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OSCAR SEAWELL

APRIL 2016

BY PRANA CHERNOVA

AND

ELIZABETH SEITZ

Biographical Sketch: Oscar Drumheller Seawell was born in 1923 in Yakima, Washington State, United States of America. He began studies at Whitman College in Washington in 1941 with a military draft deferment to study physics. In 1943 he enlisted in the U.S. Army and was assigned to the Army Specialized Training Program to study advanced Civil Engineering for a school year at the University of Utah. After serving in the United States and on Guadalcanal, the Philippines and Japan, he was discharged in January 1946 and returned to studies at Whitman College and worked as part-time assistant physics laboratory instructor.

In 1947 he received a Bachelor of Arts (Hons.) with major subjects physics and mathematics from Whitman College and took post-graduate civil engineering classes at the Massachusetts Institute of Technology in Cambridge obtaining a Masters degree in Science in Civil Engineering in 1948.

While employed by General Electric Company analysing nuclear reactors Seawell also attended the Oak Ridge School of Reactor Technology and from 1964 to 1970 he took additional nuclear and mechanical engineering classes part-time, at Stanford University in Palo Alto, California.

Through continuous part-time training which began in 1949 as an Officer in the Corps of Engineers in the United States Army Reserve Seawell rose to the rank of Lieutenant Colonel and over time, was engaged in duties as a construction engineer, combat engineer company commander, public works and utilities officer, and sanitary engineer. Through correspondence courses Seawell earned a Diploma from the U.S. Army Command and General Staff College at Fort Leavenworth, Kansas in 1974.

Seawell worked in the construction industry for a short time and was a nuclear engineer for eleven years. His work at that time mainly concerned nuclear reactor design and safety, and performing systems and operations analyses with an emphasis on creating computer simulations which were, between 1948 and 1989 quite diverse.

Seawell's teaching career included work as an Assistant Professor of Civil Engineering at the University of Idaho from 1952 to 1956, where he met and married Bonnie Scott in 1953. In 1956 they moved to Los Angeles, California where he worked as a nuclear engineer for Atomics International and The Marquardt Corporation. In 1956/57 and again in 1961/62 Seawell taught a nuclear reactor design extension class for the University of California, Los Angeles and in 1964 he and Bonnie moved to Palo Alto, California, where he taught engineering classes at San Jose State College.

He was then employed as Principal Analyst with Computer Usage Development Corporation and as Senior Operations Analyst in the Systems Applications Group of Stanford Research Institute.

In 1971 Oscar moved his family to Regina having accepted an appointed as Professor of Mechanical Engineering at the University of Saskatchewan, Regina Campus (known as the University of Regina since 1974). After initiating a short-lived Mechanical Engineering program he then planned and initiated a new Industrial Systems Engineering program, and his title was changed to Professor of Systems Engineering. He taught a variety of subjects from introductory through upper level engineering for students in other fields as well as Industrial Systems Engineering.

In 1960 Seawell was the Task Force Chairman for the American Standards Association with a mandate to prepare of a general guide for analysing nuclear reactor accidents. He was Chairman of the Los Angeles Section of the American Nuclear Society for 1963/64 and Vice-

Chairman for the University of Regina Faculty Association Executive Committee in 1975/76 and the Chairman in 1976/77. Seawell was the Engineering Curriculum and Program Committee Chairman from 1972 to 1980 and the Chairman of the President's Budget Advisory Committee in 1979/80, and Committee Chairman for the Faculty Association in 1988/89.

Seawell retired as Professor Emeritus in 1989 but continued to teach Engineering part-time through 1993. He and his wife Bonnie continue to reside in Regina.

Revised by Oscar Seawell, January 15, 2016

Scope and Content: The files relate to sources for the world's energy, and Seawell's teaching and research material in the field of nuclear energy. The collection ranges in date from 1949 to 1990 but predominantly dates from the 1950s to 1970s. Included as the last folder in the collection is a note to the University Archives from Seawell dated 2004, regarding the material. This collection also includes 19 photographs and oversize material consisting of computer printouts.

Custodial History: The files were donated to the University Archives and Special Collections in December 2015 by Oscar Seawell.

Legal Agreement: The donation agreement is pending.

Future Accruals: Future accruals are expected.

Access Restrictions: The records in this collection are open to researchers however there are closed files in boxes 9, 10, 11, 14, and 15.

Note on Arrangement: The Administration file series contains dividers. These have been retained to provide insight into Seawell's filing system. They do not contain any material. The photographs were numbered and sleeved.

Related Accessions: Related material may be found in 91-77, 92-16, 92-61, 97-18, 2005-10, 2005-11 2013-11, 2013-20, 2013-27, and 2014-56.

