

938/06.039
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12 MAR 1964

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DASARA-4 938/06.039 and 938/06.042

SUBJECT: Transfer of Funds for FY 64 Nuclear Weapons Effects Research (NWER) Program

**THRU: Commanding General
U. S. Army Materiel Command
ATTN: AMCRD-DW
Washington, D. C. 20315**

**TO: Commanding Officer
U. S. Army Nuclear Defense Laboratory
Edgewood Arsenal, Maryland 21040**

1. Reference is made to the following:
 - a. **CONFIDENTIAL** letter, DASATP/926.1, this headquarters, 12 August 1963, subject as above.
 - b. **UNCLASSIFIED** letter, DASARA-4 938/06.039, this headquarters, 19 December 1963, subject: "New Neutron Detector Techniques."
2. MIPR Number DASA 502-64, as amended by reference 1b above in the amount of \$400,000 will be amended to show an increase of \$64,000.
3. This money will be applied to Task ASA, Subtasks 06.039, "New Neutron Detector Techniques" and 06.042, "Initial Radiation Studies." This action will bring the funding levels of these subtasks to \$284,000 and \$105,000 respectively.
4. The research objectives to be accomplished in connection with the transfer of these funds are as follows:
 - a. **Subtask 06.039:** To complete research work on the investigation of effects of variations in starting material on wide base conductivity modulated neutron dosimeters.

DASARA-4 938/06.039 and 938/06.042

SUBJECT: Transfer of Funds for FY 64 Nuclear Weapons Effects Research (NWER) Program

b. Subtask 06.042: To complete compilation of initial gamma radiation data including compilation of gamma dose rate information and prediction techniques of gamma dose and dose rate data.

5. Paragraphs 4, 5 and 6 contained in reference in above apply to transfer of these funds.

FOR THE DIRECTOR:

D. G. WILLIAMS
Colonel GS
Actg Chief of Staff

M/R This letter releases funds in the amount of \$64,000 to NDL for service managed work on Subtasks 06.039, "New Neutron Detector Techniques" and 06.042, "Initial Radiation Studies."

Funds for Subtask 06.039 are a result of receipt of the Phase II money programmed for this subtask. The money is being released for completion of a contract programmed for FY 64. Withholding of the Phase II money precluded completion of this project until these additional funds were received.

The funds for Subtask 06.042 are a result of receipt of Phase II money within Task Area A2a and reprogrammed to this subtask. The original funding level for this subtask was \$75,000. However, this additional funding is required due to an underestimate of funding. The original estimate did not include compilation of gamma dose rate data and prediction techniques. Therefore, to accomplish the maximum under this subtask, this additional funding is required for the dose rate data and prediction information.

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DEPARTMENT OF DEFENSE
DEFENSE ATOMIC SUPPORT AGENCY
WASHINGTON 25, D.C.

*Return to
Maj Arnold
RA-4*

ADDRESS REPLY TO:
THE CHIEF, DEFENSE ATOMIC
SUPPORT AGENCY

DASATP/926.1

SUBJECT: Transfer of Funds for FY64 Nuclear Weapons Effects Research
(NWER) Program (U)

TO: Commanding General, U. S. Army Materiel Command, Department of
the Army, ATTN: AMCCP-PG-C (RDT&E), Washington, D.C. 20310
Commanding General, Army Medical R&D Command, Office of the
Surgeon General, Department of the Army, Washington, D.C. 20310
Chief of Engineers, Department of the Army, Washington, D.C. 20310

1. Reference is made to the following:

a. CONFIDENTIAL letter, DASATP/926, this headquarters, 26 March 1963, subject: "Nuclear Weapons Effects Research Program - Subtask Budgets for FY 64."

b. UNCLASSIFIED letter, CRD/DA, file CRD/G, 27 September 1962, subject: "Reassignment of Responsibilities."

c. UNCLASSIFIED letter, OCE, file ENGTE-E, 28 June 1963, subject: "Transmission of Funding Documents for Nuclear Weapons Effects Research Projects."

2. Reference 1a forwarded proposed NWER subtask budgets for FY 64 to the Department of the Army. Subsequent fiscal actions have resulted in a limitation of FY 64 NWER obligation authority representing a reduction in the overall program of \$6,990,000. The inclosure contains an outline of the Army portion of this reduced program.

