SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY (A BUSINESS TYPE ENTERPRISE ACTIVITY COMPONENT UNIT OF THE STATE OF SOUTH DAKOTA)

ANNUAL FINANCIAL REPORT JUNE 30, 2017

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MANAGEMENT'S DISCUSSION AND ANALYSIS JUNE 30, 2017

This section of the South Dakota Science and Technology Authority's (Authority) annual financial report presents management's discussion and analysis of the Authority's financial performance during the fiscal year ended June 30, 2017 (FY 2017). This analysis should be read in conjunction with the financial statements and notes to the financial statements.

The Authority's financial statements include the operations of funds that the Authority has established to achieve its purpose of converting its acquired Homestake Mine property into an underground science and engineering laboratory. The property was donated to the Authority by Barrick Gold in May 2006.

The activity of the Authority is accounted for as a proprietary fund type. The Authority is a component unit of the State of South Dakota and its financial statements are included in the Comprehensive Annual Financial Report of the State of South Dakota.

Included in the financial statements presented is a current year comparison to prior year balance sheet summary, revenue and expense summary, and capital assets. Further reports reflect current year detailed statement of net position, statement of revenue, expense and changes in net position, cash flow, schedule of operating expenses, and schedule of expenditures of federal awards. Comparisons of current year to prior year are important to display increases and decreases in various elements of the financial reports for the Authority. Current year detailed reports provide significant detail for statement of net position, revenues, expenses and cash flows for the Authority.

MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED) JUNE 30, 2017

FINANCIAL HIGHLIGHTS:

- Total assets at year end decreased to \$110,994,820.
- Current Assets decreased by \$2,151,545, primarily due to the expenditure of funds from the cash accounts being held by the State Treasurer on behalf of the Authority. Accounts Receivable as of the June 30, 2017 statement is also lower due to receiving payments on various invoices earlier than usual.
- Capital Assets increased by \$117,873. Page 5 details the major capital asset additions and deletions.
 Furthermore, page 16 summarizes the changes in capital assets by major categories. Notable increases include the purchase of the Ellison Property which includes land, buildings, and infrastructure as well as additional increases to Improvements in Progress for the LUX/Zeplin facility upgrades. Deletions include various computer equipment that had reached end of life status.
- Net Pension Asset and Xenon Purchased are combined on our Statement of Net Position. Net Pension Asset decreased to zero. The State's retirement system is no longer fully funded. The actuarially accrued liability of the fund is more than the assets of the fund. Therefore, for fiscal year 2017 we have a Net Pension Liability. (GASB) standards allow entities to use a pension measurement date up to one year prior to the entities reporting period. Therefore, the Authority is using a June 30, 2016 pension measurement date for our fiscal year end June 30, 2017 statements. Loans from the South Dakota Community Foundation, University of South Dakota Foundation, and South Dakota State University Foundation have enabled the Authority to purchase xenon to be used in the future LZ experiment. As of June 2017, \$5,040,356 of xenon has been purchased. In summary, the Net Pension Asset and Xenon Purchased has increased by \$1,275,265.
- Deferred Outflows of Resources is also related to our retirement plan with (SDRS). The amounts recorded relate to our proportionate share of the differences between expected and actual experience in pension earnings along with the Authority's pension contributions made subsequent to June 30, 2016. The total Deferred Outflows of Resources equals \$4,174,730.
- Total liabilities at year end increased to \$9,434,801, primarily due to the additional liability created by the signing of additional loans with the University of South Dakota Foundation and the South Dakota State University Foundation for additional xenon purchases. \$1,000,000 was received from each foundation. These loans are eleven year, unsecured nonrecourse loans with 2.5% simple interest to be paid quarterly to the lender. The loans will be repaid at the end of the LZ experiment (approximately October 2026) from the sale proceeds of the xenon previously purchased. Net Pension Liability is recorded at \$1,698,193 for the Authority's share of the collective net pension liability. Last year's calculation showed the retirement system was 104% funded where this year it is only 96% funded.
- Deferred Inflows of Resources has been reduced to zero for fiscal year 2017. (GASB) 68 requires that the amount reported as deferred outflows and inflows as they relate to the net difference between the projected and actual earnings on pension plan investments should be netted for reporting purposes. The recorded amounts have been summarized with Deferred Outflows of Resources.
- Total restricted net position decreased to \$15,278,125, partially due to the expenditure of funds received from Mr. Sanford. Funds were expended on the purchase of the Ellison Property as authorized by the Sixth Amendment to the Homestake Gift Agreement. This additional surface property will provide storage and construction material laydown space for the Long-Baseline Neutrino Facility (LBNF) and the Deep Underground Neutrino Experiment (DUNE). Additionally, restricted net position decreased for funds related to pension benefits as well as experiment funding set aside for xenon procurement, the related interest payments for xenon procurement loans, and infrastructure upgrades.
- Unrestricted net position increased to \$5,676,524.
- Total net position at year end decreased to \$105,734,749.
- Charges for Services decreased slightly to \$150,969. Revenue from Homestake decreased due to a decrease in water being treated and discharged for Homestake.

MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED) JUNE 30, 2017

FINANCIAL HIGHLIGHTS (Continued)

- Operating Grants increased to \$25,690,909. The revenue received in this classification includes \$17,022,400 received from Fermi National Laboratory, \$8,326,020 from Lawrence Berkeley National Laboratory, and \$342,489 from the SD Governor's Office of Economic Development (GOED) and various smaller universities. As of fiscal year 2017 a larger portion of the Operating Grants funding was received from Fermi National Laboratory rather than Lawrence Berkeley National Laboratory as two contracts for operations support and the Ross Shaft Rehab were transferred to Fermi National Laboratory late in calendar year 2016.
- Capital Grants and Contributions decreased to zero (down \$2,282,782 from the prior year).
- Other Grants includes \$2,000,000 from GOED for xenon procurement and interest payment expenditures on loan agreements.
- Investment Earnings decreased to \$44,570 compared to \$337,182 in the previous year as average interest rates were lower than the previous year.
- Total Program Expenses for the Authority were \$28,755,946 which represents a decrease of 22.74% percent from the previous year. Last year's Program Expenses included the conveyance of the Sanford Lab Homestake Visitor Center to Homestake Visitor Center, Inc. as well as the Sanford Science Education Center project at Black Hills State University which resulted in \$7,344,210 of expense. Furthermore, last year included an additional \$2,500,000 which was repurposed from the Indemnification Fund for the Authority to provide initial capital and pay liability coverage expenses associated with a newly formed Captive Insurance Company. This year's expenses include just \$31,355 for additional small items conveyed to the Homestake Visitor Center, Inc. Also included in Total Program Expenses Operating Expenses which increased by \$1,475,128 to \$28,635,307. Of the total expenses in this category, the major expenses were personal services 47.8 percent, contractual services 35.3 percent, and supplies, materials, and other operating expenses 8.93 percent. The majority of the increase in Operating Expenses is a result of transferring the Ross Rehab costs to a subcontract with LBNL (federal funds through the Department of Energy) as of January, 2016. Fiscal year 2016 only included one half year of Ross Rehab expenses where fiscal year 2017 included a full year of expenses. Prior to January 2016, the costs were being covered by Sanford funds and State funds which were capitalized each year as Improvements in Progress.
- Net position decreased by \$725,449 for fiscal year 2017.

MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED) **JUNE 30, 2017**

FINANCIAL STATEMENT ELEMENTS:

NET POSITION

NET TOSITION				Dollar	Percent
	201	7	2016		
	201	/	2016	Change	Change
Current Assets	\$ 20,96	7,962 \$	23,119,507	\$ (2,151,545)	-9.31%
Capital Assets	\$ 20,90 84,98		84,868,629	117,873	0.14%
Net Pension Asset and Xenon Purchased	· ·		3,765,091	1,275,265	33.87%
Total Assets	110,99		111,753,227	(758,407)	-0.68%
Total Assets	110,77	1,020	111,733,227	(730,407)	-0.0670
Pension Related Deferred Outflows	4,17	4,730	4,129,426	45,304	1.10%
Net Pension Liability	1,69	8,193	-	1,698,193	100.00%
Long-Term Liabilities Outstanding	4,51	2,117	2,602,661	1,909,456	73.37%
Other Liabilities	3,22	4,491	3,634,992	(410,501)	-11.29%
Total Liabilities		4,801	6,237,653	3,197,148	51.26%
Pension Related Deferred Inflows		-	3,184,802	(3,184,802)	-100.00%
Net Position:					
Net Investment in Capital Assets	84,78	0.100	84,524,475	255,625	0.30%
Restricted	15,27		18,208,604	(2,930,479)	-16.09%
Unrestricted		6,524	3,727,119	1,949,405	52.30%
Total Net Position	\$ 105,73		106,460,198	\$ (725,449)	-0.68%
	+ ===,:=			+ (1-2,132)	
CHANGE IN NET POSITION					
				Dollar	Percent
	201	7	2016	Change	Change
Revenues					
Program Revenues:					
Charges for Services	\$ 15	0,969 \$	247,502	\$ (96,533)	-39.00%
Operating Grants	25,69	*	24,889,116	801,793	3.22%
Miscellaneous		4,049	72,291	71,758	99.26%
Capital Grants and Contributions		-	2,282,782	(2,282,782)	-100.00%
Other Grant Revenue	2,00	0,000	2,000,000	-	0.00%
General Revenues:	_,,,,	-,	_,,,,,,,,		
Investment Earnings	4	4,570	337,182	(292,612)	-86.78%
Total Revenue	28,03	/	29,828,873	(1,798,376)	-6.03%
D	·				
Program Expenses:	20.75	5 046	27 220 226	(9.464.390)	22.740/
Science and Technology Authority	28,75		37,220,226	(8,464,280)	-22.74%
Total Expense	28,75	3,940	37,220,226	(8,464,280)	-22.74%
Change in Net Position	(72	5,449)	(7,391,353)	6,665,905	-90.19%
Net Position-Beginning	106,46	0,198	113,851,551	(7,391,354)	-6.49%
Net Position-Ending	\$ 105,73	4,749 \$	106,460,198	\$ (725,449)	-0.68%
	•			<u> </u>	