		Administration Files	
D . 4		A1 Administration (divider)	1000
Box 1	1	AIF Files and Filing System	1960
	2	Atomic Energy Commission (AEC) Licensing and regulations and	1958, 1960,1962,
	•	map of operating reactor locations in 1970, (state regulations)	1970
	3	A1P1 Patents	1960
		A2 Aircraft and Missles [Missiles] and Space Flight (divider)	1010 1001 1001
	4	A4 Atomic and Nuclear Energy – General (includes publications)	1949, 1961, 1964,
			1965
		C2 Construction (divider)	
		C3 Control of Reactors (divider)	
	5	C3C Control Rods (Grey vs Black)	1952, 1955-1958
	6	C3G Safety Devices	1958
		D Documents and Reports (divider)	
	7	DR Reference – General (includes publications)	1958, 1960
		E1 Economic (divider)	
	8	E1 Economics – Reactors – General	1960, 1961,
			1963,1966
		E4 Electronics (divider)	
	9	E2 Equipment	1966
		E3 Engineering – General (divider)	
	10	E3P Projects Gnomes and Plowshare Underground Nuclear	1961, 1962, 1964
		Explosions and Earth-Moving	
		F Fuel, Nuclear (divider)	
	11	FC 2 Fuel Cycles	1958 ,1960
	12	FE Fuel Elements (includes publication)	1957, 1960
	13	FH Fuel Handling and Shipping	[1965]
	14	FR Fuel – Raw Materials – Uranium	1959, 1964, 1970
	15	FTP Fuel – Plutonium	1964
	16	FTT Fuel – Thorium	1961
	17	FTT Materials Data – Fuels (also see HIM File re: Pu, U, Th)	1960s, 1962
	18	FTU – UO ₂ and U	1957-1959
		H1 Hazards (divider)	
	19	H1E1 Excursion Analyses	1959, 1962,
	20	H1E1 Excursion Analyses: Quasi – Equilibrium Primarily for Hazards	1958, 1959, 1962,
		Summary for Th-U Fuel in the SRE	
	21	H1E1 Kinetics Stability and CRT Tests of it	1961, 1963,
	22	H1E3 Earthquake (includes publications)	1963, 1967
	23	H1H Safety – ACRS Reports	1962
	24	H1H Safety Analyses – AEC and Hazards Analyses, (Reports	1963
		received and in separate files)	
	25	H1H Hazards – Carolinas Virginia Tube Reactor (includes hazard	1962, 1964
		analyses – control rods withdrew without valid signal)	
	26	H1H Hazards – Diable Canyon Site, California	1968
	27	H1H Hazards – Dounreay Fast Breeder Reactor	1961
	28	H1H Hazards – Dresden Reactor	1961, 1962, 1965
	29	H1H Hazards – Enrico Fermi Reactor (APDA) (PRDC) (sodium	1960, 1961-1963,
		cooled test breeder (includes Hazards Analyses)	1965
Box 2	30	H1H Hazards Elk River Reactor (includes hazards analyses report)	1960, 1962, 1965
	31	H1H Hazards – Gas Cooled Reactor	1959
	32	H1H Hazards Humbolt Bay Power Plant (PG & E) (includes hazards	1960, 1963, 1965,
	- —	analyses)	1968
	33	H1H Hazards – Improved Cycle Boiling Water Reactor (cities of Los	n.d.
		Angeles and Pasadena) San Francisco Canyon Site	
	34	H1H Hazards Indian Point Reactor (consolidated edison)	1959, 1961, 1965
	35	H1H Hazards – Malibu Reactor Los Angeles Department Water and	1963-1965, 1967
		Power	,
		-	

	36	H1H Hazards – National Bureau of Standards Reactors	1961, 1963
	37	H1H Hazards – Pathfinder Reactor (Northern States Power Co.)	1960, 1963, 1965
	38	H1H Hazards – Peach Bottom Reactor Gas-cooled Reactor	1961, 1964 -1966
	39	H1H Hazards – Piqua (includes hazards analyses)	1961, 1964
	40	Hazards – Sacramento Municipal Utilities District	1968
	41	H1H Hazards – San Onotre Nuclear Gen. Sta.; Southern California	1963, 1966, 1967,
		Edison; Camp Pendleton, California	1970
	42	H1H Hazards NS Savannah	1961, 1963-1965
	43	H1H Hazards – Saxton Reactor (includes hazards analyses)	1961-1963, 1965
	44	H1H Hazards – Sodium Reactor Experiment	1958
	45	H1H Hazards – Southwest Experimental fast Oxide Reactor,	1965
		Fayetville, Arkansas	
	46	H1H Hazards – Vallecitos and EVESR	1961-1966
	47	H1H Hazards – Vermont Yankee	1967
	48	H1H Hazards – Yankee Nuclear Power Station (Yankee Atomic	1961-1964
		Electric Co.) (includes hazards analyses)	
	49	H1M Materials Hazards – for SPPP (Special Purpose Power Plant) a	1956
		critical facility for satellite power reactor	
	50	H1M Hazards Organics – Hazards	1957, 1958
	51	H1M Materials Hazards – Pu, U, Th, Mg, Ti, Z. Safety Standards	n.d.
		(includes publication)	
	52	H1N Hazards – Nuclear (includes publication)	1957, 1961
	53	H1T Hazards – Thermal (includes core meltdown)	1968
		H2 Health and Safety – General (divider)	
	54	H2A1 Safety – Accident Statistics - Non-Nuclear	1980
	55	H2A1 Baldwin Hills Dam facilities, Los Angeles 1963	1963
	56	HEA1 Challenger Disaster	1986
	57	H2A1 Cycles and Catastrophes - Models	1999
	58	H1A1 Disaster Dates	1961, 1986
	59	H2A1 Kansas Flood	1951
	60	H1A1 Safety – Accidents and Incidents – Military Alert of SAC due to	1962
		communications fault in Fall 1961	
	61	H2A1 Safety – Accidents and Incidents – Mississauga Train Wreck,	1979, 1980, 1982
		Nov 1979 (includes publications)	1983, 1989
	62	H2A1 Safety - Accident and Incidents - Nuclear (includes	1957, 1960, 1961,
		publications)	1963, 1964
Box 3	63	H2A1 Safety – Accident and Incidents – Safety Study / Reference	1960
		Material	
	64	H2A1 Accident Study Proposal	1960
	65	H2A1 WASH-74C Consequences of Major Nuclear Power Accidents	1957
		(includes publication)	
	66	H2A1 Accident Study Correspondence AEC and AF and Internal	1960, 1961
	67	H2A1 Excursions – Uncontrolled Incidents and Other Actual (includes	1959, 1960, 1966,
	00	publication)	1968
	68	H2A1 U.S.S. Thresher Loss – Nuclear Submarine	1000
	69 70	H2A1 Safety – Accident and Incident Titanic Sinking Accidents	1986
	70	H2A2 Safety – AEC and Other Government Function ACRS	1961, 1960, 1963
	71	H2F Safety – Fast Reactors (includes inter-office letters)	1962
	72 72	H2A1 Safety Study – Correspondence – General	1960
	73 74	H2A3 Aerospace Nuclear Safety	1960-1963
	74 75	H2A3 SNAP Safety	1964, 1965
	75 70	H2N Nuclear Reactor Safety (includes publication)	1959
	76	H2N Nuclear Safety – General (includes publication)	1957, 1958, 1965, 1967
	77	H2R1 Radiological Safety – General	1956, 1958-1960
	78	H2R2 Reactor Safety – General	1959, 1961-1963,
		•	1965, 1966
			•

