AD-A142 723 MANUFACTURING METHODS AND TECHNOLOGY PROJECT EXECUTION REPORT(U) ARMY INDUSTRIAL BASE ENGINEERING ACTIVITY ROCK ISLAND IL C FULLER MAY 84 SBI-AD-E700 008 1/2

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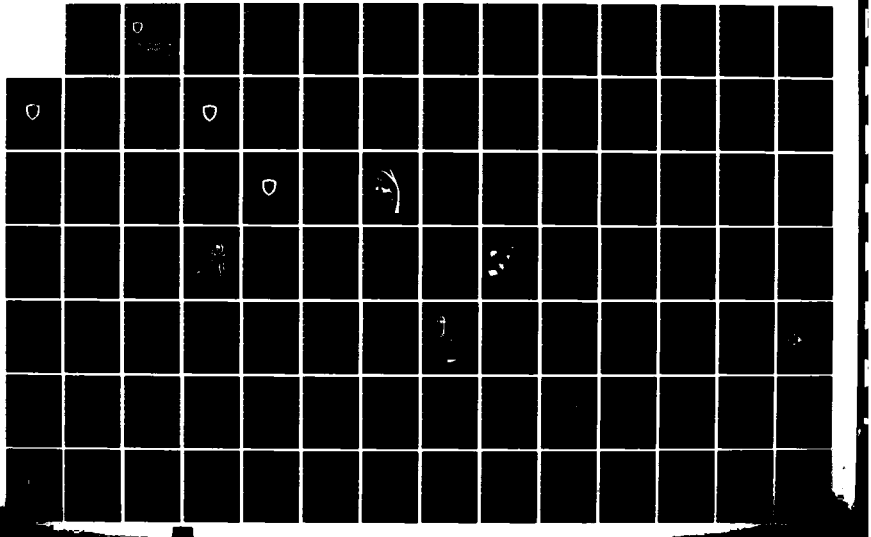

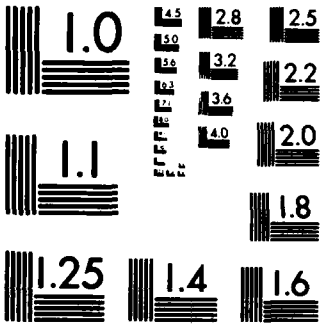

U.S. ARMY

MATERIEL DEVELOPMENT
AND READINESS COMMAND

MANUFACTURING METHODS & TECHNOLOGY

PROJECT EXECUTION REPORT

SECOND CY83

MAY 1984

PREPARED BY

USA INDUSTRIAL BASE ENGINEERING ACTIVITY

MANUFACTURING TECHNOLOGY DIVISION

ROCK ISLAND, ILLINOIS 61299

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

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Manufacturing Methods & Technology
MMT

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This document is a summary compilation of the Manufacturing Methods and Technology Program Project Status Reports (RCS DRCMT-301) submitted to IBEA from DARCOM major Army subcommands and project managers. Each page of the computerized section lists project number, title, status, funding, and projected completion date. Summary pages give information relating to the overall DARCOM program.

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

DEPARTMENT OF THE ARMY
US ARMY INDUSTRIAL BASE ENGINEERING ACTIVITY
ROCK ISLAND, ILLINOIS 61299

REPLY TO
ATTENTION OF

DRXIB-MT

15 MAY 1984

SUBJECT: Manufacturing Methods and Technology (MMT) Program Project Execution Report, Second Half CY83

SEE DISTRIBUTION

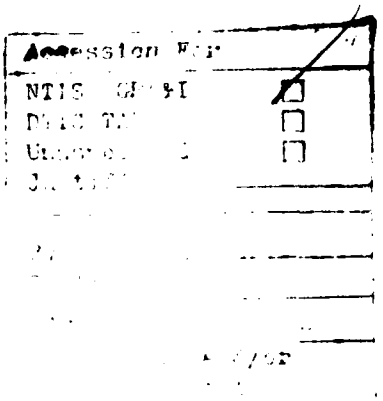
1. Reference AR 700-90, paragraph 3-4j(1), 15 Mar 82, subject: Logistics, Army Industrial Preparedness Program.

2. The Project Execution Report is a summary compilation of the MMT Project Status Reports (RCS DRCMT-301) submitted to IBEA from DARCOM Major Army Subcommands (SUBMACOM) and project managers. This document is used as a management tool for monitoring trends of the MMT Program and includes a discussion of the overall DARCOM Program. There are separate sections in the report showing projects that are new, active, and completed.

3. The submission of status reports is required by AR 700-90 to be made to IBEA within 2-1/2 months after the reporting period. For this document, that date was 15 Mar 84. Due to the peak workload conditions resulting from the transfer of the MMT program to the R&D account and the preparation required for the R&D annual reviews, the deadline was extended to 4 Apr 84. While the extension resulted in reducing delinquencies from 12% to 4%, it also delayed the publication.

4. Persons who are interested in the details of an individual project should contact the Manufacturing Technology representative at the SUBMACOM. A list of those representatives is included in Appendix IV to this report. The Project Officer for this task is Cecilia Fuller, AUTOVON 793-6521.

FOR THE DIRECTOR:



James W. Carstens

JAMES W. CARSTENS
Chief, Manufacturing Technology Division

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DISCUSSION

Background

The Army Manufacturing Methods and Technology (MMT) Program was established in 1964 as a part of the Army Production Base Support (PBS) Program. The MMT Program has goals of improving existing manufacturing technology, translating new technology into production line processes, and supporting the modernization and expansion of the military hardware production base. The program is governed by the provisions of AR 700-90, Chapter 3.

Composition of the Report

This MMT Project Execution Report provides the status summaries of 383 active projects which have a total authorized cost of $213.6 million. Total MMT program statistics, as well as the summaries of the active projects are also included. The report is compiled, edited, and published for HQ, DARCOM by the Manufacturing Technology Division of the Army Industrial Base Engineering Activity (IBEA) in accordance with AR 700-90, paragraph 3-4j(1).

Distribution of this report is extended to Army materiel developers and users and to counterparts in the Navy and the Air Force. Inquiries on the detailed technical aspects of any individual project may be answered by the MMT Program representative of the action command under which the project was completed or is being executed. Inquiries or suggestions concerning this report or other facets of the MMT Program may also be directed to the Manufacturing Technology Division of IBEA.

The report is composed of three major sections:

a. Projects Added 2nd Half, CY83 - A list divided by organization of all projects funded during the second half of CY83. Included is a narrative of the problem for each project.

b. Final Status Reports Received During 2nd Half, CY83 - A list divided by organization of all projects for which final status reports were received during the second half of CY83. Included is a narrative of the final status for each project.

c. Summary Project Status Report - These reports are divided by organization and include a summary of funding by fiscal year and a narrative status of the work accomplished during the six month period for each active project.

Status Report Submissions

There are two areas which have been of concern in the past: (1) delinquent status reports, and (2) final status reports without technical reports. Figure 1 summarizes by Command these two situations.

STATUS REPORT (RCS DRCMT 301) SUBMISSIONS

COMMAND	*301 REPORTS REQUIRED	*301 REPORTS SUBMITTED	NUMBER AND (%) OF DELINQUENT 301 REPORTS		NUMBER OF FINAL 301 REPORTS	NUMBER OF TECH RPTS SUBMITTED W/FINAL STATUS REPORTS	NUMBER AND (%) OF DELINQUENT TECHNICAL REPORTS	
AMETA	7	7	0	0%	0	0	0	0%
DESCOM	11	10	1	9%	2	0	2	100%
ERADCOM	37	34	3	8%	2	0	2	100%
TMDE	4	4	0	0%	1	N/A	N/A	
AMMRC	5	5	0	0%	1	N/A	N/A	
TECOM	3	3	0	0%	0	0	0	0%
AVSCOM	44	44	0	0%	11	4	7	64%
CECOM	11	11	0	0%	0	0	0	0%
MICOM	29	27	2	7%	5	3	2	40%
TACOM	59	59	0	0%	6	3	3	50%
AMCCOM (AMMO)	130	119	11	8%	19	11	8	42%
AMCCOM (WPNS)	99	99	0	0%	13	8	5	38%
TROSCOM	9	9	0	0%	5	4	1	20%
TOTAL	448	431	17	4%**	65	33	30	46%

FIGURE 1

* Does not include FY84 projects which were recently funded and which did not require a status report.

** Delinquency rate reflects a 3 week extension of the cutoff date. Actual delinquency as of the regular cutoff date was 52 reports or 12%.

According to this figure, there was only a 4% delinquency in receipt of 301 status reports or 17 reports not submitted by the cutoff date. This appears to be an improvement over the 5% delinquency from last reporting period and the 8% delinquency from the period a year ago. This improvement in delinquency is due to the fact that the deadline (already 2-1/2 months from the end of the period, 31 Dec) was extended to 4 Apr 84. The extension was necessary because of last minute congressional action which redirected the MMT Program from the Procurement Account to the R&D account requiring that twice as much clerical and computer work be accomplished in a 3 month shorter period of time. Specifically, preparation for the 1984 MMT Budget Reviews, held during March, conflicted with the peak workloads for the Execution Report. The actual delinquency was 12% or 52 reports, a significant decrease from the 33% delinquency as of the regular cutoff date for last period, and slightly higher than the 8% delinquency a year ago.

Accuracy of MMT summary information for management depends on a complete submission of all the project status reports for each Command. Any delinquency creates a void in the information presented in the compiled report. Therefore, steps are taken to remind the Commands of the submission of these reports. In December 1983, a call letter was mailed out to each SUBMACOM. Enclosed with this letter was a computerized listing of the projects for which a status report was required for this reporting period. Also, phone calls were made on March 1st to those commands whose submission had not yet been received. Even with the reminders, the general trend has been that more and more of the reports are submitted later and later; during 12-15 March, 47% of the status reports were received. Even though the two reports prior to this one have shown less delinquencies (8% and 5%), this has mainly been as a result of the revised AR 700-90 giving the Commands an extended 2-1/2 months from the end of the reporting period to submit their status reports. Delinquency and timeliness are areas that must be improved in order to insure a useful review of the progression of the MMT Program.

Relative to the second area of concern, there has always been a requirement that a technical report be prepared for each project. The technical report is an accepted vehicle, and in some cases the only vehicle, for true technology transfer and its importance cannot be overstated. In May 1981, a letter from the Directorate of Manufacturing Technology reinforced the requirement for technical reports. Of the 78 final status reports submitted during the previous reporting period, 42 of them, or 54% did not have technical reports included. For this period, as noted in Figure 1, 65 final status reports were received with 30 of them, or 46% being delinquent the technical report. The percentage of delinquency has improved very little. Greater strides will have to be made if true technology transfer is expected to occur. The 65 projects for which final status reports were received during this period can be found in a separate section on page 12 where the final work status is given for each project.

Program Summary

Manufacturing Methods and Technology (MMT) projects and efforts are major elements of the Army's Manufacturing Technology (MANTECH) Program. AR 700-90 succinctly describes the MANTECH objective as the improvement of the industrial readiness and efficiency of the production base for Army materiel. Further defined objectives are stated in the Statement of Principles for the DOD Manufacturing Technology Program. This Statement, originating at the Deputy Under Secretary of Defense level, not only establishes ground rules for the Program but highlights the level of emphasis that the Program receives.

To attain the objectives described in the Statement of Principles, the Army, prior to FY83, funded discrete work units called "Projects" on a yearly basis. These projects, identified by a seven-digit number, contained work requests, which upon completion would result in an end product whose technical transfer could be effected. At times, in order to have a total work package which was implementable, (i.e., which could achieve the payback for which the work was funded) the scope was of such a magnitude that total funding in one fiscal year could be an inefficient use of resources.

In this event, the total work was multi-year funded, (i.e., be more than one project, each having a technically transferrable end product). These total implementable work units were called "Efforts". These efforts could consist of many projects or just be one project, depending on the amount of work required to achieve the implementable technical goal. Efforts are identified by a four-digit number which is the same as the last four digits of a project or projects which make up the effort.

For FY83 and FY84 the conversion from the Procurement Account to the R&D account will result in some administrative changes. An MMT "project" will, under R&D parlance, be considered a "task". Also, to accommodate the R&D obligational goals, these yearly funded tasks will likely become level of effort work rather than discrete, stand alone work units which result in end products whose technical transfer could be effected. Multi-year funding will probably become more prevalent in leading to the completion of an implementable work "effort".

Due to these changes, it is likely that MMT reporting procedures will change in the future.

The following three charts (Figures 2-4) summarize MMT project reporting and funding status for the 2nd Half of CY83. These summaries include data from the major Army subcommands (SUBMACOM) that have active projects and the AMMRC and AMETA sponsored projects. Cumulative figures pertaining to project distribution and expenditures of funds on contract and in-house are provided. Projects that were closed out during the

reporting period are not included in the data used for these summaries. On the following three charts, comparisons are made between parallel reporting periods (2nd half, CY82 and 2nd half, CY83) in order to observe the project number and funding changes that occur within each Command and within the total program.

A summary of the MMT Program (Figure 2) indicates that the number of projects has dropped by 15% and the funds have decreased by 17% in comparison to the 2nd half of CY82. This significant decrease is due to two reasons: 1) since the FY84 projects were funded late (after January 1984), the FY84 program is not included in the figure, and 2) in FY83 the MMT program took a severe cut from $80+ million to $39 million.