By June 30, 2017, the Authority had invested \$84,986,502 in a broad range of capital assets, including computer equipment, land, buildings, improvements to infrastructure and the underground, and various machinery and equipment. \$20,551,152 of this \$84,986,502 (approximately 24% of this total value) was donated by Barrick Gold. This amount represents a net decrease (including additions and deductions) of \$117,873, or .14 percent, over the last year.

MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED) JUNE 30, 2017

CAPITAL ASSETS (Net of Depreciation)

	 2017	2016	Change
Improvements Underground Buildings Computer Equipment Equipment Construction in Progress Land Infrastructure Furniture Archive Material Auto	\$ 31,043,734 17,936,955 5,751,476 124,464 6,714,080 19,797,453 1,814,136 1,665,601 29,961 70,000 38,641	\$ 31,977,971 17,767,955 5,615,699 76,685 7,056,727 19,258,934 1,579,298 1,408,819 34,951 70,000 21,590	\$ (934,237) 169,000 135,777 47,779 (342,647) 538,519 234,838 256,782 (4,990)
Total Capital Assets	\$ 84,986,502	\$ 84,868,629	\$ (117,873)
This year's major capital asset additions and deletions in Purchased Capital Assets: Ellison Property Ellison Buildings Chevy 2011 3500 Stake Bed Truck Snow Plow Milliken Plug Valves McCrometer MagFlo Meter Radon Removal System Atlas Copco Air Compressor and Air Dryer RO Water System FCU-1 Fan Computer Equipment - Router, Backup Servers, Firewa Infrastructure Additions:	u.		\$ 234,838 282,000 22,657 6,594 15,777 6,980 421,974 33,725 49,328 7,557 79,473
Ellison Gravel and Paved Road			38,951
Water Inflow Phase I and Pipe Fusion Improvements (Current Year Additions):			261,669
Davis Campus Insulation			45,637
Yates Tunnel Improvements Improvements in Progress (Current Year Additions):			169,000
CASPAR Experiment Development			76,664
Ellison Asbestos Assess./Abatement			26,379
LUX/Zeplin Facility Upgrades Computer Equipment (Current Year Deletions)			823,146
Router, Backup Servers, Firewalls			106,106

MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED) JUNE 30, 2017

LONG-TERM DEBT

At the year-end, the Authority had \$4,512,117 in other long-term obligations. This is an increase of 73.37 percent as shown below.

			Total Dollar	Total Percentage
	2017	2016	Change	Change
	 2017	2010	Change	Change
Compensated Absences	\$ 495,921	\$ 443,101	\$ 52,820	11.92%
Capital Acquisition Lease	16,196	159,560	(143,364)	-89.85%
Xenon Notes Payable	4,000,000	2,000,000	2,000,000	100.00%
Total Long-Term Debt	4,512,117	2,602,661	1,909,456	73.37%

(1) The Authority is liable for the accrued vacation leave payable to all full-time employees. In addition, the Authority is liable for a portion of the earned sick leave of employees who have been employed for seven consecutive years. The increase is due to an increase in the corresponding amount of leave accumulated and outstanding at the end of the year for various employees. Included in the increase is the xenon notes payable to South Dakota Community Foundation, University of South Dakota Foundation, and South Dakota State University Foundation. Note (4) Long-Term Debt in the Notes to Financial Statements on page 17 details compensated absences, capital lease and the xenon note payable.

ECONOMIC FACTORS

- A report released from the Particle Physics Project Prioritization Panel (P5) in May 2014, outlined the 10-year strategic plan for high-energy physics in the United States. The report provides strong support for science programs envisioned for the Sanford Underground Research Facility (SURF) including research into neutrinos and dark matter, both of which are being researched at Sanford Lab. This panel formally advises both the DOE Office of Science and the National Science Foundation (NSF) on support for physics. We expect this report to play a key role in the federal government funding process for years to come. The Authority is better secured to receive continued funding for Operations in the future.
- The Authority's Board of Directors approved a capital budget for fiscal year 2017 of \$6,872,095 towards the experiment development for the Compact Accelerator System for Performing Astrophysical Research (CASPAR), as well as xenon procurement for the LZ experiment and upgrades to surface and underground facilities for the future G2-LZ (Generation 2 LUX-Zeplin) experiment. A contract with Dean Kurtz Construction was entered into in August 2016 for \$789,466 for upgrades to the surface science lab and the construction of a new radon removal building. With additional change orders, the contract amount was increased to \$843,654. Both projects were substantially completed in fiscal year 2017. Additional projects included the purchase of the Ellison property and Ellison asbestos abatement. Actual expenditures for the year totaled \$5,478,779. Actual expenses were lower than budgeted as not all projects are complete. Funding for the balance of these projects had been designated primarily from the Sanford funds including a portion of Gift No. 2. Funding for xenon procurement and the upgrades for the LZ experiment was secured with the signing of Letter Agreement #1586 in August 2015 with the Governor's Office of Economic Development (GOED) and through separate funding from Foundations. The total funding of \$6,000,000 has been received from (GOED) as well as \$4,000,000 from the Foundations. The final \$2,000,000 from Foundations will be received in 2018.

MANAGEMENT'S DISCUSSION AND ANALYSIS (CONTINUED) JUNE 30, 2017

ECONOMIC FACTORS (Continued)

- The operations contract with Lawrence Berkeley National Laboratory (LBNL) has transitioned to Fermi National Accelerator Laboratory (FNAL) as of October, 2016. With various modifications to Subcontract No. 629760 we currently have a budget of \$14,748,459 to manage and operate the facility through September 30, 2017. funding. Actual expenditures were \$12,577,323 through August 2017. Negotiations are underway to extend this contract through June 2018 with additional funding until we are able to negotiate a long-term contract with (FNAL).
- Further funding was received in fiscal year 2017 through (LBNL) in support of various small projects including the LUX (Large Underground Xenon) experiment. This award reimbursed the Authority for expenses incurred in support of the LUX for various materials and supplies as well as a percentage of the salaries of the Design Team members, for their project management skills essential to the work being performed. Other small subcontracts supplied further funding to the Authority. Included was support for the G2-LZ (Generation 2 LUX-Zeplin) investigations. Additional funding was received through LBNL for the Ross Shaft rehabilitation project as well as another small drilling project labeled kISMET. As of mid-December, 2016 the Ross Shaft rehabilitation project transitioned to Fermi National Accelerator Laboratory (FNAL) with the signing of Subcontract No. 630223. This funding will continue with (FNAL) until the project is complete.
- In late 2012, the DOE approved the Long Baseline Neutrino Experiment (LBNE) to proceed with preliminary designs to construct a large detector at SURF. In October 2014, the United States along with international partners agreed that the Sanford Lab was to remain the host for the LBNE related detectors. After further meetings, the LBNE collaboration officially dissolved and transferred all responsibilities to a new collaboration referred to as the Long Baseline Neutrino Facility (LBNF) consisting of United States and International support. The LBNF and the associated Deep Underground Neutrino Experiment (DUNE) will send neutrinos through the earth from Fermilab in Batavia, Illinois to SURF in Lead, SD. More recent developments (September 2016) involve the DOE formally approving plans for construction of the first two large underground caverns at SURF for DUNE. The first step of installing the systems to transport hundreds of thousands of tons of rock to the surface will begin in 2017. The excavation for the two caverns to house the neutrino detectors and related utilities is expected to begin in the fall of 2018. Contracts have been executed with Fermi National Accelerator Laboratory (FNAL) for these efforts. Funds were received for professional engineering management services for design and construction. Other contracts added support for Phase 2 - Geotechnical Exploration for LBNE. Additional support was received for Excavation Preliminary and Final Design, Building/Site Infrastructure, as well as funding for a tramway excavation, pipe conveyor support, and surface rock handling through final design. DOE support for professional engineering management services continues into fiscal year 2017 for the LBNF project but the large Excavation - Final Design and Building/Site Infrastructure contracts will be held directly by (FNAL) with the design firm. Thus, these design contracts have come to an end for the Authority.
- Additional funding was received during the fiscal year from various institutions including Oak Ridge National
 Laboratory, Northwestern University, South Dakota Schools of Mines & Technology, and Black Hills State
 University. Funds were received at SURF to support the Majorana experiment located at the 4850-foot level
 Davis Campus, as well as various other experiments on the underground levels. Support continues in fiscal year
 2018 from these various university except Northwestern University that has completed their project.
- A Memorandum of Understanding (MOU) was signed in November 2014 between the Authority and a commercial organization Xilinx, Inc. to establish an experiment located near the Davis Campus. Their testing measures failure rates and modes in electronic chips. We are charging them for lab space, experiment access fees, and SURF scientific support. This agreement will continue into fiscal year 2018.