	79	H2R2 Un-moderated Reactor Safety Analysis by Seawell	1962
	80	H2R2 Safety Information from American Nuclear Society (ANS)	1962
		Meetings	
	81	Reactors and Safety – General Information	n.d.
Box 4	82	H2R2 References – Safety	1963, 1964, 1971,
	-		1976
	83	H2R2 Safety – Sodium Reactors and Sodium Graphite Reactors	1959, 1962
		Instrumentation and Instruments Control (divider)	,
	84	Nuclear Power Plant Control and Instrumentation	1972
	85	IG Instrumentation	1958, 1959
	86	IR2 Instrumentation and Control Equipment for Army Corps of	1954
		Engineers Package Power Reactor (APPR)	
	87	M1 Materials	1964
	88	M1J2 Isotopes (and Elements) – Basic Data	1944, 1961
	89	MIRC Na Properties and Other Liquid Metals Thermodynamic Charts	1960
		for Rubidium (Rb), Potassium (K), Sodium (Na), Mercury (Hg)	
	90	MIRC Coolant Materials	1961, 1962, 1967
	91	MIRM Moderator Material – Graphite and Coating Notes	1958, 1959, 1962
	92	MIRS Material – Structural Sodium Graphite Reactor (SGR) Materials	1958
	~ _	M2 Mathematics (divider)	
	93	M2B Boolean Algebra	n.d.
	94	M2C1 Computer Programs	1958
	95	M2C3 Conversion Factors, Constants and Units	n.d.
	96	M2G General Math Information	1964, 1967
	97	M2P Probability Theory – Random Phenomenon	n.d.
	98	M2S Nuclear Reactor Simulator	1970
	99	M4 Military	1960
	100	M4N Nuclear Weapons	1961, 1962, 1966
		M5B Miscellaneous (divider)	,,
		Miscellaneous (divider)	
		N Nuclear (divider)	
	101	NC1 Nuclear Coefficients	1961
	102	NC4 Nuclear Calculational Methods	1961, 1962
	103	ND Nuclear Data	1959-1961
	104	NF Nuclear Fusion – Cold Fusion Experiments (See T2 for	1989
		Thermonuclear Fusion)	
	105	NK Kinetics – General	1957, 1959, 1961,
			1962
	106	NK Kinetics and Excursions	1956, 1958, 1959
	107	NK Nuclear Reactor Kinetics References	1985
	108	NK Dynamics and Control Seminar	1957, 1958
	109	NS1 Nuclear Safety – Material for Talk on Safety of Nuclear Reactors	1973, 1977-1980
	110	NS1 Canada Deuterium Uranium (CANdu) Reactor Safety	1973, 1978, 1979
	111	Nuclear Reactor Emergency Systems	1981
	112	Nuclear Safety – General	1980
	113	NS1 Nuclear Stability	n.d.
	114	NT1 Nuclear Theory and Data	1958-1961
	115	NT1 Nuclear Theory – Nuclear Models and Forces	1971, 9173
	116	Nt2 Nuclear Transients (including Xenon (Xe) spatial oscillations)	1958, 1959
		O2 Organizations, Business, and Industries (divider)	,
	117	O2A3 AEC Organization – General	1949-1952, 1956-
			1958, 1961, 1962
Box 5	118	O2 AFL – CIO	1961
	119	O2N Nuclear Industries (including those in Parkland Washington)	1960, 1961, 1964
	120	O2N Atomics International	1959-1961, 1962,
			1966
	121	O2N Fluor Corporation Ltd. and Information on Marquardt's ASTRO	1961

	Division	
122	O2N General Electric Co.	1965
123	Holmes and Narver Inc.	1948
124	O2N Utilities in Nuclear Industry – Southwest Atomic Energy	1962, 1963
	Association	
125	O2N Western Nuclear Corporation George Freund Correspondence	1956, 1959, 1961,
	concerning possible consulting	1962
126	P1 Physics – General	1965
127	P1P Physics – Particles Discovered	1961, 1964
400	P2 Power Plants (divider)	1004
128	P2A Aerospace Nuclear Power Programs in United States	1961
129	P2A Non-propulsive Power Requirements for Space Vehicles	1960
130 131	P2AR1 Ramjet Theory P2AS2 Power Plants for Satellites – SNAP Program and	1958-1959 1961, 1964
131	Radioisotope Sources (also see file R2E1A for Reactors for	1901, 1904
	Satellites)	
	P3 Processes (divider)	
	P4 Project Information (divider)	
132	P5 Publications and Speeches	1964, 1987
133	P5 Atomic Industrial Forum	1960, 1961
134	Nucleonics Space Issue	1960, 1961
135	P5 Publications – American Men of Science	1961
136	P5 Publications – Who's Who in Science	1959, 1961
	P5 Publishers – General (divider)	
	R1 Radiation (divider)	
137	R1B2 Biological Effects of Radiation	1960, 1967, 1988
138	R1E1 Material – Radiation Effects	1961, 1997
139	R1G Radiation – General	n.d.
140	R1H Radiation Hazards	1961
141	R1H Standards for Protection Against radiation – Title 10, Chap 1,	1957, 1960
	Part 20, Code of Federal Regulations R2 Reactors (divider)	
142	R2E1A Satellite Power SNAP 7, 8 and 10 (see also P2A-S2)	1960, 1961, 1965
143	R2E1G Electric Power Production – General Power Reactors Talk by	1059, 1966,
140	Milton Shaw included	1000, 1000,
144	R2E1M Military Reactors – Army Nuclear Power Program	1960-1962
145	R2G Reactors – General (includes notes on Seawell's work on	1962
-	various nuclear reactors and design classes taught	
146	Nuclear Reactor Design Class (University of California Las Angeles,	1957, 1960, 1961
	1957, 1960)	, ,
147	R2M1F Reactors – Fissionable Material Production	1959-1961, 1964,
		1965, 1967
148	R2M1F Hanford Reactors and Savannah River	n.d.
149	R2M2 Military Reactors (includes Naval, Applications and Ground)	1960, 1961, 1965
150	R2P1A1R1 Pluto Information Nuclear Ramjet	1960, 1961, 1964
151	R2P1A1R1 Tory Nuclear Ramjet Engine	1961, 1964
152	R2P1A1R2 Rocket Facilities (includes analysis by Seawell)	1960-1964
153 154	R2P1A1R2 Propulsion Reactors – Rockets (for space travel boosters)	1962-1967, 1969 1960
155	R2P1A1R2 Nuclear Rocket Kinetics Stability and Control R2P1A1R2 Reactor in Flight Test RIFT	1960
156	R2P1U Submarine Propulsion Reactors	1961, 1989
157	R2P1W Navy Organic Reactors – (program cancelled)	1958
158	R2P1W NS Savannah (Family Tour of Ship)	1962-1964
159	R2P2 Vortex Flow and Gaseous Reactors	1959, 1960
160	R2R1T M Wright Air Development Center (WADC) Containment	1977
	Safety	
161	R2R2G Research Reactors Designed by Atomics International	1954, 1955

