

# Office Memorandum • UNITED STATES GOVERNMENT

TO : John A. Derry, Executive Officer,  
Division of Biology and Medicine

FROM : Robert L. Butenhoff, Chief, Radiation Instruments Branch,  
Division of Biology and Medicine

SUBJECT: MONTHLY PROGRESS REPORT FOR THE RADIATION INSTRUMENTS BRANCH,  
JULY 1950

SYMBOL: BMR:JCG

306 DATE: August 9, 1950

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Kits containing equipment for the Washington AEC Emergency Radiological Monitoring Teams have been distributed to each of the four groups. Three of the groups have already held meetings to discuss operating procedures and general problems and to become familiar with the instruments. Development on civilian defense radiological monitoring instruments at each of the five AEC installations is continuing, but the status has not changed substantially during the last month. Arrangements have been made with the National Bureau of Standards to conduct spectral sensitivity tests and with the Signal Corps at Fort Monmouth to conduct environmental and ruggedness tests on civilian defense type instruments. The first instrument, designed by the New York Operations Office, is scheduled for testing early in August.

The Radiation Instruments Catalog copy was shipped to Oak Ridge for printing and distribution. The Catalog will contain photographs and descriptive material on 493 items. Products from 85 companies are listed. The Bureau of Standards is preparing facilities to be made available to the Branch for calibrating, testing, and storing radiation instruments.

## I. Procurement and Industrial Development Activities

### A. Summary of AEC Procurement Activities for Period July 1, 1950 - July 31, 1950

Office of Operations	Accessories	Components	Scalars	Monitors	Personnel	Survey	Total
Decentralized Procurement - Contracts or purchase orders executed							
Number of Items	0	4	2	0	0	1	7
Amount	\$ 0	\$1,325.83	\$2,064.96	\$ 0	\$ 0	\$2,066.13	\$5,456.92

### B. AEC Sponsored Research and Development

#### Washington Headquarters Procurement - Civil Defense

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The Washington Headquarters Procurement Office has now documented the negotiations which took place during the period of June 1 - June 30, 1950 concerning civilian radiological

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equipment. The four commercial companies involved are now pursuing their various programs for production of prototype instruments. The schedules proposed for completion by January 1, 1951, remain unchanged.

#### AEC Civil Defense Instrument Development

Development of civil defense radiological monitors is continuing at five AEC installations. Effort will be made during the next report period to secure complete and current information describing the program at each site. The status of these projects was not changed during the period covered by this report to justify separate breakdowns of each area's activity.

#### AEC-NRDL Civilian Defense Instrument

The program has now been completely authorized by an exchange of correspondence as well as by the initiation of a form 1080 to permit the transfer of funds. No reports on progress have been made thus far.

#### C. Instrument Appraisal Program

Eight new types of instruments have been received and placed in appraisal stock during the month. (Preliminary catalog sheets for use in describing items contained in Appraisal List No. 2 have been furnished the Publishing Branch at Oak Ridge, and it is expected that reproduction will be completed by August 15, 1950 at which time the new appraisal list will be distributed.

#### D. Catalog

On July 28 the subject material for the Radiation Instruments Catalog No. 2 was shipped to Oak Ridge for printing and distribution. The Catalog contains a total of 563 pages; 493 of which describe equipment that is listed therein; and 70 pages consist of the introduction, index of instruments, and related equipment. Approximately 85 companies are now listed in Catalog No. 2 as manufacturers of radiation detection equipment.

It is estimated that the Catalog will be ready for distribution around the middle of September.

#### E. Testing and Inspection Facilities

On July 17 alterations of a temporary NBS building were begun to provide facilities for calibration, testing, and inspection of AEC radiation detection instruments by the RIB. Occupancy is anticipated on or about August 15. Approximately 153 square feet of testing space, 135 square feet of effective bin-storage space, and 225 square feet of bulk storage space will be available.

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The testing room will be equipped with a complete set of tools for making repairs on electronic equipment and for construction of small electronic devices. Testing facilities will include conventional apparatus required for calibration and repair of radiation detection equipment and related electronics equipment.

