

MS-426, Paul Webb Collection

Collection Number: MS-426

Title: Paul Webb Collection

Dates: 1953-1993 (Bulk: 1972 – 1984)

Creator: Dr. Paul Webb

Summary/Abstract:

The Paul Webb Collection consists of records and files accumulated by the research firm Webb Associates during the course of experiments in human physiology and calorimetry between 1972 and 1984, as well as articles, book drafts, and other publications on similar topics, written by or citing Dr. Paul Webb. The collection also contains several Vari-Temp suits which were part of a calorimeter designed and used by Dr. Webb, as well as prototype space activity suits also designed by Webb.

Quantity/Physical Description: 21.2 linear feet

Language(s): English

Repository:

Special Collections and Archives, Paul Laurence Dunbar Library, Wright State University, Dayton, OH 45435-001, (937) 775-2092

Restrictions on Access: There are no restrictions on accessing material in this collection.

Restrictions on Use:

Copyright restrictions may apply. Unpublished manuscripts are protected by copyright. Permission to publish, quote or reproduce must be secured from the repository and the copyright holder.

Preferred Citation:

(Box Number, Folder Number), MS-426, Paul Webb Collection, Special Collections and Archives, University Libraries, Wright State University, Dayton, Ohio

Acquisition:

Materials were donated to Special Collections and Archives by Paul Webb in 2001.

Physical Characteristics and Technical Requirements:

The cartridges in Series IV may have been used with a Hewlett-Packard 9825, since Webb refers to this model of computer in his USDA notes. Since the HP 9825 has not been in wide use for roughly 25 years, it will likely be difficult to find a working model to read these cartridges. Some cartridges were accompanied by printout tapes; however, some of the tapes are too faded

to read, and the reader would need to be familiar with the type of experiment being undertaken and the computer program which produced the tapes in order to understand them.

Additional Sources:

Human Calorimeters (Endocrinology and Metabolism Series, Volume 7). Webb, Dr. Paul; New York: Praeger Publishers, 1985.

Processed by: Elizabeth Stanze and Kasey Eichensehr, March 2011.

Arrangement:

Series I: Experiment Data and Notes

 Subseries IA: Office of Naval Research Studies, 1972 - 1982

 Subseries IB: Air Force Sleep Loss Study, 1976 - 1979

 Subseries IC: USDA Study, 1979 - 1981

 Subseries ID: Other Projects, 1971 -1984

Series II: Research Correspondence

Series III: Articles/Publications

Series IV: Computer Data Cartridges

Series V: Suits/Materials/Equipment

 Subseries VA: Vari-Temp Suits

 Subseries VB: Unfinished Suits and Materials

Series VI: Books

Biographical/Historical Note:

Dr. Paul Webb is a research scientist and consultant who has done extensive research in aerospace and undersea medicine. He received his M.D. from the University of Virginia in 1943, and his MS in physiology from the University of Washington in 1951. He served in the U. S. Army from 1948 to 1950, and worked at the Air Force Aeromedical Laboratory from 1954 to 1958. In 1959 he founded Webb Associates, a research company in Yellow Springs, Ohio. Webb Associates performed several major studies for the United States Department of Agriculture, the Office of Naval Research, and the Air Force. While conducting research for the Office of Naval Research Webb developed an interest in protective clothing for dangerous environments, and with support from NASA began to work on an elastic space activity suit which reduced the physical energy cost to the wearer.

During this period Webb also designed and built his own suit calorimeter, a device for measuring the heat given off by the human body. Webb's calorimeter design emerged from his study of the kind of device used to cool astronauts while they were moving around outside their spacecraft. Webb's calorimeter consisted of a water-cooled undergarment worn next to the skin, three layers of insulating garments to isolate the subject's body and the undergarment from the surrounding environment, a "water loop" to control the flow and temperature of water through the undergarment, and an array of equipment, including an early computer, to test and control experiment variables. By monitoring the temperature of water passing out of the undergarment the calorimeter could measure the heat given off by the subject (i.e., the energy used). The suit

could also be used to manipulate the subject's body temperature, as Webb did during his study of body heat loss for the Navy. Suit calorimeters like Webb's are the smallest variety of these machines – other versions are compartments or small rooms in which the subject remains alone for extended periods of time. Tests using Webb's suit calorimeter were performed in a special temperature-controlled apartment, and the subject was attached to an "umbilical cord" containing the calorimeter's various cords and tubes, but otherwise could engage in (relatively) normal activities and social interaction.

Webb closed his lab in 1982 and moved to France with his calorimeter for a short time to perform experiments at Hopital Bichat in Paris. From 1984 to 1988 he was employed by companies and universities in Norway, the Netherlands, and Sweden. During this period he completed the book *Human Calorimeters*, which was published in 1985. Since 1993 Dr. Webb has served various academic appointments at Andrews University in Dayton, the University of Minnesota, and the University of Wollongong in Australia, and he has worked for Honeywell International, a diversified technology company in Torrance, California.

Dr. Webb is the recipient of many awards for his work, including the AILSA award from the Aerospace Industrial Life Sciences Association, and the Fritz J. Russ Award in bioengineering. He is also a fellow of the American Institute of Medical and Biological Engineering, and the Aerospace Medical Association. Dr. Webb is currently Clinical Professor of Community Health (Aerospace Medicine) and Research Professor of Biomedical, Industrial and Human Factors Engineering at Wright State University. He is also a member of the team of experts at the Webb Elastic Garment Group, a company which is still developing Webb's Space Activity Suit design. The Group's website is at www.elasticspacesuit.com.

Scope and Content:

The Paul Webb Collection consists of records accumulated by Dr. Paul Webb between the years 1953 and 1993. It is arranged in five series and six subseries. The bulk of the collection consists of the records of Dr. Webb's research firm, Webb Associates, relating to three major calorimetry studies the company conducted for the Air Force, the Office of Naval Research, and the U. S. Department of Agriculture, as well as several smaller projects. These studies measure the amount of body heat given off by a subject, i.e. the energy used, and how it was affected by different variables. The collection also includes correspondence relating to these studies, publications by Dr. Webb, and several suits either used or designed by Webb.

Series I, Experiment Data and Notes, consists of records and information accumulated by Webb Associates during the course of three major contracted studies, as well as scattered data from miscellaneous experiments and work undertaken by Webb and his company. It is divided into four subseries based on the entity that contracted the study.

Subseries IA, Office of Naval Research (ONR) Studies, contains data and experiment summaries for body heat loss studies Webb performed from 1972 to 1982. Dr. Webb describes these studies in Chapter 5 of *Human Calorimeters*.

Subseries IB, Air Force Sleep Loss Study (AFSL), contains data, as well as the project contract, for a sleep loss study Webb performed in 1978-1979. The data includes graphs, food diaries and

printouts for several subjects, both male and female. The variables in these tests are sleep and diet. Progress reports and correspondence for the Navy and Air Force studies can be found in Series II.

