UCRL -3871

UNIVERSITY OF CALIFORNIA

Radiation Laboratory

TWO-WEEK LOAN COPY

This is a Library Circulating Copy which may be borrowed for two weeks. For a personal retention copy, call Tech. Info. Division, Ext. 5545

BERKELEY, CALIFORNIA

DISCLAIMER

This document was prepared as an account of work sponsored by the United States Government. While this document is believed to contain correct information, neither the United States Government nor any agency thereof, nor the Regents of the University of California, nor any of their employees, makes any warranty, express or implied, or assumes any legal responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by its trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof, or the Regents of the University of California. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof or the Regents of the University of California.

UCRL-3871

UNIVERSITY OF CALIFORNIA

Radiation Laboratory
Berkeley, California

Contract No. W-7405-eng-48

LIST OF UNCLASSIFIED REPORTS RECEIVED AND ISSUED BY THE UCRL INFORMATION DIVISION DURING THE PERIOD OF JULY 1-15, 1957

July 16, 1957

Printed for the U. S. Atomic Energy Commission

LIST OF UNCLASSIFIED REPORTS RECEIVED AND ISSUED BY THE UCRL INFORMATION DIVISION DURING THE PERIOD OF JULY 1-15, 1957

July 16, 1957

Index Number	Title	Author	Date
	BIOSCIENCES		
*AECU-3030	Study of the Biological Effects of Irradiation. Progress Report for Period of January 16, 1953 to January 15, 1954.	F. H. Bethell Michigan. Univ.	
*AECU-3418	Annual Progress report.	Utah Univ.	3-31-55
AECU-3488	Worldwide Effects of Atomic Weapons; Project Sunshine.	Rand Corp.	8-6-53
*AF-SAM-56-111	Prolongation of Sulfhydryl Protection in Irradiated Mice.	J. E. Smith Texas Univ.	4-27-56
*CF-57-2-3	Spectrographic Analysis of Normal Human Tissue From Dallas, Texas.	I. H. Tipton, M. J. Cook, R. L. Steiner, et al Oak Ridge Nat'l. Lab.	2-28-57
*NARF-56-47T	Health Physics Activities [for] October 1, 1955 to September 30, 1956.	R. F. Shockley, W. R. Miller, W. F. Cockrell Convair	4-2-57
ORNL-2304	A Study of the Distribution and Excretion of Uranium in Man. An Interim Report.	S. R. Bernard, E. G. Struxness	6-57
UR-482	A Study of Gene Action in Ultraviolet-Irradiated Bacteriophage.	D. R. Krieg	5-7-57
UR-487	Species Differences in the Metabolism of Polonium^{210}	J. N. Stannard, F. A. Smith	5-16-57
USNRDL-TR-141	Urinary Excretion of Uric Acid and Allantoin by the X-Irradiated-Adren-Alectomized Rat.	K. Jackson, C. Entenman	1-30-57

*Microcard

*UWFL-40	Radiation Levels in Biological Samples Collected at Ponape, Caroline Islands, December 16-17, 1954.	L. R. Donaldson, E. E. Held, P. R. Olson Washington Univ., Seattle	3-10-55

CHEMISTRY

*A-779	Final Report on Work Under O. S. R. D. Contract OEMsr-911.	W. W. Watson Yale Univ.	8-5-43
*A-1046	Brown Oxide By-Product Recovery. [Part] 1.	D. Copenhafer, W. A. Oppold Mallinckrodt Chem. Works	7-9-43
*A-1048	Brown Oxide By-Product Recovery--III.	J. V. Opie, W. A. Oppold Same	9-10-43
*A-1050	Brown Oxide By-Product Recovery--V.	J. W. Barnes, D. R. Copenhafer, T. C. Furnas, et al Same	10-28-43
*A-1051	Brown Oxide By-Product Recovery--VI.	J. W. Barnes, T. C. Furnas, J. V. Opie, et al Same	10-28-43
*A-1053	Prediction of Magnesium Behavior in the Biscuit Reaction.	Du Pont de Nemours (E. I.) & Co.	8-14-44
*A-1068 (Del.)	Analytical Information Report [for] the Period December 16, 1944 - January 15, 1945.	N. H. Furman Madison Square Area, Manhattan District, N. Y.	2-1-45
*A-1247	Attempts to Consolidate Amorphous Boron.	H. H. Starke Columbia Univ.	3-10-44
*A-1267	Analysis of Boron Trichloride.	C. M. Judson Same	5-1-44
*A-1791	Production of 891 (Crystalline Boron): Microscopical Examination of Cross-Sections of 891 as Deposited on Core. Progress Report.	T. G. Rochow American Cyanamid Co.	4-24-44

*Microcards

*A-2122	Conversion of BF_3 to BCl_3	C. A. Hutchison, R. K. Eberts Columbia Univ.	1-25-45
*A-2155	Constituent Analysis of Boron Fluoride-Methyl Ether Complex.	C. M. Judson Same	11-15-44
*A-2191	The Development on a Commercial Scale of a Process for the Manufacture of Crystalline Boron and Analytical Methods. Final Report.	G. H. Fetterley, W. M. Hazel Norton Co., Worchester, Mass.	12-16-44
*A-2192	Properties of Synthane Dihydrates and Its Relation to Water in Complex.	E. H. Taylor Columbia Univ.	9-1-45
*A-2354	Investigation of the System Methyl Ether and Methyl Borate-Boron Fluoride Complex.	D. A. McCaulay, W. L. Rittschof Standard Oil Co.	8-2-45
*A-2355	Dissociation of the Methyl Borate-Boron Fluoride Complex.	D. A. McCaulay Same	9-11-45
*A-2356	Operation of a Podbielniak Heligrid Column.	W. L. Rittschof Same	10-2-45
*A-2358	Exchange Method of Preparing Boron Trifluoride Samples for Mass Spectrometer Analysis of Dimethyl Ether-Boron Trifluoride.	C. M. Judson Same	10-23-45
*A-2359	Analysis of Dimethyl Ether-Boron Trifluoride.	C. M. Judson Same	10-26-45
*A-2364	Concerning Some Isotopic Exchange Reactions of Boron Compounds.	A. N. Webb, W. L. Rittschof Same	10-30-45
*A-2365	Reactions of Boric Acid and Boric Oxide With Methyl Ether-Boron Fluoride Complex.	A. N. Webb, W. L. Rittschof Same	10-21-45

*Microcards

*A-3111	Production of 891. Progress Report for August 16- October 1.	J. K. Dixon American Cyanamid Co.	10-1-44
*A-3602	Explosive Limits of Mixtures of Fluorine (216) With Fluorocarbons, Hydrocarbons, and Water Vapor.	J. K. Fox, D. S. Voss, J. P. Brusie Carbide and Carbon Chem. Co.	9-25-45
*A-3719	Equipment and Operating Conditions Proposed Process for the Recovery of C-616 [UF_6]	H. W. Cromer, C. F. Swinehart Harshaw Chem. Co. Cleveland	4-10-45
*A-3789 (Sec. 7-A)	Clinton Laboratories Process Manual. Section 7-A. Product Purification Wet D. Process	W. E. Kirst Du Pont de Nemours (E.I.) & Co.	9-27-43
*A-3789 (Sec. 8)	Clinton Laboratories Process Manual. Section 8. Waste Disposal-- Wet B Process.	W. E. Kirst Same	[1943]
*AD-108091	The Electrochemistry of Low Valences of Titanium. Quarterly Progress Report for December 1, 1955 to March 1, 1956.	T. C. Franklin, H. V. Seklemian, Baylor Univ.	3-1-56
*AECU-3360 (Pt. III)	Radiochemical Separations. III. Silver.	D. N. Sunderman, W. W. Meinke Michigan Univ.	[1955?]
*AECU-3383	Progress Report No. 22 Under Contract SC-5.	New Mexico Univ.	12-1-56
*AECU-3420	Stopping Cross Sections of Solid Hydrocarbons for Protons and Helium Ions of Energy 25-375 KEV.	D. C. Lorents, E. J. Zimmerman Nebraska Univ.	[1956?]
*AECU-3421	Scintillation Response of Crystals. [Period Covered] February 1956 to August 1956.	E. J. Zimmerman Same	
*AECU-3428	Rapid Lattice Parameter Measurements of Moderate Precision on Single Crystals.	C. W. Tucker, Jr., P. Senio Knolls Atomic Power Lab.	[1956]

