UCRL 3019

UNCLASSIFIED

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.

INFORMATION DIVISION

UCRL-3019
Internal Distribution

UNCLASSIFIED

UNIVERSITY OF CALIFORNIA

Radiation Laboratory
Berkeley, California

Contract No. W-7405-eng-48

LIST OF UNCLASSIFIED REPORTS RECEIVED AND ISSUED IN THE UCRL INFORMATION DIVISION DURING THE PERIOD OF MAY 16-31, 1955

June 1, 1955

Printed for the U. S. Atomic Energy Commission

LIST OF CODES FOR REPORT NUMBERS

ACCO	-American Cyanimid Company
AEP	-Monsanto Chemical Company
ALCO	-American Locomotive Company
AMF	-American Machine & Foundry Co.
ANL	-Argonne National Laboratory
ANP	-Aircraft Nuclear Propulsion Project
APEX	-General Electric Company, ANP Project
BAW	-Babcock & Wilcox
BDX	-Bendix Aviation Corp., Detroit
BMI	-Battelle Memorial Institute
BNL	-Brookhaven National Lab.
BRB	-Bridgeport Brass Company
BSC	-Bethlehem Steel Company
CENP	-Combustion Engineering, Inc.
COO	-Chicago Operations Office
CU	-Columbia University
DCDE	-Atomic Power Development Associates
DLWK	-Duquense Light Co-Walter Kidde
DOW	-Dow Chemical Company
DP	-E.I.duPont deNemour & Co.
FWE	-Foreign Weapons Effects
GAT	-Goodyear Atomic Corporation
GEAP	-General Electric Company
GEL	-General Electric Co., General Engineering Laboratory
HEC	-Hooker Electrochemical Co.
HO	-Hanford Operations Office
HW	-Hanford Works, Richland
IDO	-Idaho Operations Office
ISC	-Iowa State College
K	-Carbide and Carbon Chemicals Co. (K-25 Plant)
KAPL	-Knolls Atomic Power Laboratory
KLX	-The Vitro Corporation of America
KLXS	-Vitro Corporation of America (Study Group)
KY	-Carbide and Carbon Chemicals Co. (C-31 Plant)
LA&LAMS	-Los Alamos Scientific Lab.
MCW	-Mallinckrodt Chemical Works
MIT	-Massachusetts Inst. of Tech.
MLM	-Mound Laboratory
NAA-SR	-North American Aviation, Inc.
NBL	-New Brunswick Laboratory
NBS	-National Bureau of Standards
NEA	-Foster Wheeler-Pioneer Service
NLCO	-National Lead Company of Ohio
NMI	-Nuclear Metals Inc.
NNSD	-Newport News Shipbuilding and Dry Dock Co.
NPG	-Commonwealth Edison Co. (Nuclear Power Group)
NYO	-New York Operations Office
ORINS	-Oak Ridge Institute of Nuclear Studies

ORNL	-Carbide & Carbon Chemicals Co. (ORNL)
ORO	-Oak Ridge Operations Office
PWAC	-Pratt & Whitney Aircraft Division of the United Aircraft Corp.
RFP	-Rocky Flats Plant
RME	-Grand Junction Operations Office
RMO	-Division of Raw Materials
SAN	-San Francisco Operations Office
SC	-Sandia Corporation
SEP	-Sylvania Electric Products, Inc.
SFO	-Santa Fe Operations Office
SRO	-Savannah River Operations Office
SO	-Schenectady Operations Office
TEI(M)	-U. S. Geological Survey Trace Elements Reports
TID	-Technical Information Service
TVA	-Tennessee Valley Authority
UCLA	-University of California Medical Research Laboratory
UCRL	-University of California Radiation Laboratory
UR	-University of Rochester
UWFL	-University of Washington Applied Fisheries Laboratory
WAPD	-Bettis Plant
WASH	-AEC, Washington
WEC	-Westinghouse Electric Company Industrial Atomic Power Group
WIN	-National Lead Co ., Inc. Winchester
WT	-Weapon Test Reports
Y	-Carbide and Carbon Chemicals Company (Y-12 Plant)

Many prefixes used for research and development reports cover a number of installations. NP("Non-Project") numbers are assigned by the Technical Information Service at Oak Ridge to those reports which it receives from sources not under contract to the Atomic Energy Commission. The UCRL Information Division gives "Misc" numbers to any others received here that do not bear an identifying number. Many reports are grouped together under numbers corresponding to an AEC division or operations office. Some of these are as follows:

CO, COO	-Chicago Operations Office
IDO	-Idaho Operations Office
NYO, NYOO	-New York Operations Office
ORO	-Oak Ridge Operations Office
RMO	-Raw Materials Division
WASH	-Atomic Energy Commission, Washington

In our semimonthly "List of Reports Received" the originating installation will be placed in the author column whenever the report code number does not indicate a specific laboratory, or is obsolete or not given in this list.

Two series of translations are currently received, one sponsored by the AEC (AEC-tr), the other by the National Science Foundation (NSF-tr).