3. The FY 64 NWER subtasks tabulated in the inclosure are assigned to the Army for management. Military Interdepartmental Purchase Requests (MIPRs) tabulated below will be issued by separate correspondence in accordance with the instructions in references 1b and 1c, above:

<u>DASA MIPR</u>	<u>PROJECT</u>	<u>AMOUNT</u>
	<u>Ballistics Research Laboratory</u>	
537-64 A-1 Air Blast		\$200,000

Declassified by DNA, Chief, ISTS

[Signature]
Date: 8/9/94

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GROUP 4
Downgraded from CONFIDENTIAL
Declassified on 2 years

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DASATP/926.1

SUBJECT: Transfer of Funds for FY64 Nuclear Weapons Effects Research (NWER) Program (U)

<u>DASA MIPR</u>		<u>PROJECT</u>	<u>AMOUNT</u>
		<u>Ballistics Research Laboratory (Continued)</u>	
027	503-64	A2a Initial Nuclear Radiation Measurements	\$ 65,000
	506-64	A2b Shielding	\$160,000
	541-64	A3 Underground	\$212,500
	520-64	A6b Ionization	\$565,000
	531-64	A9 Integrated Effects and Phenomena	\$260,000
		<u>Harry Diamond Laboratories</u>	
	512-64	A2c Transient Radiation Effects on Electronics	\$575,000
	517-64	A6a Electromagnetic Propagation Effects	\$200,000
		<u>Frankford Arsenal</u>	
	513-64	A2c Transient Radiation Effects on Electronics	\$ 25,000
	533-64	A4 Biomedical	\$ 20,000
		<u>Electronics R&D Laboratory</u>	
041	505-64	A2a Initial Nuclear Radiation Measurements	\$ 75,000
	516-64	A6a Electromagnetic Propagation Effects	\$400,000
	524-64	A7 Fallout and Residual Radiation	\$ 50,000
		<u>Chief of Engineers</u>	
	540-64	A3 Underground	\$947,500
	545-64	A5 Underwater	\$186,000
		<u>Nuclear Defense Laboratory</u>	
	502-64	A2a Initial Nuclear Radiation Measurements	\$350,000
	507-64	A2b Shielding	\$325,000
	523-64	A7 Fallout and Residual Radiation	\$270,000

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DASATP/926.1

SUBJECT: Transfer of Funds for FY64 Nuclear Weapons Effects Research
(NWER) Program (U)

<u>DASA MIPR</u>		<u>PROJECT</u> <u>Picatinny Arsenal</u>	<u>AMOUNT</u>
504-64	A2a	Initial Nuclear Radiation Measurements	\$ 50,000
529-64	A9	Integrated Effects and Phenomena	\$340,000
		<u>Surgeon General, DA</u>	
534-64	A4	Biomedical	\$554,000

4. It is realized that from time to time changes in fund level may be required, new subtasks established, or old ones cancelled. Consequently, you are authorized to make necessary changes between subtasks within your project areas, so long as the fund transfers involved do not exceed \$100,000 per subtask. Since any changes in the total commitment for any subtask must be known by the DASA program managers, you are requested to report all programming actions to Chief, DASA at the time such action is taken. In the event reprogramming in excess of \$100,000 or programming between MIPRs is desired, prior approval of this headquarters should be obtained. Subtask assignment to individual MIPRs is shown in Inclosure 1. The first DASA-78 report submitted for the FY 64 NWER Program will report changes in the subtask scope and objectives occasioned by the reduction in funding for certain subtasks.

5. Semi-Annual progress reports will be submitted in February and August, using the format contained in the DASA 78 NWER Semiannual Progress Summary, 1 April 1963, a copy of which has been furnished each agency engaged in the NWER program. (Reports Control Symbol DASA-78).

6. In connection with the transfer of these funds, request you comply with the financial management procedures listed below:

a. Accounting and reporting of these funds will be in accordance with part 4 of the DASA Manual, "Nuclear Weapons Effects Financial Management," dated 1 April 1963.

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DASATP/926.1

SUBJECT: Transfer of Funds for FY64 Nuclear Weapons Effects Research (NWER) Program (U)

b. Requests for reimbursements on Standard Forms 1080, should contain tabulation of expenditures by DASA Cost Codes (subtask numbers) and should be submitted in accordance with paragraph 6, part 3 of the DASA manual referred to in subparagraph a, above.

