

**South Dakota Science and Technology Authority Board of Directors**  
**Meeting Minutes**  
**Thursday, March 16, 2016**  
**Lead, South Dakota**

The Board of Directors of the South Dakota Science and Technology Authority (SDSTA) convened at 8:01 AM Mountain Time (MT) on Thursday, March 16, 2017 in the Education and Outreach (E&O) Conference Room at the South Dakota Science and Technology Authority, 630 East Summit Street, Lead, South Dakota.

**MEMBERS OF THE BOARD IN ATTENDANCE**

Mr. Paul Christen (by phone)  
Vice Chairperson Dana Dykhouse  
Secretary/Treasurer Patricia Lebrun (by phone)  
Chairperson Casey Peterson  
Vice Chairperson Ron Wheeler (by phone)  
Dr. Heather Wilson

**MEMBERS OF THE BOARD NOT IN ATTENDANCE**

Dr. Ani Aprahamian  
Dr. Robert Wilson

**SDSTA STAFF**

Ms. Billi Bierle, Sanford Lab Homestake Visitor Center (SLHVC) Director  
Mr. Tim Engel, Legal Counsel  
Ms. Nancy Geary, Chief Financial Officer  
Mr. Mike Headley, Executive Director  
Dr. Jaret Heise, Science Director  
Ms. Mandy Knight, Administrative Services Manager  
Mr. Bryce Pietzyk, Underground Access Director  
Mr. KC Russell, Cultural Diversity Coordinator  
Mr. Noel A. Schroeder, Environment, Safety and Health (ESH) Director  
Mr. Al Stratman, Engineering Director  
Ms. Constance Walter, Communications Director

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

Dr. June Apaza, Education and Outreach Director (BHSU)  
Dr. Ben Sayler, Sanford Science Education Center Co-Director  
Mr. Al Van Zee, Black Hills Pioneer Journalist

**ITEM 1. CALL TO ORDER**

Chairperson Casey Peterson called the meeting to order at 8:01 AM (MT). Roll call was held. Chairperson Peterson and Mr. Dana Dykhouse were present in person; Mr. Paul Christen, Ms. Patricia Lebrun and Mr. Ron Wheeler joined the meeting by telephone. Dr. Ani Aprahamian and Dr. Robert Wilson were absent. Dr. Heather Wilson arrived later. Chairperson Peterson asked guests to introduce themselves.

**ITEM 2. APPROVE AGENDA**

Chairperson Peterson asked for a motion to approve the agenda.

*Motion by Mr. Dykhouse and second by Mr. Christen to approve the agenda. By roll call vote, the motion passed unanimously.*

### **ITEM 3. APPROVE MINUTES**

Chairperson Peterson asked for comments, changes or corrections to the Minutes of the December 15 and February 24 meetings. Hearing none, a motion to approve the minutes was requested.

*Motion by Mr. Wheeler and second by Mr. Dykhouse to approve the Minutes of the December 15, 2016 and February 24, 2017 meetings as presented. By roll call vote, the motion passed unanimously.*

### **ITEM 4. CONFLICTS OF INTEREST DISCLOSURE**

SDSTA Legal Counsel Mr. Tim Engel reminded the SDSTA board that the State Board of Internal Control has recommended all state and state-related entities include a conflicts of interest disclosure as a matter of course on their agenda. Mr. Engel said it is not the same as the waiver that is the next agenda item. He then asked if any board member has a conflict of interest to disclose. Hearing none, Mr. Engel proceeded to the next agenda item.

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

Mr. Engel said SDCL CH. 3-23 is the conflicts of interest legislation for boards and commissions passed in 2016. He said it has been amended, which amendment will take effect July 1, 2017. The amendment will eliminate the need for the kind of waiver being requested today.

Mr. Engel said Dr. Heather Wilson had completed a waiver request form, and the form and the SDSM&T Grant Report have been included in the board packets. Mr. Engel reminded the Board that Dr. Heather Wilson takes a salary from the South Dakota School of Mines and Technology (SDSM&T) and that she is required by statute to disclose and request a waiver for research contracts entered into by SDSM&T.