MMT PROGRAM SUMMARY

Organization	Number of Projects			Funding Status		
	2nd Half CY82	2nd Half CY83	Percent Change	2nd Half CY82	2nd Half CY83	Percent Change
AMETA/DESCOM	14	16	14	$ 5,474,000	$ 5,818,000	6
ERADCOM	41	35	-15	29,561,900	21,653,000	-27
TMDE	4	3	-25	1,858,000	1,446,000	-22
AMMRC	6	4	-33	13,495,300	14,488,700	7
TECOM	2	3	50	1,494,000	1,934,000	29
AVSCOM	47	33	-30	28,029,200	25,038,900	-11
CECOM	9	11	22	7,684,900	9,222,800	20
MICOM	31	24	-23	20,405,100	12,645,000	-38
TACOM	59	53	-10	26,669,900	31,134,000	17
AMCCOM (Ammo)	133	111	-17	97,794,600	65,513,000	-33
AMCCOM (Weapons)	88	86	-2	21,670,500	23,022,600	6
TROSCOM	14	4	-71	4,450,500	1,887,000	-58
TOTAL	448	383	-15	$258,587,900	$213,803,000	-17

FIGURE 2

It can be noted that the largest decrease in number of projects was AMCCOM (Ammo) while the largest decrease percentagewise was TROSCOM. TROSCOM's large decrease is attributed to the close-out of all the NLAB projects last period and also due to the 5 BRDC projects that were closed out this period. Dollarwise the largest decrease was AMCCOM (Ammo) with $32.3 million. All increases were relatively small, except for TACOM which increased $4.5 million.

A breakout of the active projects by fiscal year is shown in Figure 3. Over the past few years there has been a continued emphasis on closing out older projects. Currently, data is provided to DARCOM every

ACTIVE PROJECTS BY FISCAL YEAR

ORGANIZATION	75	76	7T	77	78	79	80	81	82	83	TOTAL
AMETA/DESCOM			1		1	1	1	2	7	3	16
ERADCOM		1		1	2	3	5	5	8	10	35
TMDE							1		1	1	3
AMMRC							1	1	1	1	4
TECOM								1	1	1	3
AVSCOM								8	19	6	33
CECOM					1	1	1	4	2	2	11
MICOM						1	1	5	10	7	24
TACOM				1	1	2	2	12	20	15	53
AMCCOM (AMMO)				1	1	7	11	24	40	27	111
AMCCOM (WEAPONS)		1		2		2	10	16	39	16	86
TROSCOM						1		1	2		4
TOTAL		2	1	5	6	18	33	79	150	89	383
2ND CY82 TOTAL	1	4	3	11	19	41	68	125	172	0	444

FIGURE 3

quarter listing the active projects funded in FY79 and prior to monitor for completion. The success of this DARCOM follow-up is shown by comparing the fiscal years 75-79 for the 2nd half CY82 with the current period. A year ago, there were 79 active projects for these fiscal years. There are only 32 projects for these years reported during the 2nd half CY83. This is a 68% reduction in older projects. In addition the active FY80 projects were reduced by 51% during the same period.

Figure 4 indicates at what rate the project funds are being expended and by whom. Over the past three years, the active MMT program has shown

PROGRAM FUNDING EXPENDITURES
(MILLIONS)

ORGANIZATION	NO OF PROJECTS	AUTHORIZED FUNDING	ACTUAL CONTRACTS* AMOUNT	ACTUAL CONTRACTS* EXPENDED	REMAINING* (IN-HOUSE + PLANNED CONTRACT) AMOUNT	REMAINING* (IN-HOUSE + PLANNED CONTRACT) EXPENDED
AMETA/DESCOM	16	$ 5.8	$ 3.5	$ 2.4 (67%)	$ 2.3	$ 0.5 (22%)
ERADCOM	35	21.7	18.3	12.2 (66%)	3.4	1.7 (50%)
TMDE	3	1.4	0.7	0.7 (96%)	0.7	0.5 (79%)
AMMRC	4	14.5	5.7	3.3 (57%)	8.8	8.2 (93%)
TECOM	3	1.9	0	0 (0%)	1.9	1.8 (95%)
AVSCOM	33	25.0	20.7	12.6 (60%)	4.3	2.3 (53%)
CECOM	11	9.2	8.3	4.5 (54%)	0.9	0.5 (64%)
MICOM	24	12.6	9.0	7.7 (84%)	3.6	1.8 (50%)
TACOM	53	31.1	18.9	11.6 (61%)	12.2	8.3 (67%)
AMCCOM (AMMO)	111	65.5	39.5	26.9 (68%)	26.0	14.0 (53%)
AMCCOM (WEAPONS)	86	23.0	9.1	5.3 (58%)	13.9	6.0 (42%)
TROSCOM	4	1.9	1.6	1.5 (96%)	0.3	0.2 (75%)
TOTAL	383	$ 213.6	$ 135.3	$ 88.7 (65%)	$ 78.3	$ 45.8 (58%)
2ND CY82 TOTAL	444	$ 256.9	$ 162.0	$ 94.5 (58%)	$ 94.3	$ 45.3 (48%)

FIGURE 4

* All figures rounded to one decimal place.

an increasing contractor participation. The data from this period supports the continued greater degree of contractor involvement. For the 2nd half of CY82, the contractor and in-house figures were $162 million vs. $94 million, or 63.1% contractor involvement. For the 2nd half of CY83, these same respective values are $135 million vs. $78 million, or 63.5% contractor involvement. This is in part due to the extended cutoff date which resulted in less apparent delinquencies, which in turn resulted in more projects having funds cited on contract than that which was true during the comparison report period. Figure 4 shows that compared to the same period last year, contractor expenditures have risen to 65%, and in-house expenditures have also risen (48% vs. 58%). Again these improved figures can be related to the inclusion of more current data which resulted from less report delinquencies (an apparent 4% this period). It should be noted that cost information is included for TMDE, whereas in the comparison period it was not. The 17 delinquent projects also have an impact on this chart. There would have been additional in-house and contract funds expended that were not reported to IBEA.

MMT PROGRAM

PROJECTS ADDED 2ND HALF, CY83

PROJECTS ADDED IN 2ND HALF, CY83

DESCOM

6 83 3001
POWER AND INERTIA SIMULATOR-COMBAT VEHICLE TESTING

THE TEST TRACK AT THE MAINZ ARMY DEPOT IS A PRIMARY BOTTLENECK IN THE REBUILD MISSION. ALTHOUGH THE TEST TRACK IS OVERLOADED AN INCREASE IN THE WORKLOAD IS PROJECTED.

MICOM

3 83 1075
ELECTRONICS COMPUTER AIDED MANUFACTURING (ECAM)

ALTHOUGH INTEGRATED CIRCUITS, HYBRID CIRCUITS, PRINTED CIRCUITS AND CABLES ARE DESIGNED ON A COMPUTER, THERE IS LITTLE COMPUTERIZED CONTROL OF PROCESSES USED TO PRODUCE THESE ITEMS. A MASTER PLAN IS NEEDED TO DEFINE THE AREA AND REQUIREMENTS.

TACOM

4 83 5064
LIGHT WEIGHT SADDLE TANK (PHASE III)

FABRICATE AN ECONMICAL HIGH IMPACT NON-METALLIC FUEL TANK.

AMCCOM (AMMO)

5 83 4580
UV-CURE PAINT FOR LARGE CALIBER PROJECTILES

PROJECTILES ARE SPRAYED PAINTED WITH SOLVENT-CUT ALKYD PAINTS WHICH ARE SUBSEQUENTLY DRIED AND CURED. THE VOLATILE ORGANIC COMPOUNDS THAT ARE EVOLVED DURING DRYING ARE EXHAUSTED TO THE ATMOSPHERE AND IN TURN POLLUTE THE AIR.

5 83 4563
MANUFACTURE OF STEEL FOLDING FINS

THE METHOD OF PRODUCING THE FINS FOR THE XM815 HEAT-MP-T PROJECTILE INVOLVES COSTLY AND TIME CONSUMING SURFACE GRINDING RESULTING IN COST PER PROJECTILE OF $570.00.

PROJECTS ADDED IN 2ND HALF, CY83
(CONTINUED)

5 83 4663
REMOVAL OF BARIUM FROM COMP A-3, TYPE II WASTEWATER

THE PLANNED TYPE II COMPOSITION A-3 USES BARIUM CHLORIDE AS AN EMULSION BREAKER. FREE BARIUM IONS ARE EXTREMELY TOXIC. FEDERAL AND STATE REQUIREMENTS PERMIT ONLY UP TO 1 MG/L FREE BARIUM IN DRINKING WATER. HENCE, TREATMENT OF EFFLUENT REQUIRED.

TOTAL PROJECTS ADDED IN 2ND HALF, CY83 6

MMT PROGRAM

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY83

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY83

DESCOM

G 83 0002
CAM APPLICATION OF ROBOTICS TO SHELTER REFINISHING

CONTRACT LET TO DESIGN AND SPECIFY A ROBOTIC STATION TO PAINT VARIOUS ALUMINUM COMMUNICATIONS SHELTERS. A SECOND CONTRACT LET TO DESIGN AND SPECIFY A ROBOTIC STATION TO PREPARE SURFACES OF ALUMINUM SHELTERS FOR PAINTING.

G 81 4005
WATER JET MATERIAL REMOVAL SYSTEM

THE DESIGN OF THE WATER JET SYSTEM HAS BEEN COMPLETED BY THE CONTRACTOR.

ERADCOM

2 77 9754
CONTIN CYCLE PROC OF SHOCK RESISTANT QUARTZ CRYSTAL UNITS

GEND BUILT A PILOT LINE FOR FABRICATING 22 MHZ AT CUT QUARTZ CRYSTALS IN CERAMIC FLATPACKS. WORK INCLUDED PROVE-IN OF THE VACUUM QUARTZ CRYSTAL FABRICATION FACILITY CONSTRUCTED UNDER PHASE I (2 76 9754). 716 UNITS WERE PROCESSED IN FINAL PILOT RUN.

H 80 9897
SURFACE ACOUSTIC WAVE RESONATOR + REFLECTIVE ARRAY DEVICES

THE PROCESSES FOR PRODUCING SURFACE ACOUSTIC WAVE (SAW) COMPRESSORS HAVE BEEN DEVELOPED. AN INDUSTRY DEMONSTRATION OF THE RESULTS WAS HELD IN NOV. THESE DEVICES ARE EXPECTED TO BE USED ON ELINT AND SIGINT.

TMDE

3 81 3115
ENGINEERING FOR METROLOGY AND CALIBRATION

THIS PROJECT HAS BEEN COMPLETED.

3 81 3115 24
AUTO OF LAB CALIBRATION SERVICES

THIS SUBTASK HAS BEEN COMPLETED. THIS SUBTASK RESULTED IN THE REPLACEMENT OF THE MINICOMPUTER PREVIOUSLY USED BY THE ARMY'S PRIMARY STANDARDS LABORATORY WITH A SMALL MORE EFFICIENT DESK TOP COMPUTER/CONTROLLER.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY83
(CONTINUED)

3 81 3115 25
BASIC METROLOGY STDS FOR USE IN WIDE-RANGING ENVIRONMENTS

WORK ON THIS SUBTASK IS CONTINUED UNDER 3 82 3115-25.

3 81 3115 29
SOLID STATE VOLTAGE STDS F/REPLACE OF CHEMICAL STD CELLS

WORK ON THIS TASK HAS BEEN COMPLETED.

AMMRC

M 78 6350 2226
AIR FLOW TEST EQUIPMENT

THE INTERFACE CIRCUITRY FOR CONTROLLING THE VALVE AND SENSING SYSTEM PRESSURE WAS BUILT. A PERMANENT FRAMEWORK TO SUPPORT THE SYSTEM PIPING WAS COMPLETED. THE TECHNICAL REPORT IS BEING FINALIZED.

M 78 6350 2434
RAPID NDT FOR DOPANT DENSITY AND DISTRIBUTION

THE WORK HAS BEEN COMPLETED. TECHNOLOGY HAS BEEN TRANSITIONED TO INDUSTRY. THIS TECHNOLOGY IS NOW ROUTINELY EMPLOYED BY CONTRACTORS ON INCOMING LASER RODS TO EVALUATE ND DOPING. THIS PROGRAM HAS CONTRIBUTED TO THE COST REDUCTION OF GVS-5 RANGEFINDER.

M 79 6350 2425
OPTICAL TESTING OF FAR INFRARED MATERIALS

NO PROGRESS HAS BEEN MADE ON THIS PROJECT SINCE THE LAST REPORTING PERIOD DUE TO HIGHER PRIORITY PROGRAMS.

M 79 6350 2430
ACCEPT TESTER FOR COMMON MODULE SCANNER PERFORMANCE

THIS PROJECT WORK HAS BEEN COMPLETED. THE EQUIPMENT WILL EITHER BE RETAINED BY NVEOL FOR IN-HOUSE TEST USE OR PROVIDED AS GFE FOR MANUFACTURING TESTING.

M 79 6350 2433
POWER SUPPLY TEST CONSOLE FOR 2ND GEN IMAGE INTENSIFIE

THE SOFTWARE DEVELOPMENT AND TESTING HAS BEEN COMPLETED FOR THE FOUR POWER SUPPLIES. DOCUMENTATION OF THE SOFTWARE, OPERATOR MANUAL AND FINAL REPORT REMAIN TO BE COMPLETED.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY83
(CONTINUED)

M 79 6350 2450
GUN STEEL ADHESION CHROMIUM COATING MEASUREMENT

SEE PROJECT NO M 80 + 81 6350-2450 FOR STATUS.

M 81 6390
MMT PROGRAM IMPLEMENTATION AND INFORMATION TRANSFER

PUBLICATION OF THE MANTECH JOURNAL.

TECOM

O 78 5071 37
MILITARY VEHICLE ROLL OVER TESTS

SEE SUBTASK 37 FY83 FOR DATA.

O 79 5071 37
MILITARY VEHICLE ROLL OVER TESTS

SEE SUBTASK 37 FY83 FOR DATA.

O 80 5071 43
TEST AUTOMATION DEVELOPMENT

SEE SUBTASK 43 FY83 FOR DATA.