Subseries IC, USDA Study (USDA), contains notes and data from calorimetry experiments undertaken by Webb Associates for the USDA. The purpose of the experiments was to examine the effect of different diets on energy use. There were two distinct studies, “Overeating” and “Undereating,” carried out from the summer of 1979 to the summer of 1981. Each study was divided into phases based on types of diet, caloric intake, and activity level. The subseries is organized with analyses of food and menu information first, followed by experiment data mostly in the form of graphs of energy expenditure, weight records, and analyses of waste matter, and experiment logs containing hour-by-hour activities, events, and equipment readings. Dr. Webb describes these experiments in Chapter 5 of *Human Calorimeters*.

Subseries ID, Other Projects, contains data and notes from various smaller projects undertaken by Webb and his company between 1967 and 1984. Projects include a study called CALDEP performed in Paris in 1983, comparing energy use of Asian men to that of American men; tests of a “thermistor harness,” a device for measuring temperatures at various points on the body simultaneously; two relatively large but incompletely documented calorimetry studies labeled “AF” and “MSC” Calorimetry. This subseries also contains miscellaneous notes on elements of Webb’s research, such as nutritional value of foods, methods of testing certain variables, and equipment used.

Series II, Research Correspondence, is a small series containing correspondence between Paul Webb and several research associates. There is correspondence with individuals in America and Europe. Project correspondence, contracts, and reports for Paul Webb’s studies with the Navy and Air Force are also in the series. The series covers the years 1970 to 1993.

Series III, Articles and Publications, consists of published articles by Paul Webb. They cover a date range of 1953 – 1995. There is a draft of Webb’s book, *Human Calorimeters* and preliminary artwork for this title. The book references some of the studies documented in Series I. Correspondence between Webb and his publisher, Praeger Scientific, can be found in Series II.

Series IV, Computer Data Cartridges, contains data collected and programs used in some of the experiments in Series I, including the USDA, ONR, and Air Force studies, as well as data from several smaller studies not documented elsewhere in the collection. It also contains test and calibration programs. The cartridges were probably used with a Hewlett-Packard 9825, an early desktop computer released in 1976, which Webb mentions in his notes for the USDA study. The same or a similar model would be required to read the data on these cartridges.

Series V, Suits, is broken up into three sub-series. Subseries VA, Vari-Temp Suits, consists of Webb’s Vari-temp suits, as well as photographs and specifications for the Vari-temp suits and correspondence between Webb and ILC Dover, the company that manufactured them. There are three suits, two with tubing still attached. These were part of Webb’s suit calorimeters, which were used in some of his experiments. They were the water-cooled undergarments. Images of

this undergarment, as well as the full suit calorimeter, can be seen in the artwork for Webb's book, *Human Calorimeters*, located in Series III. Subseries VB, Unfinished Suits and Materials, consists of what may be prototype suits. Some of the garments seem to be finished while others are in pieces or pinned together and unfinished. The manufacturer of these suits is Jobst, of Toledo, OH.

Series VI, Books, consists of books that relate to Dr. Webb's scientific research into how temperature affects the human body.

Subject Terms

Persons/Families

Webb, Paul

Organizations/Corporate Names

United States. Air Force
United States. Department of Agriculture
United States. Navy
Webb Associates (Yellow Springs, Ohio)
YSI, Incorporated (Yellow Springs, Ohio)

Places

Yellow Springs (Ohio)

Subjects (General)

Calorimetry
Calorimeters
Electrocardiography
Metabolism—Testing
Nutrition—Research
Sleep deprivation

Material Types

Charts
Correspondence
Graphs

Occupations

Research scientist

Collection Inventory

Series I: Experiment Data and Notes
--

Subseries IA: Office of Naval Research Studies, 1972 – 1982			
<u>Box</u>	<u>File</u>	<u>Description</u>	<u>Date</u>
1	1	ONR Graphs: Long Slow Cool, Transient, Steady State, Bath Cooling	1974 - 78
	2	ONR Graphs: Dives, Nude Chamber (aka "Bare Ass"), NMRI, others	1972, 1975, 1979
	3	ONR Body Heat Loss Dives (BHL D): Nude Chamber Runs: Webb, Annis, Lauterbach	Feb. - May 1972
	4	ONR BHL D: Nude Chamber Runs: Thordsen, Lambach	Jun. 1972
	5	ONR BHL D: Nude Chamber Run Series Data Summaries, Calibrations	Apr. – Jul. 1972
	6	ONR BHL D: 15°C Dive: Webb	Jun. 19, 1972
2	1	ONR BHL D: 5°C Dive: Annis	Jun. 29, 1972
	2	ONR BHL D: 5°C Dive: Webb	Jul. 12, 1972
	3	ONR BHL D: 15°C Dive: Annis	Jul. 14, 1972
	4	ONR BHL D: 10°C Dive: Lauterbach	Jul. 17, 1972
	5	ONR BHL D: 10°C Dive: Webb	Jul. 18, 1972
	6	ONR BHL D: 15°C Dive: Lauterbach	Jul. 20, 1972
	7	ONR BHL D Dives: Webb	Apr. 1972
	8	ONR BHL D Dives: Annis, Lauterbach	Jun. 1972
	9	ONR BHL D Summary, Dive Data	1972
3	1	ONR System Check: Webb	Apr. 3, 1974
	2	ONR Transient Cool Rewarm: Webb, Annis	Apr.- May 1974
	3	ONR Transient Cool Rewarm: Webb, Annis, SAL	May, Jul., Sep. 1974
	4	ONR Intermediate Cooling Rate(ICR), Slow Cool Down: Annis	May 1 - 2, 1979
	5	ONR Long Slow Cool Charts: Annis, Webb, Richardson	1978
	6	ONR Long Slow Cool Series: Annis	Jun. 1977, Jun. 1978
	7	ONR Long Slow Cool Series: Richardson, Webb	Aug. 1978
	8	ONR Steady State Series: Annis, Webb	Dec. 1976
	9	ONR Steady State Series: Annis, Webb, Inman	Jan. – Feb. 1977
	10	ONR Steady State Series: Inman, Evans	Feb. 1977
4	1	ONR Steady State Series: Webb, Evans, Schwartz, Annis	Feb. 1977
	2	ONR Steady State Series: Schwartz, Evans	Mar. 1977
	3	ONR Steady State Series: Evans, Inman	Mar. 1977