MANAGEMENT'S DISCUSSION AND ANALYSIS (CONCLUDED) JUNE 30, 2017

ECONOMIC FACTORS (Continued)

- The Authority's fiscal year 2018 capital budget provides for spending \$4,677,160. Projects include concluding the (CASPAR) experiment development, finalizing the Authority's support for the surface and underground upgrades for the future G2-LZ (Generation 2 LUX-Zeplin) experiment that will be located in the Davis Campus, procurement of xenon for the LZ experiment, as well as asbestos abatement for the newly acquired Ellison property. Funding for the LZ projects will be facilitated through a letter agreement with the Governor's Office of Economic Development (GOED) for \$6,000,000 along with loan agreements for \$6,000,000 from state foundations. Agreements have been signed with the South Dakota Community Foundation, South Dakota State University Foundation, and University of South Dakota Foundation for \$2,000,000 each to be used towards the purchase of xenon. The Authority's Board of Directors also approved a budget of \$537,922 in favor of Authority supported activities.
- A Letter Agreement dated February 24, 2014 between the Authority and Black Hills State University (BHSU) provides up to \$300,000 per year for three years from the Authority to BHSU to administer the Sanford Science Education Center. Matching funds of \$150,000 per year by BHSU is documented. An amended agreement dated June 6, 2017 commits an additional \$275,000 toward education and outreach priorities for the period July 2017 June 2018. Funding for this agreement originated from a Letter Agreement #1524 between the SD Governor's Office of Economic Development (GOED) and the Authority. The full period of performance extends from June 2014 through May 2017. The first \$300,000 from the Governor's office was received in September 2014 and was extended to BHSU on a reimbursement schedule. Years two and three funding of \$300,000 and \$250,000 were received from GOED. The balance of year three funding of \$50,000 was received in June of 2017. Additional support of \$125,000 per year for four years for education programs was received from Great Plains Education Foundation. Funding will be received upon sending documented support of achievements.
- The Authority is in compliance with all legal and environmental regulations.

CONTACTING THE AUTHORITY'S FINANCIAL MANAGEMENT

This financial report is designed to provide our citizens, taxpayers, customers, and investors and creditors with a general overview of the Authority's finances and to demonstrate the Authority's accountability for the money it receives. If you have any questions about this report or need additional information, contact the South Dakota Science and Technology Authority, 630 East Summit Street, Lead, SD 57754.

STATEMENT OF NET POSITION JUNE 30, 2017

ASSETS

Current Assets	
Cash in Local Bank and Petty Cash	\$ 1,826,821
Cash on Deposit with State Treasurer	14,187,504
Accounts Receivable	1,878,813
Interest Receivable	46,464
Prepaid Expenses	587,902
Inventory of Supplies & Warehouse	2,440,458
Total Current Assets	20,967,962
Noncurrent Assets	
Xenon Purchased	5,040,356
Land	1,814,136
Underground	17,936,955
Improvements in Progress	19,797,453
Buildings, Machinery, Equipment and Infrastructure (Net) (Note 3)	45,437,958
Total Noncurrent Assets	90,026,858
TOTAL ASSETS	110,994,820
<u>Deferred Outflows of Resources</u> Pension Related Deferred Outflows	4 174 720
rension Related Deferred Outflows	4,174,730
<u>LIABILITIES</u>	
Current Liabilities	
Accounts Payable	2,066,947
Accrued Wages and Benefits	471,416
Accrued Leave, Benefits, and Capital Acquisition Lease (Note 4)	686,128
Total Current Liabilities	3,224,491
Long-Term Liabilities	
Net Pension Liability	1,698,193
Accrued Leave, Benefits, and Capital Acquisition Lease Net of Current Portion (Note 4)	512,117
Long-Term Xenon Notes Payable	4,000,000
Total Long-Term Liabilities	6,210,310
TOTAL LIABILITIES	9,434,801
NET POSITION	
Invested in Capital Assets	84,780,100
Restricted for:	, , ,
Mine Closure	1,411,988
Experiments	3,426,222
Indemnification	7,500,000
Sanford Center for Science Education	463,378
Pension	2,476,537
Unrestricted Net Position	5,676,524
TOTAL NET POSITION	\$ 105,734,749

STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION FOR THE YEAR ENDED JUNE 30,2017

Operating Revenue	
Charges for Goods and Services	\$ 150,969
Operating Grants	25,690,909
Miscellaneous	144,049
Total Operating Revenue	25,985,927
Operating Expenses	
Personal Services	13,693,652
Travel	182,579
Contractual Services	10,098,945
Supplies, Materials and Other Operating Expenses	2,564,493
Amortization Expense	137,752
Depreciation Expense	1,957,886
Total Operating Expenses	28,635,307
Operating Loss	(2,649,380)
Nonoperating Revenues/Expenses	
Grant Revenue	2,000,000
Interest Revenue	44,570
Other Expense	(120,639)
Total Nonoperating Revenues/Expenses	1,923,931
Change in Net Position	(725,449)
Net Position Beginning of Year	106,460,198
Net Position End of Year	\$ 105,734,749

The accompanying notes are an integral part of this statement.