On behalf of Dr. Heather Wilson, Mr. Engel requested that the board grant her request for a waiver.

*Motion by Mr. Dykhouse and second Mr. Christen to grant the waiver for Dr. Heather Wilson. By roll call vote, the motion passed unanimously.*

### **ITEM 6. STATE BOARD OF INTERNAL CONTROLS UPDATE**

Mr. Engel gave a brief update on the state Board of Internal Control. The Board is now focusing on true internal controls for contract and grant control. Responses to a request for proposal for an outside internal controls consultant have been received, but as of the February meeting, no contract had been awarded. He said the thought is for an outside consultant to study the Bureau of Finance and Management and make recommendations, and the state would then adapt those recommendations for use with other state agencies.

Mr. Engel said Mr. Terry Miller has been appointed as the state Internal Control Officer. Mr. Miller is an accountant and works for the South Dakota Bureau of Finance and Management.

### **ITEM 7. 2017 LEGISLATIVE UPDATE**

Mr. Engel said there was a great deal of legislation this year that was of interest to SDSTA and provided an overview on the 2017 Legislative Session bills. He began with House Bills (HB) and Senate Bills (SB) that did not pass or were withdrawn: HB 1075, HB 1089, HB 1128, HB 1144, HB 1166, HB 1192, HB 1198 and SB 152.

*Dr. Heather Wilson joined the meeting in person at 8:14am.*

House and Senate Bills that passed include: HB 1006 (will now require 72-business hours public meeting notice instead of 48-hour notice effective July 1, 2017); HB 1052, HB 1069, HB 1073 and SB 131, all relating to lobbying and gifts to public officials from lobbyists; and HB 1076 (government "Accountability Board"), HB 1068, SB 19, SB 54, SB 116 and SB 151 (relating to miscellaneous matters).

Mr. Engel also discussed HB 1170 at length and described how it will apply to SDSTA board members. This bill revises certain provisions regarding conflicts of interest for authority, board or commission members. He said the general rule now is that no board member may have an interest in or derive a direct benefit from a contract with the state agency which the board is attached (in SDSTA's case, GOED), with the state if it requires SDSTA board approval, or with a political subdivision subject to SDSTA's regulatory authority or control. This prohibition applies while a board member is in office and one year after. He said "direct benefit" and "interest" are defined differently now. "Direct benefit" means the board member or a person with whom the board member lives and commingles assets is a party to a contract, has 5% or more ownership interest in a party to the contract, acquires property under the contract or will receive any monetary gain or promotion. If the board member or a related person will receive a direct benefit, then the board member will need to ask for a waiver.

Mr. Engel said having an "Interest" in a contract means either the board member or spouse or other family member with whom the board member lives and co-mingles assets is either employed by the party to the contract or serves on the board of an entity that is a party to the contract and the person gets more than a per diem for serving on that board.

He said to get a waiver of the prohibition of direct benefits, a board member is required to provide full disclosure. Authorization is achieved in open session and included in the minutes and filed with the Auditor General and Attorney General. The waiver must be requested before the contract is signed or within 45 days after.

The board member is required to disclose an interest in a contract to the SDSTA board at the first regular board meeting after having learned of the interest. It would be recorded in the minutes and then filed with the Auditor General and Attorney General's office. The board member is only required to disclose it publically once a year; there is no approval or vote.

Mr. Engel said there is one more disclosure requirement that will affect some board members. At least once a year, board members must disclose an ownership interest of 5% or greater in an entity that receives grant money or otherwise contracts with the state or any political subdivision.

The existing law that is in effect today makes it a misdemeanor not to file a waiver. The amendments increase the penalties in certain circumstances.

Mr. Wheeler asked if he should disclose his existing contract with SDSTA as he had done so the first time and Mr. Engel said he should begin disclosing annually at the September meeting after the law takes effect July 1, 2017.

Dr. Heather Wilson asked to confirm if she will no longer be required to disclose after July 1, 2017 and Mr. Engel confirmed.

Mr. Engel explained SB 27 which creates a new felony crime of conflict of interest. This bill will apply to the SDSTA board. He said it will be a crime to derive a direct benefit from public funds in violation of the public trust (essentially, it would have to show a board member was doing something nefarious). He said to be safe if there is any doubt about a possible conflict of interest, disclose it.