Box 6

	162 163	R2RK Kinetic Experiment on Water Boiler (KEWB) Program R2R2M Research Reactors – Medical University of California, Las Angeles (UCLA) Medical Research Reactor North American Aviation	1957, 1958 n.d.
	164	R2R2T Research Reactors – Training	1963, 1967, 1997
	165	R2R2T Solution Type Research Reactors – Problems S1 Shielding (divider)	1952, 1958
	166	S1D1 Shielding Data	1956, 1957
	167	S1G1 Shielding – General	1959
	168	S2 Site	n.d.
	169	S2D Site Distances and Criteria	1956, 1961-1963, 1967
		S3 Structural Design (divider)	
	170	S3B Blast Protections	1955, 1958
	171	S3R2 Reactor Containment	1096, 1963, 1964
	172	S3R2 Structural Design Reactor Plants	1958, 1960, 1965
		T1 Thermal (divider)	
	173	Thermal Analysis in Rocket Engine- Seawell's notes	1963
	174	Thermal Data – Afterglow Heat	1958, 1959, 1974
	175	Thermal Data – Fuels (Nuclear)	1957, 1958
	176	Thermal Data – Liquid Sodium (Na)	1955, 1957, 1958,
		momai Bata Elquia obalam (ma)	1959, 1962
	177	Thermal Data – Organics	1958
	178	T1P1 Cycle Analyses and Liquid Metal Data for Space Power Plants	1961
	179	Thermal Self Regulation (Seawell's Analyses)	1962
	180	SRE Thermal Analyses	1957
	100	T2 Thermonuclear (divider)	1937
	181	T2 Thermonuclear (divider)	1959
	101		1909
	182	T3 Training (divider)	1961
		T3 AEC Fellowships	
	183	T3 Oak Ridge School of Reactor Technology (ORSORT)	1964, 1965
	404	T4 Transportation (divider)	4070
	184	Transportation of Non-Radioactive Hazardous Materials	1978
	185	T4R Transport of Radioactive Materials (including Fuel Casks (see note re: OMRE casks)	1958, 1966
	400	Career Track	1000 1000
	186	Attended Seminars	1986-1989
	187	College West	1980
	188	Computer Account for Personal Use	1971
	189	Conversion of Units	1974, 1988
	190	Copyright	1986, 1989
Box 7	191	Energy Levels	1960
	192	Greek Alphabet Symbol List	n.d.
	193	Humour	n.d.
	194	Iron Ring Ceremony – Rituals of the Calling of an Engineer	1990
	195	Library – Donation (includes receipt given)	1987, 1988
	196	Library – MURLIN use	1989
	197	Luther College	1972, 1973
	198	MacKenzie Art Gallery	n.d.
	199	Maps – Saskatchewan and Regina and Regina Campus	1979, 1982
		Past Research and Planned Writing	
		Analyses of War Cycles, and War related Notes	
	200	1975 Graphs and Analyses	1975
	201	Addition to Pulse of War in Spring and Summer 1976 (figures	1976
		prepared June 1976 and Data and Citations	
		• •	