	4	ONR Steady State Series: Schwartz, Webb	Mar. 1977
	5	ONR Steady State Series: Annis, Webb	Mar. 1977
	6	ONR Steady State Series: Schwartz, Inman	Apr. 1977
	7	ONR Steady State Series: Schwartz, Webb, Evans	Apr. 1977
5	1	ONR Steady State Series: Schwartz, Annis, Inman	May 1977
	2	ONR Steady State Series: Annis, Inman, Webb	May 1977
	3	ONR Steady State Series: JR, SJT	Aug. 1978
	4	ONR Steady State Series: JR	Sep. 6, 1978
	5	ONR Blood Chemistries, Log Book, Experiment Calendars, Summary	1971 - 77
	6	ONR Bath Calorimeter Results: Troutman, Annis, Richardson	Sep. 1978
	7	ONR Bath Calorimeter Results: Annis, Richardson, Webb	Sep. 12 - 14, 1978
	8	ONR Bath Calorimeter Results: Annis, Richardson, Webb	Sep. 14 - 17, 1978
	9	ONR Bath Calorimeter Results: Annis, Richardson, Troutman, Webb	Sep. 18 - 20, 1978
6	1	ONR Bath Calorimeter Experiment Logs for Nude Tank, TSR	Sep. 1978, Aug., Oct. 1979
	2	ONR Bath Calorimeter DCIEM, Digital Data	1978
	3	ONR Naval Medical Research Institute (NMRI) Seg. Suit , EB Calculation Sheets, Letter from NMRI to Jim Annis, Tube Suit Experiment Results	1981
	4	ONR Seg Suit Experiments: Annis	Apr. - May 1981
	5	ONR NMRI Seg Suit vs HFSS Corrected Data	Aug. 1981
	6	ONR NMRI HFD vs Seg Suit Cooling Experiments 1-6	Aug. 1981
	7	ONR NMRI HFDS vs Seg Cooling Experiments 7-10	Aug. 1981
	8	ONR Seg Suit Heat Leak Calibration Data Tests 1-5	Dec. 1981
7	1	ONR Seg Suit Heat Leak Data Tests 6-12	Dec. 1981
	2	ONR Long Slow Cooling Runs Log Book and Notes	1980 - 82
	3	ONR Long Slow Cooling Runs: Graphs, Worksheets: Annis, Humiston, Webb; Hi Flow Suits	1981 - 82
	4	ONR Long Slow Cooling Runs: Graphs, Worksheets, Urine Analysis: Annis, Humiston, Moore, Webb	1980 - 81
	5	ONR BHL D: Trans Cool and Segment Losses Experiment Log	1980 - 81
	6	ONR Trans Cool Experiments: Annis, Moore	Sep. - Oct. 1980
	7	ONR Trans Cool Experiments: Peterson	Oct. - Nov. 1980
8	1	ONR Exptl. Data Trans Cool Graphs and Data: Annis, Moore, Peterson	1980 - 81

	2	ONR Long Slow Cool, Performance Tests Atari: Annis, Humiston, Moore, Webb	1980
	3	ONR Night Driver with Diversion	Undated
	4	ONR Hyperthermia Runs NCI Suit Tests: Annis, Webb	1976, 1979
	5	ONR Calorimetric Cooling and Rewarm Log Book: Annis, Evans, Inman, Webb	1976 - 78
	6	ONR Transient Cooling Data: Analysis, Calculations	1974
	7	ONR Overlays for Bath Cal, Steady State, Transient, Long Slow Cool Runs	1974 - 78
	8	ONR Experiment Summaries for Bath Cal, Steady State, Trans Cool, Long Slow Cool	Undated
9	1	ONR Steady State Experiment Summaries	1976 - 77
	2	ONR Long Slow Cool Series Summary Review	1977 - 78
	3	ONR Stats – All Expt Data Summaries	1978 - 79
Subseries IB: Air Force Sleep Loss Study, 1976 – 1979			
<u>Box</u>	<u>File</u>	<u>Description</u>	<u>Date</u>
9	4	AFSL Data Urine Chemistries for Subjects: Grote, Lookabaugh, Ganzert, Danahey, Burtle	Feb. – Mar., Nov. 1978, Oct. 1979
	5	AFSL Data Graphs and Worksheets: Burtle, Danahey, Lookabaugh, Ganzert, Richardson; Steady Diet/Quiet Days, Fasting/Quiet Days	Apr. 1978 - 79
	6	AFSL Data Graphs and Worksheets: Grote, Lookabaugh; Steady Diet/Quiet Days, Fasting/Quiet Days	Oct.- Nov. 1979
	7	AFSL Sleep Scores: Danahey, Grote, Lookabaugh, Burtle, Webb, Willis	Oct. 1978 – Mar. 1979, Oct., Dec. 1979
	8	AFSL Sleep Scores: Ganzert, Richardson, Danahey, Burtle; Steady Diet/Quiet Days, Quiet Days/1000Kcal, Quiet Days/Fasting, No Sleep/Steady Diet, No Sleep/Steady Diet	Feb. - May, Nov.- Dec. 1978
10	1	AFSL Data Printouts: Burtle, Danahey; Quiet Days/Steady Diet	Oct.- Nov. 1978
	2	AFSL Data Printouts: Burtle, Danahey, Richardson, Ganzert; Quiet Days/Steady Diet	Feb. – Dec. 1978
	3	AFSL Data Printouts: Burtle, Danahey, Ganzert; No Sleep/Steady Diet, Overeating/No Sleep, 800Kcal/No Sleep, Steady Diet/1/2 Sleep	Feb. – Mar. 1979
	4	AFSL Data Printouts: Burtle, Danahey, Richardson; Quiet Days/1000Kcal, Quiet Days/800 Kcal, Quiet	Mar. 1978, Jan. – Feb. 1979

		Days/Fasting	
	5	AFSL Data Printouts: Ganzert, Richardson; Control Test	Feb. 16, 20, 1978
	6	AFSL Data Graphs and Worksheets: Burtle, Danahey; Quiet Days/800 Kcal, Steady Diet/1/2 Sleep, No Sleep.800Kcal, No Sleep.Overeat, Steady Diet/No Sleep	Feb. 1978 – Mar. 1979
11	1	AFSL Data Graphs and Worksheets: Burtle, Danahey; Steady Diet/Quiet Days, Quiets Days/800Kcal	Nov. 1978 – Jan. 1979
	2	AFSL Data Graphs and Worksheets: Burtle, Danahey; Standard Diet/Quiet Days, Steady Diet/ 1/2 Sleep, Steady Diet/No Sleep, Overeat/No Sleep, 800Kcal/No Sleep	Oct. 1978 – Mar. 1979
	3	AFSL Data Overview: Richardson, Ganzert; 24 Hour Graphs	Mar. - May 1978
	4	AFSL Data Graphs and Worksheets: Richardson, Ganzert; Dec '78 Version - Corrected 45 Hour Data	Dec. 1978
	5	AFSL Data Graphs and Worksheets: Richardson, Ganzert; Original 45 Hour Data; No Sleep/1000 Kcal, No Sleep/Overeat, No Sleep/Steady Diet, 1/2 Sleep/Steady Diet	Apr. - May 1978
	6	AFSL Data Graphs and Worksheets: Richardson, Ganzert; Original 45 Hour Data; No Sleep/1000 Kcal, No Sleep/Steady Diet, Quiet Day/1000Kcal	Feb. - May 1978
	7	AFSL Data Graphs and Worksheets: Lookabaugh, Grote; Quiet Day/Overeat, No Sleep/Overeat, No Sleep/1000 Kcal, No Sleep/800 Kcal, 1/2 Sleep/Steady Diet	Dec. 1979 – Jan. 1980
	8	AFSL Data Graphs and Worksheets: Lookabaugh, Grote; No Sleep/Overeat, Quiet Days/ 800 Kcal, No Sleep/1000 Kcal, Quiet Days, Overeat, No Sleep Steady Diet, Quiet Day/1000 Kcal	Oct. – Nov. 1979
12	1	AFSL Subject Schedules for Richardson and Ganzert	Undated
	2	AFSL First 45 Hour Graphs - Bad Equations: Ganzert, Richardson	Feb. – Mar. 1978
	3	AFSL First 45 Hour Graphs - Bad Equations: Ganzert, Richardson	Apr. - May 1978
	4	AFSL Activity and Experiment Log Lookabaugh, Grote	Dec. 1979
	5	AFSL Activity and Experiment Log: Burtle, Danahey	Oct. 1978 – Mar. 1979
	6	AFSL Activity and Experiment Log: Burtle Continued	Mar. 1979
	7	AFSL Activity Diary: Ganzert, Richardson	1978
	8	AFSL List of Variable Used, "Totalizer" Card Data	1978-79