C 80 5071 57
GENERAL PURPOSE BIT SLICE MICRO-COMPUTER

* SEE SUBTASK 57 FY83 FOR DATA.

C 80 5071 59
SOLAR POWERED INSTRUMENTATION VAN

* SEE SUBTASK 59 FY82 FOR DATA.

C 80 5071 60
RECEIVER OPERATING CHARACTERISTICS MEASUREMENTS

SEE SUBTASK 60 FY81 FOR DATA.

C 80 5071 71
IMPROVED COPPER CRUSHER GAGE

SEE SUBTASK 71 FY83 FOR DATA.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY83 (CONTINUED)

AVSCOM

1 81 7108
MANUFACTURING TECHNIQUES FOR TRANSMISSION SHAFT SEALS

TECHNICAL WORK COMPLETED. FINAL REPORT HAS BEEN WRITTEN AND PRINTED, HOWEVER, THE REPORT COVER IS BEING CHANGED BEFORE DISTRIBUTION.

1 80 7155
COST EFFECTIVE MANUFACTURING METHODS FOR HELICOPTER GEARS

WORK BY INTERNATIONAL HARVESTER HAS CEASED AND CONTRACT TERMINATION IS UNDERWAY. DCAS IS CONDUCTING A SURVEY OF EQUIPMENT AND IS ARRANGING TO REMOVE GOVERNMENT EQUIPMENT FROM THE HINSDALE PLANT. PROGRAM WILL NOT CONTINUE.

1 81 7155
COST EFFECTIVE MANUFACTURING METHODS FOR HELICOPTER GEARS

IN VIEW OF CONTRACTORS UNWILLINGNESS TO CONTINUE, FUNDS IN THE AMOUNT OF 220K DOLLARS WILL BE RETURNED TO AVSCOM.

1 80 7156
ULTRASONIC ASSISTED MACHINING FOR SUPERALLOYS

FURTHER DELAY WILL BE ENCOUNTERED IN INSTALLING EQUIP AT CORPUS CHRISTI ARMY DEPOT. CONTRACTOR HAS BEEN GIVEN AUTHORITY TO SHIP AND INSTALL EQUIP. FURTHER LOAN AGREEMENTS WILL BE THE RESPONSIBILITY OF AVSCOM.

1 81 7200
COMPOSITE ENGINE INLET PARTICLE SEPARATOR

ALL PROJECT WORK COMPLETED. IMPLEMENTATION OF COMPOSITE ENGINE INLET PARTICLE SEPARATOR IS PLANNED FOR THE T700 GROWTH ENGINE. PROJECT TECHNOLOGY HAS BEEN INCORPORATED IN 5000 HP MIDE 6.3 PROGRAM.

1 79 7238
PRECISION FORGED ALUMINIUM POWDER METALLURGY

BASED ON TECHNICAL PROBLEMS, UNSATISFACTORY FORGING RESULTS AND UNAVAILABILITY OF FUNDS TO MEET ORIGINAL GOALS THE AIR FORCE AND ARMY TERMINATED THE EFFORT. FINAL TECHNICAL REPORT HAS BEEN WRITTEN.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY83
(CONTINUED)

1 81 7298
HIGH TEMPERATURE VACUUM CARBURIZING

ALL WORK UNDER THIS PROJECT HAS BEEN COMPLETED. METALLURGICAL EXAMINATIONS WERE PERFORMED ON THREE TEST 9310 STEEL SLUGS. THE PROCEDURE FOR HEAT TREATING THE BMS 7-223 GEARED ROLLER TEST SPECIMENS WAS PREPARED AND ALL ROLLERS WERE HEAT TREATED.

1 82 7340
COMPOSITE MAIN ROTOR BLADE

THE FINAL REPORT DRAFT HAS BEEN REVIEWED, AND IS BEING CORRECTED.

1 81 7351
COMPOSITE SHAFTING FOR TURBINE ENGINES

A TECHNICAL REPORT IS IN PREPARATION.

1 82 7366
SPIRAL SELF-ACTING SEALS

PROJECT TERMINATED AT REQUEST OF PM. SPIRAL SELF-ACTING SEAL WILL BE INCORPORATED IN T700-GE-702. RFP NEVER ISSUED.

7 82 6190
IMPRVD CUTTER LIFE, T-700 COMP BLISK/IMPELLER MILLING OPER

LABORATORY TESTS AND PRODUCTION VERIFICATION TESTS HAVE RESULTED IN THE IDENTIFICATION OF TOOL MATERIAL, GEOMETRY, SPEEDS, AND FEEDS WHICH YIELD THE BEST RESULTS IN ACTUAL PRODUCTION. ALL WORK IS COMPLETE. IMPLEMENTATION IS UNDERWAY.

MICOM

3 83 1072
MULTIPLE HIGH RELIABILITY/LOW VOLUME LSI MANUFACTURING (CAM)

INSOUTH MICROSYSTEMS COMPLETED A STUDY OF PROCESSES INCLUDING PHOTORESIST COATING, CHEMICAL VAPOR DEPOSITION, ION IMPLANTATION, DIFFUSION AND METALLIZATION. ALL ARE GOOD FOR GROUP APPLICATION EXCEPT DIFFUSION WHICH MUST BE COMPUTER CONTROLLED.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY83
(CONTINUED)

3 82 1086
COBALT REPLACEMENT IN MARAGING STEEL-ROCKET MOTOR COMPONENTS

PHASE TWO EFFORT COMPLETE. TECHNICAL REPORT PUBLISHED AND RECEIVED BY IBEA.

3 81 3139
MILLIMETER SEEKERS FOR TERMINAL HOMING (TH)

THIS EFFORT IS COMPLETED. UNCLASSIFIED TECHNICAL REPORT IS STILL NOT RELEASED. A SPECIAL WORKING GROUP EVALUATING CONCEPT DEFINITION PROPOSALS FOR THE TERMINALLY GUIDED WARHEAD RECEIVED THE IMPLEMENTATION PLAN FOR MLRS-TGW.

3 81 3294
PRODUCTION PROCESSES FOR ROTARY ROLL FORMING

PROJECT COMPLETE. TECHNICAL REPORT WHICH WAS RECEIVED IS NOT THE FINAL TECHNICAL REPORT.

3 81 3445
PRECISION MACHINING OF OPTICAL COMPONENTS

THIS PROJECT IS COMPLETE. A FACILITY HAS BEEN ESTABLISHED FOR DIAMOND TURNING HIGH ENERGY LASER AND INFRARED OPTICS.

TACOM

T 79 4575
LASER WELDING TECHNIQUES FOR MILITARY VEHICLES

ALL WORK COMPLETED.

T 80 5045
SPALL SUPPRESSIVE ARMOR FLR COMBAT VEHICLES (PHASE II)

THE PROJECT IS COMPLETED. A FINAL TECHNICAL REPORT (NO. 12853) HAS BEEN PUBLISHED. A PIP COULD BE INSTALLED IN M113 VEHICLES AT THE RED RIVER ARMY DEPOT. THE COST OF THE KITS ARE EXPECTED TO BE EXTREMELY HIGH. CREW CASUALTY REDUCTION IS VERY GOOD.

T 81 5082
FLEXIBLE MACHINING SYSTEM, PILOT LINE FOR TCV COMPONENTS

THIS PROJECT IS PHASE 3 OF A 5 PHASE PROGRAM. THIS PHASE IS COMPLETE AND RESULTED IN A 5 VOLUME FMS MANUAL. A END OF PROJECT PRESENTATION IS SCHEDULED FOR APRIL 1984.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY83 (CONTINUED)

T 81 5085
PRODUCTION TECHNIQUES FOR FABRICATING TURBINE RECUPERATOR

PROJECT COMPLETED THE SYSTEM IS INSTALLED AND OPERATING SUCCESSFULLY.

T 80 6057
XM1 COMBAT VEHICLE

SEE SUBTASK NUMBER 6. PROJECT IS BEING TERMINATED. NO FINAL TECH REPORT WILL BE WRITTEN. DCAS CLEVELAND IS NEGOTIATING RETURN OF FUNDS.

T 80 6057 06
METROLOGY METHODS

THE TASK WAS TERMINATED. TACOM PROCUREMENT PROCEDURES ARE UNDERWAY TO OBTAIN THE BALANCE OF THE FUNDS FROM THE CONTRACTOR.

T 82 6067
FRAME WELDING FIXTURES

ALL WORK COMPLETED WAITING ON FINAL TECHNICAL REPORT.

AMCCOM (AMMO)

5 78 1353
SMOKE MIX PROCESS (GLATT)

A TECHNICAL REPORT HAS BEEN PREPARED AND SUBMITTED TO COMPLETE THIS PROJECT.

5 79 1354
SLUDGE VOLUME REDUCTION AND DISPOSAL PROCESS STUDY

BENCH AND PILOT PLANT BATCH TESTS WERE PERFORMED ON INCINERATOR EFFLUENT SLUDGE AND LATER ON SETTLED LAGOON SLUDGE. THE SLUDGES WERE CHARACTERIZED FOR SOLIDS CONTENT, PCT SETTLED SLUDGE VOLUME, AND WHETHER THEY WERE HAZARDOUS BY RCRA DEFINITION.

5 79 1355
MANUFACTURING PLANT TOXIC EFFLUENT/EMISSION PRETREATMENT

DESIGN CRITERIA AND FINAL TECHNICAL REPORT ARPBA-TR-24 WERE COMPLETED IN MARCH 1983.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY83
(CONTINUED)

5 80 1355
MANUFACTURING PLANT TOXIC EFFLUENT/EMISSION PRETREATMENT

THIS PROJECT IS COMPLETE. TOXIC POLLUTANTS AND HAZARDOUS WASTE PRODUCED AT PBA WAS IDENTIFIED. THE BAT FOR TREATMENT OF THE WASTE WAS EVALUATED AND DESIGN CRITERIA PREPARED FOR PILOT SCALE EVALUATION.

5 79 4046
QUANTITATIVE ANALYSIS OF BLENDED EXPLOSIVE SAMPLES

A PROCESS FOR CONDUCTING RAPID CHEMICAL ANALYSIS OF NOL-130 VIA THE USE OF A POLAROGRAPH WAS DEVELOPED. IT TAKES ONLY 45 MIN. THIS COMPARES TO THE STATUS QUO METHOD (WET CHEMICAL ANALYSIS) WHICH REQUIRES 4 HOURS.

5 82 4061
NITROGUANIDINE PROCESS OPTIMIZATION

THE NG DEMO PLANT WAS OPERATED TO OPTIMIZE NG AND QN PROCESS PARAMETERS. AN INTERIM TECHNICAL REPORT WAS WRITTEN COVERING OPERATIONS AND ENGINEERING ANALYSIS OF RESULTS OBTAINED.

5 82 4078
UPGRADE SAFETY, READINESS, + PROD OF EXISTING MELT POUR LNES

IN-HOUSE LOADING TESTS TO DEFINE AN ACCEPTABLE PROCESS FOR ELIMINATING POROSITY IN TNT LOADED 155MM, M549 WARHEADS WERE TERMINATED WITHOUT SUCCESSFUL RESULTS. IOWA AAP HAS COMPLETED THE CONCEPT DESIGN FOR UPDATING LINE 3A.

5 78 4149
LOADING OF 30MM ADEN/DEFA HEDP AMMUNITION

THE OBJECTIVES ESTABLISHED AT THE START OF THE PROGRAM WERE SUCCESSFULLY MET. THE 3 MAJOR TASKS COVERED PROJECTILE FABRICATION, SHAPE CHARGE LINER FABRICATION AND PROJECTILE CHARGE LOADING. ALL PROCESSES DEVELOPED ARE BEING USED IN ACTUAL PRODUCTION.

5 80 4189
HIGH FRAGMENTATION STEEL PRODUCTION PROCESS

WORK ON THIS PROJECT IS COMPLETE EXCEPT FOR THE FINAL TECHNICAL REPORT. THE FY82 PROJECT WAS TERMINATED AS OF 05/02/83.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY85
(CONTINUED)

5 80 4281
CONSERVATION OF ENERGY AT ARMY AMMUNITION PLANTS

SEE THE FOLLOWING INDIVIDUAL TASKS FOR WORK STATUS.

5 80 4281 A01
PROCESS ENERGY INVENTORY

THIS TASK HAS BEEN COMPLETED. AT IOWA AAP, THE INVENTORY IDENTIFIED SEVERAL POTENTIAL ENERGY CONSERVATION OPPORTUNITIES. AT KANSAS AAP, AN ELECTRIC MOTOR STUDY DEVELOPED A PRIORITY LIST OF MOTORS SO THEY COULD BE REPLACED WITH HIGH EFFICIENCY MOTORS.

5 80 4281 A04
ENERGY RECOVERY FROM WASTE HEAT

THE HEAT PIPE HEAT RECOVERY SYSTEM WAS EVALUATED. THE SYSTEM WAS DESIGNED TO RECOVER 12MM BTU/HR FROM THE HOT WASTE WATER. RECOVERING HEAT FROM THE HOT KETENE VAPOR TO PREHEAT COMBUSTION AIR FOR THE KETENE FURNACE WAS PROVEN. FINAL RPT BEING PRINTED.

5 80 4281 A06
UNCOOLED PRODUCER GAS FOR KETENE MANUFACTURE

EQUIP WAS INSTALLED AND DEBUGGED. BENCH SCALE SET-UP INCLUDED INSULATED PIPING, PRESSURE AND TEMPERATURE INSTRUMENTATION, TAR TRAPS AND A SMALL BOILER TO CHECK COMBUSTION EFFICIENCIES. USING HOT, CRUDE PROD GAS AS A FUEL FOR KETENE FURN WAS EXPLORED.