202	Analyses of Peaks	January, March 1975 [1976]
203	Analysis of High and Low Tendencies	March 1975
204	Bibliography of Related Material to examine, related to Pulse	[May 31, 1977]
204	The state of the s	[May 51, 1977]
005	of War	1 1 4070
205	Civil War Patterns	July 1976
206	Copies of Graph Originals used by Dave Weir to make figures	n.d.
207	Current Analyses to be finished for Monograph and /or book	May 1977
208	Current Observations and Ideas for Computer [Runs] to check	August 4, 1977
	them	3 ,
209	Extrapolations past 1944	March 1975
210	Histogram of Peaks	January, February
		1975
211	Information on Peaks (not current)	February 1975
212	Miscellaneous Calculations of Averages	March 1975
213	Miscellaneous Notes re Cycle Analyses	January 1975
214	Monograph – Preliminary version of Pulse of War to send to	1977
	Xerox	
215	Pulse of War – Book planning	1976, 1977
216	Results from Latest Analyses	May, July 1977
217	Slides for Lecture on war Cycles and re: newspaper front	n.d.
217		n.u.
	pages	
218	Department of National Defence, Canada	1977, 1979
219	Dr. Archer re: Pulse of War	June. August 1975
220	John and Helen Kettle The Future Letter	1985
221	Master Xerox copy of St. Louis papers	1979
222	People given copies of St. Louis Pages	1979, 1982
	Correspondence with Publishers and related notes and	,
	interested individuals re: War Cycles copy of two war-	
	related papers mentioned in letters to Foundation for the	
	Study of Cycles	
222		1076
223	Abelard-Schuman Ltd.	1976
224	Articles Submitted to military Review (not published)	April 1978
225	Foundation for the Study of Cycles	October, November
		1980
226	John Wiley and Sons	December 1975
227	McClelland and Stewart (Canadian Publishers)	July 1973
228	McGraw Hill Ryerson Ltd.	July 1973
229	Praeger Publishers, Inc.	August, September
225	r racger r abilisticis, inc.	1975
230	Drontico Hall Spectrum Series	
	Prentice Hall Spectrum Series	June, July 1975
231	Publication Possibilities for an article	1978
232	Publisher and List and Notes	July 1975
233	Shoe String Press (The)	July-October 1976
234	Social Sciences History Publications	1976
	Personnel	
235	Directories and Lists University of Regina	1971-1975, 1988
236	Information Re: University Faculty and Staff	1975, 1976
237	Student Directories	1970, 1973
238	Women in University of Regina Engineering Program	1985
239	Property in the Property is a second of the Property in the Property is a second of the Property in the Property is a second of the Property in the Property is a second of the Property in the Property is a second of the Property in the Property is a second of the Property in the Property is a second of the Property in the Property is a second of the Property in the Property is a second of the Property in the Property is a second of the Property in the Property is a second of the Property in the Property in the Property is a second of the Property in the Property is a second of the Property in the Property is a second of the Property in the Property is a second of the Property in the Property in the Property is a second of the Property in the Property is a second of the Property in the Property in the Property is a second of the Property in the Proper	July 1979
	Presentations	
240	American Nuclear Society (ANS) Presentation, text, notes,	June 1960
	formulas, figures, and abstract Chicago	
241	American Nuclear Society (ANS) P5 Speech and	June1960
	Correspondence Presentation, Chicago	
242	American Society of Civil Engineers (ASCE) Meeting (paper	March 1956
	, , , , , , , , , , , , , , , , , , , ,	

		presented <i>The Impact of the Atom on Civil Engineering</i>) Bullman, Washington	
	243	American Society for Electrical Engineers (ASEE) Section Meeting Presentation in Klamath Falls	April 1982
	244	Article prepared but not published (nuclear field)	1963
		Organic Moderated Reactor Experiment Fuel Casks 1957-1958	
		(Seawell was Responsible Engineer on design and manufacture of these fuel casks)	
	245	Segment from Organic Moderated Reactor Experiment	1957
	246	drawings used for making transparency masters Organic Moderated Reactor Experiment Fuel Cask Progress	1957, 1958
		and information about Organic Moderated Reactor	,
	247	Experiment Photographs of Fuel Casks Photographs (includes 19	1957, 1958
		photographs) The photographs are of fuel casks for shipping	,
		irradiated fuel elements after they had been used to fuel power generation in the Organic Moderated Reactor	
		Experiment, an experimental nuclear reactor built in 1957 in	
		southwest Idaho. There is no used fuel in these photos – only mock-up fuel elements used to test electric heating effects in	
		some of the photographs.	
	248	Organic Moderated Reactor Experiment Budget and Estimates and Actual Costs	1957, 1958
	249	Purolator Courier re: ACRS Application	1990
	250 251	Research (includes Seawell's research) Salary Scale for Engineers and Computer Personnel	1984, 1986 1961, 1965, 1968,
		calary code for Engineers and compater resonate	1975, 1990
	252 253	Storage Units for Files (receipts)	1997 1973
	203	Television Interviews Oscar Seawell 1977 Notes for Television Interview; 1973 Article on Nuclear Safety at University of Regina;	1973
		1960s Nuclear Reactor Designs Class Outlines as Taught by	
	254	UCLA Extension University of California, Irvine	1979
		Publications – Research Related	
Box 8	255 256	American Society for Engineering Education (ASEE) <i>Prism</i> Canadian Association for Futures Studies <i>Futures Canada</i>	September 1991 1976, 1977
	200	Volume 1, No. 1, 1976	1370, 1377
		Volume 1, No. 2, 1976	
		Volume 1, No. 3, 1977 Volume 2, No. 1; 1977	
	257	Canadian Imperial Bank of Commerce, <i>Spectrum</i> Volume 2, Number 4, 1982	1982
	050	Canadian National Energy Program and other Energy Documents	4077
	258	Aeronautics and Astronautics November 1977 (Coal reserves) page 30 and 36	1977
	259	Energy Documents – Canadian National Energy Program and	1980-1982
		Others (see also / related to Engineering 451 Energy Systems Class)	
	260	Fusion (publications: <i>Mechanical Engineering</i> from July 1982, <i>Nuclear News</i> July 1980 and June 1981	1980-1982
	261	Land Use in Saskatchewan and Other Land Use Documentation (re: Energy)	1980, 1982
	262	Peat, Marwick, Mitchell and Co. Management Controls	March, April 1977
	263	Radiation Biological Effects of Radiation	1976
	-	•	

