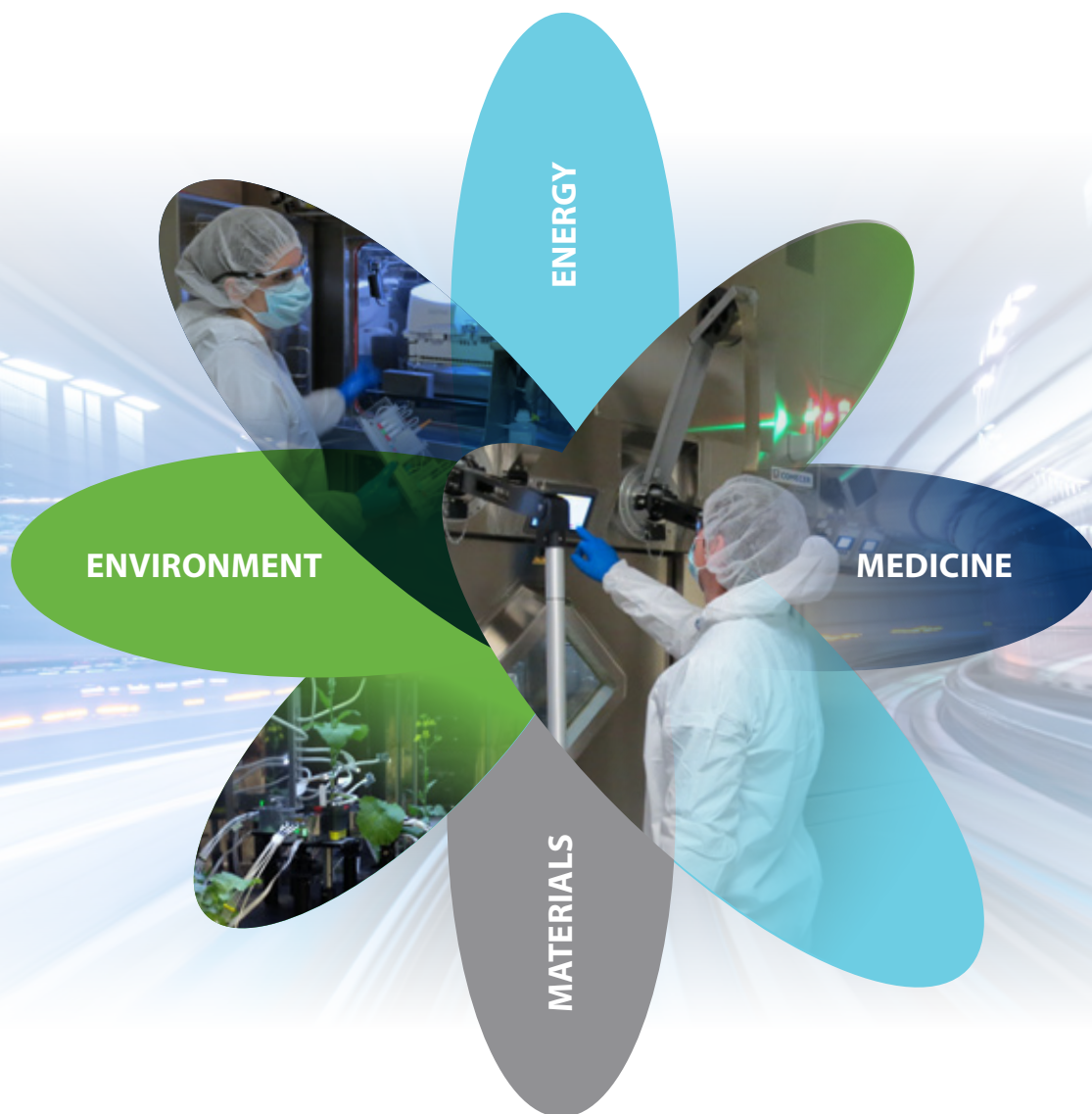


2016-2017 Annual Review

Sylvia Fedoruk Canadian Centre for Nuclear Innovation Inc.



ACCELERATING ***IMPACT***

ABOUT THE **FEDORUK CENTRE**

Located on the University of Saskatchewan campus in Saskatoon, the Sylvia Fedoruk Canadian Centre for Nuclear Innovation (Fedoruk Centre) is an independent, not-for-profit corporation that is a wholly-owned subsidiary of the University of Saskatchewan. The Fedoruk Centre is funded by Innovation Saskatchewan.

Find out more at: www.fedorukcentre.ca



Twitter: @FedorukCentre



Facebook.com/FedorukCentre

Contents

Message from the Chair and Executive Director	1
Board of Directors	2
The Fedoruk Centre's Strategic Plan.....	3
Impacts	4
Saskatchewan Centre for Cyclotron Sciences	6
Audited Financial Statements	8

MESSAGE FROM THE CHAIR AND EXECUTIVE DIRECTOR

The Fedoruk Centre is two-thirds of the way through its initial mandate to initiate nuclear research, development and training in Saskatchewan, as well as to establish the operation of the province's first cyclotron facility for innovation in life sciences and production of medical imaging agents. Many positive outcomes are already evident and the pathway to socio-economic impacts is taking shape as Saskatchewan's research community works at the leading edges of nuclear science and technology.

After establishing the capability to supply a medical radioisotope ("FDG") for the PET-CT scanner at Royal University Hospital in June 2016, the Fedoruk Centre closed out the year by qualifying for a Drug Establishment License from Health Canada. This clears the way for commercial production of FDG by the Fedoruk Centre's cyclotron and attached laboratories – the Saskatchewan Centre for Cyclotron Sciences (SCCS). In its first year of supplying to the Royal University Hospital, over 2100 Saskatchewan patients have received PET-CT scans with radioisotopes made in Saskatchewan. Local supply of FDG has reduced patient wait times for a PET-CT scan.