		and Specifications, Suit Calorimeter Wiring Specifications	
	9	AFSL Data Printouts: Richardson, Ganzert; Overeat/No Sleep, No Sleep/1000Kcal, 1/2 Sleep/Steady Diet, Quiet Days/1000Kcal, Fasting/Quiet Days	Mar. - May 1978
13	1	AFSL Data Printouts: Richardson, Ganzert; Overeat/No Sleep, No Sleep/1000Kcal, 1/2 Sleep/Steady Diet, No Sleep/Steady Diet	May 1978
	2	AFSL Air Flow Specifications and Calibration Data, Wilkinson Test, Subjective Fatigue Data	1978-1979
	3	AFSL 5 Choice Reaction Time Test Summary, Subjective Fatigue Evaluation Checklists	1978-79
	4	AFSL Subjective Fatigue, Copies of Completed Checkcards, Two Unmarked Fatigue Checkcards	Mar. - May 1978
	5	AFSL Wilkinson Vigilance Test Results: Ganzert, Richardson	Feb. - May 1978
	6	AFSL Wilkinson Vigilance Test Results: Burtle, Danahey	Nov. 1978 – Mar. 1979
	7	5 Day Metabolism Study: Annis, Bowman, Moore, Webb; Summaries of Dosages, Gas Pump Drawings and Calibration Data	1982
	8	5 Day Metabolism Study Graphs, Logs, Urine Results: Moore, Bowman, Lookabaugh, Annis, Webb	Jun. – Jul. 1982
	9	5 Day Metabolism Study: Proposals and Menu	1980, 1982, Undated
Subseries IC: USDA Study, 1979 - 1981			
<u>Box</u>	<u>File</u>	<u>Description</u>	<u>Date</u>
14	1	USDA - Standard Diet - Food Values/information	1979
	2	USDA - Group I - Misc. notes, inc. food values, urine/feces analyses	Jul. – Aug. 1979
	3	USDA - Menu info on I, II, III Overeat (File 1 of 2)	Jul. 29, 1979 - Jun. 1980
	4	USDA - Menu info on I, II, III Overeat (File 2 of 2)	Aug. 23 - 29, 1980; Undated
	5	USDA - Overeat, All groups - Urine/feces summary	Jul. 1979 – Jun. 1980
	6	USDA Undereat - Brenda & Elaine - Menus, Food intake logs	1980
	7	USDA - Group III, Lean Diet - Urine/feces collection log	1980
	8	USDA Rich diet - mostly food values and menus	Jan. - Mar. 1980;

			Undated
	9	USDA II - Rich Diet - Urine/feces collection logs, analyses	Jan. – Mar. 1980
	10	USDA Main Program	Jan. 1981
	11	USDA Undereat - Ron & Rich - Menus, Food intake logs	Apr. – Jun. 1981
	12	USDA Undereat III - Pat, Judy & Bill - Menus, Food intake lists/analyses	Jun. 28 - Jul. 21, 1981
15	1	USDA - Undereat VI, Vidor & Darrell - Menus, Food lists/analyses	1981
	2	USDA - Undereat Study - Group I - Urine & feces data	1981
	3	USDA - Undereat Study - Weight Records	1981
	4	USDA - Undereat Group II (Ron & Rich) - Urine/feces collection/analyses	May 12 - Jun. 29, 1981
	5	USDA - Undereat Study, Bomb Cal. Records, Duplicate Trays, Urine & Feces values	1981; Undated
	6	USDA - food, urine & fecal analyses	1981; Dec. 27, 1982
	7	USDA - Food Chemistry Sampling - Techniques – Guidelines	Undated
	8	USDA - Food Chemical Summary, Log Sheets, Copy of "Laboratory Techniques in Food Analysis"	Undated
	9	USDA - Food Lists - analyses, Specific Heat estimates	Undated
	10	USDA - Diet - Food values, procedures/programs for testing	Undated
	11	USDA - Lean Diet - mostly food values/information, menus	Undated
	12	USDA - weight record - Ganzert - Quiet Days, Overeat	Jun. 21, 1979
	13	USDA - Energy balance graphs, weight records - Frederick, Comegys - 24-hour metabolism, Stand. Diet	Jul. 2 - 7, 1979
	14	USDA - cumulative weight records - Frederick, Comegys, Chapelle, Peters	Jul. 10 – Aug. 31, 1979
	15	USDA - Energy balance graphs, weight records - Frederick, Comegys, Chapelle, Peters - Quiet Days, Stand. Diet	Jul. 10 - 20, 1979
	16	USDA - Energy balance graphs, 24-hour data - Chapelle, Frederick, Comegys, Peters - Q. D. - S. D., O. E.	Jul. 13 – Aug. 31, 1979
	17	USDA - Energy balance graphs, weight records - Frederick, Comegys, Chapelle, Peters - Quiet Days, Stand. Diet	Jul. 23 – Aug. 3, 1979
	18	USDA - Energy balance graphs, weight records -	Aug. 6 - 21, 1979

