget</u>	<u>\$ Over/Under Budget</u>	<u>% of Budget</u>	<u>% Remaining</u>
									100.00%
Operational CAPEX	\$ 97,361.38	\$ 100,500.00	\$ 3,138.62	96.88%	\$ 1,986,525.15	\$ 4,563,053.00	\$ 2,576,527.85	43.54%	56.46%
TOTAL CAPEX	\$ 97,361.38	\$ 100,500.00	\$ 3,138.62	96.88%	\$ 1,986,525.15	\$ 4,563,053.00	\$ 2,576,527.85	43.54%	56.46%

SD Science & Technology Authority  
Operational CAPEX Budget  
YTD FY2019 Actual vs Budget

Project #	Project Description	May 2019 YTD	FY2019 Budget	\$ Over/UnderBudget	% of Budget	% Remaining
						100%
CAP2014-01	Sanford Visitor Center Sign/Display	\$ 60,998.34	\$ 5,400.00	\$ (55,598.34)	1129.60%	-1029.60%
CAP2016-02	LX Surface/UG Facility Upgrades	\$ -	\$ 153.00	\$ 153.00	0.00%	100.00%
CAP2016-03	LZ Xenon Gas	\$ 1,756,685.33	\$ 2,557,500.00	\$ 800,814.67	68.69%	31.31%
CAP2019-01	Maintenance Support Facility	\$168,841.48	\$ 2,000,000.00	\$ 1,831,158.52	8.44%	91.56%
	Totals	\$ 1,986,525.15	\$ 4,563,053.00	\$ 2,576,527.85	43.54%	56.46%

SD Science & Technology Authority  
Operational CAPEX Budget  
Monthly Actual vs Budget

Project #	Project Description	May-19	Budget	\$ Over/UnderBudget	% of Budget
CAP2014-01	Sanford Visitor Center Displays/Monitoring	\$ 92.93	\$ -	\$ (92.93)	0.00%
CAP2016-02	LX Surface/UG Facility Upgrades	\$ -	\$ -	\$ -	0.00%
CAP2016-03	LZ Xenon Gas	\$ 473.45	\$ 500.00	\$ 26.55	94.69%
CAP2019-01	Maintenance Support Facility	\$ 96,795.00	\$ 100,000.00	\$ 3,205.00	0.00%
	<b>Monthly Totals</b>	<b>\$ 97,361.38</b>	<b>\$ 100,500.00</b>	<b>\$ 3,138.62</b>	<b>96.88%</b>



**Executive Director's Report—Mr. Mike Headley**

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16A. Annual review of SDSTA Policies and Procedures

➤ Section 2

- Anti-Harassment Policy, *updated policy (third party review)*
- Firearms Policy, *new policy (protect SDSTA infrastructure, property owned by third parties located on SDSTA property and SDSTA and non-SDSTA personnel from damage, injury or death)*

16B. Board members to sign annual statements for 2019 affirming compliance with Financial Conflict of Interest, attached—return signed statements to Mandy Knight

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**Recommended Action:**

*Motion approve new and updated SDSTA policies as presented.*

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## FIREARMS, EXPLOSIVES AND WEAPONS POLICY

The purpose of the South Dakota Science and Technology Authority (SDSTA) Firearms, Explosives, and Other Weapons Policy is to protect SDSTA infrastructure, property owned by third parties but located on SDSTA property, and SDSTA and non-SDSTA personnel from damage, injury or death.

This policy applies to all stakeholders, including visitors, users, contractors, employees and agents of SDSTA.

### A. Findings

1. Pursuant to SDCL 1-16H-5, SDCL 1-16H-15, and other applicable law, the SDSTA Board of Directors has plenary authority to manage and regulate the real and personal property owned by it or otherwise under its control. The Board of Director's authority includes the power to establish the terms and conditions upon which persons may have access SDSTA-owned or controlled property.
2. There exists sensitive experiment-related and other high value hardware underground and on the surface of the Sanford Underground Research Facility (SURF) that could be significantly damaged or destroyed by an accidental or intentional discharge of a firearm.
3. There are from time-to-time significant quantities of explosives stored and/or in use at SURF. These explosives could be triggered by an accidental or intentional discharge of a firearm or the triggering of accidental or intentional explosion of other explosive materials.
4. The prohibition of weapons other than firearms and explosives will promote a safe environment for visitors, users, contractors, employees and agents of SDSTA.

### B. Definitions

1. Firearm—a pistol, rifle, shotgun or other device from which a projectile is discharged by an explosive. For the purposes of this policy, the term includes antique and non-functioning devices.
2. Explosive—a solid or liquid substance (or mixture of substances) which is in itself is capable by chemical reaction of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings. The term includes pyrotechnic substances even when they do not evolve gases. A pyrotechnic substance is a substance or mixture of substances designed to produce an effect by heat, light, sound, gas or smoke or a combination of these as the result of non-detonative self-sustaining exothermic chemical reactions. The term includes binary explosives in any quantity.
3. Other Weapons—any knife, bow and arrow, crossbow, nun chucks, brass knuckles or other device which is capable of causing injury or death, which is commonly considered to be intended for the purpose of self-defense or for causing injury or death, and which is not intended for any other purpose. The term “knife” does not include a workplace tool or a pocket knife with a blade less than 4-inches long.