Three Fedoruk Centre Research Chairs have been filled with excellent young researchers who are contributing leadership in radiopharmacy (Dr. Kate Dadachova), nuclear medical imaging (Dr. Gupreet Aulakh) and nuclear imaging technology (Dr. Aram Temurazyan). These dynamic leaders have integrated into a community of researchers at the universities of Saskatchewan and Regina. Working together, they are applying the special capabilities of the Saskatchewan Centre for Cyclotron Sciences to develop new radiotherapies, new imaging detector technologies, and new isotopes to target more diseases, with applications in the health of plants, animals and humans.

In March 2017, the Centre for the Study of Science and Innovation Policy at the Johnson Shoyama Graduate School for Public Policy was officially launched. The Fedoruk Centre provided \$2 million to support research on the societal and policy implications of nuclear science and technology development by Fedoruk fellows and graduate students. A complementary investment was made to train graduate students and develop expertise in the technical, regulatory and legal factors that would need to be considered if siting a nuclear facility in a new jurisdiction. This \$1 million multidisciplinary project is supporting contributions of researchers from five faculties at the University of Regina and University of Saskatchewan.

Over the past year, the Fedoruk Centre also participated in national nuclear science and technology initiatives. These included: the development of technological and policy road maps for the potential deployment of small modular nuclear reactors in Canada; the Fusion 2030 proposal for a revitalized national nuclear fusion strategy with the University of Saskatchewan as a hub; and the Canadian Neutron Initiative to establish a new framework for stewardship of Canada's capacity for materials research with neutron beams beyond the closure of Canada's only major neutron source in March 2018.

With its flagship research programs underway and the Saskatchewan Centre for Cyclotron Sciences supplying radiopharmaceuticals for research and clinical practice in Saskatchewan, the Fedoruk Centre has achieved success in many objective of its initial start-up mandate. Efforts will now turn towards consolidating and building on the accomplishments made to date as work begins with our stakeholders within the Province and beyond, to renew the mandate of the Fedoruk Centre into the future after March 2019.



Engin Özberk, M.Eng



John Root, Ph.D.

Engin Özberk, M.Eng
Chair, Board of Directors

John Root, Ph.D.
Executive Director

GOVERNANCE

BOARD OF DIRECTORS

DIRECTOR	AFFILIATION
Mr. Engin Özberk, Chair	Special Advisor and Executive in Residence, Minerals MITACS
Dr. Karen Chad, Vice-Chair	Vice-President Research, University of Saskatchewan
Dr. William Kupferschmidt	Former Vice-President, R & D Canadian Nuclear Laboratories (retired)
Mr. Greg Fowler	Vice-President Finance and Resources, University of Saskatchewan
Mr. Donald Deranger	Aboriginal Advisor on Governance, Unity and Business Development
Mr. Thomas Kishchuk	Vice-President Operational Support, Federated Co-operatives Limited
Dr. Donald Wilson	Nuclear Medicine Physician and Radiation Oncologist, British Columbia Cancer Agency
Dr. Melissa Denecke	Scientific Director, Dalton Nuclear Institute, University of Manchester (UK)
Dr. Paul Schaffer	Associate Laboratory Director, Life Sciences, TRIUMF
Ms. Kari Harvey	Chief Operating Officer, Innovation Saskatchewan

PROJECT ADVISORY COMMITTEE

Made up of prominent experts from outside of Saskatchewan, the Project Advisory Committee works with subject matter experts to review and rank project proposals received by the Fedoruk Centre.

DIRECTOR	AFFILIATION
Duane Bratt, PhD	Mount Royal University, Dept. of Policy Studies (Chair)
Katherine Zukotynski, MD, FRCPC	McMaster University, Departments of Medicine and Radiology
John Luxat, PhD, P.Eng, FCAE, FCNS	McMaster University, Engineering Physics Department

STRATEGIC PLAN 2020

OUTCOME

By 2020, the Fedoruk Centre will establish a research and innovation capacity to support a vibrant nuclear sector in Saskatchewan.

GOALS



ACTIVITIES

PROJECTS:

Provide funding for short-term research projects led by Saskatchewan researchers

PROGRAMS:

Build research leadership and capacity through the support of long-term academic programs

FACILITIES:

Manage and operate nuclear research facilities such as the Saskatchewan Centre for Cyclotron Sciences

IMPACTS

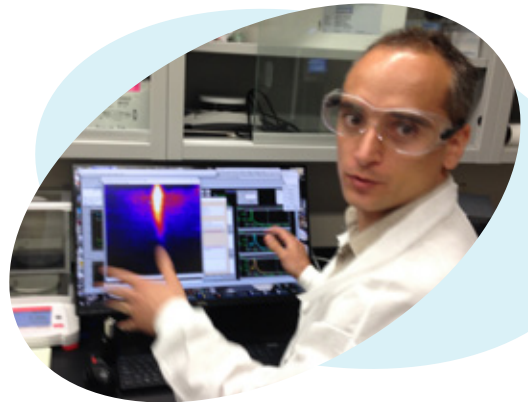
THE SASKATCHEWAN CENTRE FOR CYCLOTRON SCIENCES ACHIEVED FULL OPERATIONS.

In June 2016 the province's cyclotron facility started supplying radioisotopes for use in the PET-CT scanner at Royal University Hospital. Since then, over 2000 Saskatchewan and Alberta patients have received PET-CT scans using radiopharmaceutical produced by the Fedoruk Centre. Operations in the cyclotron facility's research wing are also now underway with facilities and equipment to develop new radioisotope-labelled imaging agents and a small PET-CT scanner for research.



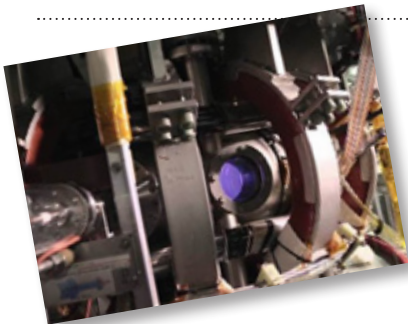
PHYTOPET CHANGES THE SCOPE OF PLANT RESEARCH IN SASKATCHEWAN.