STATEMENT OF CASH FLOWS FOR THE YEAR ENDED JUNE 30, 2017

Cook Flores from Operating Astivities		
Cash Flows from Operating Activities:	Φ	222.274
Other Operating Cash Receipts	\$	323,274
Cash Receipts from Operating Grants		27,583,372
Cash Payments to Employees for Services		(12,958,628)
Cash Payments to Suppliers of Goods and Services		(13,714,520)
Net Cash Used in Operating Activities		1,233,498
Cash Flows from Noncapital Financing Activities:		
Grant Revenue		2,000,000
Proceeds from Xenon Notes Payable		2,000,000
Xenon Purchases		(2,630,135)
Interest/Insurance Paid on Xenon		(59,282)
Grants & Donations Paid		(31,355)
Net Cash Used in Noncapital Financing Activities		1,279,228
Cash Flows from Capital and Related Financing Activities:		
Purchase of Capital Assets		(2,783,767)
Principal Paid on Capital Debt		(137,752)
Interest Paid on Capital Debt		(8,498)
Net Cash Used in Capital and Related Financing Activities		(2,930,017)
Cash Flows from Investing Activities:		
Interest Earnings		38,354
Net Cash Provided by Investing Activities		38,354
Net decrease in Cash and Cash Equivalents		(378,937)
Cash and Cash Equivalents at Beginning of Year		16,393,262
Cash and Cash Equivalents at End of Year	\$	16,014,325
Reconciliation of Operating Loss to Net Cash Used in Operating Activities:		
On analysis and I was	¢	(2 (40 200)
Operating Loss A direct ments to Pagangila Operating Logs to Not Cash Used in Operating Activities	\$	(2,649,380)
Adjustments to Reconcile Operating Loss to Net Cash Used in Operating Activities:	\$, , , , ,
Adjustments to Reconcile Operating Loss to Net Cash Used in Operating Activities: Depreciation & Amortization Expense	\$	(2,649,380) 2,095,637
Adjustments to Reconcile Operating Loss to Net Cash Used in Operating Activities: Depreciation & Amortization Expense Change in Assets and Liabilities:	\$	2,095,637
Adjustments to Reconcile Operating Loss to Net Cash Used in Operating Activities: Depreciation & Amortization Expense Change in Assets and Liabilities: Receivables	\$	2,095,637 1,920,719
Adjustments to Reconcile Operating Loss to Net Cash Used in Operating Activities: Depreciation & Amortization Expense Change in Assets and Liabilities: Receivables Prepaid Expenses	\$	2,095,637 1,920,719 (152,176)
Adjustments to Reconcile Operating Loss to Net Cash Used in Operating Activities: Depreciation & Amortization Expense Change in Assets and Liabilities: Receivables Prepaid Expenses Inventory of Supplies	\$	2,095,637 1,920,719 (152,176) 2,447
Adjustments to Reconcile Operating Loss to Net Cash Used in Operating Activities: Depreciation & Amortization Expense Change in Assets and Liabilities: Receivables Prepaid Expenses Inventory of Supplies Net Pension Asset	\$	2,095,637 1,920,719 (152,176) 2,447 2,158,428
Adjustments to Reconcile Operating Loss to Net Cash Used in Operating Activities: Depreciation & Amortization Expense Change in Assets and Liabilities: Receivables Prepaid Expenses Inventory of Supplies Net Pension Asset Decrease(Increase) in Deferred Outflow of Resources - Pension	\$	2,095,637 1,920,719 (152,176) 2,447 2,158,428 (45,304)
Adjustments to Reconcile Operating Loss to Net Cash Used in Operating Activities: Depreciation & Amortization Expense Change in Assets and Liabilities: Receivables Prepaid Expenses Inventory of Supplies Net Pension Asset Decrease(Increase) in Deferred Outflow of Resources - Pension Increase (Decrease) Deferred Inflow of Resources - Pension	\$	2,095,637 1,920,719 (152,176) 2,447 2,158,428 (45,304) (3,184,802)
Adjustments to Reconcile Operating Loss to Net Cash Used in Operating Activities: Depreciation & Amortization Expense Change in Assets and Liabilities: Receivables Prepaid Expenses Inventory of Supplies Net Pension Asset Decrease(Increase) in Deferred Outflow of Resources - Pension Increase (Decrease) Deferred Inflow of Resources - Pension Accounts and Other Payables	\$	2,095,637 1,920,719 (152,176) 2,447 2,158,428 (45,304) (3,184,802) (718,773)
Adjustments to Reconcile Operating Loss to Net Cash Used in Operating Activities: Depreciation & Amortization Expense Change in Assets and Liabilities: Receivables Prepaid Expenses Inventory of Supplies Net Pension Asset Decrease(Increase) in Deferred Outflow of Resources - Pension Increase (Decrease) Deferred Inflow of Resources - Pension Accounts and Other Payables Net Pension Liability	\$	2,095,637 1,920,719 (152,176) 2,447 2,158,428 (45,304) (3,184,802) (718,773) 1,698,193
Adjustments to Reconcile Operating Loss to Net Cash Used in Operating Activities: Depreciation & Amortization Expense Change in Assets and Liabilities: Receivables Prepaid Expenses Inventory of Supplies Net Pension Asset Decrease(Increase) in Deferred Outflow of Resources - Pension Increase (Decrease) Deferred Inflow of Resources - Pension Accounts and Other Payables Net Pension Liability Accrued Wages Payable	\$	2,095,637 1,920,719 (152,176) 2,447 2,158,428 (45,304) (3,184,802) (718,773) 1,698,193 2,868
Adjustments to Reconcile Operating Loss to Net Cash Used in Operating Activities: Depreciation & Amortization Expense Change in Assets and Liabilities: Receivables Prepaid Expenses Inventory of Supplies Net Pension Asset Decrease(Increase) in Deferred Outflow of Resources - Pension Increase (Decrease) Deferred Inflow of Resources - Pension Accounts and Other Payables Net Pension Liability	\$ *	2,095,637 1,920,719 (152,176) 2,447 2,158,428 (45,304) (3,184,802) (718,773) 1,698,193

STATEMENT OF CASH FLOWS (CONTINUED) FOR THE YEAR ENDED JUNE 30, 2017

Cash and Cash Equivalents:

Cash in Local Bank	\$ 1,826,771	
Petty Cash	50	
Cash with State Treasurer	14,187,504	
Total Cash and Cash Equivalents	\$ 16,014,325	_
		_
Non-Cash Capital and Related Financing Activities:		
Loss on Disposal of Assets	\$ 1.169	

The accompanying notes are an integral part of this statement.

NOTES TO FINANCIAL STATEMENTS JUNE 30, 2017

(1) Summary of Significant Accounting Policies

a. Reporting Entity

The South Dakota Science and Technology Authority (Authority) was created and organized by Chapter 1-16H of the South Dakota Codified Laws. The purposes of the Authority are to foster and facilitate scientific and technology investigation, experimentation, and development by creating a mechanism through which laboratory, experimental and development facilities may be acquired, developed, constructed, maintained, operated, and decommissioned. The initial focus of the Authority is to support the transfer of the Homestake Gold Mine in Lead, South Dakota for development by the research community to become the world's premier Underground Science and Engineering Laboratory; more specifically, the Sanford Underground Research Facility (SURF). Additional focus is maintained by the Authority for an education and outreach program detailing the progress.

The Authority is a business type component unit of the State of South Dakota (the State). As such, the accompanying financial statements are included in the Comprehensive Annual Financial Report of the State of South Dakota.

b. Fund Accounting

The Authority Fund is accounted for as an enterprise fund. Enterprise funds are used to account for operations (a) that are financed and operated in a manner similar to private business enterprises, where the intent of the governing body is that the costs (expenses, including depreciation) of providing goods or services to the general public on a continuing basis be financed or recovered primarily through user charges; or (b) where the governing body has decided that periodic determination of revenues earned, expenses incurred, and/or net income is appropriate for capital maintenance, public policy, management control, accountability, or other purposes.

c. Basis of Accounting

The Authority Fund follows the accrual basis of accounting. Revenues are recognized when they are earned, and expenses are recognized when they are incurred.

d. Inventory of Supplies

Inventory of supplies consists primarily of expendable equipment/supplies, donated and purchased, not yet in service. Donated inventory of supplies are valued at their estimated fair value on date of donation. Purchased equipment values are reported at cost. Reported cost values include ancillary charges necessary to place the asset into its intended location and condition for use at a later date.

e. Capital Assets

Capital assets include land, buildings, machinery and equipment, and all other tangible or intangible assets that are used in operations and that have initial useful lives extending beyond a single reporting period. Infrastructure assets are long-lived capital assets that normally are stationary in nature and normally can be preserved for a significantly greater number of years than most capital assets.

Capital assets are recorded at historical cost. Donated capital assets are valued at their estimated fair value on the date donated. Reported cost values include ancillary charges necessary to place the asset into its intended location and condition for use. Subsequent to initial capitalization, improvements or betterments that are significant and which extend the useful life of a capital asset are also capitalized.

NOTES TO FINANCIAL STATEMENTS (CONTINUED) JUNE 30, 2017

(1) Summary of Significant Accounting Policies (Continued)

e. Capital Assets (Continued)

Depreciation of all exhaustible capital assets is recorded as an expense in the Statement of Revenues, Expenses, and Changes in Net Position, with net capital assets reflected in the Statement of Net Position. Accumulated depreciation is reported on the Statement of Net Position.

Capitalization thresholds (the dollar values above which asset acquisitions are added to the capital asset accounts), depreciation methods, and estimated useful lives of capital assets reported in the Authority's financial statements are as follows:

	Capitalizat		Depreciation	Estimated
		hreshold	Method	Useful Life
Land and Land Rights	A	All Land	N/A	N/A
Improvements	\$	5,000	Straight-line	10-50 yrs.
Infrastructure		5,000	Straight-line	25-50 yrs.
Buildings		5,000	Straight-line	25-50 yrs.
Automobiles, Furniture, Machinery and Equipment		5,000	Straight-line	5-75 yrs.

f. Revenue and Expense Classifications

In the Statement of Revenues, Expenses, and Changes in Net Position, revenues and expenses are classified in a manner consistent with how they are classified in the Statement of Cash Flows. That is, transactions for which related cash flows are reported as capital and related financing activities, non-capital financing activities, or investing activities are not reported as components of operating revenue or expenses. The Authority's proprietary fund distinguishes between operating and non-operating revenues and expenses. Operating revenues and expenses of the Authority consist of reimbursement of the costs of operations from Homestake Mining Company and other entities, and the costs of providing those services, including depreciation. All other revenues and expenses are reported as non-operating.

g. Cash and Cash Equivalents

Cash includes cash on hand, demand deposits, and participating interest in the State's internal investment pool held by the State Treasurer. The amount held in the State's internal investment pool is reported at fair value. The Authority essentially has access to the entire amount of their cash resources on demand. Accordingly, equity in the cash management pool is considered to be cash and cash equivalents for the purpose of the Statement of Cash Flows.

h. Equity Classifications

Equity is classified as net position and is displayed in three components:

- 1. Net investment in capital assets, consists of capital assets, including restricted capital assets, net of accumulated depreciation (if applicable) and reduced by the outstanding balances of any bonds, mortgages, notes, or other borrowings that are attributable to the acquisition, construction, or improvements of those assets.
- 2. Restricted net position, consists of net position with constraints placed on their use either by (a) external groups such as creditors, grantors, contributors, or laws and regulations of other governments; or (b) law through constitutional provisions or enabling legislation.
- 3. Unrestricted net position, all other net position that do not meet the definition of "restricted" or "net investment in capital assets."