5 81 4285
TNT EQUIVALENCY TESTING FOR SAFETY ENGINEERING

FINAL REPORTS WERE PREPARED ON DIGL-RP, OCTOL 75/25, AND AMMONIUM PERCHLORATE. PREPARED PRELIMINARY REPORTS ON BULK FLAKE TNT AND TNT EQUIVALENCIES.

5 82 4298
EVALUATION OF DIMETHYLNITROSAMINE DISPOSAL ON HAAP B-LINE

AN INTERIM FINAL TECHNICAL REPORT HAS BEEN PREPARED.

5 80 4309
PROPELLANT PROCESS DEVELOPMENT FOR 120MM TANK AMMUNITION

SEE INDIVIDUAL TASKS.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY83
(CONTINUED)

5 80 4309 01
DEVELOP MFG METHODS FOR STICK AND JA-2 PROPELLANT

PROCESS STUDIES COMPLETED ON 15-INCH PRESS. BALLISTIC TESTS ON PILOT LOTS CONDUCTED. TAKE AWAY SYSTEM SHIFTED TO DEMAND CUTTER/PNEUMATIC CONVEYOR TYPE. INTERIM DEGN SPENT ACID REPORT PUBLISHED. FINAL TECH REPORT SUBMITTED FOR PUBLICATION.

5 80 4309 02
EXPLOSIVE LOADING OF 120MM HEAT-MP

THE PREVIOUSLY PLANNED MATERIAL HANDLING AND PRODUCTION TOOLING DESIGNS WERE CHANGED FROM 4 CAST LOADED PROJECTILE TO A PRESS LOADED UNIT. THE CHANGE WAS MADE QUICKLY AND EFFECTIVELY AND PROCUREMENT PACKAGES PREPARED TO PROCURE THE REQUIRED HARDWARE.

5 80 4309 03
ASSEMBLY PROCESS DEVELOPMENT

BONDING ALIGNMENT CARTS, PROPELLANT LOADING STATION AND BASE CASE AND CARTRIDGE CASE ASSEMBLY MACHINE BUILT UNDER THIS TASK ARE INSTALLED AND OPERATING AT IOWA AAP. TASK COMPLETED. FINAL TECHNICAL REPORT PROMISED TO BE INCLUDED WITH FY81 TECH REPORT.

5 80 4310
DMSO RECRYSTALLIZATION OF RDX/HMX

INTERIM QUALIFICATION TESTS WERE COMPLETED ON RDX/HMX EXPLOSIVES RECRYSTALLIZED FROM DMSO. NO SIGNIFICANT DIFFERENCES WERE FOUND. TOXICITY TESTS ON IN-PROCESS PLANT STREAMS INDICATED NO TOXILITY BUT STRONG MUTAGENIC ACTIVITY.

5 81 4449
PROCESS IMPROVEMENT FOR COMPOSITION C-4

SCALE UP OF BATCH SIZES FOR PBX-0280 AND LX14 WAS IMPLEMENTED. DEWATERING USING EIMCO FILTER WAS COMPLETED. DRYER STUDIES USING NAUTA MIXER/DRYER WITH NOMINAL COMP C-4 FOUND INEFFICIENT.

5 80 4464
IMPROVED HI-SPEED WATERPROOFING APPLICATION F/SC AMMO

THIS PROJECT IS COMPLETE. IMPROVED LACQUER APPLICATOR TOOL MODULES WITH A CENTRAL RESERVOIR WERE DEVELOPED FOR THE SCAMP 5.56MM LINE. TIME BETWEEN TOOL REPLACEMENTS WAS INCREASED FROM 350,000 TO GREATER THAN 1.4 MILLION ROUNDS.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY83
(CONTINUED)

5 79 4498
CONSOLIDATION AND AUTOMATIC ASSEMBLY OF SMALL MINES

AUTOMATIC SOLDERING MACHINE IS COMPLETE AND INSTALLED AT ILWA ARMY AMMUNITION PLANT. FINAL PROVEOUT OF THE MACHINE WILL BE CONDUCTED AT SOME POINT AFTER INITIAL PRODUCTION. EQUIPMENT HAS BEEN DEBUGGED AND INSTALLED AT IAAP.

5 80 4498
CONSOLIDATION AND AUTOMATIC ASSEMBLY OF SMALL MINES

MECHANIZED LOAD ASSEMBLE AND PACK EQUIPMENT FOR THE ASSEMBLY OF MINES WAS DESIGNED AND MANUFACTURED. ILWA ARMY AMMUNITION PLANT INSTALLED AND CONDUCTED FINAL PROVEOUT ON THE LAP EQUIPMENT. TECHNICAL REPORT IS BEING PREPARED.

5 82 4548
PYRO SAFETY ENHANCEMENT

SEE THE FOLLOWING TASKS FOR WORK STATUS.

5 82 4548 01
SAFETY ENHANCEMENT OF BATCH MIX MULLERS

NO MANUAL SCRAPE-DOWN WAS PERFORMED FOR THE COMPOSITIONS TESTED. TEFON BLADES DECREASED THE BUILD-UP OF COMPOSITION ON THE WALLS OF THE MULLER. A REPORT WAS COMPLETED DESCRIBING THE SCRAPE-DOWN TESTS.

5 82 4548 02
SAFETY ENHANCEMENT TRANSPORT + CONVEYING

A FINAL TECHNICAL REPORT WAS COMPLETED BY SOUTHWEST RESEARCH INSTITUTE ON MATERIALS HANDLING, TRANSPORT AND CONVEYING SYSTEMS.

5 82 4548 03
IMPROVEMENT OF FIRE SUPPRESSION SYSTEMS

A FINAL TECHNICAL REPORT FOR FIRE SUPPRESSION SYSTEMS WAS ISSUED IN DEC 1983.

5 82 4548 04
BAY DESIGN SAFETY ENHANCEMENT

A FINAL TECHNICAL REPORT ON PYROTECHNIC BAY DESIGN HAS BEEN PREPARED.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY83
(CONTINUED)

AMCCOM (WPNS)

6 79 7482
MODIFIED RIBBON RIFLING GENERATING MACHINE

ALL WORK HAS BEEN COMPLETED AND A TECHNICAL REPORT HAS BEEN WRITTEN.

6 78 7710
INJECTION MOLDING OF RUBBER OBTURATOR PADS

THE FINAL REPORT WAS PUBLISHED AND DISTRIBUTED. AN ECP WAS SUBMITTED AND ACCEPTED. AS A RESULT THE DRAWING HAS BEEN AMENDED TO PERMIT THE INJECTION MOLDING OF OBTURATOR PADS. IMPLEMENTATION WOULD BE ECONOMICAL UNDER MOBILIZATION CONDITIONS.

6 81 7916
APPLICATION OF LOW COST MANDREL MATERIALS

PROJECT COMPLETE. IBEA AWAITING FINAL TECHNICAL REPORT.

6 82 7940
SYNERGISTIC PLATINGS WITH INFUSED LUBRICANTS

THE PROJECT ESTABLISHED THE PROCESS FOR APPLYING A LUBRICANT IMPREGNATED NICKEL PHOSPHOROUS ALLOY COATING ON ARMAMENT COMPONENTS IN A PILOT SCALE FACILITY.

6 81 7948
ESTABLISH CUTTING FLUID CONTROL SYSTEM

ALL WORK HAS BEEN COMPLETED AND THE FTR HAS BEEN DISTRIBUTED TO RIA PERSONNEL AND OTHER DOD ORGANIZATIONS. PARTIAL IMPLEMENTATION OF PROJECT RESULTS IS PRODUCING ANNUAL SAVINGS OF $25K. FULL IMPLEMENTATION IS BEING PURSUED.

6 82 7966
MANUFACTURE OF TRITIUM POWERED RADIOLUMINOUS LAMPS

TWO TECH REPORTS WERE PREPARED. ONE REPORT DESCRIBES THE ENTIRE MANUFACTURING PROCESS, PROVIDES A QUALITATIVE ANALYSIS OF EACH MANUFACTURING STEP ON LAMP PERFORMANCE AND PRESENTS A SET OF GUIDELINES WHICH INCLUDE THE NECESSARY PROCESS CONTROLS.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY83
(CONTINUED)

6 80 8035
COATING TUBE SUPPORT SLEEVES WITH BEARING MATERIALS

TWO M174 PISTONS OVERLAYED WITH AL-BRONZE BEARING MATERIAL WERE TESTED FOR 5,000 ROUNDS. NO ADVERSE DEGRADATION OF THE PISTON OCCURRED. OVERALL PERFORMANCE OF THE BEARING MATERIAL WAS GOOD. A ECP WAS SUBMITTED AND ACCEPTED AFTER COMPLETE EVALUATION.

6 80 8036
WEAPON AIMING SYSTEM FOR THE 6-DOF SIMULATOR

THIS PROJECT HAS BEEN COMPLETED. A WEAPON AIMING SYSTEM FOR THE 6-DOF SIMULATOR WAS DESIGNED, IMPLEMENTED AND TESTED UNDER THIS PROJECT. NON WEAPONS MAY BE TEST FIRED FROM THE SIMULATOR DURING YAW AND PITCHING MOTIONS.

6 81 8106
LARGE CALIBER POWDER CHAMBER BORING

A BORING BAR SYSTEM WAS PROCURED INSTALLED AND TESTED. MODIFICATIONS WERE MADE AS NECESSARY. A PRECISION POSITIONING SYSTEM IS BEING PROCURED UNDER TWO STEP PROCUREMENT.

6 81 8151
PORTABLE ENGRAVING SYSTEM

CONTRACT AWARD WAS MADE TO E.S-I, ALBANY, NY DURING SEP 83 WITH COMPLETION DATE EARLY MAY 1984.

6 81 8152
IMPROVED ANODE STRAIGHTNESS FOR CHROMIUM PLATING

FABRICATION OF ANODE SUB-SCALE SPECIMENS WAS COMPLETED. LEAD PLATING OF THE ANODE AND GUN TUBE SECTIONS WAS ACCOMPLISHED. THE DESIGN AND FABRICATION OF THE FULL SCALE WAS COMPLETED. LEAD PLATING OF THE FULL SCALE ANODE WAS COMPLETED.

6 81 8153
INCREASING GUN TUBE HEAT TREATMENT CAPACITY

ALL EXPERIMENTATION AND TESTING HAVE BEEN COMPLETED FOR BOTH THE RETAINED HEAT EFFORT AND THE INDUCTION HEATING EFFORT. THE FOLLOW-ON FY84 PROJECT WILL INVESTIGATE TECHNIQUES TO INCREASE THE EXISTING TEMPERING FURNACE CAPACITY.

6 82 8570
AUTOMATIC INSP AND PROC CONTROL OF WEAPONS PARTS MFG

AN AUTOMATED GUN BARREL STRAIGHTENING METHOD HAS BEEN SELECTED. THE CONTRACTORS FINAL REPORT HAS BEEN REVIEWED AND RETURNED FOR FINAL SUBMISSION. THIS IS THE FINAL STATUS REPORT.

TROSCOM

E 80 3706
COATED FABRIC COLLAPSIBLE FUEL TANK PROGRAM - CIRCULAR SEAML

TWO FULL SIZE ENDLESS FABRICS PRODUCED EARLIER WERE COATED WITH A SUITABLE POLYMER AND FABRICATED INTO SEAMLESS TANKS. THEY WERE SHIPPED TO YPG AND EXPOSED FOR 9 MONTHS. ONE FILLED WITH H2O DID NOT LEAK. DIESEL IN 2ND DID NOT LEAK BUT HAD DARK SPOTS.

E 80 3709
CONTINUOUS LENGTH FUEL HOSE

TECHNICAL WORK WAS COMPLETED, BUT ADDITIONAL WORK IS NECESSARY TO MAKE THIS PROCESS SUCCESSFUL. IT WAS DECIDED TO TERMINATE THIS PROJECT SINCE INDUSTRY HAS INDEPENDENTLY DEVELOPED THIS PROCESS, AND IS NOW SELLING 'CONTINUOUS LENGTH FUEL HOSE'.

E 79 3743
COMPOSITE SPUN MATERIAL LAUNCHING BEAM FOR BRIDGES

TECHNICAL WORK COMPLETED. THE TOTAL EFFORT CONTINUED AS PROJECT E813743 WHICH HAS ALSO BEEN COMPLETED. A FINAL TECHNICAL REPORT WAS PROVIDED FOR THE FY81 PROJECT.

E 81 3743
COMPOSITE SPUN MATERIAL LAUNCHING BEAM FOR BRIDGES

PROJECT COMPLETE. THE PROCESS WAS DEMONSTRATED BUT NOT OPTIMIZED. MANY IMPROVEMENTS COULD BE MADE. NO FURTHER WORK WILL BE UNDERTAKEN BECAUSE THE PROPOSED APPLICATION FOR THE LAUNCH BEAM WAS CANCELLED. BRIDGING IN THE EIGHTIES PROGRAM WAS STOPPED.

E 81 3759
COMPOSITE MATERIAL REINFORCEMENT FOR MILITARY BRIDGES

THE PROJECT WORK IS COMPLETE AND A FINAL TECHNICAL REPORT IS AVAILABLE. A GRAPHITE/EPOXY TENSILE LINK WAS WOUND IN A SIMPLE RACETRACK CONFIGURATION AND TESTED FOR STRUCTURAL INTEGRITY. THE LINK INCLUDING METAL END FITTINGS WEIGHED ONLY 33 POUNDS.