The PhytoPET, a system for imaging the uptake of radioisotopes in plants, was unveiled at the University of Regina in January and used for the first time in May at the Saskatchewan Centre for Cyclotron Sciences. One of only a few systems of its kind in the world and the only one in Canada, the phytoPET system allows plant and soil scientists to follow the absorption and movement of radioactive tracers in the soil and in plants. This provides new insights into how plants interact with the soil and respond to environmental stresses – essential information for developing new crops that can adapt to higher temperatures or drought.



LOOKING AT TECHNICAL AND REGULATORY ASPECTS OF SMALL NUCLEAR POWER PLANTS.

Equipping Saskatchewan graduate students with the knowledge required to address complex and inter-related technical, regulatory and legal issues is at the heart of a \$1.1 million multidisciplinary project funded by the Fedoruk Centre in January 2017. The aim of the project at University of Regina and University of Saskatchewan is to develop expertise in the engineering, geological, geographical, regulatory and economic factors of building a small modular nuclear reactor in a place that has not previously used nuclear power, using Saskatchewan as its case study.



The Fedoruk Centre worked with Burnaby BC-based General Fusion and researchers at the University of Saskatchewan, University of Alberta, and the University of Ontario Institute of Technology to develop Fusion 2030, a road map to reinvigorate national research into nuclear fusion.



The Fedoruk Centre hosted Canada's Minister of Science, Kirsty Duncan, on a tour of the Saskatchewan Centre for Cyclotron Sciences. The Fedoruk Centre team also met with Jim Carr, Minister of Natural Resources Canada to talk about the role of nuclear power in Canada's clean energy future.





**\$8.57
MILLION**

Since 2012, the Fedoruk Centre has awarded \$4.16 million to 27 research projects. Combined with matching cash and in-kind contributions from project partners, the total funded value of the projects is over \$8.5 million.



**INTELLECTUAL
PROPERTY**

9 Since 2012 researchers supported by the Fedoruk Centre have filed 9 patents and disclosures

1 One spin-off company created



236 248

Publications by supported researchers and students since 2012

Highly Qualified Personnel have been trained or hired since 2012.

93

have completed their studies



(survey conducted by the The Evidence Network, 2016)

FEDORUK CENTRE'S IMPACT ON THE RESEARCH COMMUNITY

85%

of surveyed researchers reported that the Fedoruk Centre positively impacted the attraction of highly qualified personnel with nuclear expertise to Saskatchewan.

88%

of researchers attributed a positive impact from the Fedoruk Centre on their ability to conduct collaborative nuclear research

91%

of researchers that have developed a nuclear-related technology reported that the Fedoruk Centre had a positive impact on their ability to do so.

IMPACT AREAS

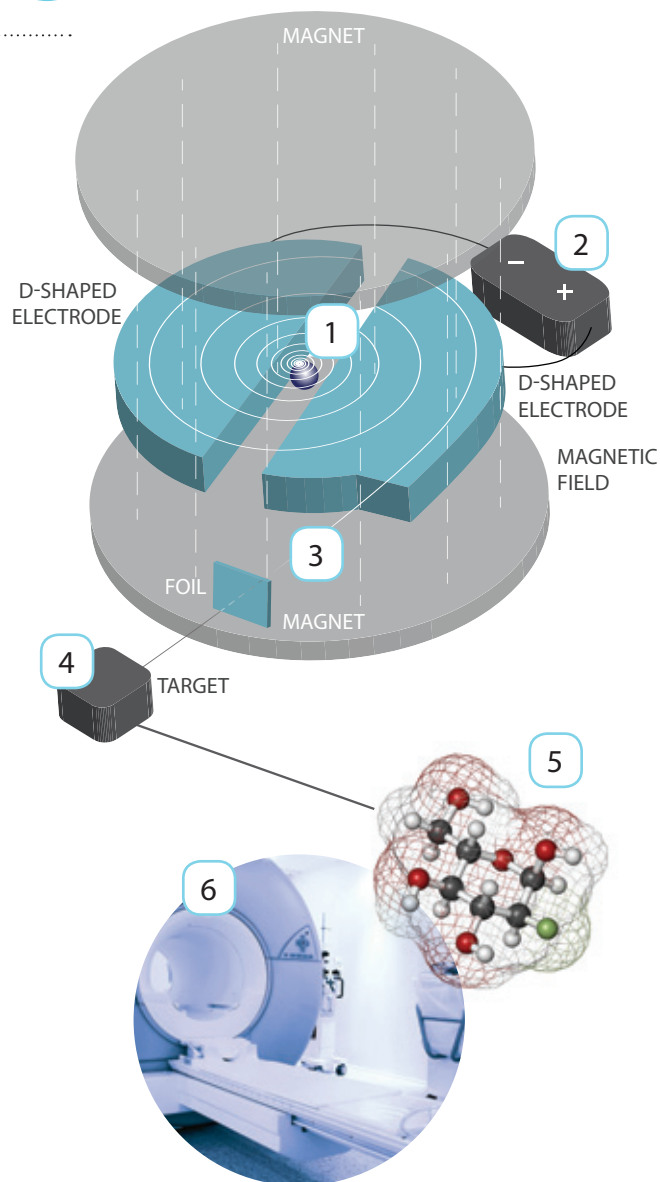
- Advancing nuclear medicine, instruments and methods
- Advancing knowledge of materials through nuclear techniques
- Improving safety and engineering of nuclear energy systems, including small reactors
- Managing the risks and benefits of nuclear technology for society and the environment

PROJECTS SUMMARY (2012-2016)	INVESTMENT
PROJECTS FUNDED	27
PROJECTS COMPLETED	11
TOTAL FEDORUK CENTRE CONTRIBUTION	\$4.16 million
FEDORUK CENTRE INVESTMENT BY IMPACT AREA	
• Nuclear Medicine	\$2.025 million, 12 projects
• Nuclear techniques for materials research	\$453 thousand, 4 projects
• Energy and Safety	\$296 thousand, 3 projects
• Society and Environment	\$1.39 million, 8 projects
PARTNER CASH CONTRIBUTIONS	\$231 thousand, 7 projects (includes institutional base funding diverted to the projects)
PARTNER IN-KIND CONTRIBUTIONS	\$4.41 million
INDUSTRIAL PARTNERS (PROJECTS)	10 partners on 14 projects