LIST OF UNCLASSIFIED REPORTS RECEIVED AND ISSUED IN THE UCRL INFORMATION DIVISION DURING THE PERIOD OF MAY 16-31, 1955

Radiation Laboratory, Department of Physics
University of California, Berkeley, California

June 1, 1955

Index Number	Title	Author	Date
	BIOSCIENCES		
A.E.R.E. MED/R 1582	A Comparison of Three Methods of Making Differential White Cell Counts	F.M.Turner C.Sanders P.C.C.Long Atomic Energy Research Establishment, Harwell Berks., (England)	12-54
*LA-1849	Relation Between Specific Ionization of Various Radiations and their Relative Biological Effectiveness in Mammalian Systems	J.Furchner	9-54
*MLCR-53	A Study of the Mechanism of Absorption of Particulates in the Respiratory Tree. Part I. Quarterly Report No. 1 For September 1 - December 1, 1953. Part II. Quarterly Report No. 2 for December 1, 1953 - March 1, 1954	A.E.Reif M.C.Elliott T.L.Chiffelle, et al Lovelace Foundation for Medical Education and Research, Albuquerque, New Mexico	1-55
*NM-006-012.04.76	The Comparative Effect of Platelets on Prothrombin Utilization from Dogs in the Degenerative and Regenerative Phase of Irradiation Bone Marrow Aplasia	E.P.Cronkite G.J.Jacobs P.K.Schork Naval Medical Research Inst., Bethesda	11-11-54
*NP-5565 *Microcards	Effects of Drugs and Radiation: Similarities and Differences and their Significance for Research and Teaching. (Lecture and Review Series No. 54-4)	F.Ellinger Naval Medical Research Inst., Bethesda	10-22-54

ORNL-1860	Health Physics Division Semiannual Progress Report For Period Ending January 31, 1955	K.Z.Morgan	5-9-55
ORNL-1863	Biology Division Semiannual Progress for Period Ending February 15, 1955	A.Hallaender E.J.Slaughter	5-11-55
*RM-1285-1(RAND)	Effects of Environment in Reducing Dose Rates Produced By Radioactive Fallout From Nuclear Explosions	J.E.Hill RAND Corp.	9-28-54
UCLA-334	The Metabolism of the Essential Fatty Acids III. The Isolation of 5,8,11-Eicosatrienoic Acid from Fat-Deficient Rats	J.F.Mead W.H.Slaton, Jr.	5-2-55
UR-382	The Relationship of the Cell Surface to Electroyte Metabolism in Yeast	A.Rothstein	4-11-55
USNRDL-TR-37	The Effect of Whole-Body X Irradiation of Mice on Immunity to Tetanus Toxoid. I. The Effectiveness of Pre-And Post-Irradiation Injections of Tetanus Toxoid with Respect to the Development of Immunity	M.S.Silverman P.H.Chin	3-3-55

CHEMISTRY

*AD-5787	[Low Temperature Thermodynamics of Inorganic Substances.] Technical Report No. 20 The Intermolecular Force Constants of Fluorine	D.White Jih-Heng Hu H.L.Johnston Cryogenic Lab., Ohio State Univ.	1-26-53
*AD-12451	A Study of Selected Metallic Borides, Nitrides, and Phosphides. Final Report	R.W.F.Morel G.C.Williams F.E.Ryerson Inst. of Industrial Research, Univ. of Louisville	1952
*AD-25101	An Investigation of Various Properties of NiAl. Part II	W.H.Herz American Electro Metal Corp.	9-53

*Microcards

*AD-28877	Investigation of the Intermetallic Compounds of Aluminum Progress Report No. 3 [Covering the Period December 15, 1953 to February 15, 1954]	W.H.Herz 2-15-54 American Electro Metal Corp.
*AD-35092	Final Report [On the Production of Funnels, Tubes and Trumpets in Various Metals by the Process of Electroforming]	S.Fialkoff Camin Labs.,Inc.
*AECU-3002	Corrosion of Zirconium. II. A Reaction Rate Study of the Solution of Hafnium-Free Zirconium in Hydrofluoric Acid Solutions. Technical Report No. XVI	T.Smith 11-30-54 G.R.Hill Inst. for the Study of Rate Processes, Univ. of Utah
*AECU-3007	A Kinetic Study of the Oxidation of Sphalerite. Part II. Technical Report No. XVIII	J.N.Ong. Jr., 2-7-55 M.E.Wadsworth W.Martin, et al Inst. for the Study of Rate Processes, Univ. of Utah
A.E.R.E. C/R 1484	Heat of Adsorption of Oxygen on Uranium Dioxide at -183°C Part I. Measurements with Liquid Oxygen Calorimeter	J.D.M.McConnell 9-16-54 Atomic Energy Research Establishment, Harwell, Berks., (England)
A.E.R.E. C/R 1534	Improved Methods for the Routine Radiochemical Analysis of Fission Product Mixtures Part I. The Recognition of Radiochemical Purity Using Aluminium Absorption Curves	G.Phillips 10-21-54 E.N.Jenkins Atomic Energy Research Establishment, Harwell, Berks., (England)
A.E.R.E. C/R 1542	The Determination of Niobium or Tantalum in Uranium and Zirconium Base Alloys	G.W.C.Milner 11-54 G.A.Barnett A.A.Smales Atomic Energy Research Establishment, Harwell, Berks., (England)