F. Procurement Summary

Attachment No. 1 includes a Summary of Status of Supply and Stockpile Procurement for delivery to Commission installations and Naval organizations where the Commission holds Navy contracts accepted by the Atomic Energy Commission. Research and development contracts and Test Purchase Orders are also reported on. The latter contracts and purchase orders differ from the supply procurement in that the services of personnel are a large part of the contract commitment. Where estimated completion dates are indicated on this attachment, requested dates have been used when delivery information has not been furnished by the contracting office or the contractor.

II. Technical Coordination Activities

A. Branch Publications

Continuing the series of articles on scintillation counters, the August issue of Ra-Det features a report by Robert T. Graveson, Hugo DiGiovanni, and Harris D. LeVine of the New York Operations Office entitled "An Alpha Scintillation Counter for Laboratory Measurements". The circulation of Ra-Det has been increased by eight copies.

Complete information from all but four of the AEC areas has been received and processed for publication in the second edition of the "Compendium of Research and Development Activities in Radiation Detection Instrumentation". Of these four, three areas have indicated that no new information will be submitted for this issue and one area has promised the information in the near future.

B. Conferences

The Branch has received and forwarded to the areas the agenda for the forthcoming meeting, sponsored jointly by the AEC-DOD, on the "Chemistry and Physics of Radiation Dosimetry" to be held at the Army Chemical Center at Edgewood, Maryland.

A draft copy of the Minutes of the Joint Us/UK/Canadian conference on instrumentation held at Chalk River on May 22, 23,

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and 24 has been received. These minutes contain valuable information of general interest. It is planned to publish the final version serially in Ra-Det. The classification is "For Official Use Only".

C. Regional Coordination

A visit was made to the Hanford Operations Office to obtain information for the Compendium and to discuss other general instrumentation problems. Because of recent visits to most of the other areas, this was the only trip scheduled at this time.

D. Civilian Defense

Arrangements have been made with the Evans Signal Laboratory at Fort Monmouth, New Jersey for environmental testing of civilian defense type radiation monitoring equipment. Informal arrangements have also been made with the Bureau of Standards for calibration and radiation quality dependency tests of these instruments.

E. Special Electron Tube Development Program

The contract between RCA and the AEC, administered by the Carbide and Carbon Chemicals Division of Union Carbide and Carbon Corporation, has been reviewed and approved by all interested parties. A meeting of the AEC Steering Committee of this program is scheduled at Princeton, New Jersey on August 31 and September 1.

Arrangements are being made through the Navy for the procurement of testing quantities of photomultiplier tubes developed under a Bureau of Ships contract.

F. Export Control

A staff paper prepared by the Export Control Branch revising listings in the Export Control regulations has been reviewed and criticised by the Branch. Detailed comments have been forwarded to the Export Control Branch.

Enclosures:

As described in 1F above (in trip.)

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## PIC-11C Pocket Alarms

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**STATUS OF SUPPLY PROCUREMENT REQUISITIONS**  
**(INCLUDING INTERIM PRODUCTION)**

Req. #	Quantity	Instrument	Contract Issued	Company	Estimated Completion Date		Office Handling Contract
					Previous	Present	
51504	600 60	Dosimeters Chargers	Gen. 630 6/28/48	Cambridge	June 50	August 50	OROO
52221	25	Alpha Survey Meter (Portable Poppy)	AT(45-1)187 1/6/49	Berkeley Scientific Co.	June 50	August 50	HOO
52220	60	Pocket Alarm PIC-110	AT(04-1)388	NTL	Complete		SFOO
51776	50	Probes for Pee Wee Survey Meter	BOW-1516-50 5/23/50	NICC	-----	Aug. 50	Washington
52241	10	Chargers for SPC-5B	Will be fabricated by G.E. at Richland		-----	Aug. 50	HOO
51544	500	Boron-lined neutron counters	AT(30-1)419 10/28/48	G.E.	June 51	June 51	NYOO

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STATUS OF STOCKPILE PROCUREMENT REQUISITIONS

Req #	Quantity	Instrument	Contract	Company	Estimated Completion Date		Office Handling Contract
					Previous	Present	
52237	750	.2r Dosimeter PIC-3C		National Tech. Laboratory	March 50	Indefinite	COO
52237	750	10r Dosimeters PIU-3D		Argonne National Laboratory	Dec. 50	Indefinite	COO
52237	75	Chargers, AV-3A		Argonne National Laboratory	March 50	Indefinite	COO
51773	20	SPC-1C Alpha Survey Meters	AT(49-1)436 4/3/50	NIOC	-----	Aug. 50	Washington