PROGRAM AREA	INVESTMENT
LEADERSHIP IN NUCLEAR MEDICINE Fedoruk Chair in Nuclear Imaging Technology Fedoruk Chair in Radiochemistry Fedoruk Chair in Animal Imaging Investments in radiochemistry equipment	\$ 5.6 million
LEADERSHIP IN PUBLIC POLICY AND SOCIAL ASPECTS OF NUCLEAR DEVELOPMENT Centre for the Study of Science and Innovation Policy (CSIP): Fedoruk Fellowships and student support	\$ 2 million
LEADERSHIP IN NUCLEAR ENERGY AND SAFETY; NUCLEAR TECHNOLOGY AND THE PHYSICAL ENVIRONMENT • Building Technical Capacity to Understand Siting Issues • CSIP investment (above)	\$ 1.1 million

HOW IT WORKS

- 1 A stream of negatively-charged hydrogen ions (atoms with one proton and two electrons) are injected into a vacuum chamber between two D-shaped plates – called ‘dees’ – enclosed between the poles of an electromagnet.
- 2 An alternating positive and negative charge between the dees moves the ion back and forth from one dee to the other. The ion accelerates every time it crosses the gap between the dees, gaining energy. The magnetic field holds the ion within the horizontal plane, resulting in the accelerating ions moving in a spiral path out towards the edge of the dees.
- 3 At the edge of the dee, the ions pass through a graphite foil that strips away the electrons, leaving a beam of high energy protons that are steered down a beamline to a target. Target materials can be liquids, solids or gases, depending on the radioisotope being made.
- 4 When a high energy proton from the cyclotron collides with an atom in the target, other sub-atomic particles are knocked out of the target atom’s nucleus converting the atom into a radioisotope.
- 5 The radioisotope is separated from the target material in the facility’s production laboratory. The radioisotope is tagged on to a molecule such as a sugar, creating a radiopharmaceutical. The completed drug is then shipped to a hospital or used in research.
- 6 In the hospital nuclear medicine department, the radiopharmaceutical is injected into a patient who is then placed in a PET-CT scanner. As the radioisotope in the radiopharmaceutical decays, it releases energy that is detected by the scanner which generates an image that is used by doctors to diagnose diseases such as cancer.



RESEARCHER SPOTLIGHT

KATE DADACHOVA

Dr. Ekaterina Dadachova joined the University of Saskatchewan in 2016 as the Fedoruk Chair in Radiopharmacy. Formerly a professor at the Albert Einstein College of Medicine in New York, Dr. Dadachova is leading pioneering research into radioimmunotherapy – using radioisotopes coupled to antibodies or other drug molecules to treat cancer and infections caused by fungi, bacteria and viruses like HIV.



GURPREET AULAKH

Dr. Gurpreet Aulakh is the Fedoruk Chair in Medical Imaging and an assistant professor at the Western College of Veterinary Medicine at the University of Saskatchewan. Dr. Aulakh earned her Ph.D. at the University of Saskatchewan and was a post-doctoral fellow at the University of Calgary. She uses a variety of optical microscopic, synchrotron and nuclear imaging tools to understand how tissue inflammation – a characteristic of illnesses ranging from cancers, to cardiovascular disease and arthritis – works at the cellular level.





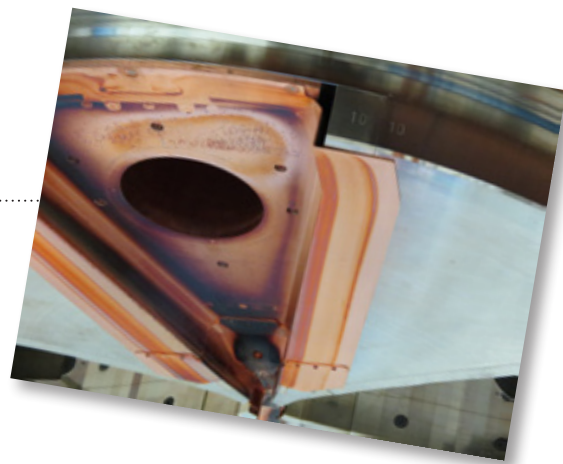
2,100 PATIENTS

In its first year of supply, over 2,100 Saskatchewan patients have had PET-CT scans using radiopharmaceuticals produced by the Fedoruk Centre.