*Microcards

AECU-3429	Detonation Pressures of Stoichiometric Hydrogen-Oxygen Mixtures Saturated With Water at High Initial Temperatures and Pressures. Final Report.	P. L. McGill, J. A. Luker, Syracuse Univ.	12-3-56
*AERE-C/M-155	A General Method for the Rapid Determination of Total Strong Acid Anion in Solution.	M. J. Cabell	7-29-52
*AERE-C/M-294	Operation of the Mervyn-Harwell Square Wave Polarograph.	L. E. Smythe	12-20-56
*AERE-C/R-779	A Useful Electrolytic Cell.	F. Hudswell, K. L. Wilkinson, J. C. Waldron	9-10-51
*AERE-C/R-933 (Del.)	Counter-Current Liquid-Liquid Extraction in Annulus Columns With Shearing Motion.	R. Spence, R. J. W. Streeton	9-22-52
*AERE-C/R-1217	U233 Production. Concentration and Purification of the Product From Solvent Extraction by the Anion Exchange Resin Deacidite FF.	I. L. Jenkins, R. J. Richardson	7-53
*AERE-C/R-1537 (Del.)	The Separation of Fission Products by Electrolytic Precipitations.	A. C. Littlejohn	11-11-54
*AERE-C/R-1563	Square Wave Polarography. Part III: Single Drop Polarography.	G. C. Barker	11-27-54
AERE-C/R-2054	The Self-Absorption and Window-Absorption Correction in the 2Pi-Beta-Proportional Counter for Certain Fission Products.	J. G. Cuninghame, M. L. Sizeland, H. H. Willis	2-57
AERE-C/R-2081	The Spectrographic Estimation of Major-Constituent Plutonium by the Iron-Flux Method.	F. T. Birks	12-56
*AERE-C/R-2165 (App.)	The Determination of Long-Lived Fall Out in Rain-Water.	R. G. Osmond, A. G. Pratchett, J. B. Warricker U. K. Atomic Energy Authority. Woolwich Outstation, England	2-57
AERE-ES/R-2089	The Removal of Fission Products From Solution With A Precipitator-Column Treatment. Part 2. Pilot Plant Trials.	K. G. Seedhouse, J. Monahan, K. W. Pearce, et al	1-57

*Microcards

AERE-M/R-2159	The Gamma and Pile Irradiation of Polytetrafluoroethylene.	R. Worrall	1-57
ANL-5693	Interstitial Compounds of Irradiated Graphite.	G. R. Henning, G. L. Montet	3-57
ANL-5725	Studies of Particle Size Distribution in Fluidized Beds.	H. M. Katz	5-57
ANL-5738	Half-Life Limit on Mn^{53}	J. R. Huizenga, J. Wing	6-57
*AWRE-O-4/57	The Determination of Nitrogen in Hydrogen and Deuterium Gas.	M. E. D. Bains Gt. Brit. Atomic Weapons Research Estab. Aldermaston, Berks, England	3-57
*BMI-256	Quarterly Progress Report on Refining of MgX and Other Uranium-Bearing Materials.	R. A. Ewing, S. J. Kiehl, Jr. R. E. Sharpe, et al	9-30-51
*BMI-259	Use of Electrical Measurements to Detect Differences Among Uranium Tetrafluoride Samples.	D. C. Reynolds, A. E. Middleton	4-15-52
BMI-955	Refining of Thorium by Solvent Extraction.	R. A. Ewing, S. J. Kiehl, Jr. A. E. Bearse	10-19-54
BMI-967	The Distribution of Thorium-Decay Products in the Thorium-Purification Process.	G. D. Calkins, M. Pobereskin, J. E. Gates, et al	12-7-54
BMI-1186	Vapor Pressure and Equilibrium Studies of the Sodium Fluoride-Beryllium Fluoride System.	K. A. Sense, R. W. Stone, R. B. Filbert, Jr.	5-27-57
*BMI-JDS-135	Recovery of Thorium and Uranium From Monazite Sands.	A. E. Bearse, E. G. Bohlmann, G. D. Calkins, et al	8-13-48
*BMI-JDS-227	Recovery of Thorium and Uranium From Monazite Sands. Progress Report of the Month of February 1950.	A. E. Bearse	2-28-50

*Microcards

*CCC-1024-TR-229	1, 1'-Dianthrimide Method for Spectrophotometric Determination of Boron.	W. A. Powell, E. H. Poindexter Richmond, Va. Univ.	3-8-57
*CCC-1024-TR-232	Determination of Hydroxylic Impurities in Methyl Borate by Infrared Spectrophotometry.	D. R. Mackey, J. W. Brogan, H. J. Birch, et al Callery Chem. Co.	3-14-57
*CF-47-10-230	1200 Area Pilot Plant Manual of Operations.	D. G. Reid, N. J. Rigstad Clinton Labs.	9-1-47
*CF-51-8-85 (Del.)	Purex Process - Second Uranium Cycle (CT-51) Quarterly Report.	J. R. Flanary Oak Ridge Nat'l. Lab.	8-10-51
*CF-51-11-65 (Del.)	Thorex Process Development Quarterly Report for Period August 10 to November 10, 1951.	A. T. Gresky Same	11-12-51
*CF-52-2-131 (Del.)	Continuous Dissolving - Quarterly Report for Period November 10, 1951 to January 10, 1952.	D. L. Foster E. O. Nurmi Same	2-11-52
*CF-54-6-178	Uranium Recovery From Bomb Liner and Scrap by Ion Exchange.	I. R. Higgins Same	6-8-54
*CF-54-11-148 (Del.)	25 Process Assistance for Period of October 29 - November 12, 1954.	F. L. Culler Same	11-23-54
*CF-54-12-6	Status of Research Program for Uranium Chemistry of Raw Materials.	K. B. Brown Same	12-2-54
*CF-57-4-77	The Choice in Thorium Oxide Slurries for the Prevention of Caking in Circulating Systems.	R. N. Lyon Same	4-22-57
*CF-57-4-97	Thorium Oxide Slurry Falling Ball Viscometer-- Final CO-OP Report, Winter, 1957.	P. E. Novak Same	4-10-57
*CM-880	Heat Conductivity in Polyatomic, Electronically Excited, or Chemically Reacting Mixtures--III.	J. O. Hirschfelder Wisconsin Univ. Naval Research Lab.	8-15-56

*Microcards

CRC-693	Experimental Determination of Stored Energy in Graphite Irradiated With Neutrons.	R. W. Attree, R. L. Cushing, J. Pieroni Chalk River Project	3-57
*HDC-1876	Preliminary Rubber Irradiation Tests.	D. L. Peterson Hanford Works	8-25-50
*HW-12836 (Del.)	The Solvent-Extraction Performance of Small Scale Redox IA Columns Using Fenske Helix Packing, Ammonium Nitrate Salting Agent, and Unirradiated Uranium.	F. W. Woodfield, J. G. Bradley, W. O. Switzer, et al	4-13-49
*HW-14764 (Del)	Special Irradiation of Temperature-Indicating Liquid. Final Report--Production Test 105-266-P.	M. W. Carbon	8-18-49
*HW-17769 (Del.)	Terminal Report on the Radiolanthanum Laboratory. I. Laboratory and Laboratory Equipment Design.	J. K. Figenshau	7-21-50
*HW-21442	Final Report, Production Test 221-B-8; Coating Removal Waste Loss Reduction.	B. E. Kirkendall	6-25-51
*HW-26517	Nitration Reactions of Shell Spray Base Under Purex Waste Recovery Process Conditions.	R. M. Wagner	12-5-52
*HW-28935	Possible Process Alternatives for Converting Recovered Uranyl Nitrate to Uranium Hexafluoride.	M. K. Harmon	6-23-53
*HW-33164	Examination of Several Different Rubber Compounds After Exposure to Pile Water.	W. S. Kelly	9-24-54
IGR-TN/C-535	Alkali Metal - Gas Reactions. Part IX. The Influence of Moisture on the Reaction of Sodium With Oxygen.	P. B. Longton GT. Brit. Culcheth Labs.	4-57
*IGR-TN/D-443	Factors Affecting the Distance of the Discharge Point From the Shore in the Sea Disposal of Effluent.	A. E. Shaw Gt. Brit. Dounreay Works, Caithness, Scotland	2-57
ISC-777	Kinetics of the Reaction Between Calcium and Water Vapor.	C. T. Apel, H. J. Svec	3-56

*Microcards

JENER-47	Absolute Neutron and Gamma-Ray Spectra of Jeep Measured by Means of Nuclear Emulsions.	S. Selim-Younis Joint Estab. for Nuclear Energy Research, Kjeller, Norway	4-57
JENER-48	Separation of Plutonium From Irradiated Uranium, and Fractionation of Long-Lived Fission Products by Ion Exchange.	R. O. Lingjaerde Same	4-57
K-1330	Equilibrium Time for a Square Plant.	D. W. Burton Oak Ridge Gaseous Diffusion Plant	6-12-57
K-1334	Special Applications Line Recorder Mass Spectrometer for Isotope Analysis.	R. H. Stevens Same	6-21-57
*KAPL-223(Del.)	Behavior of Cerium in Water-Hexone Systems.	E. C. Pitzer	9-15-49
*KAPL-1380(Del.)	Preparation of Spherical Uranium Powder by Reduction of Uranium Trioxide With Calcium.	A. P. Beard, F. K. Heumann	7-22-55
*KLX-1211	Solvent Evaluation for Liquid-Liquid Extraction (23-F) Closing Report.	Kellex Corp.	1-15-51
KLX-10066	Fission Product Separations Study. Quarterly Progress Report [for] December 1, 1956 - February 28, 1957.	R. A. Keeler, C. J. Anderson M. Kibrick	3-31-57
*LP-146(Del.)	Effects of Nuclear Radiations on Lubricants and Gasoline.	C. Goodman Mass. Inst. of Tech. Cambridge. Lexington Project	9-7-48
*MCW-118	Equilibrium Ratio of Hydrogen Fluorine and Water in the Fluorination of Uranium Dioxide at High Temperatures.	C. W. Kuhlman	7-15-48
MISC-1956-8 (Rev. Jan. 1957)	Radioisotopes; Catalog and Price List, Including Special Materials and Services.	Oak Ridge Nat'l. Lab.	1-57
MISC-1957-148	Stabilization of Spectrum Excitation Conditions in the ARC Column, by I. B. Veliakov-Bodin and S. L. Mandelshtam. Trans. from Akademiia Nauk, SSSR. Seriia Fizicheskaia. Izvestiia 5 229-34 (1941).		