*Microcards

A.E.R.E. CE/R 1120	Some Determinations of Liquid Phase Diffusion Coefficients Using an Improved Diaphragm Cell	J.B.Lewis Atomic Energy Research Establishment, Harwell, Berks., (England)	11-54
A.E.R.E. M/R. 1556	Viscosity Measurements in Branched Silicones	A.Charlesby Atomic Energy Research Establishment, Harwell, Berks., (England)	11-11-54
ANL-5417	Saturation of Vapor in a Knudsen Effusion Oven	R.J.Thorn	3-21-55
BMI-280	Progress Report on the Ammonium Carbonate Leaching of Uranium Ores Proposed as Feed to the Pilot Plant at Grand Junction, Colorado to Raw Materials Division Atomic Energy Commission	C.M.Wheeler B.G.Langston F.M.Stephens, Jr.	4-15-55
K-1207	The Pure Rotational Spectrum of Hydrogen Fluoride	D.F.Smith A.H.Nielsen	4-4-55
K-1213	The Current Efficiency of Medium Temperature Fluorine Cells	S.Katz G.H.Montillon T.Lee, et al	5-11-55
KAPL-1312	Some Statistical Aspects of X-Ray Fluorescence Spectrometry	W.S.Horton	4-19-55
*MDDC-998	Gmelin's Handbook of Inorganic Chemistry; Uranium and Isotopes System Number 55	L.Gmelin	1936
MIT-SSMT-QPR-15	Quarterly Progress Report Solid State and Molecular Theory Group No. 15		4-15-53
MLM-941	Preliminary Description and Analysis of the Spectrum of Polonium	G.W.Charles D.J.Hunt G.Pish, et al	1-28-54
MLM-979	Absorbancy Studies of Polonium Complexes in Chloride Solutions (Information Report)	D.J.Hunt	6-8-54

*Microcards

*MLRR-170	Quantitative Determination of Diborane in Air	L.Feinsilver Chem.Corps.Medical Labs., Army Chem. Center	2-53
Monograph 2408	Crystal Structures of Rh_2GE, Rh_5Ge_3 And RhGe	S.Geller Bell Telephone Labs., Inc.	4-54
NAA-SR-1153	Determination of Diphenyl in the Presence of Polyphenyls - Water Solubility Method	L.Silverman M.Shideler	5-15-55
NAA-SR-1203	Chemistry of the Pyrolysis of p-Terphenyl	L.Silverman K.Trego M.Shideler, et al	5-15-55
NAA-SR-1226	Determination of Small Quantitites of Uranium in the Presence of Large Amounts of Mercury	B.G.Johnson	5-15-55
NAA-SR-1264	Potentiometric Determination of Small Amounts of Uranium in Zirconium	L.Silverman M.Shideler	5-15-55
NBL-106	The Separation and Determination of Scandium Spectrophotometric Method Using Alizarin Red S	A.R.Eberle M.W.Lerner New Brunswick Lab. AEC	4-55
NBS-4104	Fluorine Substitution in Hydrous Silicates and Related Minerals	A.Van Valkenburg C.R.Robbins G.M.Ugrinic	3-55
*NP-5563	Determination of the Mechanism of the Increase of Viscosity of Organosilicon Compounds at High Temperatures. Quarterly Progress Report [for] September 30, 1954 to December 31, 1954 Report No. 36	E.E.Ryskiewicz Stanford Research Inst.	3-15-55
*NP-5567	Precision Determination of Lattice Constants with a Geiger-Counter X-Ray Diffractometer. Technical Report	A.Smakula J.Kalnajs Lab. for Insulation Research, Mass. Inst. of Tech.	