		Frederick, Comegys, Chapelle, Peters - Quiet Days, Overeat	
	19	USDA - Energy balance graphs, weight records - Frederick, Comegys, Chapelle, Peters - Quiet Days, Overeat	Aug. 21 - 31, 1979
16	1	USDA - Notes - Δ Hb calculations, Nitrogen correction, Hb table of values	Jan. 21 - Mar. 19, 1980
	2	USDA - Energy balance graphs - 24-hour breakdown - Chapelle, Frederick, Ventura, Logan - Quiet Days, Stand. Diet, Overeat	Jan. 21 - Mar. 19, 1980
	3	USDA - Experiment graphs, weight records - Frederick, Logan, Ventura, Chapelle - Quiet days, Stand. Diet (Rich)	Jan. 21 - Feb. 1, 1980
	4	USDA - Experiment graphs, weight records - Frederick, Logan, Ventura, Chapelle - Quiet days, Stand. Diet (Rich diet)	Feb. 4 - 15, 1980
	5	USDA - Experiment graphs, weight records - Frederick, Logan, Ventura, Chapelle - Quiet days, Overeat (Rich diet)	Feb. 20 - Mar. 5, 1980
	6	USDA - Experiment graphs, weight records - Frederick, Logan, Ventura, Chapelle - Quiet days, Overeat (Rich diet)	Mar. 5 - 19, 1980
	7	USDA - Rich diet, bomb value/gram (specific heat of foods)	Undated
	8	USDA - 36 Hour HLF/kcal (subject food logs w/ temps.)	Feb. 21 - Mar. 19, 1980
	9	USDA - HLF/kcal (food intake logs w/ temps.)	Apr. - May 1980
	10	USDA - Experiment graphs, weight records - Simon, Logan, Couch, Pidgeon - Quiet days, Stand. (Lean diet)	Apr. 16 - 25, 1980
	11	USDA - Energy balance graphs - Simon, Logan, Couch, Pidgeon - Quiet days, Stand. & Overeat (Lean diet)	Apr. 16 - Jun. 11, 1980
	12	USDA - Experiment graphs, weight records - Simon, Logan, Couch, Pidgeon - Quiet days, Stand. (Lean diet)	Apr. 28 - May 9, 1980
	13	USDA - Experiment graphs, weight records - Simon, Logan, Couch, Pidgeon - Quiet days, Overeat (Lean diet)	May 14 - 28, 1980
	14	USDA - Experiment graphs, weight records - Simon, Logan, Couch, Pidgeon - Quiet days, Overeat (Lean diet)	May 28 - Jun. 11, 1980
	15	USDA - Hb Table of Values	Undated
	16	USDA - Energy balance graphs - 24-hour data plot - Lookabaugh, Van Pelt - Quiet days, Equal eat &	Jan. 18 - Mar. 20, 1981

		Undereat	
	17	USDA - lists of foods consumed by subjects with weight, temperature, & other data - Lookabaugh, Van Pelt	Jan. 18 - Mar. 20, 1981
17	1	USDA - Energy balance graphs, weight notes - Preliminary tests - W. A. staff - Annis, P. Webb	Jan. 31 – Feb. 7, 1981
	2	USDA - Food analyses, weight, temperatures - Preliminary tests - W. A. staff	Jan. 31 – Mar. 23, 1981
	3	USDA - Energy balance graphs, weight notes - Preliminary tests - W. A. staff - E. Webb, P. Webb	Mar. 14 - 16, 1981
	4	USDA - Energy balance graphs, weight notes - Preliminary tests - W. A. staff - P. Webb, Annis	Mar. 21 - 28, 1981
	5	USDA - Energy balance graphs, weight notes - Preliminary tests - W. A. staff - Annis, Burtle	Apr. 5 - 13, 1981
	6	USDA - Experiment graphs, weight records - Lookabaugh, Van Pelt - Quiet days, Equal eat	Jan. 18 - 23, 1981
	7	USDA - Experiment graphs, weight records - Lookabaugh, Van Pelt - Quiet days, Equal eat & Undereat	Feb. 2- 25, 1981
	8	USDA - Experiment graphs, weight records - Lookabaugh, Van Pelt - Quiet days, Undereat	Mar. 2 -20, 1981
	9	USDA - Notes - 24-hour Δ Hb, Corrections for 24-hr M - Lookabaugh, Van Pelt	1981
	10	USDA - Urine analyses - Lookabaugh, Van Pelt	Jan. 20 - Apr. 3, 1981
	11	USDA - Energy balance graphs - Abrams, Siemer - Quiet days, Equal & Undereat	Apr. 12 – Jun. 11, 1981
	12	USDA - Rich Abrams, Ron Siemer - Urine analyses, other notes	Apr. 12 – Jun. 11, 1981
	13	USDA - Energy balance graphs, notes - Rich Abrams - Quiet days, Equal eat	Apr. 12 -14, 1981
	14	USDA - Energy balance graphs, notes - Ron Siemer - Quiet days, Equal eat	Apr. 14 - 16, 1981
	15	USDA - Energy balance graphs, notes - Rich Abrams - Quiet days, Equal eat	Apr. 26 - 28, 1981
	16	USDA - Energy balance graphs, notes - Ron Siemer - Quiet days, Equal eat	Apr. 28 - 30, 1981
	17	USDA - Energy balance graphs, notes - Rich Abrams - Quiet days, Undereat	May 10 -12, 1981
	18	USDA - Energy balance graphs, notes - Ron Siemer - Quiet days, Undereat	May 12 - 14, 1981
	19	USDA - Energy balance graphs, notes - Rich Abrams - Quiet days, Undereat	May 24 - 26, 1981
	20	USDA - Energy balance graphs, notes - Ron Siemer - Quiet days, Undereat	May 26 - 28, 1981

	21	USDA - Energy balance graphs, notes - Rich Abrams - Quiet days, Undereat	Jun. 7 - 9, 1981
	22	USDA - Energy balance graphs - Ron Siemer - Quiet days, Undereat	Jun. 9 - 11, 1981
	23	USDA - Misc. notes re. weight - Ron Siemer - Quiet days, Undereat	Jun. 9 - 11, 1981
18	1	USDA - Energy balance graphs - Chapelle, Siemer, Rose - Quiet days, Equal & Undereat	Jul. 6 - Sep. 4, 1981
	2	USDA - Experiment graphs, weight records, food lists - Chapelle, Siemer, Rose - Quiet days, Equal eat	Jul. 6 - 24, 1981
	3	USDA - Experiment graphs, weight records, food lists - Chapelle, Siemer, Rose - Quiet days, Undereat	Jul. 27 - Aug. 21, 1981
	4	USDA - Experiment graphs, weight records, food lists - Chappelle, Siemer, Rose - Quiet days, Undereat	Aug. 24 - Sep. 4, 1981
	5	USDA - 24 - 36 hour Δ Hbs, Quiet days, Equal & Undereat - Chapelle, Siemer, Rose	Undated
	6	USDA - urine analyses - Chapelle, Siemer, Rose	Jul. 8 - Sep. 8, 1981
	7	USDA - Leigh Hilsinger - Pre-run systems check	Sep. 30, 1981
	8	USDA - Darrell McComas, Vidor Friedman - Energy balance graphs, Quiet Days, Equal & Undereat	Oct. 4 - Dec. 5, 1981
	9	USDA - Darrell McComas - Quiet days - Energy balance graphs - Equal eat	Oct. 5 - 7, 1981
	10	USDA - Vidor Friedman - Quiet days - Energy balance graphs, Equal eat	Oct. 7 - 9, 1981
	11	USDA - Darrell McComas - Quiet days - Energy balance graphs - Equal eat	Oct. 19 - 21, 1981
	12	USDA - Vidor Friedman - Quiet days - Energy balance graphs, Equal eat	Oct. 21 - 23, 1981
	13	USDA - McComas, Friedman - Urine analyses	Oct. 7 - December 9, 1981
	14	USDA - Darrell McComas - Quiet days - Energy balance graphs - Undereat	Nov. 2 - 4, 1981
	15	USDA - Vidor Friedman - Quiet days - Energy balance graphs, Undereat	Nov. 4 - 6, 1981
	16	USDA - Vidor Friedman - Quiet days - Notes/graphs re. weight, Undereat	Nov. 4 - 6, 1981
	17	USDA - Darrell McComas - Quiet days - Energy balance graphs - Undereat	Nov. 16 - 18, 1981
	18	USDA - Vidor Friedman - Quiet days - Energy balance graphs - Undereat	Nov. 18 - 20, 1981
	19	USDA - Darrell McComas - Quiet days - Energy balance graphs - Undereat	Nov. 30 - Dec. 2, 1981
	20	USDA - Vidor Friedman - Quiet days - Energy balance graphs - Undereat	Dec. 2 - 4, 1981