*Microcards

*NLCO-651	Moving Bed Reactor Pellet Development Program. (Laboratory Investigation)	P. W. Henline, A. J. Klee, E. J. Walter	5-31-56
NLCO-675	A Kinetic Study of the Reaction $UO_2 + 4HF \rightarrow UF_4 + 2H_2O$. Part I. Development of the Rate Equation.	R. E. DeMarco, DuWane C. Bonfer, R. C. Abbott	4-18-57
*NP-6250	An Attempt to Generalize Onsager's Principle, and Its Significance for Rheological Problems. Technical Report No. 13 [Covering] Period October 1956 - March 1957.	H. Ziegler Brown Univ.	3-57
*NP-6252	Determination of Oxygen in Titanium.	W. R. Hansen, M. W. Mallett Battelle Memorial Inst.	2-25-57
*NP-6256	Research on the Determination of the Stability of Jet Engine Fuels. Quarterly Progress Report No. 1 [for] September 1 Through November 30, 1956.	H. B. Minor A. C. Nixon, R. E. Thorpe Shell Dev. Co.	
*NP-6263	Engine Oil Development. Quarterly Progress Report No. 5 [for] November 1, 1956 Through January 31, 1957.	C. L. Mahoney W. W. Kerlin E. R. Barnum, et al Same	
*NP-6265	Quarterly Progress Report No. 24.	Mass. Inst. of Tech. Solid-State and Molecular Theory Group	4-15-57
*NP-6276	Study on the Purification of the Zr-Hf Mixture and on Zr-Hf Separation. Part I. Purification of the Zr-Hf Mixture. (In French)	N. Isaac, R. DeWitte Brussels. Centre D'Etudes Pour Les Applications de l'Energie Nucleaire	9-13-55
*NP-6280	Measurement of the Activities of Rain and Surface Waters. (In French)	R. Boulenger Same	6-30-56
*NP-6294	Sixth Annual Report on the Work of the Bartol Research Foundation of the Franklin Institute	C. E. Mandeville Bartol Research Foundation	9-30-56

*Microcards

NP-6330	Proceedings of the Health Physics Society. First Annual Meeting June 25-27, 1956	Michigan Univ.	
*NYO-1236	The Conversion of Dimethyl Ether-Boron Trifluoride Complex to Boron Trifluoride.	A. Loverde Hooker Electrochemical Co.	5-27-54
*NYO-1240	A Study of the Effect of Methyl Fluroide Recycle on the Decomposition Rate of Polymer During Fractionation.	J. L. Hanner Same	6-1-54
*NYO-3800	Second Annual Report on the Preparation of Uranium Hydride. Period Covered: July 1, 1953 Through June 30, 1954.	S. Johnson Metal Hydrides Inc.	8-20-54
*NYO-7711	Studies on Coordination Compounds. XVII. The Chelating Tendencies of Some β-Diketones Toward Beryllium and Uranyl Ions and of Methoxyacetylacetone and Curcumin Toward a Variety of Divalent Ions.	D. M. Ericson, W. C. Fernelius Penn. State Univ.	4-56
ORNL-2269	Chemical Technology Division. Progress Report on Raw Materials for February, 1957.	K. B. Brown, C. F. Coleman, D. J. Crouse, et al	6-17-57
ORNL-2289	Production of Xe^{131m} 2.	R. E. McHenry	7-1-57
ORNL-2291	Chemical and Isotopic Studies of the Nitrox System for N^{15} Enrichment.	G. M. Begun, L. L. Brown, L. B. Yeatts, et al	6-25-57
ORNL-2308	Uranium Recovery From Ore by a Higgins Ion-Exchange Contactor at Grand Junction Pilot Plant.	C. W. Hancher, I. R. Higgins, J. S. Taylor	7-1-57
ORNL-2311	Radionuclides in Reactor Cooling Water - Identification, Source and Control.	D. W. Moeller	7-2-57
ORNL-2321	Use of Ion Exchange Resins to Concentrate Radionuclides for Subsequent Analysis.	B. Kahn, E. R. Eastwood W. J. Lacy	6-17-57
RMO-2801	Recovery of Uranium Values From Ore and Concentrate Samples. Progress Report No. 1.	Colorado School of Mines Res. Foundation, Inc.	9-10-54
*SOD-13	Experimental Studies in Plant and Laboratory Scale Mixer-Settler Units.	Standard Oil Dev. Co.	10-1-48

*Microcards

TID-5223(Pt.2)	Production and Separation of U^{233}. Collected Papers.	L. I. Katzin, ed Argonne Nat'l. Lab.	1952
*TID-10057	First Annual Report on the Preparation of Uranium Hydride.	R. W. Bragdon Metal Hydrides Inc.	8-15-53
UCLA-397	The KBr Pellet Technique in Infrared Spectroscopy.	P. M. Kratz, G. V. Alexander, R. E. Nusbaum	6-17-57
*UK/C/4/113	Disposal of Highly Active Solutions, 1. Fission Product Disposal in Glass. 2. Waste Disposal Into the Ground.	R. W. Durham, L. C. Watson, C. A. Mawson Chalk River Project	10-17-55
*UK/C/5/11	Some Integral Measurements Related to Neutron Spectrum Characterisation.	R. G. Freemantle Gt. Brit. Atomic Energy Res. Estab., Harwell, Berks, England	[1956]
*WADC-TN-55-181	Determination of Gamma Radiation Effects on Linear Polyethylene by Infrared Analysis.	N. E. Srp Wright Air Dev. Center	5-55
*WADC-TR-54-98 (Pt.3)	Investigation and Development of High-Temperature Structural Adhesives. Report No. 3 [for] May 1, 1955 to November 1, 1955.	A. S. Kidwell, K. L. McHugh Conn. Hard Rubber Co.	9-56
*WADC-TR-55-495 (Pt. II)	Measurements of Thermal Properties. Report [for the Period] August 17, 1955 to August 16, 1956.	I. B. Fieldhouse, J. C. Hedge, J. I. Lang, et al Ill. Inst. of Tech.	9-21-56
*WADC-TR-56-433	Neutron Induced Radioactivities in IF-6 In-Flight Food Packets.	R. P. Epple Tracerlab, Inc., Boston	6-56
*WADC-TR-56-557 (Pt. 1)	Effects of Gamma Radiation on Aircraft Transparent Materials. [Period covered] December 1955 to October 1956.	D. L. Schmidt, R. H. Johnson Wright Air Dev. Center	11-24-56

*Microcards

*WADC-TR-56-663	Fundamental Studies on the Adhesion of Organic Materials to Metal Substrates.	R. L. Patrick, W. A. Vaughn Quantum Inc., Cheshire, Conn.	12-56
*WAL-397/9	A Survey of the Elevated Temperature Properties of Teflon and KEL-F.	A. P. Levitt, A. K. Wong Watertown Arsenal Labs.	8-24-56
*WAPD-PWR-CP-2126	Removal of Carrier-Free Radioisotopes From Pure Water by Mixed-Bed Ion Exchange Columns; Application to PWR Waste Disposal System.	W. T. Lindsay, C. S. Abrams	
*WIAP-M-36	The Kinetics of Nuclear Fuel Consumption and Production, U-238, U-235 Mixtures.	J. M. Stein Westinghouse Elec. Corp.	2-25-54

ENGINEERING

*A-3789 (Sect.13)(Del.)	Clinton Laboratories Process Manual. Section 13 - Materials of Construction.	Du Pont de Nemours (E.I.) & Co.	3-31-44
*AECU-3433	Leak Testing Procedure.	C. F. Barrett, Jr. Knolls Atomic Power Lab.	11-19-53
AERE-ES/R-2124	Calibration of the Mercury Vapour Detector Type "B".	P. E. Thorpe R. W. Marriott	1-1957
*AGC-1310-3	Experimental Studies on Heat Transfer and Fluid Flow Systems. Quarterly Progress Report No. 3 [for] January 1 Through March 31, 1957.	M. E. Ellion, L. Green, Jr. K. L. Nall Aerojet-General Corp.	4-30-57
*AGC-AE-23	Polyphenyl-Coolant Burnout Studies. Monthly Progress Report [for] August 26 Through September 25, 1956.	Same	
*CF-55-3-84	Large Diameter Piping in the Basement of the ORR Building.	J. P. Sanders Oak Ridge Nat'l Lab.	3-15-55
*CF-56-2-33	Improvements in the Operation of Westinghouse 200A Slurry Pump.	W. Q. Hullings, A. S. Kitzes Same	2-3-56