*Microcards

*NP-5568	[Stability and Reaction Studies of Hydrogen Peroxide.] Report No. 44. Hydrogen Peroxide. Part 3. (Chapter 7-8)	W.C.Schumb C.N.Satterfield R.L.Wentworth Mass. Inst. of Tech.	12-31-54
NYO-4921	Studies on the Nature of the Protective Actions of β-Mercaptoethylamine and Cysteine Against X-Rays and a Nitrogen Mustard	P.R.Salerno H.L.Friedell	4-27-55
ORNL-1861	Radioisotope Production and Process Development Annual Report for 1954	A.F.Rupp E.E.Beauchamp J.H.Gillette, et al	5-19-55
*OSR-TN-54-81	Stabilization of Energy-Rich Molecules. I. Energy Transfer with Hydrogen. Technical Note No. 6	M.Boudart J.T.Dubois Forrestal Research Center, Princeton Univ.	5-54
*PA-TR-1898	Mechanical Properties of Rigid Plastics at Low Temperatures	H.A.Tisch Picatinny Arsenal	5-54
*PA-TR-2060	Survey of the Methods Used to Determine the Dynamic Mechanical Properties of Polymers	O.R.Abolafia Picatinny Arsenal	9-54
PDB-95	A Bibliography of MassSpectrometry References Mass Spectrometer Section	Chalk River Project (Canada)	
*PRL-5.13	Fluids, Lubricants, Fuels, and Related Material. Quarterly Report for October, November and December 1954	Petroleum Refining Lab., Penn. State Coll., School of Chem. and Physics	1-28-55
*RDB(Cap)/R-8095	Analysis of Non-Corrosive Gases with a Mass Spectrometer. Part I. The Potentialities of the Mass Spectrometer for Gas Analysis	D.H.Brain P.B.F.Evans Research and Dev.Br. Industrial Group, Capenhurst Works, United Kingdom Atomic Energy Auth. Capenhurst, Ches. (England)	

*Microcards

*RDB(Cap)/R-8108	Analysis of Non-Corrosive Gases Using a Mass Spectrometer. Part II. The Development of Measuring Techniques	D.H.Brain P.B.F.Evans Research & Dev. Br. Industrial Group, Capenhurst Works, United Kingdom Atomic Energy Auth. Capenhurst, Ches. (England)	9-54
*RDB(Cap)/R-8120	A Kinetic Study of the Fluorination of Uranium Tetrafluoride by Fluorine	V.Y.Labaton Same	1-55
*RDB(Cap)/TN-127	An Accurate Gas Blending Apparatus for Mixtures Involving Small Molar Concentrations	D.H.Brain P.B.F.Evans Same	9-54
*RIA-54-849	[Prolongation of Service and Storage Life of Ordnance Rubber Components] Report No. 11 Infrared Spectroscopy of Polymers: A Literature Review	R.Freeman Rock Island Arsenal Lab.	3-3-54
*RME-3049	Final Technical Report for May 1, 1951-June 30, 1953 Part 1. Studies of the Minor Constituents in Some Calif. Beach Sands. Part 2. Optical and Chemical Studies of Minerals Containing Tantalum, Niobium, Titanium and Uranium as a Preliminary to Investigation of the Mineralogy of Some Idaho Placer Deposits	C.O.Hutton Stanford Univ.	6-30-53

ENGINEERING

A.E.R.E. ED/R 1559	Thermal Convection in a Long Cell Containing a Heat Generating Fluid	W.Murgatroyd Atomic Energy Research Establishment, Harwell Berks., (England)	11-18-54
*NACA-TN-3336	Review of Experimental Investigations of Liquid-Metal Heat Transfer	B.Lubarsky S.J.Kaufman Lewis Flight Propulsion Lab., NACA	11-4-54

*Microcards

*NAVORD-2958	A Review of Investigations on Turbulent Flow with Heat Transfer at Smooth Walls	P.J.Theodorides Naval Ordnance Lab.	11-4-53

GEOSCIENCES

*NYO-6060	An Investigation of the Mineralogy, Petrography and Paleobotany. of Uranium-Bearing Shales and Lignites. (Scope A--Shales). Third Annual Report [for] Period of April 1, 1953 to March 31, 1954	E.O.Strahl E.Camilli N.M.Short, et al Penn. State Coll., School of Mineral Industries	3-31-54
*NYO-6061	An Investigation of the Mineralogy, Petrography and Paleobotany of Uranium-Bearing Shales and Lignites. (Scope B--Lignites). Third Annual Report [for] Period of April 1, 1953 to March 31, 1954	E.F.Koppe E.S.Erickson, Jr. C.L.Trotter, et al	3-31-54

METALLURGY AND CERAMICS

*AD-10278	Kink Band Formation in High-Purity Aluminum During Creep at High Temperatures	A.M.Gervais J.T.Norton N.J.Grant Mass. Inst. of Tech.	2-53
*AD-10555	Investigation of the Metallurgical Characteristics of the 36% Aluminum Titanium-Base Alloy. Quarterly Report No.3 [for] December 1, 1952 to March 1, 1953	J.B.McAndrew H.D.Kessler Armour Research Foundation	4-8-53
*AD-12978	Investigation of a New Method for the Determination of the Coefficients of Surface Diffusion of Metals	S.J.Strindberg F.C.Wagner Horizons, Inc.	6-2-53
*AD-15918	A Study of Creep of Titanium and Two of its Alloys. Progress Report No. 10 for the Period January 1, 1953 to March 31, 1953	J.V.Gluck J.W.Freeman Eng. Research Inst. Univ. of Mich.	3-31-53