	264 265 266 267 268	Food Irradiation Nuclear Material (includes thermac and radiation effects) Radiation and Our Environment Radiation Protection – Engineering 601 project by Derek Shiu Renewable Energy News; En-Form (series incomplete 1980s – 1990s) (Oversize)	n.d. 1959, 1966 1969, 1980, 1989 1984 1980s-1990s
		Publications – University Related University of Saskatchewan, Regina Campus	
	269	Convocation Spring - May 25, 1973 University of Regina	1973
	270	Brochure – n.d. Convocation	n.d.
	271	Spring – May 23, 1975	1975
	272	Spring – May 22, 1981	1981
	273	Spring – May 27, 1983	1883
	274	Spring – May 27, 1903 Spring – May 25, 1984;	1984
		Fall – October 20, 1984	
	275	Spring – May 24, 1985 Fall – October 19, 1985	1985
	276	Fall – November 1, 1986	1986
	277	Spring, May 22, 1987	1987
	278	Spring – May 26, 1989	1989
	0	Fall – October 28, 1989	1000
	279	Faculty of Engineering Brochure (features Oscar Seawell - see page 4)	n.d.
Box 9	280	Grad Book - Engineering Students Society – 1986	1986
CLOSED	281	Grade Books Classes	1900
CLUSED	201		
	000	Thesis - Faculty of Engineering	4007
	282	A Comparison of Particulate Removal Systems for the	1987
		Shand Thermal Station, A.D. Carson	
	283	Design and Evaluation of Cellular Manufacturing Systems (CMS), K.A. Richardson	1989
	284	A Model for the Economic Comparison of Plant Location	1972
	285	Sites, J. E. Matlock A Model of Historical Interrelationships Among War,	1977
		Science, Economics, Technology and Culture, R.W. Tunison	
	286	A Pentane Extraction Feasibility Study for Petro-	1986
	287	Canada's Empress Gas Plant, M.A. Hugel Performance Study of Cooling Water System art Petro-	1987
		Canada's Empress Gas Plant, P.J. Kuprowski	
Box 10	288	A Simulated Consolidation of the Grain Handling and Transportation System in the Kerrobert Region of	1974
		Saskatchewan, C.L. Kirkland	
CLOSED	289	Recommendation letter	1993
		Research Material with an Emphasis on Energy (include food,	
	200	populations, and music content of interest	4070 4000
	290	Accident Data – Canada	1979, 1980
	291	Accidents – Nuclear and Non-Nuclear Accident Effects,	1981
	000	Contamination, Arguments	1000 1000 1555
	292	Acid Rain	1980, 1982 1983
	293	Asia – Uranium and Other Mineral Reserves in Tibet	1982
	294	Canada and Saskatchewan – Energy Resources	1972, 1978
	295	Canada Deuterium Uranium (CANdu) 300 Reactors	1984

	296	Chemical Pollution (including lead, acid rain and laws)	n.d.
	297	China – Industry, Pollution and Coal Usage	1982
	298	Coal resources and Uses	1982, 1988
	299	Conversion of Units	1973
	300	Dimensions of Energy, (Seawell's plans for book, not implemented)	1982
	301	Earth History	n.d.
	302	Energy Conference Notes – for reference when preparing book	August 1982
	002	(Geothermal Well at University of Regina included in notes)	August 1002
	303	Energy Resources – General	1981
	304	Energy Sources – General Energy Sources – Wind and Geothermal	n.d.
	305	Farm Equipment – 5 Holt Sidehill Combines on George Drumheller Ranch	1905
	306	Food – Limits of Growth Competition Submission for possible Mitchell Prize	1974, 1975
	307	Geology – Geoscience Canada re: Canadian Geology (and possible article publisher (include Canadian application)	1981
	308	Geology re: Petroleum and Classification of Carbonate Rods	1958, 1961, 1962, 1971
	309	Geothermal Project at University of Regina	1982, 1983
	310	Home Energy Use	1982
	311	Home Heating Systems and Costs	1982
	312	Mexico – Maps and Information on Country (includes tectonics)	n.d.
	313	Nuclear Power Debate and Comparison of Fatalities from Other	1976
	313		1970
	24.4	Causes (see page 9 of Science Forum)	4000
	314	Nuclear Fusion	1982
	315	Nuclear Fusion – Cold Fusion	1989,1990
	316	Nuclear History – History of Nuclear Development	1989
	317	Nuclear Power Reactors – Canada Deuterium Uranium (CANdu) in Canada and Abroad	1985
	318	Nuclear Radiation Release – Hanford	1990
	319	Nuclear Reactor – Hanford N Reactor	1989
	320	Nuclear Reactor – Safety Goals	1982
	321	Nuclear Waste	1982
	322	Buried Waste Criticality Page 81 Nuclear News	1975
	323	Canadian Nuclear Fuel Waste Documents and Publications	1978, 1979
	324	Oil Platforms – The 'Ocean Ranger' which sank	1983-1985
	325	Oil Refinery (what is)	1989
	326	Oil and Gas Resources and Investment in Canada	1983
		Population	1974-1976
	327	·	
D 44	328	Population and Food	1955
Box 11		Research Material Nuclear Energy Files (From Uses at University of	
		Regina and Miscellaneous)	
	329	The American Society of Mechanical Engineers (ASME) Publications on Nuclear Reactor Safety, Design, and	1972, 1973, 1975
	000	Analysis	4070
	330	Canada Deuterium Uranium (CANdu) Reactors Brochures	1976
		Atomic Energy of Canada Limited (AECL) Paper and Globe and Mail articles	
	331	Canadian Reactor Fuels (includes data)	1976
	332	Comparative Risks of Different Methods of Energy Generation	1976, 1977
		and of Other Events	
	333	Hanford N Reactors and Hanford Area Map	1975
	334	Hanford Information, Map, Geology, Science Centre, Basalt	n.d.
		Waste Isolation Project, (radioactive waste management –	
		from visit to Hanford Works during sabbatical leave	
	335	Heavy Water (including thermodynamic tables)	1973
	550	1.54 Trator (morasing thermodynamic tables)	.0.0