*Microcards

*CF-56-9-60	Conduction of Heat in a Finite Plate in Contact With an Environment in Which the Temperature Varies as a Prescribed Function of Time.	D. H. Platus, R. V. Meghreblian Oak Ridge Nat'l. Lab.	9-12-56
*CF-57-4-80	Possible Radiation Damage to the Stator Windings of the HRT Circulating Pump.	E. [H.] Gift Same	4-17-57
*CF-57-4-96	Deflection Equations for Various Loadings of Circular-ARC Curved Beams.	D. L. Platus, B. L. Greenstreet Same	4-22-57
*IGR-TN/W-366	Heat Transfer Tests on Aluminium and Copper Bonded Stainless Steel Heat Exchangers.	D. Gambles, T. I. M. Crofts Gt. Brit. Windscale Works	9-20-56
K-1324	Laminar Flow in an Annulus With Porous Walls.	A. S. Berman Oak Ridge Gaseous Diffusion Plant	6-13-57
MONOGRAPH-2778	A Study of Statistical Treatments of Fatigue Data. Reprinted From American Society for Testing Materials, Philadelphia. Proceedings 56, 1091-1117 (1956)	M. N. Torrey, G. R. Gohn Bell Tel. Labs.	5-57
*NACA-TN-4000	A Phenomenological Relation Between Stress, Strain Rate, and Temperature for Metals at Elevated Temperatures.	E. Z. Stowell Langley Aeronautical Lab.	2-18-57
NARF-57-17T	Separation of Nuclear Effects in a Mixed Radiation Field. An Experimental Design for Materials and Component Damage Studies.	D. W. Gaylor, J. B. Wattier Convair	2-2-57
*NP-6243	Correlation of Heat Transfer and Pressure Drop for Air Flowing Across Banks of Finned Tubes. Report No. 30.	D. L. Katz, E. H. Young, R. B. Williams, et al Michigan Univ.	12-54
*RDB(W)/TN-49	Temperature Distribution in a "Double Annulus" Heat Exchanger.	W. B. Hall Gt. Brit. Windscale Works	3-53
*SC-4046(M)	Unclassified Portion of Radiation Effects Bibliography.	S. T. Landrith	3-1-57

*Microcards

TID-7006	Corrosion and Wear Handbook for Water Cooled Reactors.	D. J. DePaul, ed. Westinghouse Elec. Corp.	3-57
*WADC-TR-55-422 (Pt. I)	Review of the Literature on Two-Phase (Gas-Liquid) Fluid Flow in Pipes. Part I.	W. A. Gresham, Jr. P. A. Foster, Jr. R. J. Kyle Georgia Instl of Tech.	6-55
*WADC-TR-56-267	Evaluation of Designs and Materials for High Speed-High Temperature Shaft Seals for Turbojet Engine Applications.	E. J. Taschenberg Koppers Co., Inc. Pittsburgh	9-24-56
*WADC-TR-56-579	Development of Friction-Seal Materials for High Temperature-High Speed Operation. Period Covered: July 1, 1955 to July 31, 1956.	P. F. Mataich, Horizons, Inc. Cleveland	10-25-56
*WAPD-TM-37	Mechanical Loading Versus Thermal Loading.	R. P. Kapp	1-21-57
*WIAP-4	Hydraulic Aspects of Fluid Flow Through Packed and Fluidized Systems.	N. A. Beldecos, J. D. Lokay, A. K. Smith Westinghouse Elec. Corp.	10-15-53
*WIAP-M-30	A 50 KW DC Electromagnetic Pump for Liquid Metal Application.	A. R. Jones Same	[1953?]

GEOSCIENCES

*AECU-3419	Density of Basic Rocks at Very High Pressures.	D. S. Hughes, R. G. McQueen Los Alamos Scientific Lab.	[1956]
*RME-3118	Monazite Placers on Rabon Creek, Laurens County, and Big Generostee Creek, Anderson County, South Carolina.	L. A. Hansen D. W. Caldwell Bureau of Mines, & Geological Survey	2-55
*RME-3128	Deadwood Conglomerate Monazite Deposit Bald Mountain Area, Sheridan and Big Horn Counties, Wyoming.	A. A. McKinney, H. W. Horst Bureau of Mines	3-53

*Microcards

*RME-3137 (Pt.II)	Annual Report for April 1, 1955 to March 31, 1956. Part II.	J. W. Gruner, D. K. Smith, Jr. J. A. Knox Minnesota Univ.	4-1-56
RME-3147	Departure Curves and Electrode Factors for the Determination of True Formation Resistivity From Electric Logs Obtained With Roller Type Electrodes in Air Drilled Bore Holes Not Containing Fluid.	J. A. Pranglin Well Inst. Dev. Co. Bellaire, Tex.	1-4-57

METALLURGY & CERAMICS

*A-1036	Comparison of Refractories as Bomb Lining Materials in Production of Metal.	W. H. Keller Iowa State Coll.	6-11-44
*A-1304	Metal Hydrides Final Report.	P. P. Alexander Metal Hydrides Inc.	7-26-43
*A-3814	Orientation of Single Crystals With A Universal Vise; Geometrical Theory.	H. Jacobson Columbia Univ.	11-19-45
*AECU-3431	The Feasibility of Roll Cladding Titanium on Steel. Summary Report [for] November 1, 1955 to December 31, 1956.	R. F. Domagala, D. W. Levinson Ill. Inst. of Tech.	12-31-56
*AGC-AE-18	The Reaction of Molten Lead With Water. Progress Report [for] March 1 Through April 30, 1956.	Aerojet Gen. Corp.	6-6-56
*AGC-AE-19(Pt.I)	The Reaction of Molten Metal With Water. Monthly Progress Report [for] May 1 Through June 30, 1956.	Same	7-23-56
*AGC-AE-22	The Reaction of Molten Metal With Water. Monthly Progress Report [for] July 1 Through July 31, 1956.	Same	9-14-56
*AGC-AE-26	The Reaction of Molten Metal With Water. Monthly Progress Report [for] August 1 Through September 30, 1956.	Same	10-26-56
*AGC-AE-28	The Reaction of Molten Metal With Water. Monthly Progress Report [for] October 1 Through October 31, 1956.	Same	11-23-56

*Microcards

ANL-5661	Selected Properties of Vandium Alloys for Reactor Application.	K. F. Smith, R. J. Van Thyne	5-57
ANL-5690	The Fabrication of Certain Jacketed Uranium Helices.	F. L. Yaggee	5-57
*ANL-WHZ-122	Handbook of Constants for Selected Pile Materials.		10-30-47
*ARL/MET-13	The Chromium-Rich Alloys of the Chromium-Titanium-Tungsten System at 900° and 1200°C.	N. Ryan Australia. Aeronautical Res. Labs., Fishermen's Bend, Victoria	7-55
*BMI-927	Corrosion of Type 347 Stainless Steel in the Uranium-Derby Pickle Bath.	R. S. Peoples, R. W. Fink, O. M. Stewart, et al	7-14-54
BMI-1188	An Investigation of Uranium Solid Solubility in Thorium.	A. A. Bauer, F. A. Rough R. F. Dickerson	5-29-57
*BNL-2506(Del.)	Proposal for Annealing of Graphite Structure in the Brookhaven National Laboratory Reactor.		9-4-53
*BRB-7(Del.)	Hardness Evaluation of Alpha Hot-Rolled Uranium Rod for Drawing.	M. T. McGowan, H. S. Rubenstein, R. M. Treco	8-31-55
*CF-55-1-113	Specifications on Stainless Steel STR Irradiation Test Element.	J. E. Cunningham Oak Ridge Nat'l. Lab.	1-21-55
*HW-39880	Controlled Oxidation of Plutonium Metal Turnings.	R. C. Smith, D. R. Doman	11-10-55
*HW-49460	Consumable Electrode Project.	W. I. Steinkamp	3-20-57
IDO-16338	Failure of WAPD-30 High Pressure Loop.	M. S. Robinson Phillips Pet. Co.	4-19-57
IDO-16337	Radiation Damage Studies Program ETR Loop Materials Progress Report.	Same	4-19-57