*Microcards

*AD-15919	A Study of Creep of Titanium and Two of its Alloys Progress Report No. 11 for the Period April 1, 1953 to June 30, 1953	J.V.Gluck J.W.Freeman Eng. Research Inst., Univ. of Mich.	6-30-53
*AD-16386	The Development of Magnesium Alloys Having Improved Engineering Properties. Final Report	M.W.Mote P.D.Frost J.H.Jackson Battelle Memorial Institute	7-31-53
*AD-18652	Phase Relationships in Magnesium-Lithium-Aluminum Alloys. Interim Technical Report No. 2 for November 1, 1952-January 31, 1953	D.W.Levinson D.J.McPherson Armour Research Foundation	2-24-53
*AD-22885	Phase Relationships in Magnesium-Lithium-Aluminum Alloys. Letter Report No. 7 for the Period January 31, 1953 to February 28, 1953	D.W.Levinson D.J.McPherson Armour Research Foundation	1953
*AD-25917	Structural Changes of Commercial Titanium and Titanium-Base Alloys on Heat Treatment. Quarterly Report No. 11 for August 15 to November 15, 1953	D.W.Levinson D.J.McPherson Armour Research Foundation	12-15-53
*AD-26137	Research and Development of Wrought and Cast High Temperature Alloys. Progress Report No. 3 for September 16, 1953 to December 15, 1953	R.R.MacFarlane R.S.DeFries, E.E.Reynolds, et al Allegheny Ludlum Steel Corp.	12-15-53
*AD-30314	Study of Effects of Alloying Elements on the Weldability of Titanium Sheet. Third Quarterly Report	H.M.Meyer J.M.Parks Armour Research Foundation	5-11-53

*Microcards

*AD-35134	Basic Research on Sintered Titanium Powder Analogous to "SAP" for High Temperature Strength. Bi-Monthly Report for July 1, 1953-September 1, 1953	E.P.Weber G.F.Davies Brush Labs., Co.	1953
*AD-42776	Stress Relaxation of Gasket Materials and Evaluation of a Test Fixture	L.S.Kowalczyk Detroit Univ.	1954
BMI-994	Enameling of Zirconium	J.Schultz H.P.Tripp B.W.King, et al	4-27-55
*CAL-KA-797-M-12	Development of Substitute Alloys for High Temperature Use. Bimonthly Progress Report	J.Salvaggi G.J.Guarnieri Cornell Aeronautical Lab., Inc.	8-31-54
*CAL-KB-836-M-6	Compressive-Stress-Rupture Properties of High Temperature Materials. Quarterly Progress Report for the Period January 15, 1954 to April 15, 1954	L.A.Yerkovich G.J.Guarnieri Cornell Aeronautical Lab., Inc.	
*CAL-KB-836-M-7	Compressive-Stress-Rupture Properties of High Temperature Materials, Quarterly Progress Report for the Period April 15, 1954 to July 15, 1954	L.A.Yerkovich G.J.Guarnieri Cornell Aeronautical Lab., Inc.	
*CAL-KB-914-M-2	Quarterly Progress Report on Relaxation of Titanium and Titanium Alloys	F.J.Vawter G.J.Guarnieri Cornell Aeronautical Lab., Inc.	10-1-54
*CAL-KB-914-M-3	Quarterly Progress Report on Relaxation of Titanium and Titanium Alloys	F.J.Vawter G.J.Guarnieri Cornell Aeronautical Lab., Inc.	
DP-107	Ultrasonic Welding of Aluminum	J.B.Jones C.F.DePrisco J.G.Thomas	2-55

*Microcards

*EES-040028B	Corrosion Properties of Various Materials in High Temperature Waters	C.J.Lancaster 6-22-53 Naval Eng. Experiment Station, Annapolis
*ITL-4135	Strength of Joints in Aluminum Alloys 61S-T6 and 52S-H34 Welded by the Semiautomatic Inert-Gas Metal-ARC Process Using 43S Aluminum Alloy Filler Metal	Industrial Test Lab., Philadelphia Naval Shipyard
Monograph 2414	Purification of Antimony and Tin by Zone Refining	M.Tanenbaum 6-54 A.J.Goss W.G.Pfann Bell Telephone Labs., Inc.
*NACA-TN-3380	Study of Effects of Microstructure and Anisotropy on Fatigue of 24S-T4 Aluminum Alloy	H.A.Lipsitt 9-30-53 G.E.Dieter G.T.Horne, et al Carnegie Inst. of Tech.
*NP-5552	Navy Project for Investigation of Heat Resistant Alloys of Metal Powders. Final Report [for April 1, 1949 to December 31, 1952]	D.P.Ferriss 12-31-52 L.H.Mott G.J.Comstock Powder Metallurgy Lab., Stevens Inst. of Tech.
*NP-5554	The Copper-Palladium System in the Composition Range From 0 to 30 Atomic Percent Palladium. Final Report for December 22, 1952 to November 30, 1954	F.E.Jaumot, Jr. A.Sawatsky Lab. for Research and Dev. Franklin Inst.
*NP-5562	The Properties of Oxidation Resistant Scales Formed on Molybdenum-Base Alloys at elevated Temperatures. Technical Report No. 467-3	M.Gleiser 2-55 W.L.Larsen R.Speiser, et al Research Foundation Ohio State Univ.