NOTES TO FINANCIAL STATEMENTS (CONTINUED) JUNE 30, 2017

(1) Summary of Significant Accounting Policies (Concluded)

i. Application of Net Position

It is the Authority's policy to first use restricted net position, prior to the use of unrestricted net position, when an expense is incurred for purposes for which both restricted and unrestricted net position are available.

i. Accrued Leave

Compensated absences consist of vacation and sick leave earned. The vacation leave is earned by full-time employees at the rate of 4.62 hours per pay period, increasing to 6.16 hours per pay period after 15 years of service. The vacation leave may accumulate only to a maximum of twice the annual accrual. Upon retirement or resignation, only full-time employees with 180 days of continuous service will be paid for accumulated vacation leave. Sick leave is earned at the rate of 4.32 hours per pay period. Upon termination, some employees are entitled to receive compensation for a portion of their sick leave balance. Those with seven years of service or more will receive compensation at the rate of 25 percent of their balance up to a maximum of 480 hours.

k. Pensions

For purposes of measuring the net pension liability (asset), deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense (revenue), information about the fiduciary net position of the South Dakota Retirement System (SDRS) and additions to/deletions from SDRS's fiduciary net position have been determined on the same basis as they are reported by SDRS. The Authorities contributions and net pension liability (asset) are recognized on an accrual basis of accounting.

(2) Deposits and Investments

Deposits

The majority of the Authority's cash is on deposit with the State Treasurer. Such funds are invested through the South Dakota Investment Council. Management of the State's internal investment pool is the statutory responsibility of the South Dakota Investment Council (SDIC). The investment policy and required risk disclosures for the State's internal investment pool are presented in the audit report of the South Dakota Investment Council, which can be obtained by contacting the Department of Legislative Audit, 427 South Chapelle, c/o 500 East Capitol, Pierre, South Dakota 57501.

Custodial credit risk is the risk that in the event of a bank failure, the Authority's deposits may not be returned to it. The Authority does not have a deposit policy for custodial credit risk. None of the Authority's deposits were exposed to custodial credit risk.

Investments

In general, SDCL 1-16H-18 permits funds to be invested in (a) direct obligations of, or obligations the principal of the interest on which are fully guaranteed or insured by, the United States of America; or (b) obligations of any solvent insurance company or other corporation or business entity if rated in the two highest classifications established by a standard rating service or insurance companies or a nationally recognized rating agency; or (c) short term discount obligations of the Federal National Mortgage Association; or (d) obligations of any state of the United States or any political subdivision, public instrumentality, or public authority of any state of the United States, which obligations are not callable before the principal is to be paid, are fully secured as to both sufficiency and timely payment by, and payable solely from, obligations described in (a). The Authority did not have any investments as of June 30, 2017.

NOTES TO FINANCIAL STATEMENTS (CONTINUED) JUNE 30, 2017

(3) Changes in Capital Assets

A summary of changes in capital assets for the year ended June 30, 2017 is as follows:

		Balance					Balance
	J	une 30, 2016	Reclassified*	Increases	Decreases	June 30, 2017	
Business-Type Activities:							
Capital Assets, not Being							
Depreciated:		4 == 0 +00					
Land	\$	1,579,298	\$ -	\$ 234,838	\$ -	\$	1,814,136
Underground	\$	17,767,956		169,000	-	\$	17,936,956
Archive Materials	\$	70,000	-	-	-	\$	70,000
Construction Work in	ф	10.250.024	(207.670)	026100		ф	10 505 452
Progress (Note 8)	\$	19,258,934	(387,670)	926,189	-	\$	19,797,453
Total Capital Assets, not	\$	20 (7) 100	(297 (70)	1 220 027		φ	20 (10 545
Being Depreciated	Þ	38,676,188	(387,670)	1,330,027		\$	39,618,545
Capital Assets, Being Depreciated:							
Equipment Under Capital Lease	\$	883,945	_	_	_	\$	883,945
Automobiles	\$	86,305	_	22,657	_	\$	108,962
Buildings	\$	7,223,086	_	282,000	_	\$	7,505,086
Furniture	\$	74,212	_	202,000	_	\$	74,212
Computer Equipment	\$	461,417	_	79,473	106,106	\$	434,784
Improvements	\$	37,006,542		45,637	100,100	\$	37,052,179
Infrastructure	\$	1,658,242	209,828	90,792		\$	1,958,862
Machinery and Equipment	\$	10,368,447	177,842	364,093	10,817	\$	10,899,565
Total Capital Assets, Being		, ,	,	,	,		, ,
Depreciated	\$	57,762,196	387,670	884,652	116,923	\$	58,917,595
Total Capital Assets, Before							_
Depreciation	\$	96,438,384	_	2,214,679	116,923	\$	98,536,140
Depreciation	Ψ	70,430,304		2,214,077	110,723	Ψ	70,550,140
Less Accumlated Depreciation:							
Equipment Under Capital Lease	\$	539,791	-	137,752	-	\$	677,543
Automobiles	\$	64,715	-	5,606		\$	70,321
Buildings	\$	1,607,386	-	146,223	-	\$	1,753,609
Computer Equipment	\$	384,731		31,695	106,106	\$	310,320
Furniture	\$	39,260	-	4,990		\$	44,250
Improvements	\$	5,028,571	-	979,874		\$	6,008,445
Infrastructure	\$	249,423	-	43,838		\$	293,261
Machinery and Equipment	\$	3,655,878		745,659	9,648	\$	4,391,889
Total Accumlated Depreciation	\$	11,569,755		2,095,637	115,754	\$	13,549,638
Capital Assets, Net	\$	84,868,629	\$ -	\$ 119,042	\$ 1,169	\$	84,986,502

^{*}Reclassifications are due to the Authority performing analysis of assets that were previously grouped in construction work in progress. Various items were transferred to equipment and infrastructure and placed in service as of June 30, 2017.

NOTES TO FINANCIAL STATEMENTS (CONTINUED) JUNE 30, 2017

(4) Long-Term Debt

A summary of changes in long-term debt follows:

	Beginning Balance	Additions	Deletions	Ending Balance	Due Within One Year
Accrued Compensated Absences	\$ 886,202	\$ 635,894	\$ 530,253	\$ 991,843	\$ 495,922
Xenon Notes Payable	\$ 2,000,000	\$ 2,000,000		\$ 4,000,000	\$ -
Capital Acquisition Lease	\$ 344,154	\$ -	\$ 137,752	\$ 206,402	\$ 190,206
	\$ 3,230,356	\$ 2,635,894	\$ 668,005	\$ 5,198,245	\$ 686,128

Xenon Notes Payable

Loan Agreements with S.D. Community Foundation, S.D. State University Foundation, and University of S.D. Foundation to purchase xenon. The loans are 11 year, unsecured non recourse loans with 2.5% simple interest paid quarterly. The notes are due on October 1, 2026

\$4,000,000

Capital Acquisition Lease

The Authority leases a deep level pump system from AmWest, Inc. - Hydro Resources. The lease is due in monthly installments of \$35,000 per month tentatively through July 31, 2018. The Interest Rate is 4%.

\$ 206,402

This lease meets the criteria to be called a capital lease; however, since the payments on this lease are funded under the Department of Energy contract through Lawrence Berkeley National Laboratory (LBNL) title will actually vest with LBNL rather than with the Authority. Because this meets the definition of a capital lease, the Authority has recorded the related asset and liability. The asset is being fully depreciated over the term of the lease and will be removed from the books at the end of the lease.

The annual requirements to amortize long-term debt outstanding as of June 30, 2017, are as follows:

	Capital Acqu	isition Lease	Xenon No	Xenon Notes Payable			Totals		
_	Interest	Principal	Interest	Principal	Principal Interest		P	Principal	
2018	4,794	190,206	100,000	-	\$	104,794	\$	190,206	
2019	54	16,196	100,000	-	\$	100,054	\$	16,196	
2020			100,000	-	\$	100,000	\$	-	
2021			100,000		\$	100,000	\$	-	
2022-2026			500,000		\$	500,000	\$	-	
2027-2031			25,000	4,000,000	\$	25,000	\$4	1,000,000	
Total	\$ 4,848	\$ 206,402	\$ 925,000	\$ 4,000,000	\$	929,848	\$4	1,206,402	
-									

Total cost and accumulated amortization for the capital lease is as follows:

Gross amount of assets under capital lease	\$ 883,945
Accumulated amortization	677,543
	\$ 206,402

The purchase price at the commencement of the financing (capital acquisition) lease was:

Principal	\$ 883,945
Interest	91,055
Total	\$ 975,000

NOTES TO FINANCIAL STATEMENTS (CONTINUED) JUNE 30, 2017

(5) Xenon Purchased

Xenon purchased is valued at a cost per liter with additional freight, customs, and analysis charges. The total includes 20,000 liters purchased in 2013 valued at \$332,855 (average cost of \$16.64/liter), 100,000 liters purchased in November 2015 at \$6.80/liter valued at \$680,012, and 100,000 liters purchased in March 2016 at \$5.692/liter valued at \$593,796. Additional purchases for fiscal year 2017 include 100,000 liters purchased in August 2016 at \$5.964/liter valued at \$596,476, 150,000 liters and 100,295 liters purchased in January 2017 at \$5.50/liter and \$6.353/liter valued at \$825,017 and \$637,200 respectively, 100,000 liters purchased in March 2017 at \$5.50/liter valued at \$550,000, and 150,000 liters in June 2017 at \$5.50/liter valued at \$825,000. Total xenon purchased to date is \$5,040,356.