In conclusion, Mr. Engel said there were many bills this session which could have affected SDSTA and/or the board, and asked if the board had any further questions. There were none.

## **ITEM 8. AUDIT COMMITTEE REPORT**

Ms. Lebrun said the board had discussed the Audit Report Fiscal Year Ended June 30, 2016 in detail at the December 15 meeting and said it is a clean report with no non-compliance and no discrepancies (no findings). She submitted the report for acceptance.

*Motion by Ms. Lebrun and second by Mr. Wheeler to accept the audit report fiscal year ended June 30, 2016 as presented. Motion passed unanimously.*

Chairperson Peterson said SDSTA Chief Financial Officer Ms. Nancy Geary and her staff have done a phenomenal job with the finances on a consistent basis and are to be commended.

## **ITEM 9. FINANCIAL REPORT**

Ms. Geary began her summary stating the receivables have increased for Fermilab and decreased for Lawrence Berkeley National Laboratory (LBNL) due to the contract transition last fall. She said SDSTA received \$1M from the South Dakota Community Foundation and \$1M from the South Dakota State University Foundation for xenon purchases in January. Also, the Dean Kurtz contract is moving along for the Surface Laboratory. SDSTA Executive Director Mr. Mike Headley said the tie-ins for the building will be completed in May and are on schedule. He said they are doing a great job.

Mr. Headley pointed out there is a substantial underrun with the Department of Energy (DOE) Operations funds. He said most of the underrun is based on the financial plan having the SURF Bridge contract finishing in December but that has been extended until June 2017; it is expected to be on plan at that time.

Also, Ms. Geary said the five-year contract is currently being reviewed by Fermilab. Mr. Headley answered questions about xenon purchases and prices and then continued with the next item on the agenda.

*Motion by Mr. Wheeler and second by Mr. Christen to accept the financial report as presented. Motion passed unanimously.*

## **ITEM 10. REPORT FROM THE EXECUTIVE DIRECTOR**

Mr. Headley discussed the SDSTA February Monthly Report beginning with the current safety performance and said things are going well; the SDSTA has only had one recordable injury.

He commented the Environment, Safety and Health Oversight Committee (ESHOC) held their review on site in December and since then, the ESH team and others are working on the recommendations made by ESHOC. It was noted the next ESHOC Review will be held in July. Mr. Headley said the SDSTA team has been looking at elements of the safety program that are working well and those that require additional attention. He said field observations have been working well and there is a pilot program at the Ross Shaft called 'Behavior-based Safety' that kicked off a few weeks ago. He said overall things are going great.

Mr. Headley said he attended meetings in Washington D.C. last week with Mr. Wheeler and Fermilab Director Dr. Nigel Lockyer. He said it was a good trip and the House and Senate support remain strong for Sanford Lab and the experiments. He said the continuing resolution is through April 28 at Fiscal Year (FY) 2016 levels but there is still an opportunity for a FY2017 appropriation.

Mr. Headley said LZ participated in three reviews with the last one held in January; construction is fully approved by DOE. He said the surface lab is on schedule and bidding for the underground work will begin in early summer.

In regard to the Long Baseline Neutrino Facility/Deep Underground Neutrino Experiment (LBNF/DUNE), Mr. Headley said LBNF plans are advancing. The Construction Management contract procurement process will conclude in early summer with a Construction Manager (CM) announcement expected in early June. SDSTA Engineering Director Mr. Al Stratman has been working with the SDSTA team on project plans called SURF reliability projects or site preparation projects. One example is the Tramway. Mr. Headley said the Tramway needs to be improved to support the pipe conveyor project but it is directly tied to the need for a budget to move forward.

Mr. Headley said he and LBNF Far-Site Conventional Facilities (FSCF) Project Manager Mr. Joshua Willhite gave updates on the lab and pipe conveyor system at an LBNF public meeting held on March 13 in Lead. He said approximately 100 people attended and it went well.