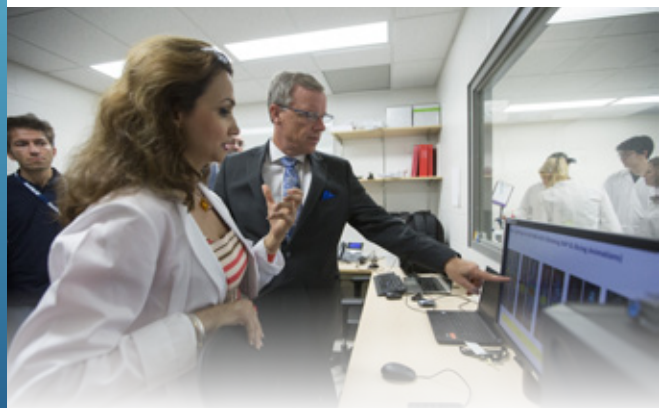
ONE WEEK

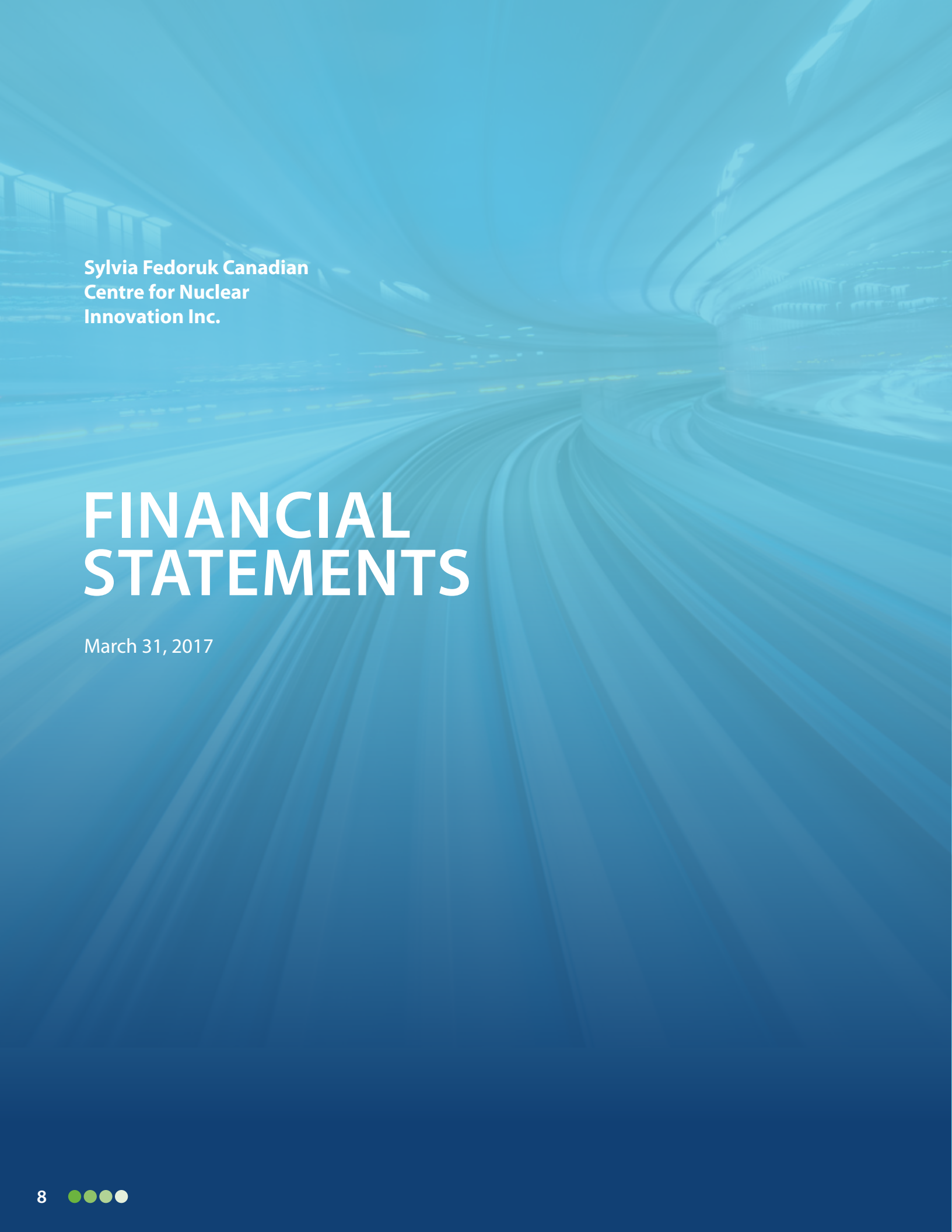
Thanks to the local supply of radioisotopes made possible by the cyclotron, wait times for a PET-CT scan in Saskatchewan are about 1 week.



RESEARCH WING

Operations in the cyclotron facility's research wing are now underway with the installation of a microPET-CT scanner for imaging small animals, a radiochemistry laboratory for the development of new imaging agents, and a small animal holding facility. Plans are now in development for additional facilities, including a dedicated lab for imaging plants.





Sylvia Fedoruk Canadian
Centre for Nuclear
Innovation Inc.

FINANCIAL STATEMENTS

March 31, 2017



July 14, 2017

Independent Auditor's Report

**To the Member of
Sylvia Fedoruk Canadian Centre for Nuclear Innovation Inc.**

We have audited the accompanying financial statements of Sylvia Fedoruk Canadian Centre for Nuclear Innovation Inc., which comprise the statement of financial position as at March 31, 2017 and the statements of operations and unrestricted net assets and cash flows and schedule of expenditures for the year then ended, and the related notes which comprise a summary of significant accounting policies and other explanatory information.

Management's responsibility for the financial statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian accounting standards for not-for-profit organizations, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

*PricewaterhouseCoopers LLP
128 4th Avenue South, Suite 600, Saskatoon, Saskatchewan, Canada S7K 1M8
T: +1 306 668 5900, F: +1 306 652 1315*

"PwC" refers to PricewaterhouseCoopers LLP, an Ontario limited liability partnership.

**Opinion**

In our opinion, the financial statements present fairly, in all material respects, the financial position of Sylvia Fedoruk Canadian Centre for Nuclear Innovation Inc. as at March 31, 2017 and the results of its operations and its cash flows for the year then ended in accordance with Canadian accounting standards for not-for-profit organizations.

PricewaterhouseCoopers LLP

Chartered Professional Accountants

Sylvia Fedoruk Canadian Centre for Nuclear Innovation Inc.

Statement of Financial Position

As at March 31, 2017

	2017 \$	2016 \$
Assets		
Current assets		
Cash held by University of Saskatchewan (note 8)	11,862,808	12,473,811
Accounts receivable (note 8)	365,613	9,946
Prepaid expenses	15,408	3,248
	<u>12,243,829</u>	<u>12,487,005</u>
Cash held by University of Saskatchewan (note 3)	25,000	-
Tangible capital assets (note 4)	37,058	31,244
Asset retirement obligation (note 5)	<u>582,752</u>	<u>-</u>
	<u>12,888,639</u>	<u>12,518,249</u>
Liabilities		
Current liabilities		
Accounts payable and accrued liabilities	<u>51,337</u>	<u>101,718</u>
Accrued decommissioning costs (note 5)	613,503	-
Deferred contributions (note 6)	<u>12,198,799</u>	<u>12,416,531</u>
	<u>12,863,639</u>	<u>12,518,249</u>
Net assets		
Unrestricted net assets	-	-
Internally restricted net assets (note 3)	<u>25,000</u>	<u>-</u>
	<u>12,888,639</u>	<u>12,518,249</u>
Economic dependence (note 1)		
Operating lease (note 7)		
Commitments (note 10)		
Subsequent event (note 11)		

Approved by the Board of Directors

Greg Fowler Director Engin Özberk Director

The accompanying notes are an integral part of these financial statements.