(6) Retirement/Pension Plan

Plan Information:

All employees, working more than 20 hours per week during the year, participate in the South Dakota Retirement System (SDRS), a cost sharing, multiple employer defined benefit pension plan administered by SDRS to provide retirement benefits for employees of the State of South Dakota and its political subdivisions. The SDRS provides retirement, disability, and survivors' benefits. The right to receive retirement benefits vests after three years of credited service. Authority for establishing, administering and amending plan provisions are found in SDCL 3-12. The SDRS issues a publicly available financial report that includes financial statements and required supplementary information. That report may be obtained at http://www.sdrs.sd.gov/publications/ or by writing to the SDRS, P.O. Box 1098, Pierre, SD 57501-1098 or by calling (605) 773-3731.

Benefits Provided:

SDRS has three different classes of employees, Class A, Class B public safety and Class B judicial. Class A retirement benefits are determined as 1.7 percent prior to 2008 and 1.55 percent thereafter of the employee's final 3-year average compensation times the employee's years of service. Employees with 3 years of service are eligible to retire at age 55. Class B public safety benefits are determined as 2.4 percent for service prior to 2008 and 2.0 percent thereafter of employee final average compensation. Class B judicial benefits are determined as 3.733 percent for service prior to 2008 and 3.333 percent thereafter of employee final average compensation. All Class B employees with 3 years of service are eligible to retire at age 45. Employees are eligible for service-related disability benefits regardless of length of service. Three years of service is required for nonservice-related disability eligibility. Disability benefits are determined in the same manner as retirement benefits but are payable immediately without an actuarial reduction. Death benefits are a percent of the employee's final average salary.

The annual increase in the amount of the SDRS benefits payable each July 1st is indexed to the consumer price index (CPI) based on SDRS funded status:

- If the SDRS market value funded ratio is 100% or more 3.1% COLA
- If the SDRS market value funded ratio is 80.0% to 99.9%, index with the CPI
 - 90.0% to 99.9% funded 2.1% minimum and 2.8% maximum COLA
 - 80.0% to 90.0% funded 2.1% minimum and 2.4% maximum COLA
- If the SDRS market value funded ratio is less than 80% 2.1%COLA

All benefits except those depending on the Member's Accumulated Contributions are annually increased by the Cost-of-Living Adjustment.

Contributions:

Employees are required by state statute to contribute 6 percent of their salary to the plan. State statute also requires the employer to contribute an amount equal to the employee's contribution. State statute also requires the employer to make an additional contribution in the amount of 6.2 percent for any compensation exceeding the maximum taxable amount for social security. The Authority's contributions to the SDRS for the fiscal years ended June 30, 2017, 2016 and 2015 was \$595,112, \$573,626, and \$557,420, respectively, equal to the required contributions each year.

NOTES TO FINANCIAL STATEMENTS (CONTINUED) JUNE 30, 2017

(6) Retirement/Pension Plan (Continued)

<u>Pension Liabilities (Assets), Pension Expense (Revenue), and Deferred Outflows of Resources and Deferred Inflows of Resources to Pensions:</u>

At June 30, 2016, SDRS is 96.89% funded and accordingly has a net pension liability. The proportionate shares of the components of the net pension liability of South Dakota Retirement System, for the Authority as of June 30, 2017 are as follows:

Proportionate share of pension liability	\$54,553,152
Less Proportionate share of net pension restricted for pension benefits	52,854,959
Proportionate share of net pension liability (asset)	\$ 1,698,193 ========

At June 30 2016, the Authority reported a liability (asset) of \$1,698,193 for its proportionate share of the net pension liability (asset). The net pension liability (asset) was measured as of June 30, 2016, and the total pension liability (asset) used to calculate the net pension asset was based on a projection of the Authority's share of contributions to the pension plan relative to the contributions of all participating entities. At June 30, 2016, the Authority's proportion was .50273600% which is a decrease of .0061729% from its proportion measured as of June 30, 2015.

For the year ended June 30, 2017, the Authority's recognized pension expense of \$1,221,628. At June 30, 2017, the Authority reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows Of Resources	Deferred Inflows Of Resources
Difference between expected and actual experience.	\$ 591,179	\$
Changes in assumption.	1,017,137	
Net Difference between projected and actual earnings on pension plan investments.	1,888,964	
Changes in proportion and difference between Authority contributions and proportionate share of contributions.	82,338	-0-
Authority contributions subsequent to the measurement date.	595,112	
TOTAL	\$ 4,174,730	\$ -0-

NOTES TO FINANCIAL STATEMENTS (CONTINUED) JUNE 30, 2017

(6) Retirement/Pension Plan (Continued)

\$595,112 reported as deferred outflow of resources related to pensions resulting from the Authority's contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ending June 30, 2018. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense (revenue) as follows:

Year Ended June 30:

2018	\$ 974,815
2019	601,967
2020	1,213,586
2021	789,250
TOTAL	\$3,579,618 =======

Actuarial Assumptions:

The total pension liability (asset) in the June 30, 2016 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation 3.25 %

Salary Increases 5.83 % at entry to 3.87 % after 30 years of service

Investment Rate of Return 7.25 % through 2017; 7.50 % thereafter, net of pension plan investment expense

Mortality rates were based on the RP-2000 Employee Mortality Table for males and females, as appropriate.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period July 1, 2005 through June 30, 2011. The mortality assumptions were revised based on an extension of the experience study including mortality experience through June 30, 2013.

Investment portfolio management is the statutory responsibility of the South Dakota Investment Council (SDIC), which may utilize the services of external money managers for management of a portion of the portfolio. SDIC is governed by the Prudent Man Rule (i.e., the council should use the same degree of care as a prudent man). Current SDIC investment policies dictate limits on the percentage of assets invested in various types of vehicles (equities, fixed income securities, real estate, cash, private equity, etc.). The long-term expected rate of return on pension plan investments was determined using a method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighing the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of real rates of return for each major asset class included in the pension plan's target asset allocation as of June 30, 2016 (see the discussion of the pension plan's investment policy) are summarized in the following table using geometric means:

Asset Class	Target <u>Allocation</u>	Long-Term Expected Real Rate of Return
Global Equity	58.0%	4.5%
Fixed Income	30.0%	1.8%
Real Estate	10.0%	4.6%
Cash	2.0%	0.7%
Total	100%	
	=====	

NOTES TO FINANCIAL STATEMENTS (CONTINUED) JUNE 30, 2017

(6) Retirement/Pension Plan (Concluded)

Discount Rate:

The discount rate used to measure the total pension asset was 7.25 percent through 2017 and 7.50% thereafter. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the current contribution rate and that matching employer contributions from will be made at rates equal to the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability (asset).

Sensitivity of (liability) to changes in the discount rate:

The following presents the Authority's proportionate share of the net pension liability (asset) calculated using the Discount rate of 7.25 percent through 2017 and 7.50 percent thereafter, as well as what the Authority's proportionate Share of the net pension liability (asset) would be if it were calculated using a discount rate that is 1-percentage point lower (6.25/6.50%) or 1-percentage point higher (8.25/8.50%) than the current rate:

	Current				
	1%	Discount	1%		
	<u>Decrease</u>	Rate	<u>Increase</u>		
Authority's proportionate share of the net					
pension (liability) asset	\$9,503,064	\$1,698,193	\$(4,667,518)		

Pension Plan Fiduciary Net Position:

Detailed information about the plan's fiduciary net position is available in the separately issued SDRS financial report.

(7) Risk Management

The Authority is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. There were no insurance claims exceeding insurance coverage during the past three years. During the period ended June 30, 2017, the Authority managed its risks as follows:

Building Structure Charges:

The buildings and permanent structures owned by the Authority are not covered by commercial insurance.

Personal Property Insurance:

The Authority purchases insurance for the contents of the administration building from a commercial insurance carrier, however, the contents of the Authority's other buildings are not insured.