19	1	USDA - Food Chemistry notebook - Day log, General calibrations, notes	Dec. 11, 1978 - Aug. 15, 1981
	2	USDA - Paul Webb's project notebook, Overeating & Undereating studies - schedules, body compositions, blood chemistry, personal log	Jul. 7, 1979 - Dec. 5, 1981
	3	USDA - Sample log - Diet Kitchen; Chronological list of food samples for chem. Lab (also bomb calorimeter procedure)	Jul. 7, 1979 - Jan. 7, 1981
	4	USDA - dietary log, Control experiments - P. Webb, E. Webb, Annis, Burtle, Ganzert	Feb. 14 - Jul. 22, 1979
	5	USDA - Overeat study, Activities & Experiment log #1 - Chapelle, Comegys, Frederick, Peters	Jan. 31 - Aug. 17, 1979
	6	USDA - Overeat study, Activities & Experiment log #2 - Chapelle, Comegys, Frederick, Peters	Aug. 19 - 31, 1979
	7	USDA - Subject diet log - weight & composition of individual items #1	Jul. 5 - 23, 1979
	8	USDA - Subject diet log #2 - weight and composition of foods	Jul. 24 - Aug. 11, 1979
	9	USDA - Subject diet log #3 - weight and composition of foods	Aug. 12 - 30, 1979
	10	USDA - Subject diet log #4 - weight and composition of foods	Aug. 31 - Sep. 2, 1979
	11	USDA - Overeat study, Activities & Experiment log #3 - Chappelle, Frederick, Logan, Ventura	Jan. 21 - Mar. 19, 1980
	12	USDA - Overeat study, Activities & Experiment log #4 - Couch, Pidgeon, Logan, Simon	Apr. 16 - Jun. 11, 1980
	13	USDA - Diet log, rich diet #1	Jan. 21 - Mar. 20, 1980
	14	USDA - Diet log, Lean diet #1	Apr. 13 - Jun. 11, 1980
	15	USDA - Undereat Study, Activities & Experiment Log #1 - Lookabaugh, Van Pelt	Jan. 18 - Mar. 20, 1981
	16	USDA - Undereat Study - Activities & Experiment log #2 - Abrams, Siemer	Apr. 12 - Jun. 9, 1981
	17	USDA - Undereat Study - Subject diet log #1 - Lookabaugh, Van Pelt	Jan. 18 - Mar. 20, 1981
	18	USDA - Undereat Study - Subject Diet log #2 - Abrams, Siemer	Apr. 12 - Jun. 13, 1981
	19	USDA - Undereat Study - Subject diet log #3 - Abrams, Siemer, Ventura?	Jul. 5 - Sep. 5, 1981
	20	USDA - Undereat Study - Subject diet log #4 - Darrell, Vidor	Oct. 3 - Dec. 4, 1981
	21	USDA - Equal eat & Undereat, Quiet Days Expt. Logs - Friedman & McComas	Oct. 5 - Dec. 4, 1981

Subseries ID: Other Projects, 1971 - 1984			
<u>Box</u>	<u>File</u>	<u>Description</u>	<u>Date</u>
20	1	AF Calorimetry - log and graphs possibly from tests of suit calorimeter	Jul. 20, 1970 - Apr. 9, 1971
	2	AF Calorimetry - 24-hour run (scrubbed at 6 hrs)/Subj.: Paul Webb	Feb. 20, 1971
	3	Calorimetry - AF Cal.; MSC Cal. - General data & information - equipment, graphs, project summary	Mar. 4, 1971 - Mar. 27, 1973
	4	AF Calorimetry - 24-hour run (Quiet day)/Subj.: Paul Webb	Mar. 3 -5, 1971
	5	AF Cal. - 24-hour run, Quiet day/Subj.: J. Annis	Mar. 7 - 9, 1971
21	1	AF Calorimetry - graphs and data from calorimeter runs	Mar. 7 - 30, 1971
	2	AF Cal. - 24-hour run, Active day/Subj.: P. Webb	Mar. 27 - 29, 1971
	3	AF Cal. - 24-hour run, Active day/Subj.: J. Annis	Apr. 7 - 9, 1971
	4	AF Calorimetry/Subj.: J. Annis, P. Webb	1971
22	1	MSC Calorimetry - Partitional Cal./Subj.: Stew Lauterbach - Expt. notes/data, EKG printouts	Mar. 16 - 18, 1973
	2	MSC Calorimetry - Partitional Calorimetry/Subj.: Sam Troutman (1st trial - See 2nd Expt. 26 Nov 1973) Expt. Notes/data	Mar. 25 - 27, 1973
	3	MSC Calorimetry Dry Run/Subj.: Stew Lauterbach - Experiment log, graphs	Sep. 12 - 25, 1973
	4	MSC Calorimetry - Quiet day/Subj.: Stew Lauterbach	Sep. 19 - 21, 1973
	5	MSC Calorimetry activity log - Subjects: Stew Lauterbach, Sam Trautman	Sep. 19, 1973 - Aug. 29, 1974
	6	MSC Calorimetry runs - 24 Hour Stay-Awake; Subj.: Stew Lauterbach - Exp. data - body temp., weight, kcals, etc.	Oct. 2 - 4, 1973
	7	MSC Calorimetry (#3) - Quiet Day/Subject: Sam Troutman - Exp. notes - caloric intake, weight loss, graphs	Oct. 15 - 18, 1973
	8	MSC Calorimetry - Constant M (Unfed)/Subj.: Stew Lauterbach	Oct. 22 - 24, 1973
	9	MSC Calorimetry - 24 hr. Stay Awake - Quiet - Exp. notes, includes 1 photo of subj. in suit calorimeter	Nov. 12 - 13, 1973
23	1	MSC Calorimetry - Constant M (Undereat)/Subj.: Sam Troutman	Nov. 20 -21, 1973
	2	MSC Calorimetry - Partitional Calorimetry/Subj.: Sam Troutman (2nd expt. - see 1st trial, 25 Mar 1973) Expt. Notes/data	Nov. 26 - 27, 1973