Robert H. Booth

ROBERT H. BOOTH
Major General, USA
Chief

1 Incl
Subtask Assignments to
Individual MIPRs CONF GP-4

Copy furnished (w/Incl)

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BRL
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Frankford Arsenal
WES
WRAMC

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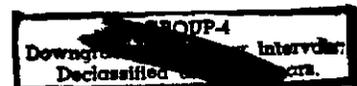
FY 64 NWER PROGRAM

Subtask Assignments to Individual MIPRs

Ballistics Research Laboratory

<u>Project A1</u>	Air Blast		
01.024	Vulnerability of Interceptor Missiles		\$ 50,000
02.049	Sub-Kiloton Air Blast Phenomena		\$ 25,000
02.053	Blast Effects on Missile Bodies		\$100,000
02.058	Military Equipment Damage Studies		\$ 25,000
		MIPR No. 537-64	\$200,000
<u>Project A2a</u>	Initial Nuclear Radiation Measurements		
✓ 06.027	Magnetic Neutron Spectrograph		\$ 65,000
		MIPR No. 503-64	\$ 65,000
<u>Project A2b</u>	Shielding		
11.001	Neutron Radiation Shielding Studies		\$100,000
11.031	Enclosure Shielding Studies		\$ 60,000
		MIPR No. 506-64	\$160,000
<u>Project A3</u>	Underground		
13.015	Generation and Propagation of Underground Shock		\$ 75,000
13.017	Instrumentation Development for Ground Shock		\$ 25,000
13.111	Blast Patterns in Tunnels and Chambers		\$ 25,000
13.112	High Pressure Diffraction and Drag Studies		\$ 50,000
13.121	Gage Development and Instrumentation Techniques		\$ 7,500
13.190	Modernization of Shock Tube Instrumentation		\$ 30,000
		MIPR No. 541-64	\$212,500
<u>Project A6b</u>	Ionization		
07.007	Development of Research Instrumentation		\$300,000
07.010	Critical Reaction Rate Investigations		\$ 65,000
07.017	Two-D Hydrodynamic Calculations		\$200,000
		MIPR No. 520-64	\$565,000

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Project A9 Integrated Effects and Phenomena

08.008 Integrated Lethal Effects \$260,000
MIPR No. 531-64 \$260,000

Harry Diamond Laboratories

Project A2c Transient Radiation Effects on Electronics

16.011 Theoretical and Experimental Analysis of Radiation Effects on Electronic Systems and Sub-systems \$275,000
16.012 Effects of Radiation on Electronic Components and Circuits \$200,000
16.020 Displacement Effects \$100,000
MIPR No. 512-64 \$575,000

Project A6a Electromagnetic Propagation Effects

04.015 Fuze Function Effects \$200,000
MIPR No. 517-64 \$200,000

Frankford Arsenal

Project A2c Transient Radiation Effects on Electronics

16.014 Radiation Effects on Fire Control Assemblies \$ 25,000
MIPR No. 513-64 \$ 25,000

Project A4 Biomedical

03.079 Flash Blindness and Chorioretinal Burns \$ 20,000
MIPR No. 533-64 \$ 20,000

Electronics R&D Laboratory

Project A2a Initial Nuclear Radiation Measurements

06.041 Fast Neutron Spectrograph \$ 75,000
MIPR No. 505-64 \$ 75,000

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Project A6a Electromagnetic Propagation Effects

04.014 Communication Effects Simulation \$400,000
MIPR No. 516-64 \$400,000

Project A7 Fallout and Residual Radiation

10.029 Terrain Effects and Fallout Control \$ 50,000
MIPR No. 524-64 \$ 50,000

Chief of Engineers

Project A3 Underground

13.009 Studies of the Dynamic Properties of Soils (WES) \$300,000
13.010 Interaction of Structures and Soils (WES) \$295,000
13.039 Instrumentation Studies (WES) \$ 70,000
13.142 Use of Nuclear Explosions for Large Scale Evacuations \$ 35,000
13.153 Dynamic Properties of Materials and Elements (WES) \$247,500
MIPR No. 540-64 \$947,500