Employee Health Insurance:

The Authority purchases health insurance for its employees from a commercial insurance carrier. Settled claims resulting from these risks have not exceeded the liability coverage during the past three years.

NOTES TO FINANCIAL STATEMENTS (CONTINUED) JUNE 30, 2017

(7) Risk Management (Continued)

<u>Liability Insurance:</u>

The Authority purchases liability insurance for risks related to torts, theft or damage of property, errors and omissions of public officials, employee practices liability coverage, and professional engineers' coverage through its participation in the South Dakota Authority Captive Insurance Company, a component unit of the State of South Dakota. Additional liability coverage including environmental liability is purchased from commercial insurance carriers. Settled claims resulting from these risks have not exceeded the liability coverage during the past three years.

Worker's Compensation:

At the policy renewal date of 06/01/17 the Authority continues to purchase workmen's compensation through the South Dakota Worker's Compensation Insurance Plan. Settled claims resulting from these risks have not exceeded the liability coverage during the past three years.

Unemployment Benefits:

The Authority provides coverage for unemployment benefits by paying into the Unemployment Compensation Fund established by state law and managed by the State of South Dakota.

(8) Significant Commitments, Contracts, and Subsequent Events

On December 23, 2009, the Authority received \$20,000,000 designated as Sanford Gift No.2. Gift No.2 was originally established for the Sanford Center for Science Education. Two amendments to the Homestake Gift Agreement were signed in June 2010 and October 2011, respectively, whereby it was agreed to use \$15 million of this \$20 million for the purpose of infrastructure and safety upgrades at the Underground Davis Campus and for replacing steel and other rehabilitation of the Ross Shaft. In early August, 2012, the Authority signed a third amendment to the Gift Agreement and received the remaining \$15 million of Gift No.2 called for by Section 2 of the Gift Agreement. The Gift No.2 balance of \$20 million was to be held in a restricted fund whereby the principal was not to be expended until a written approval of a business and operational plan for the Sanford Center for Science Education was received from Mr. Sanford. Furthermore, the third amendment allowed the Authority to utilize and expend interest and other earnings on Gift No.2 restricted funds. In May, 2013, the Authority signed a fourth amendment to the Gift Agreement whereby it was agreed to expend up to \$7,000,000 of Gift No.2 for the construction or remodeling of the Yates Dry Building (located at SURF), the remodeling or replacement of the Lead Homestake Visitor's Center and the remodeling of Jonas Hall (located on the campus of Black Hills State University in Spearfish, SD). This authorization was conditioned on the Authority raising \$1.5 million from other sources for the Black Hills State University project and \$1 million for the Sanford Lab Homestake Visitor's Center in Lead. The Authority secured a \$2 million Future Fund grant from the State of South Dakota in October 2013 and an additional \$500,000 was received in July 2014 from Great Plains Education Foundation that satisfies this monetary obligation. Both outside facilities agreed in writing to incorporate and use the name "Sanford" in the naming of the facilities. Operating agreements are in place which reasonably provide for the ongoing operations of the respective facilities by the Homestake Visitor Center, Inc. and Black Hills State University. Given the construction budget of the (SLHVC) and the Jonas Science Building renovation costs, it was not possible to undertake the upgrades to the Yates Dry. These details were reported in the Fifth Amendment to the Homestake Gift Agreement in February 2015. Furthermore, any part of Gift No.2 not used for the three construction projects may be used for the construction and operation of additional underground laboratory space at SURF to accommodate other experiments, and for related infrastructure to access or support the new laboratory space through the shafts. After the above projects were finished approximately \$1,000,000 remained. On June 23, 2016 the sixth amendment was signed allowing the Authority to use the remaining funds to purchase real estate known as "Ellison Hill" and to conduct needed environmental assessments and remediation of the property. This will provide needed storage and

NOTES TO FINANCIAL STATEMENTS (CONTINUED) JUNE 30, 2017

(8) Significant Commitments, Contracts, and Subsequent Events (Continued)

construction material laydown space for the (LBNF) and (DUNE) projects. The "Ellison Hill" property was purchased in May 2017. A contract with Horsley Specialties, Inc. was executed in May 2017 for \$357,144 for the asbestos removal. The cost of this remediation will be shared equally by the Authority and Homestake Mining Company per purchase agreement. With additional change orders, the contract amount was decreased to \$327,144. Remediation of the property is scheduled to be complete in December 2017 and will likely deplete the remaining Gift No. 2 funds.

In February 2010, the Authority entered into a contract with AmWest, Inc. – Hydro Resources in the amount of \$1,540,000 for the installation and maintenance of a deep level pump system. Subsequent change orders increased the contract amount to \$1,782,500 and extended the date through December 31, 2011. Another change order signed in May 2012 increased the contract amount to \$4,482,500 with a period of performance through December 31, 2017. The leased pump system is designed to dewater the mine from approximately the 5000' level to approximately the 7800' level. With the current vision of the DOE to not develop science laboratories past the 4850' level, the scope of this contract has been revised. Further negotiations with AmWest, Inc. resulted in the signing of another addendum to the contract effective January 1, 2013. This addendum reduced the monthly lease charges by \$2,500 per month for the years of 2013 to the end of the lease, tentatively July 31, 2018, resulting in an overall savings of \$150,000. Additionally, the agreement calls for the leased property to become the property of the lessee at the end of the lease without any additional payment. It will then become the property of the Federal Government as these capital asset-type costs are being charged direct to the subcontract with LBNL.

A contract was signed in early January 2014 with the South Dakota School of Mines and Technology (SDSM&T) to be the lead institution for the accelerator project known as (CASPAR) Compact Acceleration System Performing Astrophysical Research. With an additional change order the contract total is \$999,334 and extends into fiscal year 2018. This project is located in the new Ross Campus laboratory at the 4850' Level. Another underground facility was completed as a laboratory for Black Hills State University to support low background counting activities, biology study workstations, and other future small-scale experiments. Contracts have been signed with both institutions whereby each will pay the Authority for reasonable energy costs and any other specific needed supplies.

The Authority's long term cooperative agreement with Homestake Mining Company of California continues. The Authority agrees to combine Homestake's wastewater from Grizzly Gulch with the mine wastewater, as well as treat, and discharge the water. For the first year of this agreement, Homestake agreed to pay the Authority an amount ranging from \$.58 to \$.84 per 1000 gallons based on average total gallons treated per minute per month. Revenue from this agreement for the past two years was \$206,036 and \$147,832 respectively. Revenue was lower this last year due to the number of gallons treated being lower. This negotiated treatment price will be renegotiated once per year for the length of the contract. The negotiated price was renewed for the current year. Estimated revenues for the upcoming year are at \$168,000; somewhat higher than last year's actual due to increasing Homestake water to be treated. The term of the contract runs to September 30, 2020.

A lease between the Authority and Department of Energy (DOE) for land (above ground) and space (underground) for the Long Baseline Neutrino Facility (LBNF) was signed on March 29, 2016. The term of the lease goes through April 30, 2036, but shall remain in force thereafter from year to year without further notice, but shall in no event extend beyond a total of 65 years. An easement was signed with Homestake Mining Company for the construction and maintenance of conveyor facilities for the transportation of excavated rock to the Open Cut (open mine pit) owned by Homestake. The Long Baseline Neutrino Facility will include a large experimental facility underground at the 4850'L. Waste rock excavated from that level will be deposited into the Open Cut. An additional easement was negotiated with the City of Lead across their property to construct, maintain, and operate this overhead conveyance system.

The Authority, along with the South Dakota Bureau of Administration, and five additional South Dakota Authorities signed a Joint Powers Agreement on June 1, 2015 to form a captive insurance company to insure against certain risks. \$2,500,000 was repurposed in August 2015 from a portion of the \$10,000,000 Indemnification Fund held by the Authority. The original Appropriation Act for the indemnification fund that was made by the State Legislature in 2004 was included as a part of the agreement between Homestake Mining Company and the Authority.

NOTES TO FINANCIAL STATEMENTS (CONTINUED) JUNE 30, 2017

(8) Significant Commitments, Contracts, and Subsequent Events (Continued)

Homestake Mining Company agreed with the signing of the Third Amendment to the Property Donation Agreement in August 2015 to release \$2,500,000 from the Indemnification Fund in order for the Authority to fund the captive insurance company. The Act from 2004 was revised by the State Legislature per Legislative Session 2015 HB 1186, to allow the use of up to \$2,500,000 to be used to provide initial capital and pay expenses for the Authority's purposes in the captive insurance company.