*Microcards

*IGR-TN/W-454	Mass Transfer in Liquid Metal Circuits. A Review of Progress in Initial Studies.	A. Draycott, P. D. Rich Gt. Brit. Windscale Works	1-57
*KAPL-1604(Del.)	Metallurgy Report of the Research Operation for June, July, August 1956.	C. A. Bruch, W. M. Cashin	
KAPL-1693	Recovery of Uranium From Fused Salt Melts by Electrodeposition.	L. W. Niedrach G. R. Fountain	3-29-57
KAPL-1746	Magnesium-Zirconium Diffusion Studies.	L. S. DeLuca, H. T. Sumsion, D. D. Van Horn	4-1-57
KAPL-1765	The Action of Molten Uranium on Graphite.	E. L. Swartz	4-9-57
*KAPL-M-AME-5	S3G Seal Weld--Unit Cell to Standpile Housing.	R. L. Harris	2-7-57
MONOGRAPH-2763	Dislocations in Plastically Bent Germanium Crystals. Reprinted From Journal of Metals 8 946-9 (1956)	F. L. Vogel, Jr. Bell Tel. Labs. Inc.	5-57
MONOGRAPH-2780	Supermendur; A New Rectangular-Loop Magnetic Material. Reprinted From Electrical Engineering 76 208-11 (1957)	H. L. B. Gould, D. H. Wenny Same	5-57
NAA-SR-1867	Effect of Sodium on the Mechanical Properties of Zirconium.	J. C. Bokros	6-15-57
NAA-SR-1926	Germinative Grain Growth Characteristics of Zirconium.	J. C. Bokros	6-15-57
*NBS-4884	Thermal Expansion of Cermet Components by High Temperature X-Ray Diffraction. Progress Report No. 12 for the Period March 15, 1956 to June 15, 1956.	F. A. Mauer, L. H. Bolz	
NMI-1176	Quarterly Progress Report for the Period January 1, 1957 Through March 31, 1957.		5-20-57
*NP-6253	Thermal Conductivity of Titanium and Titanium Alloys.	J. W. Holladay Battelle Memorial Inst.	3-11-57

*Microcards

*NP-6254	Bibliography on Surface Hardening of Titanium and Titanium Alloys.	Battelle Memorial Inst.	3-6-57
*NP-6255	The Emissivity of Titanium.	Same	3-15-57
*NP-6258	Measurement of Thermal Properties. Progress Report No. 3 [for] January, February, and March 1957.	J. I. Lang, I. B. Fieldhouse Ill. Inst. of Tech.	4-10-57
*NP-6259	ARC Welding Titanium.	Battelle Memorial Inst.	3-21-57
*NP-6262	Titanium Progress to Date.	H. B. Goodwin Same	3-25-57
*NP-6291	Minutes of Titanium Symposium on Heat Treating and Alloying Held at Case Institute of Technology, Cleveland, Ohio, November 7 and 8, 1956.	Metallurgical Advisory Committee on Titanium.	
*NP-6293	Titanium Alloys for Thermal Flight.	R. I. Jaffee Battelle Memorial Inst.	4-17-57
NRL-4942	A Differential Thermal Analysis Apparatus for Temperatures up to 1575°C.	K. G. Skinner	5-24-57
*ORNL-551	Bending of a Fuel Assembly.	W. B. Allred, H. C. Savage	6-9-48
*TID-3601	Handling Techniques for Beryllium and Properties of Beryllium and Beryllium Alloys. A Literature Search	W. E. Bost, Comp.	2-57
*TID-10001	Studies of Graphite for Fuel Elements.	L. D. Loch, J. A. Slyh, W. H. Duckworth Battelle Memorial Inst.	10-13-54
*TML-46A	Department of Defense Titanium Sheet-Rolling Program. Status Report No. 1.	C. R. Simcoe Same	3-8-57
*UK/C/5/19	Fixation of Highly Active Wastes in Solid Form.	C. B. Amphlett Gt. Brit. Atomic Energy Res. Estab. Harwell, Berks, England	9-25-56

*Microcards

*WADC-TN-55-290 (Pt.2)	Development of Cast Iron-Base Alloys of Austenitic Type for High Heat-Resistance and Scale-Resistance. Period Covered: June 1955 to July 1956.	F. Eberle, J. H. Hoke, W. E. Leyda, Babcock and Wilcox Co.	9-15-56
*WADC-TR-53-230 (Pt.III)	Study of Effects of Alloying Elements on the Weldability of Titanium Sheet. [Period Covered] February 7, 1955 to August 31, 1956.	J. F. Rudy, J. B. McAndrew, H. Schwartzbart Ill. Instl of Tech.	9-1-56
*WADC-TR-55-458 (Pt. II)	Relaxation Behavior of Titanium Alloys. [Period Covered] April 1, 1954 to January 31, 1956.	F. J. Gillig Cornell Aeronautical Lab., Inc.	11-5-56
*WADC-TR-56-37	Dampling, Elasticity, and Fatigue Properties of Titanium Alloys, High Temperature Alloys, Stainless Steels, and Glass Laminate at Room and Elevated Temperatures. Period Covered: June 1952 to October 1955.	E. R. Podnieks, B. J. Lazan Minnesota Univ.	3-56
*WADC-TR-56-85	Effect of Ceramic Coatings on the Creep Rate of Metallic Single Crystal and Polycrystalline Specimens. [Summary Report for] June 15, 1952 Through September 30, 1955.	J. R. Cuthill, W. N. Harrison Nat'l. Bureau of Standards	4-56
*WADC-TR-56-137	High Alloy Content Cermets Containing Titanium Diboride as the Minor Constituent. Final Report [for] March 27, 1954 to September 1, 1955.	T. A. Willmore, D. G. Bennett Illinois Univ.	12-55
*WADC-TR-56-139	High Temperature Resistant Ceramic Coatings of Increased Long Heat Stability.	K. E. Nelson, T. A. Willmore, D. G. Bennett Same	12-55
*WADC-TR-56-140	Metal Protective and Radiation Reflective Ceramic Coatings.	C. L. Hoenig, T. A. Willmore, D. G. Bennett Same	1-56
*WADC-TR-56-220	Effects of Physical Variables on Delayed Failure in Steel. Period [Covered] March 31, 1955 to March 31, 1956.	R. D. Johnson, H. H. Johnson, J. G. Morlet, et al Case Inst. of Tech.	4-27-56

*Microcards

*WADC-TR-56-222 (Pt. I.)	Determination of Emissivity and Reflectivity Data on Aircraft Structural Materials. Part I. Techniques for Measurement of Total Normal Emissivity and Reflectivity With Some Data on Copper and Nickel. Period Covered: May 1955 to May 1956.	H. T. Betz O. H. Olson, B. D. Schurin, et al Ill. Inst. of Tech.	6-56
*WADC-TR-56-237	Evaluation of Thin Iron Films as Sensitive Corrosion Indicators. Period Covered: January 1955 to April 1956.	D. Roller Wright Air Dev. Center	6-25-56
*WADC-TR-56-304	The Effect of Microstructural Variables and Interstitial Elements of the Fatigue Behavior of Titanium and Commercial Titanium Alloys. Period Covered April 1, 1955 to March 31, 1956.	C. B. Dittmar, G. W. Bauer, D. Evers Mallory-Sharon Titanium Corp., Niles, Ohio	10-1-56
*WADC-TR-56-372	Ceramic Crucible for Melting Titanium.	B. C. Weber, W. M. Thompson, H. O. Bielstein, et al Wright Air Dev. Center	6-56
*WADC-TR-56-409	Autoradiographic Study for the Distribution of Thorium in Magnesium Alloys. Period Covered: April 1, 1955-March 16, 1956.	K. Wolfsberg G. John	8-20-56
*WADC-TR-56-411	The Constitutional and Aging Characteristics of Magnesium-Thorium and Magnesium-Thorium Ternary Alloys.	A. S. Yamamoto, E. J. Klimek, W. Rostoker Ill. Inst. of Tech.	11-27-56
*WADC-TR-56-456	Creep Behavior of Magnesium Alloys.	G. W. Pearsall, C. S. Roberts Dow Chem. Co.	9-17-56
*WADC-TR-56-545	Development of a Heat-Treatable Titanium Alloy Having Adequate Formability. Period Covered: May 1955 to July 1956.	H. A. Robinson, A. J. Griest, A. M. Sabroff, et al Battelle Memorial Inst.	11-15-56
*WADC-TR-56-580	The Effect of Various Heat Treatment Cycles Upon the Mechanical Properties of Titanium Alloys With Various Interstitial Levels.	B. F. Hadley, G. W. Bauer, D. Evers Mallory-Sharon Titanium Corp, Niles, Ohio	12-14-56

*Microcards

*WADC-TR-57-30	The Influence of Hydrogen on Delayed Failure in Titanium Alloys.	R. D. Daniels, E. L. Harmon, Jr., A. R. Troiano Case Inst. of Tech.	2-57
*WAL-401/79-33	The Effect of Hydrogen on the Mechanical Properties of Titanium-Aluminum Alloys. Interim Report.	L. W. Berger, D. N. Williams, R. I. Jaffee Battelle Memorial Inst.	3-1-57
*WAL-401/268	The influence of Forging Temperature on Mechanical Properties of Al-V Titanium Alloys.	L. S. Croan, F. J. Fiszitand Watertown Arsenal Labs.	2-57
*WAL-401/272	Development of Tough, High-Strength, Quarternary Titanium-Base Alloys of the Ti-Al-V-X System.	W. F. Kirk, H. Margolin, N. Y. Univ.	11-56
*WAPD-ADC-22	Experimental Program Using Van De Graaff Facilities.	W. W. Godsin, G. P. Simon, Y. Solomon, et al Westinghouse Elec. Corp.	[9-56]
*WAPD-FE-894	Gaseous Contamination of Zircaloy-2 Cladding During Fuel Rod Fabrication by Extrusion and Drawing.	H. J. Snyder, Westinghouse Elec. Corp.	6-30-55
*WAPD-RM-194	Corrosion of Some Reactor Structural Materials at 600°F.	B. G. Schultz, P. Cohen, Westinghouse Elec. Corp.	9-28-53
*WAPD-T-208	The Crystal Structure of U_2Mo.	E. K. Halteman, Same	9-55
WAPD-TM-51	The Zircaloy-2 In-Pile Tube for the NRX Central Thimble.	R. M. Lieberman	4-1-57
*56-RL-1606	Microstructure of Barium Titanate Ceramics.	R. C. DeVries, J. E. Burke, Gen. Elec. Co.	8-56