	3	12-Hr Constant M Calorimetry (aborted at 14 hrs)/Subj.: Paul Webb	Jan. 17 - 18, 1974
	4	12-hr Fixed M Calorimetry/Subj.: Paul Webb	Mar. 24 - 26, 1974
	5	FB - FM: Nutritional Calorimetry/Subj.: Stew Lauterbach	Jun. 14 - 15, 1974
	6	Fixed Metabolism - Balance Feeding Calorimetry/ Subj.: Stew Lauterbach	Aug. 29 - 30, 1974
	7	Calorimetry & Energetics - References and Notes (J. Annis)	1954 - 1971
	8	Bomb Calorimeter Log #1 - Day log - operational notes	Nov. 19, 1978 - Jun. 16, 1981
24	1	MTC II AC - R.T. - S.D.A. Experiment - Graphs, EKG printouts, activity log	Nov. 2, 1967
	2	Balke tests of Yellow Springs clinic doctors - Webb, Trautman, Robinow, Blackburn	Jan. 17, 1974
	3	Full Calorimetry, Fuel Balanced Fixed Metabolism	Mar. 25 - Jun. 15, 1974
	4	Fuel Balance Fixed Metabolism Experiment (scrubbed at 1 hr)/Subj.: Stewart Lauterbach	Jun. 4 -5, 1974
	5	"Energy Cost of Speaking - Some Preliminary Results"	Nov. 8 - 11, 1974
	6	Water Loop - Pump, Thermistor, Flow Sensor, Filter, Gems Sensor Division brochure	1976 - 78, 1980
	7	Water Loop - Water Flow Calibration Data	1978 - 81
	8	U.S. Coast Guard - A Study of Hypothermia - Request for proposal, notes	Mar. 15, 1977
	9	Fecal markers - paper, graphs and notes	Dec. 1980
	10	Notes and information on food and waste bombing/values	May 1980 - Apr. 1984
	11	CALDEP - Experiment notes (1 of 2) - Exp. data, written programs, calorimeter diagrams	1983
	12	CALDEP - Experiment notes (2 of 2) - weight records, comparison w/ American subjects	1983
25	1	CALDEP - Log book pages (copies)	1983
	2	CALDEP - Charts - rates of metabolism & Sigma-Q - 8 subjects	Apr. 6 - 28, 1983
	3	CALDEP - Charts - metabolic rate, kcals/min - w/ data collection notes - 8 subjects	Apr. 6 - 28, 1983
	4	CALDEP - drafts of articles on results with correspondence/editor's criticism	Oct. 10, Nov. 15, 1985
	5	"Bare Ass Thermistor Harness" (1 of 2) correspondence, data, programs	May 1972 - Mar. 1991
	6	"Bare Ass Thermistor Harness" (2 of 2) graphs, computer printouts	Undated

	7	24-hour clock times – updating	Undated
	8	Data System Temperature Correction Graph	Undated
Series II: Research Correspondence			
<u>Box</u>	<u>File</u>	<u>Description</u>	<u>Date</u>
25	9	Office of Naval Research Proposals, Reports for Dives, Heat Loss Experiments	1981 - 82
	10	ONR Aerospace Medical Association Paper Data, Presentation Paperwork	1979
	11	Office of Naval Research Proposals, Reports, Correspondence for Body Heat Loss in Diving study	1971 - 72, 1979 - 83
26	1	Office of Naval Research Multiple Proposals to Extend "A Study of Body Heat Loss in Diving"	1970 - 1978
	2	Air Force Sleep Loss Study Project History, Menu, Contract, Proposals and Progress Reports	1978
	3	Air Force Sleep Loss Study Project History, Summary of Bioenergetic Results, Proposal to Extend Contract	1978, 1979
	4	Correspondence with David Potts About W.O. Atwater	1989, 1991, 1993
	5	Correspondence Between Webb and Leif Hambræus of University of Uppsala, Sweden	1984 - 88
	6	Correspondence Between Webb and Professor Wim Saris of University of Limburg, Netherlands	1985 - 86
	7	Correspondence Between Webb and Praeger Scientific	1984 - 85
	8	Correspondence with Dale Schoeller about a Collaboration, Includes Grant Application	1980 - 83
Series III: Publications			
<u>Box</u>	<u>File</u>	<u>Description</u>	<u>Date</u>
26	9	Publication <i>Human Calorimeters</i> Draft Preface - Chapter 5	Undated
27	1	Publication <i>Human Calorimeters</i> Draft Chapters 6-End	Undated
	2	Publication Preliminary Artwork for <i>Human Calorimeters</i> , Book Reviews for <i>Human Calorimeters</i>	Undated, 1985
	3	Calorimetry Suit Images for <i>Human Calorimeters</i>	Undated
	4	Calorimetry Suit Negatives	Undated
	5	Drafts "Metabolizable Energy of Human Mixed Diets" and Correspondence	Apr. 11, 1985; Aug. 16, 1985
	6	Article "The Metabolizable Energy Value of Foods,"	1984

		Miller, Derek S., and Judd, Patricia A	
	7	Publications: Articles by Webb	1980 - 87, 1990 - 95
28	1	Publications: Articles by Webb	1970 - 78
	2	Publications by Webb	1966 - 68
	3	Publications by Webb	1962, 1966
	4	Publications: NASA Life Science Data Book Compiled by Webb Associates	Jun. 1962
	5	Publications: Articles by Webb, "Water Cooled Garments: A Review" by Nunneley	1953, 1959, 1970
	6	Article "Computer Program Devises Precise Menus Within Multiple Dietary Constraints" and Program Instructions	Undated
	7	Research Reference Lists A-E	Undated
	8	Research Reference Lists E-N	Undated
29	1	Research Reference Lists O-Z	Undated
Series IV: Computer Cartridges			
<u>Box</u>	<u>File</u>	<u>Description</u>	<u>Date</u>
29	2	Computer Printout Tapes ONR I and II	1974 - 1978
	3	Computer Printout Tapes-AFSL Men's Compressed Duplicate Cartridge, 24 Hr. M. Program-Heat Leak (Box 4)	1978
	4	Computer Printout Tape-AFSL-Men's Compressed Duplicate Cartridge	Feb. 27 - May 26, 1978
	5	Computer Printout Tapes-Jim Richardson, Chuck Ganzert	Mar. - Jun., 1978
	6	Computer Printout Tapes-AFSL-CEB, M, ΣQ-All Expt.	Jun. 1978
	7	Computer Printout Tapes-USDA, AFSL-Test, Transfer, Plot	1978 - 1979
	8	Computer Printout Tapes-Unnamed Experiment Data Anthea Burtle, Mary Anne _____, Jim Richardson, Chuck Ganzert	1978 - 1979
	9	Computer Printout Tape-AFSL-Compressed Duplicate Data, Women	Fall 1978 - Winter 1979
	10	Computer Printout Tape-AFSL-Compressed Duplicate Data (Fall)	1979
	11	Index-AFSL Computer Data Cartridge Elaine Lookabaugh, John Grote	Oct. - Dec. 1979
	12	Computer Printout Tapes	1979
	13	Computer Printout Tapes-ONR Suit Cooling	Apr. 1979