	336	History of Canada Deuterium Uranium (CANdu) Reactor and of Nuclear Research in Canada	1976
	337	Neutrons at Work – Various Uses	August 1963
	338	Nuclear Fuel Cycles	1979, 1981
	339	Nuclear Power Reactor Types	1989
	340	Nuclear Reactors Reference Material and Seawell's Notes in	1977
		Preparation for a Television Interview on Nuclear Energy	
	341	Basic Kinetic Derivations and Data by Oscar Seawell	1962, 1963
	342	Delayed Neutron Data (not applicable to Canada Deuterium Uranium (CANdu))	1961
	343	Kinetics - Nuclear Reactors	n.d.
	344	Nuclear Power Basic Information	1979, 1982
	345	Physics of Nuclear Reactor and Data Atomic Energy of Canada Limited (AECL) 5229 (emphasis on Canada Deuterium Uranium (CANdu) Reactors)	1975, 1977
	346	Safety in Engineering (includes nuclear safety)	1987
	347	Safety in Mining and Health	1978
	348	UO ₂ (Uranium Oxide) Fuel Info	1962, 1964
	040	CC ₂ (Gramam Cxide) i dei inic	1002, 1004
	-	Teaching Material	
		Computer Science 374	
CLOSED	349	Ron Tonogai Term Project The Canada Deuterium Uranium	April 1984
		(CANdu) / PHW Nuclear Reactor Simulation (Oversize)	
		Energy Reference Material	4004
	350	Co Generational	1984
	351	Coal	December 1979
	352	Earth's Energy and Mineral Resources	1978, 1980
	353	Electric Power in Canada	1979
	354	Energy Brochures (for use in Engineering 451 Energy Systems) 1/5	1979-1982
Box 12	355	Energy Brochures (for use in Engineering 451 Energy Systems) 2/5	1981
	356	Energy Brochures (for use in Engineering 451 Energy Systems) 3/5	1980-1982
	357	Energy Brochures (for use in Engineering 451 Energy Systems) 4/5	1976, 1980, 1982
	358	Energy Brochures (for use in Engineering 451 Energy Systems) 5/5	1978
	359	Energy General	1978, 1981, 1985
	360	Energy Conserving Living (Workshop - Energex '82)	August 1982
Box 13	361	Energy Electricity Production and Distribution – Broad Coverage	1982
	362	Energy in Saskatchewan	1977, 1979-1981
	363	Energy Projections	1979, 1981
	364	Environment	[1987]
	365	Environment - Acid Rain	1980
	366	Environment - Impacts - General	1972
	367	Environment Water and Pollution	n.d.
	368	Facts Sheets about Energy	1979
	369	Geothermal	1981
	370	Hydro Electric Power and River Systems	1973, 1975, 1976
	370 371		
		LH ₂ (Liquid Hydrogen)	1972-1974, 1983
	372	Natural Gas	n.d.
	373	Oil	1977
D 4.4	374	Oil Fired Generator Generation	1983
Box 14	375	Reducing Military Energy Vulnerabilities	1980
	376	Renewable Energy	1975, 1977, 1984

	377	Technology and Humanity Engineering100	1975
	378	Digital Computer Use in an Engineering Computation Class (Summary for Spring 1980 Talk to American Society for Electrical Engineers (ASEE) North West (NW) Section Meeting	1980
	379	Seawell's Copies of Engineering 100 Analysis Report Engineering 200, 201, 330 and 351	January 15, 1994
	380	Administrative Note from Seawell Re: Nuclear Reactor System Simulations primarily Canada Deuterium Uranium (CANdu) simulation from Engineering 200, 201, 330 and 351, Computer Science 375 etc Engineering 200	n.d.
	381	Engineering 200 Nuclear Reactor Simulation Assignment Sheets and Data from a Sodium Graphite Moderated Reactor (Winter 1976)	1976
	382	Engineering 200 Nuclear Reactor Simulation CANdu 600 Reactor Student Reports and Results (Fall 1977) Engineering 201	1977
	383	[Engineering 201] (punch cards) Program for Initializing Canada Deuterium Uranium (CANdu) 600 Primary Coolant Data	1970
		Engineering 201 (Engineering Computations and Designs) (Fall 1979)	1979
	384	1 st Digital Assignment – Programming (Fall 1979)	1979
	385	2 nd Digital Program Assignment – Programming and	1979
		Derivations and Calculations (Fall 1979)	
CLOSED	386	3 rd Assignment – Submissions by Student (Kim Worff) (Oversize) (Fall 1979)	1979
	387	Canada Deuterium Uranium (CANdu) 600 Primary Coolant Loop Transient Simulations (Fall 1979)	1978
	388	Completed Simulations #1 and #2 Copies – Students Submissions Copied (Fall 1979)	1979
	389	Set of Digital Programming Assignment Handouts (includes D ₂ 0 (Heavy Water) Enthalpy Table) (Winter 1980)	1980
	390	Simulation Assignments and Notes for Reference (Winter 1979)	1979
		Engineering 330 (Simulation and Modelling Class) (Winter 1979)	
	391	1 st Nuclear Reactor Simulation Assignment (Winter 1984)	1984
	392	2 nd Nuclear Reactor Simulation Assignment (Winter 1984)	1984
	393	3 rd Nuclear Reactor Simulation Assignment (Winter 1984)	1984
	394	4 th Nuclear Reactor Simulation Assignment (Winter 1984)	1984
	395	5 th Nuclear Reactor Simulation Assignment (Winter 1984)	1984
	396	Copies of Student Nuclear Reactor Simulation #5 Simulation and Modelling Class (Winter 1984)	1984
	397	CANdu Steam Generation Data (used for EN 330 5 th Nuclear Reactor Simulation)	1981
	398	Instructions re: Computer Accounts and Assignments (Winter 1984)	1984
	399	Lab Lectures re: Fortran Usage (Winter 1984) Lars Nielsen (Seawell's Grader in Engineering 330 Winter 1983)	1984
	400	Administration Note from Seawell Re: Lars Nielsen Information and Suggestions	1983
	401	Programming Languages – Information from Lars Neilsen	1969, 1975, 1979, 1983
	402	Lecture for March 1984 Reviewing and Summarizing Pipe Transport Assignment	1984
	403	Lectures by Jim Mozel (Winter 1984)	1984
	404	Numerical Stability Lecture (Winter 1984)	1984