*Microcards

PHYSICS

*A-781	Design of Cascades of Thermal Diffusion Columns for Experimental Data. A Nomograph for Rapid Calculations.	K. Cohen Columbia Univ.	8-13-43
AD-37381	Electron Tube Research and Development. Final Engineering Report [for] 1949-1953. Subminiature Versions of RMA Types 6L6, 6AG7, and One-Half of 6AS7G (QF355, QF353, and QF354) and Subminiature Diode Type QF546.	Raytheon Mfg. Co.,	4-5-54
*AECU-3422	Study of Secondary Electrons in Gases.	C. E. Kuyatt Nebraska Univ.	[1957]
*AECU-3425	Some Notes on the Estimation of Reliability.	R. L. Calvert Sandia Corp.	[9-4-56]
*AECU-3434	Subordination in Complex Variable Theory and a Theorem on Minimal Surfaces. (Thesis).	J. H. Evans Los Alamos Scientific Lab.	1955
*AEP-101	Reactor Physics Studies.	G. E. Putman, W. S. Hogan Atomic Elec. Project, St. Louis	9-30-53
*AERE-G/M-142	The Characteristics of a Corrugated Wave Guide With a Coupling Hole.	A. W. Hough-Grassby	10-28-52
*AERE-GP/M-196	On the Possibility of Producing Relativistic Self-Constricted Ring Currents.	J. D. Lawson	1-57
AERE-GP/R-2095	Non-Linear Effects in Spiral-Ridge Cyclotrons. Part I.	N. M. King, W. Walkinshaw	11-56
AERE-R/M-100	Some Thermal Pile Neutron Absorption Cross-Sections Measured With the Dimple Pile Oscillator.	J. D. Cummins, A. H. Spurway	12-56
*AERE-T/R-1601	On the Successive Reflected Shock Waves Caused by a Piston Moving With Uniform Velocity Into a Closed Cylinder With and Without a Superposed Magnetic Field.	R. T. P. Whipple	1-55

*Microcards

CU-154	Progress Report for July, August, September 1956 to the United States Atomic Energy Commission.		
CU-163	Slow Neutron Velocity Spectrometer Studies of the Total and Fission Cross Sections of U^{235}	E. Melkonian, V. Perez-Mendez, M. L. Melkonian	6-10-57
*HW-13959	Rate of Burnout of Absorbers.	P. R. Gillett	7-19-49
*HW-40345(Del.)	Physics Research Quarterly Report [for July,] August, September, 1955.		12-7-55
*HW-47088	The Design and Application of a Heat Transfer Analogue for Radially Symmetrical Problems.	M. W. Cook	1-30-57
IDO-16327	Local Thermal Flux Distribution in Spert III Fuel Elements by the Sperical Harmonics Method.	C. W. Reich Phillips Pet. Co.	3-13-57
*KAPL-1468(Del)	Physics Section Report for September, October, November 1955.		
LA-2127	Pu^{239} Cross Sections and Their Temperature Dependence.	J. Devaney, M. Goldstein B. Fagan	7-3-57
MISC-1957-146	Photoproduction of K^{+}-Mesons From Polyethylene.	A. B. Clegg, M. P. Ernstene, A. V. Tollestrup Calif. Inst. of Tech.	[1957?]
MISC-1957-147	Photoproduction of K^{+} Mesons in Hydrogen.	P. L. Donoho, R. L. Walker Same	[1957?]
MONOGRAPH-2750	The Full Stature of the Crossbar Tandem Switching System. Reprinted From American Inst. of Electrical Engineers, New York. Transactions 75 Pt. I, 486-96 (1956)	J. Meszar, Bell Tel. Labs.	3-57
MONOGRAPH-2772	Automatic Protection Switching for TD-2 Radio System. Reprinted From American Inst. of Electrical Engineers, New York. Transactions 75, Pt. I, 520-7 (1956)	G. H. Klemm Same	5-57

*Microcards

*MURA-254	A Radio Frequency System for Experiments With The FFAG Electron Model.	K. M. Terwilliger Midwestern Univ. Res. Assn.	4-57
*MURA-255	Radio Frequency Experiments With an FFAG Electron Model Accelerator.	K. M. Terwilliger, L. W. Jones, C. H. Pruett Same	4-57
*NAVORD-5326	Use of the 701 Computer for Complicated Thermodynamic Equilibria Calculations. Period Covered: October 1955 to August 1956.	D. S. Villars Naval Ordnance Test Station, Inyokern, Calif.	10-16-56
*NP-5448 (3rd Ed.)	Basic Data of Electrical Discharges. Technical Report No. 283. Third Edition.	S. C. Brown, W. P. Allis Mass. Inst. of Tech.	9-1-56
*NP-6191	Spallation of Medium Weight Elements. (Thesis).	G. Rudstam Uppsala Univ.	1956
*NP-6264	Studies of the Annihilation of Positrons in Gases. Final Report [for] December 1, 1955 Through November 30, 1956 [on] Research and Development on Study of Positronium and Magnetic Moment of the Electron.	M. Heinberg, L. A. Page Pittsburgh Univ. Sarah Mellon Scaife Rad. Lab.	
*NP-6279	On the Determination of The Thermal Neutron Density of a Uniform Medium. Methodological Note on the Use of Nuclear Emulsions. (In French)	C. Beets, H. Breny Brussels. Centre D'Etudes Pour Les Applications de l'Energie Nucleaire	6-15-56
NP-6313	Multichannel Pulse Height Analyzers. Proceedings of an Informal Conference, Gatlinburg, Tennessee, September 26-28, 1956. Publication No. 467.	H. W. Koch, R. W. Johnston, eds. Nat. Res. Council. Committee on Nuclear Science	1957
NRL-4791	A High-Level Microwave Detector. II.	G. P. Ohman, W. L. Roberts	7-18-56
NYO-4844	Interaction of K^+-Mesons in the Interval 30-65 MEV.	T. F. Hoang, M. F. Kaplon R. Cester Rochester N. Y. Univ.	6-3-57

*Microcards

NYO-4845	The Parity of Elementary Particles.	P. T. Matthews Rochester, N. Y. Univ.	6-3-57
*NYO-7886	Motion of Magnetic Lines of Force. Technical Report No. 1.	W. A. Newcomb Princeton Univ.	4-20-55
ORNL-2283	Mathematics Panel Semiannual Progress Report for Period Ending February 28, 1957.	A. S. Householder	6-25-57
ORNL-2302	Physics Division. Semiannual Progress Report for Period Ending March 10, 1957.		6-24-57
ORNL-2309	Conference on Neutron Physics by Time-of-Flight Held at Gatlinburg, Tennessee November 1 and 2, 1956.		7-1-57
ORNL-2334	Studies of the Sperical Harmonics Method in Neutron Transport Theory. I. The Relation Between P_L- and Gauss Quadrature Solutions of the Milne's Problem.	W. Kofink	6-24-57
P-116A-AEC	Relativistic Self-Consistent Solutions for Heavy Atoms.	S. Cohen Rand Corp.	6-28-57
PR-P-33	Physics Division. Progress Report [for] January 1, 1957 to March 31, 1957.	Chalk River Project	
*RM-1724 (Rand)	Some Physical Qualifications for Reliability Formulas.	W. J. Howard Rand Corp.	6-1-56
*SC-2991(TR)	A Remark on the Overlap of Two Circles.		8-21-53
SC-3896(TR)	Accuracy in Calculating Arithmetical Problems of Varying Complexity.	G. M. Peterson, J. L. Evans, R. J. Weldon New Mexico Univ.	10-56
*SWP/P-3	Heat Sources in Shields.	C. C. Horton Gt. Brit. Atomic Energy Res. Estab.	5-3-54
*SWP/P-23	Suggested Programme of Work on Duct Shielding Problems.	D. B. Halliday, C. C. Horton Same	5-16-55