*Microcards

*NP-5572	Relaxation Behavior of Titanium Alloys. Quarterly Progress Report No. 3	E.A.Sticha Crane Co.	1-15-55
*NP-5575	Resume of the Experience of the U. S. Naval Torpedo Station with Welding in the Fabrication or Repair of Pure Aluminum NAVOL Tanks for Hydrogen Peroxide Service	Naval Underwater Ordnance Station Newport, R.I.	8-9-50
*RAE-TN-MET-196	The Effect of Surface Finish on the Fatigue Resistance of Two Aluminum Alloys	N.J.F. Gunn Royal Aircraft Esta. Farnborough, Hants (England)	3-54
*RDB(W)/TN-166	Argonarc Welding Machine for the Root-Run in Three Inch Stainless Steel Piplines	E.K.Richardson C.O'Grady Research and Dev. Br. Industrial Group, Windscale Works. United Kingdom Atomic Energy Auth. Windscale, Cumb. (England)	
*RDB(W)/TN-181	Small Bore Argon Arc Pipe Welding Machine for the Root Run in Nb-Stabilized Stainless Steel	E.K.Richardson Same	1-55
*WADC-TR-52-51 (Pt. 1)	Foamed Metal Low Density Core Material for Sandwich Construction	J.Bjorksten J.C.Elliott R.J.Roth	6-52
*WADC-TR-52-145 (Pt. 2)	Exploration of Vanadium-Base Alloys. Report for Period May 14, 1952 to May 14, 1953	W.Rostoker D.J.McPherson M.Hansen Armour Research Foundation	11-54
*WADC-TR-53-101	Titanium Alloys for Analytical Standards	H.W.Lownie, Jr. D.L.Chase W.M.Henry Battelle Memorial Inst.	5-53

*Microcards

*WADC-TR-53-451	[Substitutes for Critical and Strategic Materials.] The Development of a Forgeable High-Strength, High-Temperature, Chromium-Rich, Chromium-Iron Alloy	D.P.Moon H.A.Blank A.M.Hall Battelle Memorial Inst.	1-54
*WADC-TR-54-101	Studies of Phase Relationships and Transformation Processes of Titanium-Alloy Systems. [Summary Report Covering Period January 8, 1953 to January 8, 1954]	D.J.McPherson W.Rostoker Armour Research Foundation	10-54
*WADC-TR-54-212	[Ceramic Components for Aircraft Power Plants] Studies in the System Nickel - Titanium - Carbon	E.R.Stover J.Wulff Mass. Inst. of Tech.	1-54
*WADC-TR-54-616 (Pt. 1)	Hydrogen Contamination in Titanium and Titanium Alloys. Part 1. Hydrogen Embrittlement in Alpha-Beta Titanium Alloys. (Report of WADC Technical Meeting Oct. 29,1954)	R.J.Kotfila H.N.Burte Materials Lab., Wright Air Dev. Center	1-55
WAPD-122	A Micarta Tube Vacuum Induction Melting Furnace	E.S.Foster W.J.Hurford R.J.Axton	5-4-55

PHYSICS

*AD-10193	Improvement of Reliability of Current Regulator Tubes. Quarterly Report No. 3 [for] January 1, 1953 to March 31, 1953	W.C.Kaiser A.J.Stokes Victoreen Instrument Co.	1953
*AD-30732	A Study Program on Possible Uses of Radioactive Materials in Electronic Devices. Final Report [for July 1, 1951 to November 30, 1953]	P.Rappaport J.J.Loferski E.G.Linder David Sarnoff Research Center	11-53
*AD-34974	Interim Engineering Report for Neutron Survey Equipment (Phase II)	R.Bersin Tracerlab, Inc.	3-54

*Microcards

*AD-40394	The Probable Error of the Mean of a Small Sample Research Report No. 13801	H.J.Josephs V.S.Brook Post Office Eng. Dept. (Great Britain)	11-20-53
*AD-43739	Beta Ray Ionization from the Ground. Scientific Report No. 4	V.F.Hess W.D.Parkinson H.A.Miranda Fordham Univ.	12-53
*AD-44790	The Efficiency of the Sample Median	H.Hotelling Inst. of Statistics Univ. of N.C.	9-54
*AECU-3001	A Kinetic and Thermodynamic Study of the Contact Angle. Technical Report No. XII	R.O.French M.A.Cook M.E.Wadsworth Utah Univ.	9-30-54
*AECU-3008	Current Integrator Report 60-68	K.D.Jenkins Crocker Lab., Univ. of Calif., Berkeley	4-3-50
*AECU-3009	Magnet Current Regulator and Metering Circuit. Report 60-143	K.D.Jenkins Crocker Lab., Univ. of Calif. Berkeley	5-1-52
*AECU-3010	Magnet Current Regulator. Report 60-164	K.D.Jenkins Crocker Lab., Univ. of Calif. Berkeley	3-11-53
A.E.R.E. EL/R 1560	The Circuits of the Portable Gamma Back-Scatter Thickness Gauge	J.P.Kerry E.W.Pulsford Atomic Energy Research Estab. Harwell, Berks. (England)	11-17-54