TOTAL PROJECTS COMPLETED IN 2ND HALF, CY83 65

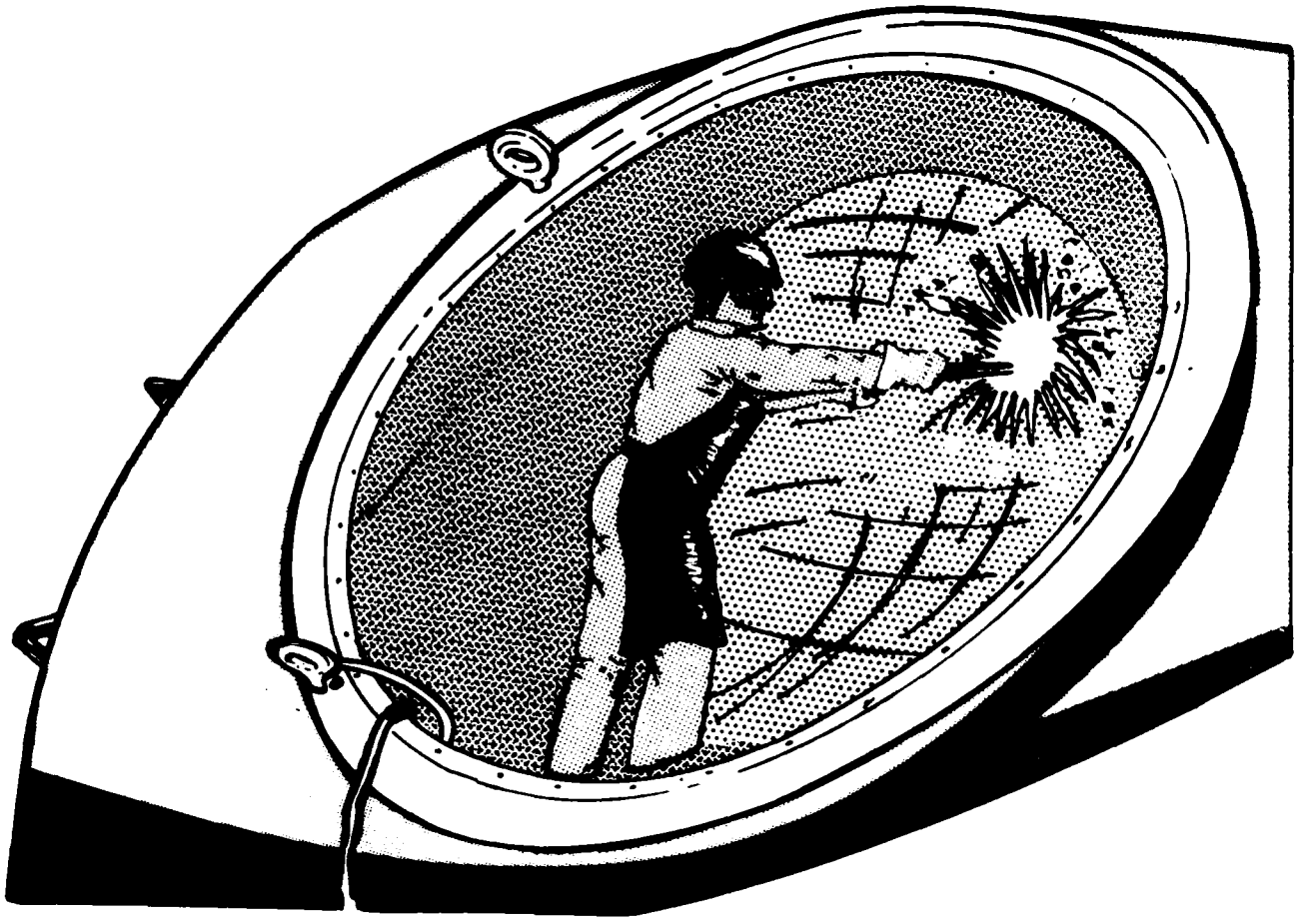
MMT PROGRAM

SUMMARY PROJECT STATUS REPORT

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM

SUMMARY PROJECT STATUS REPORT

The Summary Project Status Report for each major Army subcommand (SUBMACOM) is preceded by the tabulated SUBMACOM MMT project funding status. The accuracy of funding amounts is based on the individual project status reports. The status as reported here is the IBEA condensation of information contained in the report or other comments as deemed useful. If a status report was not provided, a pertinent comment was made so that the project would be printed.



DEPOT SYSTEMS COMMAND
(DESCOM)
AND
MANAGEMENT ENGINEERING TRAINING ACTIVITY
(AMETA)

AMETA AND DEPOT SYSTEMS COMMAND

CURRENT FUNDING STATUS, 2ND CYES

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)	INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)
77	1	383,000	383,000	315,300 (82%)	0	0 (0%)
77	0	0	0	0 (0%)	0	0 (0%)
78	1	870,000	743,000	579,300 (77%)	127,000	127,000 (100%)
79	1	495,000	387,800	316,700 (82%)	107,200	107,200 (100%)
80	1	460,000	432,000	196,300 (45%)	28,000	28,000 (100%)
81	2	952,000	392,000	288,900 (73%)	560,000	56,100 (6%)
82	7	2,438,000	1,075,400	622,500 (57%)	1,362,600	210,600 (15%)
83	3	220,000	120,000	46,300 (38%)	100,000	0 (0%)
TOTAL	16	5,818,000	3,533,200	2,369,300 (67%)	2,284,800	511,100 (22%)

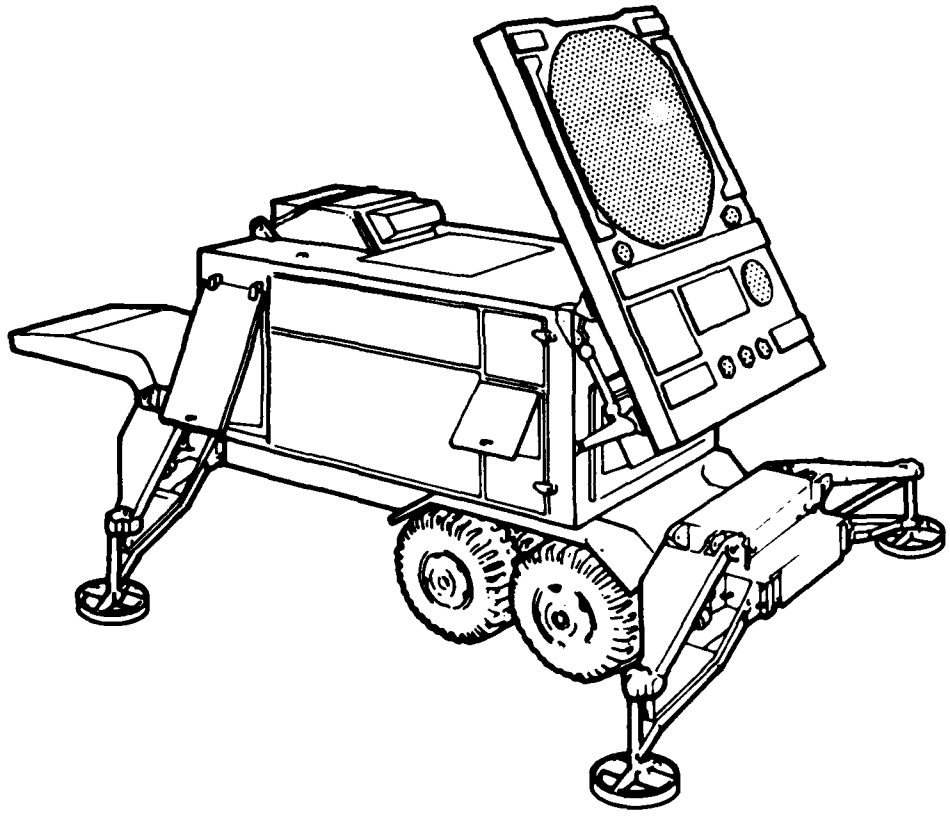
AUTHORIZED FUNDING CONTRACT ALLOCATED 61% INHOUSE REMAINING 39%

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
2ND SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
4 77 5052	ARMY ENGINEERING DESIGN HANDBOOK FOR PRODUCTION SUPPORT CONTINUED WORK ON 706-158 AND 159, DYNAMICS OF BALLISTIC IMPACT, PARTS I + II, AND 706-199, DEVELOPMENT GUIDE FOR RELIABILITY, PART 5, CONTRACTING FOR RELIABILITY.	383.0	383.0		JUN 78	JUN 84
0 78 5052	ARMY ENGINEERING DESIGN HANDBOOK FOR PRODUCTION SUPPORT HANDBOOK 706-103, SELECTED TOPICS IN EXPERIMENTAL STATICS PUBLISHED.	870.0	743.0	127.0	NOV 79	JUN 84
0 79 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT CAMERA READY COPY COMPLETED FOR HANDBOOK NO 706-100, DESIGN GUIDANCE FOR PRODUCIBILITY. WORK STARTED ON PRELIM FINAL DRAFT MANUSCRIPT FOR HANDBOOKS 706-125 AND 706-280.	495.0	387.8	107.2	MAY 83	JUN 84
0 80 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT WORK ON 706-480 PRELIMINARY FINAL DRAFT MANUSCRIPT CONTINUE. WORK ON 706-177 FINAL DRAFT MANUSCRIPT CONTINUING AT AMCCOM. DELAYS EXPERIENCED IN GETTING TECHNICAL WORK GROUPS TO FINALIZE OUTLINE FOR 706-123, 706-210, AND 706-XXX.	460.0	432.0	28.0	JAN 83	JUN 84
0 81 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT STATUS OF PROJECT CANNOT BE DETERMINED SINCE THE STATUS OF THIS REPORT IS IDENTICAL WITH THE PREVIOUS FOUR STATUS REPORTS.	531.0	392.0	36.1	JAN 84	JUN 84
0 82 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT TECHNICAL WORKING GROUPS (TWG) FORMED FOR 706-160, 170, 247, AND 481. PRELIMINARY DRAFT MANUSCRIPT BEING PREPARED ON 706-120. PROBLEMS EXPERIENCED IN GETTING TWG FORMED FOR 706-410.	580.0	550.0	29.7	SEP 83	JUN 84
0 83 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT WORK STARTED ON 706-122. REMAINDER OF FUNDS EXPENDED ON FY83 EFFORTS ON 706-430 AND TO COVER 6 MONTHS OPERATION OF RESEARCH TRIANGLE INSTITUTES HANDBOOK OFFICE.	120.0	120.0		DEC 83	JUN 84

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
U 82 2001	PROVIDE PROTOTYPE ROBOTS FOR AUTOMATED BLAST CLEANING THE SOLICITATION PACKAGE HAS BEEN RELEASED TO ALL PROSPECTIVE BIDDERS. PRE-PREPOSAL CONFERENCE SCHEDULED FOR 29 FEB 84.	162.0		2.0	SEP 84	SEP 84
U 82 2002	LONG RANGE DEPOT PRODUCTIVITY IMPROVEMENT PROGRAM THE STATEMENT OF WORK FOR PHASE I WAS FINALIZED AND REVIEWED BY TACOM.	100.0		58.0	JUN 84	JUN 84
U 83 3001	POWER AND INERTIA SIMULATOR-COMBAT VEHICLE TESTING A SCOPE OF WORK IS BEING PREPARED.	100.0			NOV 86	NOV 86
U 81 4002	ROBOTIZED WELDING OF M113A2 SUSPENSION FLOOR LAYOUTS HAVE BEEN APPROVED. FIXTURES HAVE BEEN DESIGNED AND BUILT.	421.0			SEP 81	DEC 84
U 82 4002	ROBOTIZED WELDING OF M113A2 SUSPENSION FLOOR LAYOUTS HAVE BEEN APPROVED. FIXTURES HAVE BEEN DESIGNED AND BUILT.	344.0	336.1	8.3	AUG 84	DEC 84
U 82 4004	AUTOMATED DISASSEMBLY OF DOUBLE PIN TRACK ORIGINAL SPECIFICATIONS WERE RECALLED FOR TECHNICAL MODIFICATIONS THUS RESULTING IN A 6 MONTH DELAY IN PROCUREMENT ACTION. BID PROPOSAL IS DUE INTO PROCUREMENT BY MID JANUARY 1984.	952.0		5.3	SEP 83	SEP 85
U 82 4005	WATER JET MATERIAL REMOVAL SYSTEM PHASE II THE SYSTEM HAS BEEN FABRICATED AND DELIVERED TO RRAD. ONE OF THE PUMP MOTORS WAS FOUND TO BE DEFECTIVE. THE MOTOR IS BEING REPLACED BY THE CONTRACTOR AND ACCEPTANCE TESTS WILL BE PERFORMED IN FEBRUARY 1984.	200.0	189.3	7.5	DEC 83	DEC 84
U 83 7001	AUTO DYNAMOMETER CONTROL F/STANDARDIZED INSPECT TEST (CAM) ***** DELINQUENT STATUS REPORT *****					JUN 84
U 82 8001	ANNISTON PRODUCTIVITY IMPROVEMENT PROGRAM STATEMENT OF WORK AND SUPPORTING MATERIALS ARE BEING DEVELOPED.	100.0		100.0	SEP 83	SEP 83



ELECTRONICS
RESEARCH AND DEVELOPMENT COMMAND
(ERADCOM)

E L E C T R O N I C S R + D C O M M A N D

CURRENT FUNDING STATUS, 2ND QTR

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)	INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)
76	1	248,800	247,000	247,000 (100%)	1,800	[illegible] ([illegible]%)
77	0	0	0	0 (0%)	0	(0%)
77	1	875,000	775,000	725,000 (93%)	100,000	[illegible] (100%)
78	2	500,000	441,200	441,200 (100%)	58,800	[illegible] (100%)
79	3	2,366,300	2,177,800	1,469,100 (67%)	188,500	[illegible] (100%)
80	5	3,519,900	2,936,700	2,308,500 (78%)	583,200	[illegible] (94%)
81	5	3,255,200	2,977,500	2,800,800 (94%)	277,700	[illegible] (99%)
82	8	4,966,800	4,417,800	2,757,000 (62%)	549,000	[illegible] (40%)
83	10	5,921,000	4,363,500	1,417,000 (32%)	1,557,500	[illegible] (15%)
TOTAL	35	21,653,000	18,336,500	12,159,600 (66%)	3,316,500	1,661,700 (50%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 85% INHOUSE REMAINING 15%