Mr. Headley said there has been focused effort to get the word out across the state about Sanford Lab. He, SDSTA Science Director Jaret Heise and SDSTA Communications Director Constance Walter traveled East River a few weeks ago and will do the same again in a few weeks to update the public on happenings at the Sanford Lab.

Mr. Headley said Sanford Lab Homestake Visitor Center (SLHVC) Executive Director Ms. Billi Bierle provided statistics relating to last year. The SLHVC hosted over 68,000 visitors, 100 buses and provided trolley tours to almost 6,000 people. Also, 68 groups used the SLHVC Classroom. He said strong goals are being set for this year and Ms. Bierle is doing a great job. Mr. Wheeler asked if the SLHVC was running in the black and Mr. Headley replied yes. He said this current calendar year, the VC is paying half of the Executive Director's salary and is starting to make the transition from the SDSTA paying her salary to the SLHVC paying all of it. Mr. Wheeler and Mr. Christen concurred that is great news.

Mr. Headley said Dean Kurtz Construction is working on the Radon Removal System building and it should be complete in another week.

Mr. Headley said the Ross Shaft Refurbishment contract is in place through end of September 2017. He said the bridge contract was extended through end of June 2017 and the 5-Year contract was submitted on February 15. SDSTA is fielding questions from Fermilab currently. Mr. Wheeler said he is impressed that the Ross Shaft is being completed on time and on budget and Mr. Headley concurred and said it was great to tell that story in Washington D.C. last week.

He said E&O Director Dr. June Apaza and her team continue to make great progress with the curriculum kits that are being distributed across the state. Mr. Headley said the numbers are impressive; between September 2015 and February 2017, 23,000 K-12 students have been served.

Mr. Headley said the Cultural Advisory Committee had a meeting on March 14 and Ms. Lebrun joined. He said the committee reinforced recommendations previously suggested and discussed continuing to put focus on hiring minorities including those in the Native American community. He said Ms. Walter is working with Cultural Diversity Coordinator Mr. KC Russell on developing a short 2 to 3-minute cultural video, which will be viewed alongside the SDSTA safety video. Mr. Headley then discussed additional cultural activities including tribal school visits, the SD Indian Education Summit and STARBASE. Ms. Lebrun said she thought it was a good meeting and was impressed with the quality and intensity of the meeting.

Mr. Headley said the monthly Deep Talks organized by SDSTA at the Visitor Center have been going well with a consistent crowd of approximately 60-75 people. The March 14 Pi Day event was a success.

Next, Mr. Headley introduced SDSTA Science Director Dr. Jaret Heise who gave a slide presentation on Science Integration. Dr. Heise provided an update on the Davis Campus—Large Underground Xenon (LUX) and MAJORANA DEMONSTRATOR (MJD). He also gave an update on the Ross Campus—Compact

Accelerator for Performing Astrophysical Research (CASPAR) and Black Hills State University Underground Campus (BHUC), including other users such as the Berkeley Low Background Counter (assays for first batch of 45 LZ photomultiplier tubes completed), University of South Dakota/Alabama (potential space identified for detector outside cleanroom, would need LN piping) and the South Dakota School of Mines & Technology (proposal submitted for hardware development to monitor surface contamination, collecting dust on witness plates in conjunction with cleanliness studies).

Mr. Wheeler asked how useful has it been for students to use the underground facility. Dr. Heise said BHSU and SDSM&T faculty are actively involved and Dr. Heather Wilson attested many students from SDSM&T are involved. Mr. Headley said the SDSTA should capture the number of faculty and students involved in research at the Sanford Lab because there is a good story developing.

Dr. Heise concluded with selected other research efforts and gave an update on the following: Conference on Science at SURF to be held May 13-15 at SDSM&T, SIGMA-V (project funded by DOE Enhanced Geothermal Systems based on kISMET-Permeability (k) and Induced Seismicity Management for Energy Technologies), Rock Melt, GEOX, NASA Astrobiology Institute and other biology on the different levels underground (800L, 1700L, 2000L, 4100L, 4850L).