		Experiments	
	14	Computer Printout Tape-AFSL-Test, Transfer, Plot	Sep. 1979
	15	"Catalog for Combined EQ Data for Tek O;File O"	1979 - 1981
	16	Computer Printout Tapes-USDA-Experiment Data	Jan. - Mar. 1980
	17	Computer Printout Tapes-USDA Data Tape Labeled "Test-Plot-Transfer" (Box 6)	1980
	18	Computer Printout Tape-Compressed Data USDA Overeat Study (Tape A)	1980
	19	Index-Compressed Duplicate Data Cartridge USDA "Overeat" Rich Diet, Quiet Day Study	Jan. - Mar. 1980
	20	Computer Printout Tape-Food Data/Graphs (Beef Round, Bag of Gelatin)	Jul. 3, 1980
	21	Computer Printout Tape-ONR-Long Slow Cool (P.Webb, High Flow Suit	Feb. 9, 1982
	22	Computer Printout Tape-AFSL-"Tre MΣQ-Combo Expts, Statistics, Plot"	Undated
	23	Computer Printout Tapes-AFSL-Compressed Tre, M ΣQ Data	Undated
	24	Computer Printout Tapes-AFSL-Test, Plot, Calculate, Transfer	Undated
	25	Computer Printout Tapes-Duplicate USDA Food Data (Box 4)	Undated
	26	Computer Printout Tapes-ONR Bath Calorimeter Program Data (Box 5)	Undated
	27	Computer Printout Tapes-ONR Bath Calorimeter Data (DCIEM)	Undated
	28	Computer Printout Tape-ONR-TAS Program	Undated
30	1	USDA 1979 (8 cartridges)	1979
	2	USDA 1980 (7 cartridges)	1980
	3	USDA 1981 (2 cartridges)	1981
31	1	USDA 1981 cont' (9 cartridges)	1981
	2	USDA Undated (1 cartridge)	Undated
	3	AFSL 1978 (1 cartridge)	1978
	4	AFSL 1979 (4 cartridges)	1979
	5	AFSL compressed 1978 - 1979 (2 cartridges)	1978 - 1979
32	1	AFSL 1980 (1 cartridge)	1980
	2	AFSL Undated (5 cartridges)	Undated
	3	ONR "Long, Slow Cool" 1979 (1 cartridge)	1979
	4	ONR "Long, Slow Cool" 1981 (5 cartridges)	1981
	5	ONR "Long, Slow Cool" 1982 (5 cartridges)	1982
33	1	ONR data - Webb & Annis (2 cartridges)	Feb. 11, 1981; Nov. 26, 1981

	2	ONR BHL D - S. Moore, S. Annis (5 cartridges)	Jul. 1982
	3	ONR BHL D - 5 day M - B. Bowman (3 cartridges)	Jul. 1982
	4	ONR BHL D - 5 day M - E. Lookabaugh (3 cartridges)	Undated
	5	ONR BHL D - 5 day M - P. Webb (3 cartridges)	Undated
	6	ONR data, programs, test tapes, control (1 cartridge)	1979, 1980, Undated
34	1	ONR - data, programs, tests, control cont' (6 cartridges)	1979, 1980, Undated
	2	Other - Soldier Study (2 cartridges)	Undated
	3	5-day M + D2 18 (5 cartridges)	Undated
	4	"Compressed Duplicate Data" (3 cartridges)	1977 - 1984
	5	"Miscellaneous - Mostly W. A. Staff" (1 cartridge)	1979 - 1980
35	1	"Miscellaneous - Mostly W. A. Staff" cont' (2 cartridges)	Undated
	2	"GAYMAR cooling blankets/sheets" (2 cartridges)	Undated
	3	"CALDEP - Paris" (12 cartridges)	Apr. 1983
	4	Other - test, utility, programs, blank (1 cartridge)	Undated
36	1	Other - test, utility, programs, blank cont' (12 cartridges)	Undated
Series V: Suits			
Subseries VA: Vari-Temp Suits			
<u>Box</u>	<u>File</u>	<u>Description</u>	<u>Date</u>
37	1	Calorimeter (Vari-Temp) Specifications, Correspondence with ILC Dover, Images	Aug. 1, Sept.7, 1978
	2	Vari Temp Suit with Tubes	Oct. 1978
38		Vari Temp Suit with Tubes	Oct. 1978
39		Vari Temp Suit without Tubes	Oct. 1978
Subseries VB: Unfinished Suits and Materials			
<u>Box</u>	<u>File</u>	<u>Description</u>	<u>Date</u>
40	1	Proto-Type Suit 2-25 JA	Undated
	2	Proto-Type Suit SAS #8 PL-4	Undated
	3	Proto-Type Suit SAS #9 PL-4	Undated
	4	Proto-Type Suit SAS #6 PL-4	Undated

	5	Proto-Type Suit SAS #5 PL-4	Undated
41	1	Unfinished Pieces Two Cuffs, One Arm Piece	Undated
	2	Proto-Type Suit SAS #5 PL-5	Undated
	3	Proto-Type Suit SAS #6 PL-2	Undated
	4	Proto-Type Suit SAS #8 PL-2	Undated
	5	Proto-Type Suit SAS #7 PL-1	Undated
	6	Proto-Type Suit Jacket 2 DL 50-25	Undated
42		Suit Material Unfinished	Undated
Series VI: Books			
<u>Box</u>	<u>File</u>	<u>Description</u>	<u>Date</u>
43	1	<i>Physiology in Industry: Evaluation of Industrial Stresses by the Physiological Reactions of the Worker</i>	1960
	2	<i>Cold Injury : Transactions of the Sixth Conference July 6-10, 1958</i>	1960
	3	<i>The Physiology of Human Survival</i>	1965
	4	<i>Survival in Cold Water</i>	1969
44	1	<i>The Stress of Hot Environments</i>	1972
	2	<i>Accidental Hypothermia</i>	1977