Project A5 Underwater

14.020 Surface Waves from Conventional Explosives (WES) \$ 40,000
14.036 Shockwave Mitigation (WES) \$ 30,000
14.037 Bottom Reflection (WES) \$ 50,000
14.081 Air Induced Water Shock (WES) \$ 30,000
14.082 Run-up Characteristics of Long Period Waves(WES) \$ 36,000
MIPR No. 545-64 \$186,000

Nuclear Defense Laboratory

Project A2a Initial Nuclear Radiation Measurements

✓06.026 Gamma Spectrograph \$ 75,000
✓06.039 New Neutron Detector Techniques \$200,000
✓06.042 Initial Radiation Studies \$ 75,000
MIPR No. 502-64 \$350,000

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216,000
100,000

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Project A2b Shielding

11.008	Gamma Shielding by Structures	\$ 60,000
11.022	Radiation Transport Engineering Studies	\$100,000
11.025	Neutron Cross Sections	\$115,000
11.042	Experimental Neutron Propagation through Concrete	<u>\$ 50,000</u>

MIPR No. 507-64 \$325,000

Project A7 Fallout and Residual Radiation

10.013	Fallout Data Summary	\$100,000
10.048	Effects of Scavenging Material	\$ 70,000
10.049	Fallout Particle Formation	\$ 50,000
10.054	Fallout Prediction System	<u>\$ 50,000</u>

MIPR No. 523-64 \$270,000

Picatinny Arsenal

Project A2a Initial Nuclear Radiation Measurements

✓ 06.037	Effects of Nuclear Radiation on Explosives and Propellant Ingredients	<u>\$ 50,000</u>
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MIPR No. 504-64 \$ 50,000

Project A9 Integrated Effects and Phenomena

08.002	Ion Debris	\$125,000
08.007	Satellite Vulnerability	<u>\$215,000</u>

MIPR No. 529-64 \$340,000

Surgeon General, DA

Program A4 Biomedical

03.008	Effects of Massive Doses of Radiation on Central Nervous System	\$ 50,000
03.037	Life Span Studies of Irradiated Dog	\$ 10,000
03.038	Studies on Fission Products from Fallout	\$ 65,000
03.074	Effects of Radiation at Cellular, Organ and Total Organism Levels	<u>\$ 44,000</u>

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03.077	Effects of Fractionated and Continuous Radiation	\$120,000
03.082	Effects of Ionizing Radiation Combined with Trauma	\$100,000
03.084	Dosimetry of Neutron and Gamma Radiation for Reactor	\$ 75,000
03.085	Biological Effectiveness of Mixed Ionizing Radiations in Rodents	<u>\$ 90,000</u>

MIPR No. 534-64 \$554,000

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19 DEC 1963

938/06-039

DASARA-4 938/06.039

SUBJECT: New Neutron Detector Techniques

**THRU: Commanding General
U. S. Army Materiel Command
ATTN: AMCRD-DE-N
Washington, D. C. 20315**

**TO: Commanding Officer
U. S. Army Nuclear Defense Laboratory
Edgewood Arsenal, Maryland 21040**

1. Reference is made to letter, DASATP/938.1, this headquarters, 12 August 1963, subject: "Transfer of Funds for FY 64 Nuclear Weapons Effects Research (NWER) Program."

2. MFR Number DASA 503-64 in the amount of \$350,000 will be amended to show an increase of \$50,000.

3. This money will be applied to Task ASA, Subtask 06.039, "New Neutron Detector Techniques", which will bring the funding level on this subtask to \$250,000.

4. The research objective to be accomplished in connection with the transfer of these funds will be to develop, test and evaluate germanium detectors for nuclear particle detection.

5. Paragraphs 4, 5, and 6 contained in the reference, paragraph 1 above, apply to transfer of this money.

FOR THE CHIEF:

R. C. JOHNSON
Rear Admiral, USN
Deputy Chief

PPA Contact by

DASARA-4 938/06.039

SUBJECT: New Neutron Detector Technique

M/R: This is the transfer of the last \$50,000 withheld on this subtask and is being sent to MDL to extend a present contract with Solid State Radiation, Inc. to develop, test and evaluate a surface barrier germanium detector operated in a thermoelectrically cooled environment. The additional funds are required to obtain a satisfactory neutron detector of germanium which is very promising.

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