Dr. Heather Wilson asked about SDSM&T involvement and progress with the Center for Disease Control (CDC) and National Institute for Occupational Health Administration (NIOSH). SDSTA ESH Director Mr. Noel Schroeder said, along with SDSM&T Mining Engineering Director Dr. Lance Roberts and SDSTA Underground Access Director Mr. Bryce Pietzyk, they have met with NIOSH. Dr. Heather Wilson said SDSM&T has been trying to get NIOSH to get a deep underground experiment station at Sanford Lab; Mr. Schroeder replied that they are awaiting a response from NIOSH to get the right people involved.

Mr. Headley then introduced Mr. Pietzyk who gave a presentation on major operations activities. Mr. Pietzyk provided an update on the Ross Shaft Rehabilitation (August 19, 2017 scheduled completion to the 5000L with 30 sets remaining); Yates Shaft (continued support of science and operations as well continue top-down maintenance below set 271); Underground Maintenance Crew (4850L ground Support—West Lab Drift planned completion September 2017 and East Lab Drift planned completion December 2017—2000L water inflow controls). Mr. Pietzyk said water inflow needs to be minimized so it does not impact science. He said the water inflow controls have been running for approximately a month and they have seen good results during this limited time. Mr. Headley said the work on Yates repairs are a few years solution, not 30 years. He said the refurbishment of the Yates is one of the major capital projects on the list that has been discussed with DOE. The next step within the next few years is to acquire funds for the Yates Shaft design work. Mr. Pietzyk then asked if there were further questions. There were none. Mr. Headley said this is important work and Mr. Pietzyk and his team are doing an amazing job.

*Motion by Mr. Dykhouse and second by Mr. Christen to accept the executive director's report. By roll call vote, the motion passed unanimously.*

## **ITEM 11. SDSTA POLICIES AND PROCEDURES**

Mr. Headley briefly discussed the following policy recommendations and said they had been reviewed by Mr. Engel.

The following policies were recommended for approval:

- Policy 3:12 Travel Approval—Employees Policy (*updated; to comply with Federal Travel Regulations and Fermi Research Alliance requirements*)

- Policy 4:8 Workers' Compensation Policy (*updated; changed department name "EHS" to "ESH" and updated the SD Department of Labor's name*)
- Policy 4:13 Inclement Weather Operations Policy (*updated; to include overtime hours*)

Mr. Headley said several Policies and Procedures in the Manual have been retired. He said between now and the June meeting, the policies, procedures and employee handbook will be consolidated.

*Motion by Mr. Wheeler and second by Ms. Lebrun to approve the new and updated policies as presented. By roll call vote, the motion passed unanimously.*

## **ITEM 12. APPROVAL OF SDSTA BUSINESS ADVISORY COUNCIL CHARTER**

Chairperson Peterson motion to table this item to no later than the December 14, 2017. He said it became apparent at the last meeting that board members need to become more informed about this concept. He said he would like to appoint a committee of three to explore it further.

*Motion by Mr. Dykhouse and second by Mr. Christen to table approval of the SDSTA Business Advisory Council Charter. By roll call vote, the motion passed unanimously.*

Chairperson Peterson then appointed a committee made up of Mr. Christen, Mr. Headley and Mr. Wheeler to study the business advisory council proposal and bring it back to the board before December. He said this could be delayed further if needed.

## **ITEM 13. EXECUTIVE SESSION**

*Motion by Mr. Dykhouse and second by Mr. Wheeler to enter executive session to discuss personnel matters and to consult with legal counsel concerning contractual matters and pending litigation. By roll call vote, the motion passed unanimously.*

*The board recessed at 9:58 AM for a break and Executive Session and reconvened at 10:43 AM.*

## **ITEM 14. REPORT FROM EXECUTIVE SESSION**

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

*Motion by Mr. Dykhouse and second by Mr. Wheeler to accept the Executive Session Report. Motion passed unanimously.*

## **ITEM 15. SELECT NOMINATING COMMITTEE**

Chairman Peterson said he had asked Dr. Aprahamian and Mr. Dykhouse to serve on the Nominating Committee and they agreed. He reminded the board that the annual election of officers will be held at the June meeting.