Letter Agreement #1586 was signed in August 2015 between the Governor's Office of Economic Development (GOED) and the Authority whereby the State is granting up to \$6,000,000 between July 14, 2015 and September 30, 2018. The State has chosen to engage in a partnership with the Authority, the South Dakota Community Foundation, the South Dakota State University Foundation, and the University of South Dakota Foundation to assist with the costs of infrastructure/laboratory upgrades, procurement of xenon for future "Dark Matter" experiments, and interest payments to these foundations. The full \$6,000,000 has been received from the State as well as \$2,000,000 from the South Dakota Community Foundation, and \$1,000,000 each from the University of South Dakota Foundation and the South Dakota State University Foundation. Loan agreements are in place between the Authority and the three foundations for a total of \$6,000,000 to be used for the purchase of xenon for the future LZ experiment. The loans extend to the last quarter of 2026. They are unsecured nonrecourse loans with 2.5% simple interest to be paid quarterly to each lender. The loans will be repaid at the end of the LZ experiment (approximately October 2026) from the sale proceeds of the xenon previously purchased. Purchase orders for xenon have been issued for an additional 700,000 liters at a total price of \$3,869,234 with Praxair Distribution and Baosteel Gases.

(9) Construction Work in Process

The Authority accumulates the costs of construction projects in Construction Work in Progress until such time as the projects are completed and/or placed in service. Some of the ongoing improvement projects are capitalized as they progress. The \$19,797,453 of construction work in progress at June 30, 2017, consisted of \$17,665,235 of accumulated costs for the Ross Shaft rehabilitation project, \$915,139 for the (CASPAR) experiment development, \$1,190,700 for LZ facility upgrades, and \$26,379 for the Ellison asbestos assessment and abatement project. The costs accumulated consist of amounts under contract in addition to materials and other expenses purchased by the Authority. The remaining commitment on existing contracts at June 30, 2017 is approximately \$4,697,723. These commitments are to be paid for using current funds that have been redirected from the Sanford Gift #2 as well as the \$12,000,000 funding for the LZ infrastructure/laboratory upgrades, and xenon procurement.

(10) Continuing Operations

The DOE's 2018 budget proposal includes approximately \$14.6 million to fund basic operations at the Sanford Lab. This basic operations funding transitioned to FNAL (Fermi National Accelerator Laboratory). Further negotiations are in process for extension through FY2018 as well as a five-year contract for DOE operations funding. The Ross Shaft rehabilitation project that also transitioned to FNAL will continue until the project is complete. The 2018 budget proposal includes \$4,756,131 for this project. Additionally, Authority support for the LUX/Zeplin experiment engineering support and installation efforts has been extended to September 2018 with a budget of \$1,468,467.

(11) Related Party Transactions

Mr. Ron Wheeler was appointed to the Board of Directors by the Governor effective July 1, 2013, and is a current member of the Board of Directors. As of July 1, 2013, Ron Wheeler transitioned from Executive Director to the Director of Governmental & External Affairs for the Authority. Mr. Wheeler was a full-time employee of the Authority until January 3, 2014, at which time he retired from full-time employment. Effective January 3, 2014, the Authority signed a contract with Mr. Wheeler as a consultant for the Authority. The contract with amendments is for \$395,000 and extends to January 3, 2019. For the period of July 1, 2016 – June 30, 2017, he was paid \$69,013.13 for his consulting services. Mr. Wheeler will assist in directing the state and federal government affairs programs for the Authority. Furthermore, he will maintain and foster private funding sources for the long-term growth of the facility.

REQUIRED SUPPLEMENTARY INFORMATION OTHER THAN MD&A

SCHEDULE OF PROPORTIONATE SHARE OF THE NET PENSION LIABILITY (ASSET)

South Dakota Retirement System

Last 10 Fiscal Years *

	2017 2016		2016	2015	
Authority's proportion of the net pension liability (asset)	0.5027360%		0.5089089%	0.5287996%	
Authority's proportionate share of net pension liability (asset)	\$ 1,698,193	\$	(2,158,428) \$	(3,809,788)	
Authority's covered employer payroll	\$ 9,256,007	\$	9,042,866 \$	8,888,749	
Authority's proportionate share of the net pension liability (asset) as a percentageof its covered-employee payroll	18.35%		23.87%	42.86%	
Plan fiduciary net position as a percentage of the total pension liability (asset)	96.89%		104.10%	107.00%	

^{*} The amounts presented for each fiscal year were determined as of the measurement date of the collective net pension liability (asset) which is 6/30 of previous fiscal year. Until a full 10-year trend is compiled, the Authority will present information for those years for which information is available.

SCHEDULE OF THE AUTHORITY CONTRIBUTIONS

South Dakota Retirement System

Last 10 Fiscal Years

	2017	2016	2015
Contractually required contribution	\$ 595,112	\$ 573,626	\$ 557,420
Contributions in relation to the contractually required contribution	\$ 595,112	\$ 573,626	\$ 557,420
Contribution deficiency (excess)	\$ -	\$ -	\$ -
Authority's covered-employee payroll	\$ 9,596,007	\$ 9,256,007	\$ 9,042,866
Contributions as a percentage of covered-employee payroll	6.20%	6.20%	6.16%

^{*} Until a full 10-year trend is compiled, the Authority will present information for those years for which information is available.

SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY NOTES TO THE REQUIRED SUPPLEMENTARY INFORMATION

Schedule of the Proportionate Share of the Net Pension Liability (Asset) and Schedule of the Authority Contributions.

Changes of benefit terms:

No significant changes.

Changes of assumptions:

No significant changes.

SUPPLEMENTAL INFORMATION

SCHEDULE OF OPERATING EXPENSES FOR THE YEAR ENDED JUNE 30, 2017

Personal Services	
Employee Salaries	8,688,403
Employee Benefits	5,005,249
Total Personal Services	13,693,652
Travel	
Meals and Lodging	51,737
Auto and Fleet Services	37,026
Air - Commercial and Charter	38,145
Incidentals to Travel	3,580
Non-Employee Travel	51,963
Meals (Not Overnight)	127
Total Travel	182,579
Contractual Services	
Equipment Rental	104,578
Contractual - Other	5,477,255
Insurance	410,873
Lobbying	215,000
Computer Services	299,924
Telecommunications	48,121
Monitoring and Programming	76,311
Legal Consultant	109,976
Training	19,612
Consultant Fees - Accounting and Auditing	13,120
Promotion and Advancement	16,413
Dues and Memberships	3,226
Utilities	2,188,775
Maintenance and Repairs	1,115,762
Total Contractual Services	10,098,945
Supplies, Materials and Other Operating Expenses	
Maintenance and Repairs	1,380,403
Other Supplies and Equipment	1,096,983
Other Expenses	4,122
Office Supplies and Equipment	20,444
Safety	364
Licenses and Permits	40,011
Workshop and Registration Fees	17,442
Postage	4,033
Bank Charges	690
Total Supplies, Materials and Other Operating Expenses	2,564,493
Amortization Expense	137,752
Depreciation Expense	1,957,886
Total Operating Expenses	28,635,307

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS FOR THE YEAR ENDED JUNE 30, 2017

	Pass-Through Numbers	CFDA Numbers	Amount
U.S. Department of Energy			
Pass-Through the Regents of the University of California LUX (Large Underground Xenon) Research & Development	6973786	81.6973786	194,896
U.S. Department of Energy			
Pass-Through the Regents of the University of California			
SURF (Sanford Underground Research Facility) Operations Support	6994297	81.6994297	5,474,402
U.S. Department of Energy			
Pass-Through the Regents of the University of California	50.551.1 5	04.5055445	045 405
LUX/Zeplin (LZ) Cryogenic System Integration and Installation	7255146	81.7255146	917,425
U.S. Department of Energy			
Pass-Through the Regents of the University of California	7262800	01.7262000	2 (71 270
SURF (Sanford Underground Research Facility) Ross Shaft Rehab	7262800	81.7262800	3,671,379
U.S. Department of Energy			
Pass-Through the Regents of the University of California	7290021	01 7300031	74 295
LBNL Kismet Project	7289931	81.7289931	74,285
U.S. Department of Energy			
Pass-Through Oak Ridge National Laboratory	4000144140	01 40001 441 40	20.155
Experiment Support for Majorana Demonstrator	4000144149	81.4000144149	20,175
U.S. Department of Energy			
Pass-Through Fermi National Accelerator Laboratory		0.4	
SURF (Sanford Underground Research Facility) Operations Support	629760	81.629760	9,560,663
U.S. Department of Energy			
Pass-Through Fermi National Accelerator Laboratory	520222	04 (2022)	2 004 604
SURF (Sanford Underground Research Facility) Ross Shaft Rehab	630223	81.630223	2,984,691
U.S. Department of Energy			
Pass-Through RESPEC			
R & D Rock Melt Sealing Tests	02703A	81.02703A	114,102
National Science Foundation:			
Pass-Through South Dakota School of Mines & Technology			
Mathematical and Physical Sciences Research Grant	PHY-1615197	47.049	20,650
U.S. General Services Administration:			
Pass-Through South Dakota Federal Property Agency		39.003	5
<u>Total</u>			\$ 23,032,673

Note: The schedule of expenditures of federal awards is presented on the cash basis of accounting.