### C. Prohibitions

Except as otherwise provided in this subsection D, no person other than law enforcement or military (including National Guard) personnel engaged in the performance of their duties as such or SDSTA security personnel authorized to do so by the Executive Director may use or possess a Firearm, Explosive, or Other Weapon anywhere on SDSTA-owned or controlled property. The prohibition on the use or possession of Explosives does not apply to qualified SDSTA, consultant or contractor personnel temporarily in control or possession of, or using, Explosives as a part of planned experimental, demolition or construction activities.

#### D. Consequences for Violations

1. SDSTA employees shall be subject to disciplinary action, up to and including termination, upon the first or any subsequent violation of this policy.
2. Non-SDSTA employees may be temporarily or permanently excluded from SDSTA property upon the first or any subsequent violation of this policy.



## SEXUAL HARASSMENT INVESTIGATION POLICY

The purpose of this policy is to establish a mechanism for third-party investigation of claims of sexual harassment and related alleged retaliatory adverse employment actions. This policy applies to the SDSTA Board of Directors, management and staff.

### **A. Definitions**

1. Board of Directors—The duly-appointed, acting and qualified Board of Directors of SDSTA, including ex officio members.
2. Management—The executive director, laboratory director and all other SDSTA employees with authority to make hiring and firing decisions or whose recommendations concerning hiring and firing decisions carry great weight.
3. Staff—All SDSTA employees other than management.
4. Adverse Employment Action—For the purposes of this policy only, an employer action that might dissuade a reasonable employee from making or supporting a charge of sexual harassment or related discrimination, including but not limited to a tangible change in working conditions that produces a material employment disadvantage, such as termination, cuts in pay or benefits, denial of promotion, refusal to hire, denial of job benefits, demotion, suspension and other changes that affect an employee's future career prospects, as well as circumstances amounting to a constructive discharge.
5. Sexual Harassment—see Employee Handbook, Anti-Harassment Policy.

### **B. Investigation of claims of harassment and retaliatory adverse employment actions**

1. All allegations of sexual harassment or retaliatory adverse employment actions shall be reported to the executive director. The executive director shall promptly forward any such report to the chairman of the Board and to general counsel. If the chairman of the Board or general counsel are implicated in the report, the report will not be forwarded to the person implicated. If the chairman of the Board is implicated, the report will be forwarded to a vice-chairman or other member of the Board of Directors not implicated in the report. If general counsel is implicated in the report, the chairman of the Board or other member of the Board of Directors will retain other legal counsel to act in the place of general counsel in connection with the report.
2. General counsel (or any other lawyer to whom the report is referred), in consultation with the chairman of the Board or other board member, shall retain the services of a consultant to investigate the report and promptly provide a written summary of its findings to general counsel and the chairman of the Board. After consultation, general counsel and the chairman of the Board shall provide a copy of the report to the executive director and solicit the executive director's recommendation concerning how to respond to the report. The recommendation is subject to approval, modification or rejection by the chairman of the Board.

3. Any proposed adverse employment action related to, or alleged to be related to, a claim of sexual harassment or discrimination may not be implemented until after the application of the procedures set forth in this policy. Any such adverse employment action implemented in violation of this section 3 is subject to reversal by the chairman of the Board.

Nothing in this policy is intended to limit or otherwise modify the authority of the Board of Directors.



## **Conflict of Interest Statement**

In accordance with Article VII of the South Dakota Science and Technology Authority (SDSTA) Financial Conflict of Interest Policy, this statement affirms that the undersigned:

- a. Has received a copy of the Financial Conflict of Interest Policy,
- b. Has read and understands the policy, and
- c. Has agreed to comply with the policy.

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*Signature*

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*Date*

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*Printed Name*



**Executive Session—Chairperson Casey Peterson**

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Meeting closed to public during executive session.

See recommended motion below.

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**Recommended Action:**

*Motion to enter executive session to discuss personnel matters and to consult with legal counsel concerning contractual and legal matters.*

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**Report from Executive Session—Chairperson Casey Peterson**

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See recommended motion below.

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**Recommended Action:**

*“The board consulted with legal counsel concerning contractual and legal matters. No action was taken.”*

*OR*

*...as discussed and stated otherwise*

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**Confirm date and time of next meeting—Chairperson Casey Peterson**

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The next board meeting will be held on Thursday, September 19, beginning at 8:00 AM (Mountain Time).

<b>2019 Quarterly Board Schedule</b>	
March 21, 2019	08:00 am (MT)
June 20, 2019	08:00 am (MT)
<b>September 19, 2019</b>	<b>08:00 am (MT)</b>
December 12, 2019	09:00 am (MT), lunch provided

*South Dakota Science and Technology Authority  
Sanford Underground Research Facility  
Education & Outreach Building (large conference room)  
630 E. Summit Street,  
Lead SD 57754  
Questions? Contact Mandy Knight, [mknight@sanfordlab.org](mailto:mknight@sanfordlab.org)  
Direct Line: 605.722.4022, Cell: 605.641.0475*

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**Recommended Action:**  
*Informational.*

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**Public Comments—Chairperson Casey Peterson**

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**Recommended Action:**

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**Board Comments—Chairperson Casey Peterson**

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1. Dr. Ani Aprahamian
2. Mr. Dana Dykhouse, Vice-Chairperson
3. Ms. Pat Lebrun, Secretary-Treasurer
4. Mr. Roger Musick
5. Mr. Casey Peterson, Chairperson
6. Dr. Jim Rankin, Ex-officio member
7. Mr. Ron Wheeler, Vice-Chairperson
8. Dr. Robert Wilson

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**Recommended Action:**

*None.*

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