*Microcards

A.E.R.E. T/M.117	The Absorption of Neutrons by a Small, Strongly Absorbing Rod	R.J.Royston Atomic Energy Research Establ. Harwell, Berks. (England)	11-54
ANL-5368	Design of a Computer - Oracle	J.C.Chu	9-54
*ARE-3/54	The Absorption of Gamma-Radiation in Lead, Steel, and Concrete	R.Halmshaw R.Knapp Armament Research Estab. (Great Britain)	3-54
CERN-PS/MM 12	A I M A N T DC IV	European Council of Nuclear Research	2-55
CERN-PS/MM 13	Etude Preliminaire Du Modele AC V Avec Alimentation Continue	European Council of Nuclear Research	2-55
CERN-PS/MM 14	Etude de Dispositifs Pour L'Alimentation En Impulsion Des Maquettes V Et Suivantes	Same	2-55
CERN-PS/PL 4	Injection Dans Le Synchrotron. Aberrations	Same	4-55
CRT-565	Ionisation Bursts Due to Single Cosmic Ray Particles	J.W.Gardner Chalk River Project (Canada)	11-54
DP-101	Floating-Decimal Matrix Inversion	F.M.Trantham, Jr.	4-55
MIT-QPR-AC-LAB 1-3, 1955	Quarterly Report January - March 1955	R.H.Bolt R.D.Fay	
Monograph 2370	Behavior and Applications of Ferrites in the Microwave Region	A.G.Fox S.E.Miller M.T.Weiss Bell Telephone Lab.	1-55
Monograph 2371	Potentials of Infinite Systems of Sources in Semiconductor Engineering	A.Uhlir, Jr. Same	1-55

*Microcards

Monograph 2372	The Interface Between Germanium and an Electrolyte	W.H.Brattain C.G.B.Garrett Bell Telephone Labs. Inc.	1-55
Monograph 2373	Boolean Matrices and Combinational Circuit Design	F.E.Hohn L.R.Schissler	1-55
Monograph 2379	Thermal Velocity Effects in Electron Guns	C.C.Cutler M.E.Hines	3-55
Monograph 2382	Large Signal Theory of Traveling-Wave Amplifiers	P.K.Tien L.R.Walker V.M.Wolontis	3-55
Monograph 2409	Pin-Hole Camera Investigation of Electron Beams	C.C.Cutler J.A.Saloom	3-55
Monograph 2412	Surface Properties of Semiconductors	W.H.Brattain C.G.B.Garrett	7-54
Monograph 2413	Magnetic Focusing of Electron Beams	J.T.Mendel	3-55
*NBS-3492	Preferred Circuits Manual		8-1-54
*NBS-3666	Notes to the Preferred Circuits Manual. Supplement to "Preferred Circuits Manual."		9-1-54
NP-4923	Combustion Aerodynamics Laboratory Interim Technical Report No.7 Velocity Separation of Ionic Masses From Pulsed Groups	D.W.Batteau Harvard Univ.	8-53
*NP-5560	Conducting Thin Films. Quarterly Technical Progress Report for October 1, 1954 to December 31, 1954	C.E.Drumheller R.C.Eggleton L.L.Howard Electrical Eng. Research Lab., Eng. Experiment Station, Univ. of Ill.	1-15-55

*Microcards

*NP-5566	A Solid-State Model for Detonations. Technical Report No. XVI	R.B.Parlin J.C.Giddings Inst. for the Study of Rate Processes, Univ. of Utah	1-1-55
*NP-5573	Pulse-Amplitude Analysis in Nuclear Research. Technical Report No.3	A.B.VanRennes Servomechanisms Lab. Mass. Inst. of Tech.	1-15-55
*NP-5574	A-C Ionization Detector. Technical Report No. 4	D.R.Whitehouse Same	1-31-55
*P-88 (R) Rev.	Strochastic (Monte Carlo) Attenuation Analysis	H.Kahn RAND Corp	7-14-49
P.L.A.C.5	Grid Focussing in the Proton Linear Accelerator Temperature Rise in the Grids	R.E.Clay Atomic Energy Research Estab. Harwell, Berks. (England)	9-54
P.L.A.C.6	A Theoretical Investigation of the Temperature Rise of the Front Edge of a Focusing Grid During a Proton Pulse 600 MeV. Proton Linear Accelerator	R.O.Ridley Same	8-54
P.L.A.C.8	Alignment of Drift Tubes in a 600 Mev Proton Linear Accelerator	R.E.Clay Same	12-13-54