Sylvia Fedoruk Canadian Centre for Nuclear Innovation Inc.

Statement of Operations and Unrestricted in Net Assets

For the year ended March 31, 2017

	2017 \$	2016 \$
Revenue		
Innovation Saskatchewan grant – restricted (note 9)	4,217,732	6,799,301
University of Saskatchewan grant (notes 8 and 10)	753,751	-
Radioisotope product sales	374,934	-
Interest income (note 8)	56,189	63,974
Other income	32,596	-
	<u>5,435,202</u>	<u>6,863,275</u>
Expenditures (Schedule)		
Grants (note 8)	2,655,611	5,365,048
Cyclotron (note 8)	2,072,700	878,513
Operations (note 8)	681,891	619,714
	<u>5,410,202</u>	<u>6,863,275</u>
Excess of revenue over expenditures	25,000	-
Unrestricted net assets – Beginning of year	-	-
Transfer to internally restricted net assets (note 3)	<u>(25,000)</u>	<u>-</u>
Unrestricted net assets – End of year	<u>-</u>	<u>-</u>

The accompanying notes are an integral part of these financial statements.

Sylvia Fedoruk Canadian Centre for Nuclear Innovation Inc.

Schedule of Expenditures

For the year ended March 31, 2017

	2017 \$	2016 \$
Expenditures		
Grants (notes 8 and 10)		
Program grants	1,510,000	2,096,444
Project grants	846,738	463,604
Cyclotron capital grants	298,873	2,805,000
	<u>2,655,611</u>	<u>5,365,048</u>
Cyclotron (notes 8 and 10b)		
Salaries and benefits	800,641	545,503
Supplies and services	464,207	107,434
Operating license (note 8b)	398,824	220,740
Externally contracted services and consultants	355,985	-
Travel	18,063	3,494
Accretion of accrued decommissioning costs (note 5)	15,809	-
Amortization of asset retirement obligation (note 5)	14,942	-
Amortization of tangible capital assets	4,229	1,342
	<u>2,072,700</u>	<u>878,513</u>
Operations (note 8)		
Salaries and benefits	456,160	385,856
Supplies and services	120,707	119,070
Travel	54,051	58,465
Rent and occupancy (note 7)	40,230	39,050
Amortization of tangible capital assets	10,743	17,273
	<u>681,891</u>	<u>619,714</u>
	<u>5,410,202</u>	<u>6,863,275</u>

The accompanying notes are an integral part of these financial statements.

Sylvia Fedoruk Canadian Centre for Nuclear Innovation Inc.

Statement of Cash Flows

For the year ended March 31, 2017

	2017 \$	2016 \$
Cash provided by (used in)		
Operating activities		
Excess of revenue over expenditures for the year	25,000	-
Items not affecting cash		
Accretion of accrued decommissioning costs (note 5)	15,809	-
Amortization of tangible capital assets	14,972	18,615
Amortization of asset retirement obligation (note 5)	14,942	-
	<u>70,723</u>	<u>18,615</u>
Changes in non-cash working capital items		
Cash held by University of Saskatchewan	586,003	1,716,757
Accounts receivable	(355,667)	(7,115)
Prepaid expenses	(12,160)	(3,248)
Accounts payable and accrued liabilities	(50,381)	77,894
Deferred contributions	(217,732)	(1,799,301)
	<u>(49,937)</u>	<u>(15,013)</u>
	<u>20,786</u>	<u>3,602</u>
Investing activities		
Purchase of tangible capital assets	<u>(20,786)</u>	<u>(3,602)</u>
Net change in cash	-	-
Cash – Beginning of year	<u>-</u>	<u>-</u>
Cash – End of year	<u>-</u>	<u>-</u>

The accompanying notes are an integral part of these financial statements.

Sylvia Fedoruk Canadian Centre for Nuclear Innovation Inc.

Notes to Financial Statements

March 31, 2017

1 Nature of business

The Sylvia Fedoruk Canadian Centre for Nuclear Innovation Inc. (the “corporation” or “Fedoruk Centre”) was originally incorporated as a non-profit organization under the Canadian Not-for-Profit Corporations Act on December 20, 2011 as the Canadian Centre for Nuclear Innovation Inc., with its parent company and sole member being the University of Saskatchewan (“U of S”). On October 5, 2012 the corporation was registered with Corporations Canada as the Sylvia Fedoruk Canadian Centre for Nuclear Innovation Inc. The corporation qualifies as a tax exempt organization under the Income Tax Act.

The mandate of the Fedoruk Centre is to place Saskatchewan among global leaders in nuclear research, development and training through investments in partnerships with academia and industry, for maximum societal and economic benefit. This purpose is accomplished through investment in projects and programs of Saskatchewan-based, publicly-funded institutions and their partners and through operating the Saskatchewan Centre for Cyclotron Sciences (“SCCS”), which is owned by the U of S, for research and clinical applications. The Fedoruk Centre began the regulatory commissioning of the cyclotron and radioisotope production facility in October of 2014 and achieved operational status in May of 2016.

The operation of the corporation is economically dependent on the funding from Innovation Saskatchewan (note 9).

2 Summary of significant accounting policies

a) Basis of presentation

These financial statements include the accounts of the corporation and are presented in accordance with Canadian accounting standards for not-for-profit organizations (“ASNPO”).

b) Use of estimates

The preparation of financial statements in conformity with ASNPO requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amount of revenue and expenditures during the reporting period. Actual results could differ from these estimates. Significant financial statement items that require estimates include the asset retirement obligation and accrued decommissioning costs.

c) Tangible capital assets

Tangible capital assets are recorded at cost and amortized over their expected useful lives. Computer equipment and software is amortized using the declining balance method at a rate of 30%. Furnishings and equipment are amortized using the straight-line method at a rate of 20%. Leasehold improvements are amortized using the straight-line method over the term of the lease.

Sylvia Fedoruk Canadian Centre for Nuclear Innovation Inc.