	405	Optional 6 th Nuclear Reactor Simulation Assignment – Nuclear Reactor Kinetics and Fuel Temperature Calculations	1984
	406	Sigma 9 Usage Information from Barry Ford (given to students in EN 330)	1984
Box 15	407	Steam Generator in Canada Deuterium Uranium (CANdu) Reactor System	1978, 1984
	408	Steam Generator Handout EN 330 Winter 1983 and Winter 1984	1978, 1984
	409	Administrative Note from Seawell Re: CANdu Nuclear Reactor EN 330	n.d.
	410	Assignment Planning (Winter 1984)	1984
	411	Canada Deuterium Üranium (CANdu) Reactor Simulation) (Winter 1983)	1982
	412	Class List / Lab Groups (Winter 1984)	1984
	413	Computer Consulting	1984
	414	Data for Nuclear Reactor Simulation (Winter 1983)	1983
	415	Data for Nuclear Reactor Simulation (EN 330 Winter 1984) (EN 351 Fall 1989)	1978, 1989
	416	EN 330 Canada Deuterium Uranium (CANdu) Simulation Runs by Jim Mozel (Faculty) and Lars Nielsen (Grader) and Copies of Instructions by Oscar Seawell (Oversize)	1983
	417	Exam (March 1984)	1984
	418	Exam Master (Mid-Term Exam) (Winter 1984)	1984
	419	Exam for Preparing Solution (summary notes to be written)	1984
		(Winter 1984)	
0.0055	420	Flag Notes, Canada Deuterium Uranium (CANdu) Assignment and Solution (Barry Ford)(Winter 1979)	1979
CLOSED	421	Grades (Winter 1984)	1984
	422	Lecture	March 14, 1983
	423	Lecture on Canada Deuterium Uranium (CANdu) Simulation and Simulation Writeups #1, #2, #3 (Winter 1983)	1983
	424	Nuclear Reactor Simulation – lectures completed (also used in EN 351 Fall 1989)	1983, 1984, 1989
	425	Nuclear Reactor Simulation #1 (Winter 1983)	1983
	426	Nuclear Reactor Simulation #2 (Winter 1983)	1983
	427	Nuclear Reactor Simulation #3 (Winter 1983)	1983
	428	Nuclear Reactor Simulation Master Copies (Winter 1983)	1983
	429	Planning for Human Simulation of Canada Deuterium Uranium (CANdu) Reactor – Not Done	1983
	430	Schedules and Planning (Winter 1983)	1983
	431	Startup Accident Data and Presentation	1984
	432	Student Assignments #1 (completed nuclear reactor simulations) (Winter 1984)	1984
	433	Student Paper (Rocky Jervis) from Lab #1 Assignment by Jim Mozel) (Winter 1984)	1984
	434	Student Results Nuclear Reactor Simulations (Winter 1983) Engineering 330 Simulations and Modelling	1983
	435	Administrative Note from Seawell Re: 330 Simulations and Modelling	1983
	436	Canada Deuterium Uranium (CANdu) 600 Station Design	1976
	437	Canada Deuterium Uranium (CANdu) Phase #1 Assignment 1 Steady State Temperatures	1983
	438	Canada Deuterium Uranium (CANdu) Simulations (Summer 1983 and Winter 1983) (Oversize)	1983
	439	Canada Deuterium Uranium (CANdu) Analysis and Discussions (toward use in Winter 1984 and in books)	1983
	440	Canada Deuterium Uranium (CANdu) Digital Simulation	1983

	Chapter 2 – Steady State Systems Approximization (initialization) for different power levels)	
441	Canada Deuterium Uranium (CANdu) Digital Simulations Summary Information and Schedule	1983
442	Canada Deuterium Uranium (CANdu) Information to Obtain from AECL	1983
443	Canada Deuterium Uranium (CANdu) Nuclear Reactor Kinetics for Simulations 1965	1961, 1965, 1983
444	Canada Deuterium Uranium (CANdu) Steam Generator	1983
445	Canada Deuterium Uranium (CANdu) Thermal Analyses - Reactor	June 1983
446	Data on H_20 (water) and D_20 (Heavy Water)	1973, 1983
447	EN 330 Canada Deuterium Uranium (CANdu) Simulation Planning for Winter 1984 – Kent Fletcher	1983 [°]
448	Kent Fletcher Assignment to Prepare Canada Deuterium Uraniun (CANdu) Simulations	1983
449	Nuclear Reactor Simulation Assignments Phases as Written by Kent Fletcher Summer 1983	1983
	Engineering 351 (Heat, Mass and Momentum Transfer)	
450	Canada Deuterium Uranium (CANdu) Simulation and Copies of Handouts (Fall 1989)	1989
451	Canada Deuterium Uranium (CANdu) and World Nuclear Power Plant and Steam Generation Handouts (Fall 1989)	1978, 1989
452	Canada Deuterium Uranium (CANdu) Part E and Steam Generator Drawings	1982
453	Canada Deuterium Uranium (CANdu) Simulation Time Constant Estimation and T _F Feedback for October17 Lectures (when computer programs are returned) and November 14 Lecture (Fall 1989)	1989
454	Canada Deuterium Uranium (CANdu) Simulations Part E Analysis and Results (Fall 1989)	1989
455	Canada Deuterium Uranium (CANdu) Steam Generation Thermal Calculations from which Seawell established Thermal Resistance between D ₂ 0 and H ₂ 0 for each of the 5 segments (Fall 1989)	1989
456	Nuclear Reactor Simulation Assignments – Masters (Fall 1989)	1978, 1989
457	Numerical Stability Notes for heat Transfer and fluid Flow from April 1973 and December 1989	1973, 1989
458	Past lectures on Canada Deuterium Uranium (CANdu) Simulation	1989
459	Industrial Engineering – Typical Sequence of Classes in Subject Area	n.d.
460	University of Regina Archives – Seawell's note regarding this material	March 22, 2004