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
2ND SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 80 3010	MILLIMETER-WAVE SOURCES FOR 60, 94, AND 140 GHZ THE PILOT LINE RUN AT HUGHES DEMONSTRATED A 25 PCT YIELD FOR THE D, V, AND W-BAND IMPATT DIODES. A BREADBOARD HYBRID MODULATOR AND 94GHZ SOURCE WAS DELIVERED FROM TRW TO ERADCOM. ALL WORK HAS BEEN COMPLETED. FINAL 301 AND TECH RPT NOT YET RECEIVED.	1,067.4	997.3	68.0	JUL 82	JUN 84
M 83 3010	HYBRID MODULATOR FOR PULSED IMPATT MILLIMETER WAVE SOURCES TRW HAS COMPLETED 3 HYBRID MODULATORS. THESE DEVICES DRIVE 10-WATT IMPATTS TO GENERATE 100 NANOSECOND 94GHZ PULSES. TWO UNITS HAVE SURVIVED SHOCK AND VIB TESTS. 110 IMPATTS HAVE BEEN RF TESTED AND SHOW EXCELLENT PERFORMANCE. ENV AND QA TESTS ONGOING.	363.0	363.0		SEP 84	SEP 84
M 82 3011	INDIUM-PHOSPHIDE GUNN DEVICES VARIAN ASSOC DEVELOPED A RECESSED STRUCTURE IN WHICH THE GUNN DIODE IS FORMED. 56 GHZ DIODES CONTROL 1/4 WATT POWER AT 8 PCT EFFICIENCY. 94 GHZ DIODES ARE LESS CONSISTENT. TEST CAVITY NEEDS OPTIMIZATION. DETECTOR SENSITIVITY DEGRADES W/TIME.	1,227.1	1,118.1	74.4	AUG 84	SEP 84
M 80 3023	TUBULAR PLASMA PANEL A DEMONSTRATION OF THE MILITARIZED PLASMA PANEL DISPLAY MANUFACUTRING FACILITY WAS HELD IN JUNE. A ONE YEAR - NO COST CONTRACT EXTENSION WAS GRANTED TO ALLOW PRODUCTION DEMONSTRATION USING BCS AND MIFASS DISPLAYS. A DRAFT FINAL REPORT WAS SUBMITTED.	800.0	674.0	95.0	APR 82	OCT 84
M 80 3026	HIGH PRESSURE OXIDE IC PROCESS HORIZONTAL FURNACE BUILT BY AUTOCLAVE CO DID NOT PERFORM AS EXPECTED + $200K IS NEEDED TO CONVERT TO VERTICAL. A MICROPROCESSOR CONTROLS HEATING, PRESSURIZING, OXIPIZING, ANNEALING, DEPRESSURIZING + COOLING. A GUARANTEE SHOULD BE ASKED OF AUTOCLAVE.	650.1	391.0	259.0	MAY 82	JUN 84
M 80 3501	THIRD GENERATION PHOTOCATHODE ON FIBER OPTIC FACEPLATE ITT ELECTRO OPTICS DIV CHANGED FROM LIQUID TO VAPOR PHASE EPITAXY OF GALLIUM ARSENIDE PHOTOCATHODE ON NEW FIBER OPTIC FACEPLATE. TEMPERATURE COEFFICIENT OF GALLIUM ARSENIDE + GLASS FIBER OPTICS MUST MATCH. BETTER BONDING + ANNEALING WILL BE TRIED.	572.4	492.4	80.0	MAR 82	MAR 85
M 81 3505	HIGH CONTRAST CRT PHOSPHOR DEPOSITION AND SEALING HUGHES HAS COLLECTED DATA ON AN EXERCISER CRT WHICH WAS BUILT ON A DIFFERENT CONTRACT. IT HAS NOT BEEN TESTED UNDER ARMY APPLICATION CONDITIONS. SEVERE ARCHING THROUGH FRIT SEAL WAS EXPERIENCED. PROCUREMENT HAS INITIATED CONTRACT TERMINATION.	350.4	349.6	0.8	OCT 82	
M 82 3505	HIGH CONTRAST CRT PHOSPHOR DEPOSITION AND SEALING - PHASE II CONTRACT MODIFICATION OR TERMINATION OF THIS CONTRACT IS IN THE OFFING. HUGHES HAS NOT DELIVERED CONFIRMATORY CRTS IN PHASE I.	286.0	229.8	56.9	JUN 83	

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 82 5016	BONDED GRID ELECTRON GUN VARIAN EXPERIENCED DIFFICULTY OBTAINING QUALITY BORON NITRIDE (BN) BLANKS FROM SUBCONTRACTOR. BN BLANKS OUTER PERIPHERY DELAMINATED DURING LASER MILLING. 1ST BONDED GRID GUN COMPLETED WAS TESTED IN BEAM ANALYZER. PERFORMANCE OF THIS GUN WAS MARGINAL.	852.5	763.7	27.7	MAR 84	APR 85
M 82 5019	LASER-CUT SUBSTRATES FOR MICROWAVE TUBES TEN S-BAND AND TEN C-BAND SLOW-WAVE STRUCTURES FOR USE IN IBCFA WERE DELIVERED TO ERADCOM FOR EVALUATION. FIVE OF EACH WERE RETAINED FOR NORTHROP EVALUATION. TWO OF EACH WILL BE USED IN CFA DESIGN AND EVALUATED. DRAFT FINAL RPT NOT YET ACCEPTABLE.	431.5	390.5	41.0	MAR 83	JUN 84
M 83 5019	LASER-CUT SUBSTRATES FOR MICROWAVE TUBES THE LASER-CUT ANODE CIRCUITS FROM PHASE I HAVE BEEN DESIGNED INTO THE IBCFA.THE GUN STRUCTURES AND WAVEGUIDE OUTPUT TRANSITION HAVE BEEN BUILT BUT NOT TESTED. 2 C-BAND AND 2 S-BAND CFA TUBES WILLBE BUILT.NO TECHNICAL OR ADMINISTRATIVE PROBLEMS SEEN.	408.0	369.0	12.5	NOV 84	NOV 85
M 81 5041	MILLIMETER WAVE MIXERS AND ARRAYS FUNDS ARE EXPIRED AND EXTENSION GRANTED. TWENTY W-BAND MIXERS ARE BEING ASSEMBLED. COMPLETION IS EXPECTED IN NEXT REPORTING PERIOD	575.9	495.0	60.9	JUL 83	JUL 84
M 83 5107	MMT EHF SOLID STATE AMPLIFIER A CONTRACTOR WILL IMPROVE FAB AND TEST PROCEDURES FOR SILICON IMPATT AMPLIFIERS. PROD AND TEST EQUIP WILL BE COMPUTER CONTROLLED. IMPATT AMPLIFIERS WILL BE USED IN THE SCOTT SATELLITE PROG. BIDS WERE REVIEWED AND ADDITIONAL DATA REQUESTED.	1,179.0			SEP 85	DEC 85
M 82 5109	PRECISION LO-COST SURF ACOUSTIC WAVE DELAY LINES-UHF APPL TRW IS BUILDING SAW DELAY LINES. 2ND ENGR SAMPLE EVALUATION + SYSTEM UPDATE RESULTED IN CHANGING DEVICE CENTER FREQUENCIES + MODE BANDWIDTHS. THIS PERMITTED FULL FREQUENCY COVERAGE BUT WITH HIGHER Q. MASK FABRICATION FOR MODIFIED DEVICES IS FINISHED.	596.0	500.7	13.0	MAY 85	JUN 85
M 83 5109	PRECISION LOW-COST SAW DELAY LINES FOR UHF APPLICATIONS PHASE II FOLLOW-ON TO ABOVE. TRW DEVELOPED AN RF WAFER PROBE + NEW COMPUTER ROUTINES WHICH REDUCED TEST TIMES FOR 2 INCH WAFER TO 59 MINUTES. SAW DEVICE YIELDS ARE ALSO PROVIDED AUTOMATICALLY. PILOT RUN WILL PROVE OUT MANUFACTURING TECHNIQUES.	408.0	382.6		JUN 85	JUN 85
M 80 5147	HI RESISTIVITY POLYCRYSTALLINE SILICON HEMLOCK SEMICONDUCTOR CORP UPGRADED ITS REACTORS AND CHEMICAL FEEDSTOCK AND MADE HIGH PURITY POLYSILICON. TI AND HUGHES ZONED IT INTO DETECTOR GRADE SINGLE CRYSTAL. HEMLOCK SHIPPED 22 POUNDS OF 15K OHM-CM POLY TO HUGHES IN 40 MM DIA BOULES.	430.0	382.0	48.0	SEP 82	JUN 84

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
2ND SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

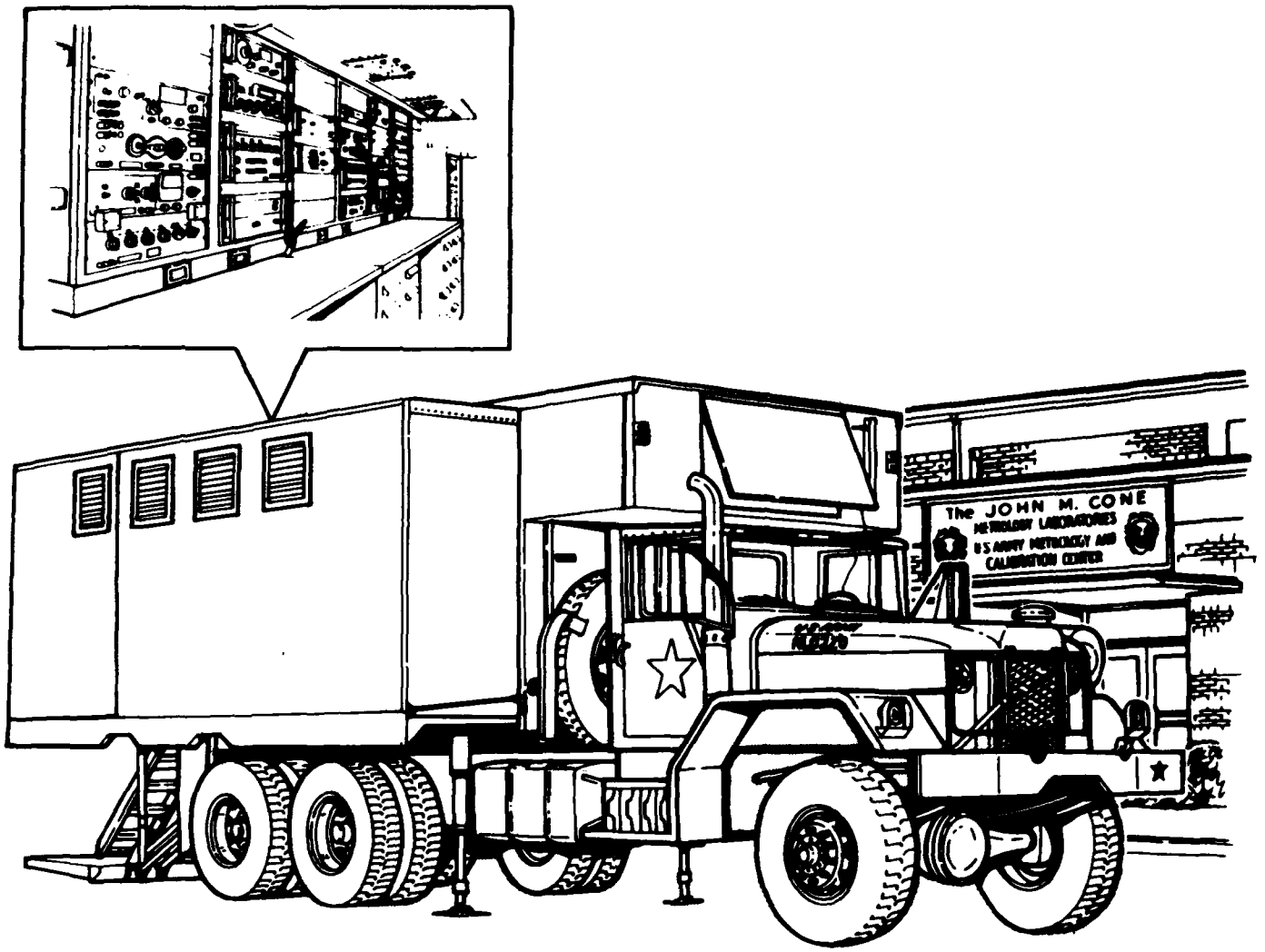
PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 83 5151	LIQUID PHASE EPITAXY OF HGCDTE F/COMMON MODULE DET ARRAYS SANTA BARBARA RESEARCH CTR IS REFINING ITS LIQUID PHASE REACTION PROCESS, AND IS DESIGNING EQUIP + FACILITIES FOR ITS 2ND PHASE $1 MILLION EFFORT. TI DESIGNED + ORDERED EQUIPMENT FOR A LIQUID PHASE EPITAXIAL PILOT LINE. THIS SHOULD CUT COST.	539.0	500.0	39.0	DEC 85	MAR 85
M 83 5162	EXJAM BATTERY MANUFACTURING TECHNOLOGY, PHASE II ***** DELINQUENT STATUS REPORT *****					JUN 84
M 83 5166	AUTOMATIC RETICLE INSPECTION SYSTEM, PHASE I KLA INSTRUMENTS IMPROVED THEIR OPTICS FOR HALF-MICRON RESOLUTION, USED A NEW LIGHT SOURCE AND SENSOR DESIGN, AND A NEW SIGNAL PROCESSING ALGORITHM FOR DIE TO DIE INSPECTION. KLA NOW MARKETS THIS NEW INSPECTION EQUIPMENT. A FINAL REPORT IS DUE 3/84.	590.0	540.0	39.1	SEP 85	AUG 85
M 83 5174	CAM SPUTTERING CONTROL FOR ZNO HARRY DIAMOND LABS IS ESTABLISHING AN AUTOMATIC SEMICONDUCTOR PROCESS MONITORING + CONTROL SYSTEM. MASS SPECTROMETER WAS DELIVERED BUT SEVERAL DEFECTS WERE FOUND. THE INSTRUMENT WAS RETURNED TO MANUFACTURER FOR REPAIR. GOAL WAS IMPROVED YIELDS.	150.0		81.0	DEC 84	DEC 84
M 81 5176	PROGRAM FOR A GRAPHITE/EPOXY ANTENNA REFLECTOR ***** DELINQUENT STATUS REPORT *****				APR 82	JUN 84
M 83 5180	MMT FOR METAL DEWAR AND UNBONDED LEADS AN INTERNAL DESIGN REVIEW OF THE NEW COMMON MODULE DETECTOR/DEWAR HAS BEEN COMPLETED. CRITICAL LONG-LEAD ITEM AVAILABILITY REVIEWED. PRODUCIBILITY ANALYSIS IS ON-GOING. COST DRIVERS ARE BEING IDENTIFIED. DEWAR SELECTION CRITERIA LIST IS DEFINED.	1,391.0	1,315.9	75.0	DEC 84	JUN 84
M 82 5183	PRODUCTION OF LARGE DIAMETER SILICON FOR LASER SEEKERS HUGHES IS AUTOMATING ITS 3 INCH ZONER BUILT BY WESTECH. A REMOTELY OPERABLE RF HEATING COIL AND RESISTIVITY MEASURING EQUIPMENT WERE RECEIVED. HUGHES GAVE A NO-COST EXTENSION BECAUSE OF LATE EQUIPMENT DELIVERY. NBS FOUND FLAWS IN MEASMT EQUIP.	566.0	499.0	34.0	JAN 84	SEP 84
M 82 5193	PROCESS ADJUSTMENTS F/ENVIRON STRESS ON ELECT CIRCUIT METALS THE CONTRACTOR CONTINUES TO COLLECT EXPOSURE DATA AT FIELD SITES. STATISTICAL CORRELATION BETWEEN OBSERVED CORROSION AND SPECIFIC ENVIRONMENTS IS BEING DERIVED. SIMULATED AGING TESTS ARE BEING DEVISED AND VERIFIED. PROJECT ENGR GAVE TALK AT RIA.	21.0	21.0		JUN 83	JUN 84
M 83 5196	INDUSTRIAL PRODUCTIVITY IMPROVEMENT - ELECTRONICS CECOM ANTICIPATES MANY DIFFICULTIES NEGOTIATING A BUSINESS DEAL IN THIS IMIP CONTRACT. MONEY IS NEEDED AT CECOM TO MANAGE THIS WORK, ONLY 1/3 MAN-YEAR IS NOW BEING PROVIDED. HARRIS WILL STUDY 15 MMT PROJECTS AND A LARGE BUSINESS SYSTEM PROJECT.	893.0	893.0		JUN 84	JUN 84