Notes to Financial Statements

March 31, 2017

d) Revenue recognition and grant expenditures

The corporation follows the deferral method of accounting for contributions which includes funding from Innovation Saskatchewan and other funding sources. Deferred contributions related to expenses of future periods represent unspent externally restricted funding and any related investment income, which are for the purposes of providing funding to eligible recipients and the payment of operating and capital expenditures in future periods. Unrestricted contributions are recognized as revenue when received or receivable if the amount to be received can be reasonably estimated and collection is reasonably assured.

Revenue from the sale of radioisotope products of the cyclotron is recognized when significant risks and rewards of ownership have been transferred to the purchaser and reasonable assurance exists regarding the measurement of the consideration that will be derived from the sale of the product.

Investment income earned on the cash held by University of Saskatchewan is recognized as revenue when the U of S can measure and transfer the income to the corporation.

Contributions of materials and services are recognized only when a fair value can be reasonably estimated and when the materials and services are used in the normal course of the corporation's operations and would otherwise have been purchased.

Grants are recognized as expenditures when the current year grant commitment to the recipient is due under the terms of the grant agreement.

e) Financial instruments

Financial assets and financial liabilities consisting of cash held by University of Saskatchewan, accounts receivable, and accounts payable and accrued liabilities are initially recognized at fair value and subsequent measurement is at amortized cost. The corporation does not consider itself to have significant exposure to credit risk, currency risk, interest rate risk, liquidity risk, market risk or other price risk. Financial assets are tested for impairment at the end of each reporting period when there are indications that an asset may be impaired.

f) Decommissioning and asset retirement obligation

As a component of its Class II Nuclear Facilities and Prescribed Equipment License from the Canadian Nuclear Safety Commission ("CNSC"), the corporation completes an acknowledgement of liability with respect to the safe termination of licensed activities under the Class II license. As at March 31, 2017, the obligation is calculated as \$96,000 (2016 – \$93,000) based on the formula provided by the CNSC and the Fedoruk Centre's inventory of prescribed equipment. The corporation is not required to set aside any specific funds, or pay any annual financial contribution to the CNSC, with respect to this obligation.

During the year, the cyclotron received its CNSC operating license. The corporation is required to decommission the currently licensed prescribed equipment, facility and nuclear substances when operations cease and has accounted for the estimated costs associated with this requirement.

Sylvia Fedoruk Canadian Centre for Nuclear Innovation Inc.

Notes to Financial Statements

March 31, 2017

g) Allocation of expenses

To reflect the portion of effort of operating staff directed towards the activities of the cyclotron facility, salaries and benefits for certain individuals are allocated from operations to the cyclotron. During the year ended March 31, 2017, \$144,786 (2016 – \$126,332) was allocated.

3 Internally restricted net assets

As provided for under the corporation's policy for funding the cyclotron decommissioning liability, the corporation has allocated \$25,000 from unrestricted net assets to internally restricted net assets to fund any future decommissioning liability.

4 Tangible capital assets

	2017		2016	
	Cost \$	Accumulated amortization \$	Net book value \$	Net book value \$
Equipment	42,858	12,499	30,359	3,081
Furnishings	21,922	18,483	3,439	10,857
Computer equipment and software	16,278	13,018	3,260	6,343
Leasehold improvements	-	-	-	10,963
	81,058	44,000	37,058	31,244

5 Asset retirement obligation and accrued decommissioning costs

During the year, as a component of its Class II Nuclear Facilities and Prescribed Equipment License from the CNSC, the corporation recognized the asset retirement obligation related to the expected future cost of decommissioning the currently licensed prescribed equipment, facility and nuclear substances. The asset retirement obligation will be amortized on a straight line basis over the expected remaining useful life. The corporation expects the facility to operate for a 40 year period, which commenced during the current fiscal year.

The estimated undiscounted future cash flows required to decommission the facility are expected to be approximately \$900,000. Accretion of \$15,809 and amortization of \$14,942 are included in decommissioning expense for the year ended March 31, 2017. The present value of the asset retirement obligation and the liability for accrued decommissioning costs has been calculated using a credit adjusted risk free interest rate of 2.65% and an inflation rate estimate of 1.6%.

Sylvia Fedoruk Canadian Centre for Nuclear Innovation Inc.

Notes to Financial Statements

March 31, 2017

	2017		2016
	Cost \$	Accumulated amortization \$	Net book value \$
Asset retirement obligation	597,694	14,942	582,752
			-

A reconciliation of the accrued decommissioning costs is as follows:

	2017 \$	2016 \$
Opening accrued decommissioning costs	-	-
Estimate of decommissioning costs	597,694	-
Accretion expense	15,809	-
Closing accrued decommissioning costs	613,503	-

6 Deferred contributions

The corporation receives funding from Innovation Saskatchewan to be held, administered and distributed in accordance with the funding agreement. Deferred contributions related to expenses of future periods represent the unspent externally restricted funding, which is for the purpose of providing funding to eligible recipients and the payment of operating and capital expenditures in future periods. The changes in the deferred contributions balance are as follows:

	Operations \$	Cyclotron \$	2017 \$
Opening deferred contributions	9,625,044	2,791,487	12,416,531
Contributions during the year: Innovation Saskatchewan (note 9)	3,000,000	1,000,000	4,000,000
Total contributions available	12,625,044	3,791,487	16,416,531
Less: Amount recognized as revenue in current year	2,974,845	1,242,887	4,217,732
Closing deferred contributions	9,650,199	2,548,600	12,198,799

Sylvia Fedoruk Canadian Centre for Nuclear Innovation Inc.

Notes to Financial Statements

March 31, 2017

	Operations \$	Cyclotron \$	2016 \$
Opening deferred contributions	8,740,832	5,475,000	14,215,832
Contributions during the year: Innovation Saskatchewan (note 9)	4,000,000	1,000,000	5,000,000
Total contributions available	12,740,832	6,475,000	19,215,832
Less: Amount recognized as revenue in current year	3,115,788	3,683,513	6,799,301
Closing deferred contributions	9,625,044	2,791,487	12,416,531

7 Operating lease

On August 30, 2016, the corporation entered into a lease agreement for office space. The term of the lease agreement is two years and seven months and the future minimum annual lease payments are \$39,560 per year until the expiry of the lease agreement on March 31, 2019.