## **ITEM 16. CONFIRM DATE AND TIME OF NEXT MEETING**

Chairperson Peterson asked if there were any concerns with the board meeting scheduled for Thursday, June 22, 2017 at 8:00 A.M. (MT). There were none.

## **ITEM 17. BOARD COMMENTS**

Chairperson Peterson asked Dr. Heather Wilson to report on her job status and she said she is President of SDSM&T until confirmed by the Senate; a hearing will be perhaps scheduled next month.

*Mr. Christen rejoined the meeting by teleconference at 10:45 AM.*

Dr. Heather Wilson said SDSM&T is hosting the SURF Conference in May and she has asked Fermilab to co-host the event. She would like this to be an annual event and to host every other year in the Black Hills on deep underground science. Dr. Heather Wilson said SDSM&T and RESPEC are working

cooperatively on a deep underground borehole experiment funded by DOE. She said RESPEC has issued four contracts for initial work in the community; it is part of the waste storage and deep underground program at DOE. The second phase relates to science outreach and rather than set up a separate effort, SDSM&T's recommendation is to work with Sanford Lab because they are so well aligned. This would be DOE funded with additional effort for K-12 understanding deep underground science. Dr. Heather Wilson said this would add to what is already well established at Sanford Lab and expand it to more students. Long term if South Dakota is chosen, the science that would be able to be done through this is amazing; this is over a \$40M science project and she said she thinks it is a big deal.

Mr. Headley said Mr. Todd Kenner, president of RESPEC, and his group have already reached out to Sanford Lab. Dr. Apaza said they have met twice and are in the process of helping to write the E&O portion of the proposal.

Dr. Heather Wilson said NIOSH is the part of the Center for Disease Control (CDC) that does research on safety and health. She said there is an element of research for safety and health in mining and NIOSH does not have a place for deep underground occupational safety and health research. To attract other researchers and universities to Sanford Lab also, SDSM&T has put a proposal together to request establishing a station here. She said it could raise the national prominence of this site beyond just DUNE to mine safety and health, deep underground ventilation, deep underground communication systems, etc. She said this would get more researchers to think about Sanford Lab to accomplish science. She concluded that she and Dr. Roberts will set up a meeting with the CDC to get it moving. Chairperson Peterson and the board members thanked Dr. Heather Wilson for her continued effort helping the Sanford Lab.

Mr. Dykhouse thanked the staff for the continued outreach across the state and said he was impressed with the SLHVC numbers. He said a big part of the mission is to let the citizens of South Dakota know that their investment is paying off.

Ms. Lebrun said it was a good meeting and there is forward progress at every meeting and it is appreciated. She said the staff is doing a great job and thanked Mr. Headley for putting all this together.

Mr. Christen said this has been a very informative meeting, lots of things have been accomplished and congratulated the staff. He said the future looks bright and said he was amazed at the SLHVC numbers as well. He said the SDSTA has the board support for underground work for ongoing experiments and fundraising.

Mr. Wheeler said this is the first time he has not been to a regular board meeting in person and he apologized. He complimented the staff and said the Ross Shaft accomplishments have been outstanding. Lastly, he thanked the E&O staff for the great work and said he loved the fact that they are focusing on the right things.

Mr. Engel thanked the board for the opportunity and said he appreciates the work.

Mr. Headley thanked Administrative Services Manager Ms. Mandy Knight for logistics of the meeting and he said he enjoys the opportunity to tell the board about the great work the team is doing. He said this is an amazing group that makes it happen each day, does it safely and is making the entire operation look really good and ready for the future. He thanked the Board for advocating for the Sanford Lab.

Chairperson Peterson said it is a privilege to work with Sanford Lab. He shared a comment that a friend made and said his friend envied Chairperson Peterson because of his involvement in something that is interesting and different from his career as an accountant. Chairperson Peterson said it is a great opportunity to continue to understand the scientific research that is going on and appreciates the work being done.



## **ITEM 16. ADJOURN**

Chairperson Peterson asked if anyone had any other questions or comments and called for a motion to adjourn.

*Motion by Mr. Dykhouse and second by Mr. Christen to adjourn. Motion passed unanimously.*

**Meeting adjourned at 10:55 AM.**