*Microcards

*TNCC(Can)-4	Comments on the Significance of the Measurements on Pu^{240} by F. W. Cornish and M. Lounsbury	C. H. Westcott Chalk River Project	3-7-56
*WADC-TN-57-117	p- and d- Scattering Corrections to the Average Logarithmic Energy Decrement and to the average Value of the Cosine of the Scattering Angle.	A. L. Kaplan Wright Air Dev. Center	11-16-56
*WADC-TR-57-89	The Transmission of Fission Neutrons Having Energy Above the $S^{32}(n,p)\ P^{32}$ Threshold by Straight Cylindrical Ducts in Water.	R. E. Benenson, A. N. Fasano Same	2-57
*WAPD-P-663	Neutron Gamma-Ray Shielding Calculation.	D. Schiff	5-55
WAPD-TM-32	Power Peaking at Rod Channels.	R. S. Halgas	12-56
*WHC(C)/P-9 (Del.)	Criticality of Plutonium Solutions and Suspensions; Recommendations for Plant Design.	H. A. C. McKay Gt. Brit. Atomic Energy Res. Estab.	9-18-53
*Y-B20-67	Process Development Seminars. Notes Prepared for a Series of Seminars Held During the Period, September 1947 to July 1948.		6-50

REACTOR SCIENCE

AERE-R/R-2151	Studies on Zephyr With a Thorium Envelope.	R. M. Absalom, B. G. Chapman, J. E. R. Holmes, et al	1-31-57
ANL-5607	EBWR Experimental Boiling Water Reactor.		5-57
ANL-5710	The Theoretical Physics of the Argonaut Reactor.	C. N. Kelber	5-57
*ANL-JTW-6	Nuclear Fuse Element Transient Heating.	J. T. Weills	5-3-54
*APAE-MEMO-2a	Interpretation of Experimental Flux and Power Data on the APPR-1 Critical Experiment.	P. V. Oby, J. G. Gallagher Alco Products Inc.	12-23-55

*Microcards

*APAE-MEMO-96	APPR-1 Hot Channel Factors. Re-Evaluation on the Basis of Manufacturing Experience and Zero Power Experiments.	J. O. Brondel Alco Products Inc.	5-6-57
BNL-3146	Summary Hazards Report on Enriched Fuel Element Loading for the BNL Research Reactor.	N. Corngold	5-24-56
*BRL-1011	Blast Effects Tests of a One-Quarter Scale Model of the Air Force Nuclear Engineering Test Reactor.	W. E. Baker, J. D. Patterson, II Ballistic Res. Labs.	3-57
*CF-55-8-145	Shielding for the HRT Charcoal Pit and Gas Line.	T. W. Leland Oak Ridge Nat'l. Lab.	8-24-55
*CF-55-8-190	A Food Sterilization Reactor. Reactor Design and Feasibility Problem.	E. O. Guernsey, R. M. Ball, T. V. Kavanagh et al Oak Ridge School of Reactor Tech.	8-55
*CF-55-10-118	Effect of Non-Uniform Neutron Flux Distribution on the Temperature Distribution in Thick Fuel Elements.	L. G. Alexander Oak Ridge Nat'l. Lab.	10-27-55
*CF-57-1-65	Interim Report of APPR Irradiation Test Program at MTR.	E. E. Gross, L. D. Schaffer Same	1-21-57
*HARD(A)/P-26	A Medium Pressure Auxiliary Circuit for the Homogeneous Aqueous Reactor Experiment.	C. L. Brown, J. B. Morris, L. W. R. Hughes Gt. Brit. Atomic Energy Res. Estab.	1-17-57
IDO-16341	The Spert-III Reactor Facility Preliminary Design Report.	T. R. Wilson Phillips Pet. Co.	5-6-57
*KAPL-247	Feasibility Report for the Zero Power Mock-up of the Dual Purpose Reactor.	H. Brooks, T. M. Snyder, G. Dessauer	9-30-49

*Microcards

*KAPL-410	Cooling of Fast Breeder Rod (FBR-2).	R. J. Fritz, R. G. Kennison	5-18-50
*KAPL-M-ALM-3	Initial Loading of ACME I.	A. L. MacKinney, J. S. Franke	[1-57]
*KAPL-M-EDL-123	Operation of S2G 8" Stop Valves Following Primary Bellows Failure. Phase I--S2G Freeze Seal Tester.	P. K. Salzman, F. N. Schell	2-5-57
*NAA-SR-179 (Rev.)	Low Enrichment Uranium Thermal Reactors for the Production of Plutonium and Useful Power.	E. F. Weisner	7-7-52
*NAA-SR-276 (Del.)	Reactor Safety Quarterly Progress Report [for] May - July 1953.	N. E. Huston	1-1-54
NAA-SR-1875	Sodium Graphite Reactor. Quarterly Progress Report [for] October-December, 1956.	R. L. Carter, ed.	5-15-57
*NAA-SR-Memo-174	Preliminary Calculation of Flux Distribution in Converter Reactor Cells.	E. R. Cohen	1-8-52
*NAA-SR-Memo-344	Fabrication of Fuel and Food Elements for a Converter Reactor.	W. L. Cockrell	5-28-52
*NP-6260	Progress Report No. 39 for February and March, 1957.	W. J. Posey Mine Safety Appl. Co.	4-12-57
*NP-6277	Nuclear Reactor Simulator. (In French).	E. Gourski Brussels. Centre D'Etudes Pour Les Applications de l'Energie Nucleaire	12-28-55
*NP-6278	Study of an Enriched Uranium-Graphite System Cooled by Air. (In French).	H. Dopchie Same	4-13-56
PR-RRD-9	Reactor Research and Development Division. Progress Report [for] January 1, 1957 to March 31, 1957.	Chalk River Project	

*Microcards

*ROSC/P-3	Reactor Safety. Main Headings Under Which the Safety of a Particular Reactor Might be Examined.	R. F. Jackson Gt. Brit. Atomic Energy Res. Estab.	3-23-54
*TID-5367	Building 305-M Test Pile Startup.	L. W. Fox, L. C. Heck, K. E. Plumlee, et al Du Pont de Nemours (E.I.) & Co.	5-19-54
*TID-5397	Cleaning of NYX Reactor. NYX Test Number 1.4.2.	A. A. Johnson, F. J. Poss Same	2-53
TID-7006	Corrosion and Wear Handbook for Water Cooled Reactors.	D. J. DePaul, ed. Westinghouse Elec. Corp.	3-57
*TID-10004	Diffusion Lengths in Heterogeneous Cylindrical Assemblies.	H. Neumann Hanford Atomic Prod. Operation	9-25-53
*TID-10075	Feasibility Report for the KAPL Thermal Test Reactor.	H. B. Stewart, F. G. LaViolette, G. L. McClelland, et al Knolls Atomic Power Lab.	11-9-50
*TID-10085	Design of Fast Neutron Breeder Test Pile.	W. H. Zinn Chicago Univ.	1-25-46
*UK/C/5/5	U^{235}-H_2O Assemblies for LIDO.	C. C. Horton Gt. Brit. Atomic Energy Res. Estab.	[1956]
WAPD-BT-1	Bettis Technical Review. Reactor and Plant Engineering. Volume I, No. 1, May, 1957.		
*WAPD-MDM-14	Tritium Hazard With Lithium Borate in PWR.	W. T. Lindsay, Jr.	6-10-54
*WAPD-PWR-RD-107	Preliminary Description of PWR Refueling and Handling Equipment System.		[12-30-55]

*Microcards

*WAPD-T-259	Power and Temperature Control of Pressurized Water Cooled Reactors.	W. H. Hamilton J. N. Grace, et al	6-55
*WAPD-TH-19	Pressure Drop Tests-Parallel Rod Subassemblies With Various End Connections.	B. W. LeTourneau, R. E. Grimble	3-19-55
*WAPD-TH-82	Experimental Investigation of Pressure Drop Through Parallel Rod Subassemblies Connected by Tube Sheets of Various Flow Areas.	B. W. LeTourneau, R. E. Grimble	8-15-55
*WAPD-TH-178	An Analysis of Mixing in Parallel Flow Rod Bundles.	R. E. Grimble, W. H. Bell	3-56
*WAPD-TH-183	Preliminary Investigation of the Effect of Vertically Downward Flow on Burnout Flux.	H. S. Jacket, J. D. Roarty, A. Weiss	[2-56]
*WASH-750	Visit to England, Holland, Belgium, and France (Saclay), [October 1956]. and Visit to France (Marcoule), Austria, and Portugal, [October 1956].	J. Chernick, H. Kouts Brookhaven Nat'l. Lab.	
*WASH-754	Trip Report of Visit to United Kingdom Atomic Energy Authority, Harwell, From December 6 to December 20, 1956.	R. A. Meyer, C. Raseman, H. Susekind Same	
*WIAP-2	Comparative Performance of Modern Steam Turbine Generator Units For Atomic Power Plants.	N. A. Beldecos, A. R. Jones, A. K. Smith Westinghouse Elec. Corp.	3-53
*WIAP-7	Proposed 80,000 Kilowatt Pressurized Water Reactor Plant. Plant Design and Cost Estimate.	Same	2-55
*WIAP-M-7	A Study of Temperature Distribution Through a Reactor in the Axial Direction.	A. R. Jones Same	4-23-53
*YAEC-17	Monthly Progress Report for January 1957.	Yankee Atomic Elec. Co. Boston	2-18-57