REACTOR SCIENCES

*NRL-4469	In-Pile Performance of NRL-1 Thimble at MTR	J.R.Ambrose	11-54

MISCELLANEOUS

A.E.R.E. C/R 1524	Some Remarks on the Guinier-Type X-Ray Focusing Camera	R.W.M.D'Eye Atomic Energy Research Estab. Harwell, Berks., (England)	10-9-54

*Microcards

A.E.R.E. HP/R 1452	The Atmospheric Diffusion of Gases Discharged From the Chimney of the Harwell Pile (BEPO)	N.G.Stewart H.J.Gale R.N.Crooks Atomic Energy Research Estab. Harwell, Berks., (England)	10-4-54
ANL-5434	Additions to the Library Report for the Period April 16-30 1955 Technical Reports and Books	P.A.Schulze	
ASTIA-U-79	Title Announcement Bulletin No. U-79		5-2-55
*DTMB-863	Bibliography on Shells and Shell-Like Structures	W.A.Nash David W.Taylor Model Basin	11-54
MISC 1955-14 INDEX	Index to Seventeenth Semiannual Report to Congress Major Activities in the Atomic Energy Programs July 1954 December 1954	Atomic Energy Commission	
Monograph 2376	Weathering of Polyvinyl Chloride	J.B.DeCoste V.T.Wallder	2-55
NP-5423	Progress Report to Bureau of Ships, Code 854 on an Investigation of Samplers for the Collection and Classification of Radioactive Airborne Particulate Materials	Mine Safety Appliances Co.	
*NP-5534	Internal Stress Gauges for Cementitious Materials	Y.C.Loh Mass. Inst. of Tech.	7-51
ORNL-1865	Instrumentation and Controls Division Semiannual Progress Report for Period Ending January 31, 1955	C.J.Borkowski	5-19-55
UCLA-332	Behaviour of Shock Waves Entering Model Bomb Shelters	B.B.Dunne B.Cassen	4-25-55

LIST OF UNCLASSIFIED REPORTS ISSUED IN THE UCRL INFORMATION DIVISION

*Microcards

UCRL-2888	High Temperature Studies: I. Reactions of the Refractory Silicides with Carbon and with Nitrogen II. Thermodynamic Properties of the Carbides III. Heat of Formation of the $3\pi_u$ State of C_2 from Graphite	O.H.Krikorian	4-55
UCRL-2926	The Fluoride Complexing of Sc(III), Cu(II), Pb(II), Zn(II), Hg(II), Hg_2(II), Sn(II), and Ag(I), in Aqueous Solution	A.D.Paul	4-55
UCRL-2943	The New Element Mendelevium, Atomic Number 101	A.Ghiorso B.G.Harvey G.R.Choppin S.G.Thompson G.T.Seaborg	4-4-55
UCRL-2944	Nuclear Properties of 100^{256}	G.R.Choppin B.G.Harvey S.G.Thompson A.Ghiorso	4-4-55
UCRL-2946	Eddy-Current Bridge for Measurement of Skin Losses	Q.A.Kerns	4-11-55
UCRL-2953	π^+-Photomeson Production from Hydrogen, Deuterium Helium, and Carbon	G.W.Repp	4-12-55
UCRL-2955	Relative Yields of Nitrogen-17 Produced by 190-Mev. Deuteron Bombardment	W.W.Chupp	4-13-55
UCRL-2956	Photodisintegration of Deuterons at High Energies	D.R.Dixon	3-30-55
UCRL-2957	A Study of the Barrier Existing in the Sublimation of Arsenic and Red Phosphorus	J.S.Kane	4-55
UCRL-2958	Cellular Radiobiology	R.K.Mortimer C.A.Beam	4-55
UCRL-2969	Angular Distributions of Charged Particles From 31 -Mev Protons on Carbon	G.J.Hecht	4-21-55
UCRL-2970	Decay Schemes and Nuclear Spectroscopic States in the Heavy-Element Region	F.S.Stephens, Jr.	6-55

UCRL-2975	Elastic Scattering of High-Energy Polarized Protons by Complex Nuclei	R.D.Tripp	4-29-55
UCRL -2976	Will the End of the Actinide Series Be Reached?	B.G.Harvey	4-29-55
UCRL-2978	List of Unclassified Reports Received and Issued in the UCRL Information Division for Period Covering April 16-30,1955		5-5-55
UCRL-2979	Multiple Meson Production in Emulsions Exposed to the Bevatron Beam	W.R.Johnson	5-3-55
UCRL-2980	Radioactive Decay of the Isomers of Americium-242	R.W.Hoff H.Jaffe T.O.Passell F.S.Stephens E.K.Hulet S.G.Thompson	4-15-55
UCRL-2984	Neutron Cross Section of Cm^{242}	J.P.Surls B.G.Harvey	5-10-55
UCRL-2991	A 3.9×10^{-8} Second Metastable State in Pa^{231}	D.Strominger J.O.Rasmussen	5-11-55
UCRL-3000	List of Unclassified Reports Received and Issued in the UCRL Information Division Covering Period May 1-15,1955		5-19-55