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
2ND SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
H 81 9506	THIRD GENERATION LOW COST IMAGE INTENSIFIER TUBES LITTON STILL IS EXPERIENCING LOW TUBE YIELDS. HOWEVER INCIDENCE OF EMISSION POINTS + VACUUM LEAKS WAS REDUCED. NEW VAPOR PHASE EPITAXIALLY GROWN PHOTOCATHODES HAVE SHOWN IMPROVED COSMETIC QUALITY. FIVE MORE CONFIRMATORY SAMPLES WERE SHIPPED.	1,386.0	1,280.0	106.0	JUN 84	JUN 84
C 76 9736	EPITAXIAL + METALLIZATION PROCESSES FOR GAAS IMPATT DIODES MACOM GA-AS PRODUCTS CO COMPLETED WORK ON AUTOMATIC CONTROL OF EPITAXIAL LAYER GROWTH + COMPUTERIZED CONTROL OF DOPANT GASES. MACOM MADE IMPATT DIODES FOR MICROWAVE SYSTEMS. FINAL REPORT IS BEING DISTRIBUTED. PROJECT WAS WRITTEN UP FOR TOP-TEN BOOK.	248.8	247.0		JUN 77	APR 84
H 78 9736	PULSED GALLIUM ARSENIDE IMPATT DIODES MACOM GA-AS PRODUCTS CO DELIVERED 100 17 GHZ PULSED IMPATT DIODES FOR THE MULTI-ENVIRONMENT ACTIVE RF MISSILE SEEKER. AUTOMATED PROCESSING CONTROLS GIVE DIODE-TO-DIODE AND WAFER TO WAFER UNIFORMITY. IS A JOINT ERADCOM/MACOM EFFORT. A NEW SPEC WAS DEV	500.0	441.2	58.8	JUN 80	MAY 84
C 77 9805	AUTO MICROCIRCUIT BRIDGE PDN MEASURE OF QUARTZ CRYSTALS HUGHES DEVELOPED AN AUTOMATIC MICROCIRCUIT BRIDGE MEASUREMENT SET FOR MEASURING QUARTZ CRYSTAL PARAMEAERS. SYSTEM REPLACES CRYSTAL IMPEDANCE METERS + HAS CAPABILITY OF MEASURING 25 CRYSTALS A DAY. RESULTANT TECHNIQUES WILL BE PLACED INTO MIL-C-3098.	875.0	775.0	100.0	JAN 79	APR 84
H 79 9805	QUARTZ CRYSTAL PARAMETER TESTING FOLLOW-ON TO 2 77 9805. HUGHES INCREASED TESTING CAPACITY OF PREVIOUS SYSTEM TO 200 CRYSTALS PER DAY. MULTICRYSTAL TEMPERATURE CHAMBERS WERE ADDED FOR AUTOMATIC ACQUISITION OF FREQUENCY/TEMPERATURE + AGING DATA.	725.0	685.0	40.0	JUN 80	APR 84
H 79 9807	PROCESSING HIGH STABILITY QUARTZ CRYSTAL UNIT GEND PHASE III EFFORT EXPANDING PILOT LINE CAPABILITY OF H 77 9754 TO 5 + 10 MHZ QUARTZ CRYSTALS. CONFIRMATORY RUN WAS ABORTED DUE TO DEFECTIVE QUARTZ BLANKS. NEW QUARTZ BLANKS WERE RECEIVED + ARE UNDER EVALUATION. NEW CONFIRMATORY RUN SET FOR AUG84.	1,272.1	1,214.1	58.0	MAR 81	FEB 85
H 79 9836	MINIATURE CATHODE RAY TUBES CONFIRMATORY SAMPLES HAVE BEEN FABRICATED. FIVE OF THE 10 WERE SUBJECTED TO ALL ENVIRONMENTAL TESTS, EXCEPT EMI. AN ACCELERATED LIFE TEST PLAN IS BEING DRAFTED TO COMPENSATE FOR PAST SLIPPAGE.	369.2	278.7	90.5	AUG 81	AUG 84
H 76 9606	PDN TECHJE-GALLIUM ARSENIDE MIWAV FIELD EFFECT TRANSISTORS ***** DELINQUENT STATUS REPORT *****				NOV 80	JUN 84
H 82 9905	LO-COST MONOLITHIC GALLIUM ARSENIDE MICROWAVE INTEG CIRCUITS WESTINGHOUSE DELIVERED FIRST SAMPLE CIRCUITS BUT THEY WERE NOT UP TO SPEC. ION IMPLANT DOSAGE + ANNEALING SCHEDULES WERE VARIED + TOPOLOGY WAS RECONFIGURED. 17 OF 30 PROCESS SPECS WERE WRITTEN. THE PERF SPECS ARE TOUGH AS IS THIS HF GA-AS WORK	986.7	895.0	17.3	SEP 84	SEP 84

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 81 9909	PRODUCTION TECHNIQUES FOR SILICON MW POWER TRANSISTORS COST INCREASE OF $139K GRANTED. WITH AN AVERAGE YIELD OVER 70 PCT, 700 30-WATT S-B AND POWER TRANSISTORS CAN BE MADE FROM ONE WAFER. THREE PASSED RF OPERATIONAL LIFE TESTING AT 200DEG, 30-WATTS AND 1000 HRS. ONE FAILED. FAILURE ANALYSIS UNDERWAY.	942.9	852.9	72.1	SEP 83	JAN 84



TEST MEASUREMENT DIAGNOSTIC EQUIPMENT SUPPORT GROUP (TMDE)

TEST MEASUREMENT DIAGNOSTIC EQUIPMENT SUPPORT GROUP

CURRENT FUNDING STATUS, 2ND CY83

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)		INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)	
80	1	756,000	499,000	499,000	(100%)	257,000	257,000	(100%)
81	0	0	0	0	(0%)	0	0	(0%)
82	1	450,000	95,000	72,000	(75%)	355,000	212,000	(59%)
83	1	240,000	170,000	170,000	(100%)	70,000	70,000	(100%)
TOTAL	3	1,446,000	764,000	741,000	(96%)	682,000	539,000	(79%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 53% INHOUSE REMAINING 47%

SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

PROJ No.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
3 80 3115	ENGINEERING FOR METROLOGY AND CALIBRATION SEE SUBTASKS FOR WORK STATUS.	756.0	499.0	257.0	DEC 81	JUN 84
3 80 3115 01	JOSEPHSON EFFECT VOLTAGE STANDARD WORK ON THIS SUBTASK IS CONTINUED UNDER 3 81 3115-01.				DEC 81	AUG 83
3 80 3115 14	SIX-PORT MEASUREMENT SYSTEM THIS TASK HAS BEEN COMPLETED.				DEC 81	MAR 84
3 80 3115 17	DYNAMIC ELECTRICAL MEASUREMENTS AND STANDARDS SEE PROJECT 3 82 3115-17 FOR WORK STATUS.				DEC 81	JAN 84
3 80 3115 19	SUBMILLIMETER WAVE STANDARDS THIS TASK HAS BEEN COMPLETED. THIS SYSTEM IS NOW QUALIFIED AS A MEASUREMENT SYSTEM FOR USE IN CERTIFYING STANDARDS FOR ARMY PRIMARY CALIBRATION LABORATORIES.				DEC 81	MAR 84
3 80 3115 21	ELECTRO-OPTICAL (E-O) SYSTEMS THIS TASK WAS CANCELLED DUE TO LACK OF FUNDING.				DEC 81	MAR 84
3 80 3115 24	AUTO LAB CALIBR SERVICES USING DESK CAL/DESK TOP COMPUTERS WORK ON THIS SUBTASK IS CONTINUED UNDER 3 81 3115-24.				DEC 81	AUG 83
3 80 3115 25	BASIC METROLOGY STANDARDS F/USE IN WIDE RANGING ENVIRONMENTS WORK ON THIS SUBTASK IS CONTINUED UNDER 3 81 3115-25.				DEC 81	AUG 83
3 82 3115	ENGINEERING FOR METROLOGY AND CALIBRATION FOR STATUS, SEE SUBTASKS BELOW.	450.0	95.0	212.0	OCT 84	JAN 84
3 82 3115 01	JOSEPHSON EFFECT VOLTAGE STANDARD A ONE PPM VOLTAGE STANDARD WAS DELIVERED. PROBLEMS WERE ENCOUNTERED DURING INITIAL OPERATION OF THE SYSTEM. LIQUID NITROGEN USED TO PRECOOL THE DEWAR SOLIDIFIED AT THE BOTTOM OF DEWAR PREVENTING INSERTION OF THE JOSEPHSON JUNCTION PROBE.				OCT 84	JAN 84
3 82 3115 17	DYNAMIC ELECTRICAL MEASUREMENT STANDARDS A MODULAR PULSE CIRCUIT IS PRESENTLY BEING EVALUATED. THE CIRCUIT PROMISES TO BE VERY VERSATILE SINCE IT CAN BE PULSE OPERATED, CONTINUOUSLY MODULATED, OR OPERATED IN A STATIC FORWARD BIASED MODE.				JUN 84	JAN 84
3 82 3115 25	BASIC METROLOGY STD FOR USE IN WIDE-RANGING ENVIRONMENTS ADDITIONAL WIRING HAS BEEN INSTALLED SO THAT VOLTAGE OF REFERENCES PLACED IN AN ENVIRONMENTAL CHAMBER MAY BE MONITORED. THIS WILL BE USED TO MEASURE THE RESPONSE OF THE REFERENCE TO VARYING TEMPERATURE AND HUMIDITY CONDITIONS.				JUN 84	JAN 84