*Microcards

*YAEC-19	Monthly Progress Report for February 1957.	Yankee Atomic Elec. Co., Boston	3-25-57

MISCELLANEOUS

ANL-5747	Additions to the Library. Report for the Period June 1-15, 1957. Technical Reports and Books.	P. A. Schulze	
ASTIA-U-125	Title Announcement Bulletin. Bulletin No. U-125.		5-20-57
ASTIA-U-126	Title Announcement Bulletin. Bulletin No. U-126.		6-7-57
MISC-1957-41 Executive 3	85th Congress, 1st Session, Senate. Statute of the International Atomic Energy Agency. Report of the Committee on Foreign Relations on Executive I, Eighty-Fifth Congress, First Session.	U. S. Congress	6-14-57
MISC-1957-41 H. R. 8005	85th Congress, 1st Session, House of Representatives. A Bill to Provide for the Conveyance of an Interest of the United States in and to Fissionable Materials in a Tract of Land in the County of Cook, and State of Illinois. Introduced June 7, 1957, by Mr. O'Brien of Illinois, and Referred to the Committee on Government Operations, and June 27, 1957, Reported With an Amendment, Committed to the Committee of the Whole House on theState of the Union, and Ordered to be Printed.	Same	
MISC-1957-41 H. R. 8254	85th Congress, 1st Session, House of Representatives. A Bill to Provide for the Appointment of Representatives of the United States in the Organs of the International Atomic Energy Agency, and to Make Other Provisions With Respect to the Participation of the United States in That Agency, and for Other Purposes, Introduced by Mr. Cole June 19, 1957, and Referred to the Joint Committee on Atomic Energy.	Same	
MISC-1957-41 H. R. 8269	85th Congress, 1st Session, House of Representatives. A. Bill to Prohibit Further Testing by Explosion of Nuclear Devices so Long as All Other Countries Refrain From Exploding Such Devices, Introduced by Mr. Porter, June 20, 1957, and Referred to the Joint Committee on Atomic Energy.	Same	

*Microcards

MISC-1957-41 H. R. 8323	85th Congress, 1st Session, House of Representatives, a Bill to Establish a Cnetral Security Office to Coordinate the Administration of Federal Personnel Loyalty and Security Programs, to Prescribe Administrative Procedure for the Hearing and Review of Cases Arising Under Such Programs, and for Other Purposes, Introduced by Mr. Rees, June 24, 1957, and Referred to the Committee on Post Office and Civil Service.	U. S. Congress
MISC-1957-41 H. R. 8334	85th Congress, 1st Session, House of Representatives. A Bill to Establish a Central Security Office to Coordinate the Administration of Federal Personnel Loyalty and Security Programs, to Prescribe Administrative Procedure for the Hearing and Review of Cases Arising Under Such Programs, and for Other Purposes, Introduced by Mr. Hiestand, June 24, 1957, and Referred to the Committee on Post Office and Civil Service.	Same
MISC-1957-41 Report No. 437	85th Congress, 1st Session, Senate. Report (To Accompany S. 2243) [on] Congressional Review of Atomic Power Program, Submitted by Mr. Anderson, From the Joint Committee on Atomic Energy, June 14, 1957.	Same
MISC-1957-41 Report No. 571	85th Congress, 1st Session, House of Representatives. Report (To Accompany H. R. 7992) [on] Congressional Review of Atomic Power Program, Submitted by Mr. Durham, From the Joint Committee on Atomic Energy, June 14, 1957, Committed to the Committee of the Whole House on the State of the Union and Ordered to be Printed.	Same
MISC-1957-41 Report No. 656	85th Congress, 1st Session, House of Representatives. Report (To Accompany H. R. 8005) [on] Providing for the Conveyance of an Interest of the United States in and to Fissionable Materials in a Tract of Land in the County of Cook, and State of Illinois, Submitted by Mr. Dawson of Illinois From the Committee on Government Operations, and June 27, 1957, Committed to the Committee of the Whole House on the State of the Union and Ordered to be Printed.	Same
MISC-1957-41 S. 2243	85th Congress, 1st Session, Senate. A Bill to Amend the Atomic Energy Act of 1954, as Amended [With Regard to Appropriations], and for Other Purposes, Introduced by Mr. Anderson, June 10, 1957, Read Twice and Referred to the Joint Committee on Atomic Energy, and Reported Mr. Anderson, With Amendments, June 14, 1957.	Same

MISC-1957-41 S. 2341	85th Congress, 1st Session, Senate. A Bill to Provide for the Appointment of Representatives of the United States in the Organs of the International Atomic Energy Agency, and to Make Other Provisions With Respect to the Participation of the United States in That Agency, and for Other Purposes, Introduced by Mr. Pastore, June 19, 1957, Read Twice, and Referred to the Joint Committee on Atomic Energy.	U. S. Congress	
MISC-1957-149	Development of Scientific, Engineering, and Other Professional Manpower (With Emphasis on the Role of the Federal Government). 85th Congress, 1st Session, Joint Committee on Atomic Energy.	Same	5-57
MONOGRAPH-2770	Nature's Pulses. Reprinted from Institute of Radio Engineers, New York. Student Quarterly 3, 3-5 (1957).	Estill I. Green Bell Tel. Labs.	5-57
*NEL-663	A Theoretical Study of Atmospheric Diffusion With Applications to Fallout From Atomic Clouds.	J. J. Marciano, Navy Elec. Lab., San Diego, Calif.	2-17-56
*SC-4073(TR)	Estimating Safety Probabilities From Fallout Forecasts for Nevada Test Site.	J. W. Reed	2-57
TID-1913	Report Announcement Bulletin. Unclassified Reports for Civilian Applications.		6-6-57
WT-1218	Evaluation of Various Types of Personnel Shelters Exposed to an Atomic Explosion. Projects 34.1 and 34.3 [of] Operation Teapot: Report to the Test Director.	L. J. Vortman Sandia Corp. and Federal Civil Defense Administration	5-56

LIST OF UNCLASSIFIED REPORTS ISSUED BY THE UCRL INFORMATION DIVISION

UCRL-3656 (2nd Rev.)	Direction of Polarization Produced by Quasi-Elastic Scattering of 315-Mev Protons.	H. Bradner, W. Isbell	6-11-57
UCRL-3723	A Note on Least-Squares Fitting of Atomic-Beam Resonance Curves.	H. B. Silsbee	3-26-57
UCRL-3729	A Temperature-Regulated Bismuth Resistor for Magnetic-Field Measurements.	C. G. Bols E. W. Skiff, P. G. Watson	6-6-57

*Microcards

UCRL-3758	Biology and Medicine Quarterly Report; January, February, March 1957.		4-19-57
UCRL-3782	Physics Division Quarterly Report; February, March, April 1957.		5-13-57
UCRL-3785	I. The Interaction of Negative K Mesons at Rest in Complex Nuclei. II. The K^- Mass, Σ^- Mass and $\Sigma^- - \Sigma^+$ Mass Difference. (Thesis)	F. H. Webb, Jr.	5-57
UCRL-3790	A Tracer Study With Oxygen-18 in Photosynthesis by Activation Analysis.	I. Fogelstrom-Fineman, O. Holm-Hansen, B. M. Tolbert, M. Calvin	5-20-57
UCRL-3796	Polarization and Angular Correlation in the Production and Decay of Particles of Spin 1/2 and Spin 3/2.	R. Spitzer, H. P. Stapp	6-5-57
UCRL-3813	Continuously Sensitive Bubble Chamber.	R. H. Good	6-17-57
UCRL-3814 Abs.	Relativistic Self-Consistent Solutions for Heavy Atoms.	S. Cohen,	6-57
UCRL-3837 Abs.	Elastic Scattering of 44.7-Mev Alpha Particles by Helium.	H. E. Conzett, G. Igo, H. C. Shaw, R. J. Slobodrian	7-57
UCRL-3838 Abs.	Photomeson Production From Hydrogen and Deuterium.	E. A. Knapp, R. W. Kenney, V. Perez-Mendez, W. A. Perkins	7-57
UCRL-3856 Abs.	Hyperfine Structure of Plutonium-239.	J. C. Hubbs, R. Marrus, W. A. Nierenberg, J. L. Worcester	7-57
UCRL-3857 Abs.	Spins of Some Radioactive Iodine Isotopes.	E. Lipworth, H. L. Garvin	7-57
UCRL-3861 Abs.	The Dipole and Quadrupole Moments of Gallium-67.	J. C. Hubbs, W. A. Nierenberg, J. L. Worcester	7-57

UCRL-3864 Abs.	The Nuclear Spins of Ag^{106} and Ag^{110m}.	W. B. Ewbank, W. A. Nierenberg, H. A. Shugart, H. B. Silsbee	7-57
UCRL-3844	List of Unclassified Reports Received and Issued by the UCRL Information Division During the Period of June 16-26, 1957.		6-28-57
UCRL-Trans-310	On Particles of Intermediate Mass Between Meson and Proton, by A. I. Alikhanian and V. M. Kharitonov. Trans. from Akademiia Nauk, SSSR. Doklady 85, 295-8 (1952)		