8 Related party transactions

During the year, the corporation entered into transactions with its parent company and sole member, the U of S. The corporation purchased goods and services from the U of S in the amount of \$38,490 (2016 – \$16,495) and incurred operating license costs for the cyclotron of \$398,824 (2016 – \$220,740). In addition, cyclotron capital costs of \$452,210 (2016 – \$973,416) incurred by the corporation were reimbursed by the U of S and are recorded at their net amount of nil in expenditures.

Interest income of \$56,189 (2016 – \$63,974) was received from the U of S based on the corporation's funds held in bank accounts administered by the U of S. The corporation received \$753,751 (2016 – nil) in grants during the year from the U of S for cyclotron start-up operating costs of which \$242,751 is included in accounts receivable at March 31, 2017 (2016 – nil). Of the grants made during the year by the corporation, \$2,140,534 (2016 – \$4,484,755) were made to the U of S, including individuals or entities related to or employed by the U of S.

The related party transactions described above are measured at carrying amounts. All funds received by the corporation are held in, and payments to vendors of the corporation are made from, bank accounts administered by the U of S, which are included on the statement of financial position as "cash held by University of Saskatchewan".

Sylvia Fedoruk Canadian Centre for Nuclear Innovation Inc.

Notes to Financial Statements

March 31, 2017

9 Innovation Saskatchewan grant

The Fedoruk Centre signed a funding agreement with Innovation Saskatchewan on March 2, 2012 for a total of \$30 million to be disbursed over 7 years, from January 2, 2012 to March 31, 2019. Funds are to be used solely for the purposes of the project as defined in the agreement. The agreement defines that all funds must be returned to the funder if there is non-compliance or the agreement is terminated by the funder, and at the application of the Fedoruk Centre the funder may elect to limit repayment to an amount not exceeding actual and reasonable project expenses paid by the Fedoruk Centre.

The funding agreement with Innovation Saskatchewan was amended on June 4, 2013. The amendment allows the Fedoruk Centre to redirect up to \$6.3 million of the original \$30 million to assist the U of S with cash flow for the cyclotron capital project. If capital costs for the cyclotron are less than \$6.3 million, any remaining amount will be returned to the Fedoruk Centre's operating budget. The amendment also provides for \$1 million per year for three years, in addition to the original \$30 million, for cyclotron facility operating costs. The final payments from Innovation Saskatchewan are scheduled to be received as follows: \$1.8 million during the year ended March 31, 2018 and \$0.9 million during the year ended March 31, 2019. The third and final \$1 million payment for cyclotron facility operating costs is also scheduled to be received during the year ended March 31, 2018.

10 Commitments

a) Grants

The Fedoruk Centre provides grants to eligible individuals and their institutions for the purpose of nuclear research, development and training. Project grant awards are funded over multiple years. The total maximum commitment made during the year ended March 31, 2017 was approximately \$1,159,000 (2016 – \$152,000). Project grants disbursed during the year ended March 31, 2017 were \$846,738 (2016 – \$463,604). The remaining maximum commitment on all projects is approximately \$1,024,000 (2016 – \$712,000).

Based on the above, total anticipated maximum commitments over the next five years are as follows:

	\$
2017	252,000
2018	465,000
2019	128,000
2020	124,000
2021	55,000

During the year ended March 31, 2016, a program grant agreement was signed between the Fedoruk Centre, the University of Regina and the University of Saskatchewan under which the Fedoruk Centre will fund three research chairs for five years, beginning in 2015 and ending June 30, 2020, and will fund ancillary support to accelerate innovation in nuclear imaging tools and techniques and to advance

Sylvia Fedoruk Canadian Centre for Nuclear Innovation Inc.

Notes to Financial Statements

March 31, 2017

research, development and training in nuclear medicine. The Fedoruk Centre's total maximum commitment is \$5,166,444 over the term of the agreement.

Program grants disbursed during the year ended March 31, 2017 were \$1,210,000 (2016 – \$2,096,444), with an additional \$300,000 disbursed by the Fedoruk Centre related to research chair recruitment.

Based on the above, total anticipated maximum commitments over the next three years are as follows:

	\$
2017	620,000
2018	620,000
2019	620,000

b) Cyclotron

The Fedoruk Centre has entered into an operating license agreement with the U of S for the cyclotron facility. The agreement calls for the Fedoruk Centre to be responsible for the operation, maintenance and eventual decommissioning of the cyclotron facility. During the term of the license agreement, an annual license fee will be paid to the U of S by the Fedoruk Centre based on costs that the U of S incurs on the facility.

The operating license agreement includes a requirement for a separate funding agreement to provide the U of S with funding in the form of grant contributions of up to \$6.3 million for the construction of the cyclotron facility. Funds from other sources are to be fully exhausted prior to any funds from the Fedoruk Centre being utilized. Each instalment, a maximum of \$2.1 million, will be adjusted according to need. The balance of the \$6.3 million not required for the capital project will be returned to the Fedoruk Centre's operating account. During the year ended March 31, 2017, grants of \$298,873 (2016 – \$2,805,000) were made.

During the year ended March 31, 2016, the Fedoruk Centre entered into an agreement for the provision of cyclotron maintenance services. The term of the agreement is from February 1, 2016 to January 31, 2019 and the cost is \$280,000 per year.

11 Subsequent event

Subsequent to March 31, 2017 the Fedoruk Centre entered into a program grant agreement with a maximum commitment of \$2 million, payable in annual instalments up to June 30, 2019. The Board of Directors of the Fedoruk Centre approved the finalization of the funding agreement during the year ended March 31, 2016 and the effective date of the agreement is July 1, 2016, however execution of the agreement did not occur until subsequent to March 31, 2017.



303-111 Research Drive,
Saskatoon SK S7N 3R2

306.966.3375

www.fedorukcentre.ca



Medicine

Materials

Energy

Environment