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STATUS OF PRODUCTION DEVELOPMENT PROCUREMENT REQUISITIONS

Req #	Quantity	Instrument	Contract Issued	Company	Estimated Completion Date		Office Handling Contract
					Previous	Present	
51457	2	Alpha-Beta-Gamma Hand Counter Probe	GEN-686 9/20/48	General Electric	Complete		OROO
51457	2	5-Fold Beta-Gamma Hand and Foot Counter	GEN-710 9/30/48	RCA	Complete		OROO
52201	25	Alpha-Beta-Gamma Survey Meter (SIC-T1)	AT(40-1)780 5/20/48	Sylvania	July 50	Aug. 50	OROO
52202	25	Beta-Gamma Survey Meter (SGM-T3)	AT(40-1)770 4/7/49	Bendix	July 50	Sept. 50	OROO
52210	100 4	Slow Neutron Dosimeter Chargers	AT(40-1)435 10/28/48	Cambridge Inst. Company	Jan. 50	Aug. 50	NYOO
52211	10	Alpha-Survey Meter (Walkie Poppy)	AT(40-1)430 11/15/48	General Electric	July 50	Aug. 50	NYOO
52239	10	Alpha-Beta-Gamma Civilian Monitor	Being negotiated by ORNL				OROO
52214	25	Filter Paper Analyzer	AT(11-1)18 4/7/49	NICC	July 50	Aug. 50	COO
52225	60	AC Poppy	AT(40-1)775 5/17/49	Raytheon	March 50	Oct. 50	OROO
52230	40	Scale of 8 Survey Meters	AT(04-1)249 4/8/49	Berkeley Scientific Co.	June 50	Aug. 50	SFOO
52240	25	Pocket Electrometer PIC-15A	Will be negotiated by SFOO				SFOO



STATUS OF TEST PROCUREMENT REQUISITIONS

Req #	Quantity	Instrument	Contract Issued	Company	Estimated Completion Date	Office Handling Contract
51767	17	MIC-15A Brown Electrometers	AT(40-1)809 1/13/50	Minneapolis Honeywell Regulator Company	August 50	Washington
51781	5	ARC-1A Counting Rate Computers	AT(49-1)439 6/14/50	Berkeley Scientific Co.	Complete	Washington
51783	5	Windowless Flow Counters, BG-5B2A	AT(49-1)460 6/23/50	Tracerlab, Inc.	August 50	Washington
51784	5	AV-13A Power Supply	Being Negotiated	NICC		Washington
51784	5	AV-15A Power Supply	Being Negotiated	Victoreen		Washington
51785	10	SGM-31A Portable Survey Meter, Model RMI	AT(49-1)462 6/26/50	Nucleonic Corp. of America	August 50	Washington
51785	10	Alpha-Beta-Gamma Probes for RMI with BG-1A22C GM Tubes	AT(49-1)462 6/26/50	Nucleonic Corp. of America	August 50	Washington
51785	6	Geiger Tubes Model GM1NNA (BG-1A22D)	AT(49-1)462 6/26/50	Nucleonic Corp. of America	August 50	Washington
51786	25	PIG-12A Dosimeters	Being Negotiated	Kelley-Koett		Washington
51786	25	AV-2F Chargers	Being Negotiated	Kelley-Koett		Washington
51786	2	SIG-25A Survey Meters	Being Negotiated	Kelley-Koett		Washington

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Req #	Quantity	Instrument	Contract Issued	Company	Estimated Completion Date-	Office Handling Contract
51787	5	MIC-2CX2 Switch for Vibrating Reed Electrometer	Being Negotiated	Applied Physics		Washington
51787	5	BIC-2A Ionization Chamber for Vibrating Reed Electrometer	Being Negotiated	Applied Physics		Washington
51788	1	MIC-17A Precision Ionization Meter (Failla Design)	AT(49-1)456 6/20/50	Cambridge Instrument Co.	August 50	Washington
51789	3	AC-6B Electrostatic Precipitator	AT(49-1)461 6/26/50	Mine Safety Appliance Company.	August 50	Washington
51789	1	AC-8A Air Collector	AT(49-1)461 6/26/50	Mine Safety Appliance Company	August 50	Washington
51790	2	SIC-26A1 Analysis Units, open window	Being Negotiated	Landsverk Electrometer Company		Washington
51790	2	SIC-26A2 Analysis Units, thin window	Being Negotiated	Landsverk Electrometer Company		Washington
51790	2	SIC-26A3 Analysis Units, closed window	Being Negotiated	Landsverk Electrometer Company		Washington
51791	8	SBX-2A Scintillation Type Survey Meter	Being Negotiated	General Electric		Washington
51792	2	SIC-7B Beta-Gamma Survey Meters	Being Negotiated	Tracerlab, Inc.		Washington

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Req #	Quantity	Instrument	Contract Issued	Company	Estimated Completion Date	Office Handling Contract
51792	5	AR-12A Mechanical Registers	Being Negotiated	Tracerlab, Inc.		Washington
51792	30	PIO-16A Dosimeters	Being Negotiated	Tracerlab, Inc.		Washington
51792	5	AV-22A Chargers	Being Negotiated	Tracerlab, Inc.		Washington
51792	3	ARX-6A Alpha Scintillation Probe	Being Negotiated	Tracerlab, Inc.		Washington
51793	1	AT-24A Double Pulse Generator	BOW-1632-50	Berkeley Scientific Co.	August 50	Washington
51794	2	SIC-24A Zeuto	Being Negotiated	NICC		Washington
51794	5	SGM-4B Alpha-Beta-Gamma Survey Meter	Being Negotiated	NICC		Washington
51795	1	SGM-48A Gamma Survey Meter	BOW-1631-50 6/19/50	Western Radiation Laboratory	Complete	Washington
51797	1	MGM-22A Area Monitor	BOW-1637-50 6/20/50	Radiophone Company	August 50	Washington
51799	1	MRX-2A Monitor	Being Negotiated	R-C Scientific Instrument Company		Washington
51799	1	ARX-2A Detecting Head	Being Negotiated	R-C Scientific Instrument Company		Washington

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Req #	Quantity	Instrument	Contract Issued	Company	Estimated Completion Date	Office Handling Contract
51799	1	ABX-3A Detecting Head	Being Negotiated	R-C Scientific Instrument Co.		Washington
51800	10	BE-4A Photomultiplier Tubes	Being Negotiated	RCA		Washington
51800	10	BE-5A Photomultiplier Tubes	Being Negotiated	RCA		Washington
51801	2	SIC-22A Beta-Gamma Survey Meters	BOW-1638-50 6/22/50	Atomic Instrument Co.	August 50	Washington
51801	2	ABX-1A Scintillation Head	BOW-1638-50 6/22/50	Atomic Instrument Co.	August 50	Washington
51802	1	BG-1B26A Probing Needle Counter	Being Negotiated	Victoreen		Washington
51803	1	CGM-26A1 Binary Scaler	Being Negotiated	NCA		Washington
51803	1	CGM-26B3 Decade Scaler	Being Negotiated	NCA		Washington
51804	5	SGM-52A Beta-Gamma Survey Meter	Being Negotiated	Victoreen		Washington
51805	37	BFT-1A Neutron Thermometers	Being Negotiated	NICC		Washington
51806	25	SIC-31A Civilian Defense Survey Meters	AT(49-1)451 6/19/50	Tracerlab, Inc.	Dec. 50	Washington

STATUS OF TEST PROCUREMENT REQUISITIONS

Req #	Quantity	Instrument	Contract Issued	Company	Estimated Completion Date	Office Handling Contract
51806	20	SIC-33A Civilian Defense Survey Meters	AT(49-1)459 6/22/50	Kelley-Koett	Dec. 50	Washington
51806	20	SIC-34A Civilian Defense Survey Meters	AT(49-1)459 6/22/50	Kelley-Koett	Dec. 50	Washington
51811	20	SIC-36A Civilian Defense Survey Meters	Being Negotiated	NICC		Washington
51813	2	SIC-45B Survey Meter	Being Negotiated	Special Instruments Laboratory		Washington
51814	10	SIC-19C Survey Meter AN/PDR-T1	Being Negotiated	Tracerlab, Inc.		Washington
51806	20	SIC-32A Civilian Defense Survey Meters	AT(49-1)458 6/22/50	Victoreen	Dec. 50	Washington

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