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
2ND SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
3 82 3115 34	IMPROVED ON-SITE SERVICE AIR SPEED CALCULATIONS PRODUCED FROM THE OUTPUT OF A DIFFERENTIAL PRESSURE TRANSDUCER PASSED THROUGH A VOLTAGE TO FREQUENCY CONVERTER, COUNTER, AND MICROPROCESSOR HAVE BEEN COMPLETED. THIS SOFTWARE HAS BEEN COMMITTED TO EPROM FOR USE.				JUL 83	FEB 84
3 82 3115 35	VISCOSITY AND DENSITY MEASUREMENTS REVIEW OF EXISTING INSTRUMENTATION SUITABLE FOR INCORPORATION INTO SECONDARY TRANSFER FLOWMETER TEST CONFIGURATIONS IS CONTINUING.				APR 83	FEB 85
3 82 3115 36	DIRECT FLOWMETER READOUT THIS PROJECT WAS DELAYED DUE TO THE TRANSFER OF THE PROJECT LEADER.				JAN 86	SEP 86
3 82 3115 37	DATA ANALYSIS TECHNIQUES DELAYS IN PROCUREMENT HAS CONTINUED TO CAUSE SLIPPAGE IN THIS PROJECT. THE PORTABLE MICROCOMPUTER TO BE FIELD TESTED STILL HAS NOT ARRIVED.				JAN 83	FEB 84
3 83 3115	ENGINEERING FOR METROLOGY AND CALIBRATION FOR STATUS, SEE SUBTASK LISTED BELOW.	240.0	170.0	70.0	DEC 84	DEC 84
3 83 3115 01	JOSEPHSON EFFECT VOLTAGE STANDARD TESTING OF 1PPM VOLTAGE STANDARDS CONTINUED DURING THIS REPORTING PERIOD. PROBLEMS STILL EXIST IN THE PRODUCTION AND SELECTION OF APPROPRIATE JOSEPHSON-JUNCTION DEVICES. THE PROBLEMS ARE PECULIAR TO INDIV DEVICES AND MAY CAUSE NON-VERTICAL STEPS.				DEC 84	DEC 84
3 83 3115 25	BASIC METROLOGY STD FOR USE IN WIDE-RANGING ENVIRONMENTS CHARACTERIZATION OF VARIOUS COMMERCIAL SOLID STATE VOLTAGE REFERENCES DEVICES CONTINUED USING THE AUTOMATED SYSTEM. IT HAS BEEN CONCLUDED FROM MEASUREMENTS MADE THUS FAR THAT A FILTER ON THE OUTPUT IS REQ IN ORDER TO ACHIEVE DEPENDABLE RESULTS.				DEC 84	DEC 84
3 83 3115 34	IMPROVED ON-SITE SERVICE PROCUREMENT HAS STARTED ON AIR SPEED MODIFICATIONS. A QUANTITY OF DIFFERENTIAL PRESSURE TRANSDUCERS IS BEING PURCHASED. PORTIONS OF THE HYDRAULIC PRESSURE STANDARD WORK HAS BEEN COMPLETED. EVALUATION OF THE PRESSURE TRANSDUCERS IS UNDERWAY.				DEC 84	DEC 84
3 83 3115 35	VISCOSITY AND DENSITY MEASUREMENTS THE PROJECT WAS DEFERRED FOR THIS REPORTING PERIOD AS THE PROJECT LEADER TRANSFERRED TO A NEW POSITION.				FEB 85	FEB 85

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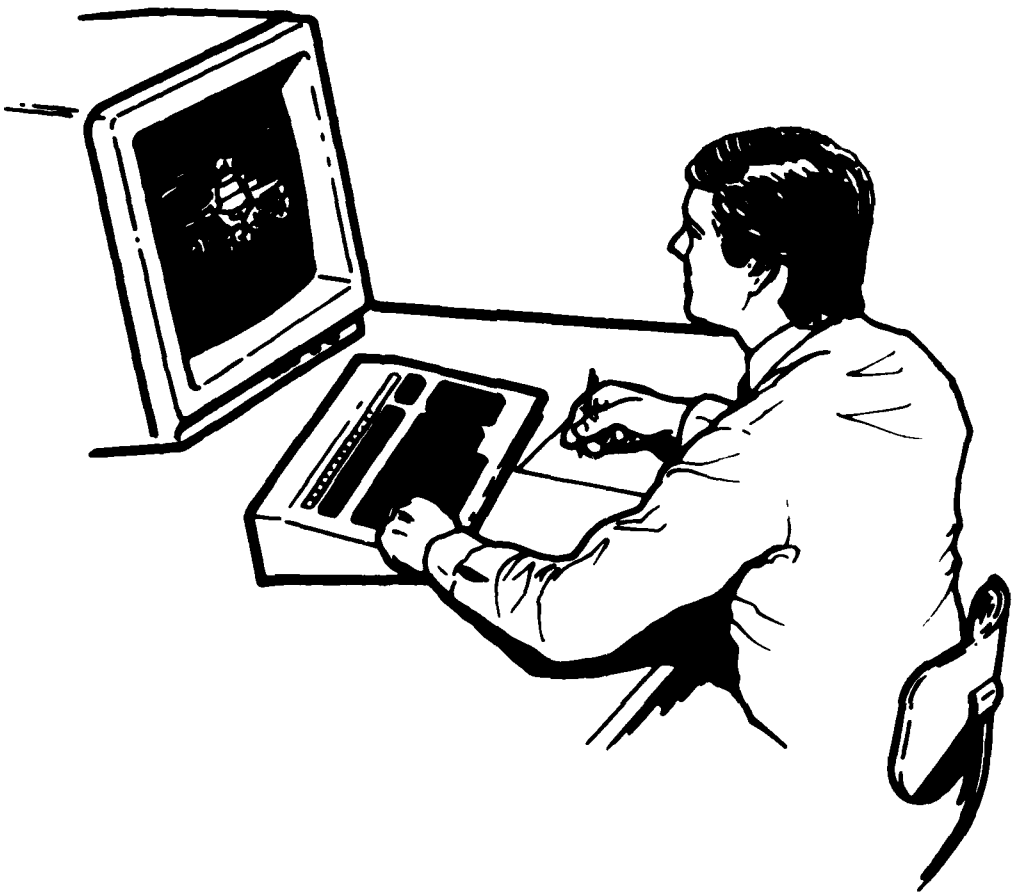
3 83 3115 36	DIRECT FLOWMETER READOUT ORIENTATED A NEW PROJECT LEADER TO CALIBRATION INSTRUMENTATION AND TECHNIQUES INTEGRAL TO THE DESIGN CONCEPT TO BE UTILIZED IN THE DEVELOPMENT OF THIS PROJECT.				SEP 86	SEP 86



ARMY MATERIALS AND MECHANICS RESEARCH CENTER (AMMRC)

ARMY MATERIALS AND MECHANICS RESEARCH CENTER

CURRENT FUNDING STATUS, 2ND CY83

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)	INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)
80	1	4,323,300	1,633,700	1,633,700 (100%)	2,689,600	2,689,600 (100%)
81	1	4,349,000	1,479,500	909,000 (61%)	2,869,500	2,728,000 (95%)
82	1	4,573,000	1,920,000	743,200 (38%)	2,653,000	2,227,500 (83%)
83	1	1,243,400	656,600	0 (0%)	586,800	586,800 (100%)
TOTAL	4	14,488,700	5,689,800	3,285,900 (57%)	8,798,900	8,232,100 (93%)

AUTHORIZED FUNDING — CONTRACT ALLOCATED 39% — INHOUSE REMAINING 61%

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* 80 6350	MATERIALS TESTING TECHNOLOGY (MTT) FOR PROJECT STATUS, SEE SUBTASKS BELOW.	4,323.3	1,633.7	2,689.6	APR 83	OCT 84
* 80 6350 2205	HOLOGRAPHIC INSPECTION OF ROTARY FORGED PREFORMS THE DESIGN OF THE ELECTRONIC CARDS INCLUDING THE MASS MEMORY STORAGE CARD AND THE CHARGE COUPLED DEVICE ANALOG STORAGE SHIFT REGISTER WAVE FORM BUFFER HAVE BEEN COMPLETED AND DOCUMENTED IN TWO RPI TECHNICAL REPORTS.	105.0	80.0			DEC 83
* 80 6350 2402	INSP PROC-TEST INSTR F/MASS PROD SCATTERABLE MINES COMPUTER ***** DELINQUENT STATUS REPORT *****					JUN 84
* 80 6350 2405	BURN TIME TEST FOR ZIRCONIUM POWDER IN THERMAL BATTERY THIS PROJECT HAS BEEN COMPLETED.	70.0	17.0	53.0		MAR 84
* 80 6350 2445	ULTRASONIC TIRE INSPECTION ***** DELINQUENT STATUS REPORT *****					JUN 84
* 80 6350 2446	BLACKLIGHT VIDEO INSPECTION SYSTEM THE CLOSED CIRCUIT VIDEO SYSTEM HAS BEEN PROCURED AND DELIVERED. IT HAS BEEN CHECKED OUT AND IS FUNCTIONING PROPERLY.	35.0	10.0		JUN 83	SEP 84
* 80 6350 2450	GUN STEEL ADHESION CHROMIUM COATING MEASUREMENT CONSTRUCTION OF THE ADHESION TESTER WAS RECENTLY COMPLETED. THE DELIVERY OF THE SYSTEM IS SCHEDULED FOR NOV 1983.	60.0	20.0	40.0		JUN 84
M 80 6350 2613	INFLOW AIR BLEED TEST, LTC-712 ENGINE THIS EFFORT HAS BEEN DISCONTINUED DUE TO THE NON-AVAILABILITY HARDWARE AND ENGINE CONFIGURATION CHANGES. THE RESULTS OF THE PROJECT TO DATA WILL BE USED TO SUPPORT ENGINE ENDURANCE TESTS AND PARTS QUALIFICATION.	267.0		120.3		JAN 84
* 80 6350 2614	TEMP. COMPENSATED VOLTAGE CONT CRYSTAL OSCILLATOR TEST METH. ***** DELINQUENT STATUS REPORT *****					JUN 84
* 80 6350 2627	INFRARED SPECTROSCOPY ANALYSIS OF NON-VOLATILE VEHICLES ***** DELINQUENT STATUS REPORT *****				APR 81	JUN 84
* 80 6350 2632	DEVELOPMENT OF INFRARED AND OPTICAL TESTS ***** DELINQUENT STATUS REPORT *****				DEC 81	JUN 84
* 80 6350 2646	PISTON ACTUATOR TEST THE ASSEMBLY OF THE SYSTEM HAS BEEN COMPLETED. THE SYSTEM HAS BEEN CALIBRATED AND 100 PISTON ACTUATORS HAVE BEEN TESTED. THE FINAL REPORT IS IN THE PROCESS OF BEING WRITTEN.	85.0		85.0		JUN 84

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* 81 6350	MATERIALS TESTING TECHNOLOGY (MTT) FOR PROJECT STATUS, SEE SUBTASKS BELOW.	4,349.0	1,479.5	2,720.2	OCT 83	OCT 84
* 81 6350 1802	4/32 FIELD ARTILLERY FUZE/S+A TRANSPORTATION VIBRATION TEST THE TECHNICAL WORK AND FINAL REPORT HAVE BEEN COMPLETED. THE RESULTS OF THIS EFFORT WILL REDUCE THE TEST TIME FROM SIX HOURS TO TWO HOURS.	103.2		103.2		NOV 83
* 81 6350 2224	AUTOMATED ANTENNA PATTERN MEASUREMENT THE FABRICATION AND TESTING OF COMPUTER INTERFACES AND THEIR INTEGRATION INTO THE MEASUREMENT SYSTEM IS NEAR COMPLETION. THE MTT FUNDS HAVE BEEN EXHAUSTED. CURRENTLY THE PROJECT IS BEING CONTINUED USING PATRIOT PROJECT FUNDS.	65.0		65.0		JUN 84
* 81 6350 2401	CANNON TUBE AUTOMATIC MAGNETIC BORESCOPE INSPECTION THE MAGNETIC RECORDING BORESCOPE HAS BEEN SENT TO THE VENDOR FOR REPAIRS. SEVERAL PROBLEM AREAS HAVE BEEN IDENTIFIED. LOOSE MECHANICAL CONNECTIONS, BROKEN WIRES AND STRAY ROTATIONAL SIGNALS ARE BEING IMPRESSED ON THE DETECTION SIGNAL CIRCUITS.					SEP 84
* 81 6350 2409	EMISSION SPECTROGRAPH ANAL MARAGING STEEL PLASMA EXCITATION ***** DELINQUENT STATUS REPORT *****					JUN 84
* 81 6350 2420	OPTICAL AND DIG STANDARDS AND MEASURING SYSTEM THE NBS INSTR FOR MEASURING ANGULAR SCATTER IS CURRENTLY ON LINE AND MEASUREMENTS HAVE BEEN MADE ON THE FIRST GENERATION SCRATCH SAMPLES.	252.0	200.0	52.0		JUN 84
* 81 6350 2603	PROVIDE AUTO SPHERICITY INTERFEROMETER F/TEST LENS SURFACES THE TECHNICAL WORK HAS BEEN COMPLETED. THE FINAL REPORT IS SCHEDULED FOR COMPLETION IN FEB 1984.	110.0	37.7	59.9		JAN 84
* 81 6350 2604	NEW COMPATIBILITY TEST METHOD FOR EXPLOSIVE SYSTEMS THE PROJECT HAS BEEN COMPLETED. THE FINAL REPORT IS IN THE PROCESS OF BEING WRITTEN AND IS SCHEDULED FOR COMPLETION IN MARCH 1984.	45.0		45.0		JAN 84
* 81 6350 2631	CRITICAL ELECTROMAGNETIC INSP PROBLEMS WITHIN THE ARMY COMPLETED THE EVALUATION OF THE EDDY CURRENT INST FOR MEASURING CASE DEPTH OF CARBURIZED GEARS. THE RESULTS OF THIS EVALUATION ARE CONSIDERED NEGATIVE. THEREFORE, IMPLEMENTATION IS NOT APPROPRIATE.	67.0		67.0		MAR 84
* 81 6350 2633	FOURIER TRANSFORM IR TECHNIQUES FOR QC OF PREPREG SYSTEM ***** DELINQUENT STATUS REPORT *****					[illegible]

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* 81 6350 2639	ROADWHEEL SEAL TEST MACHINE THE IN-HOUSE FABRICATION OF THE ROAD SEAL TEST MACHINE IS IN-PROCESS.					JUN 84
* 81 6350 2642	ADVANCED PENETRATING RADIATION TECH F/PRODUCT EVALUATION THE EVALUATION OF THE GAMMA-GAUGING EQUIPMENT WAS COMPLETED. A NEGATIVE FINDING CONCERNING THE APPLICABILITY OF THE EQUIPMENT IS CONTAINED IN THE FINAL REPORT.	75.0		67.0		JUN 84
* 81 6350 2800	THERMAL + DYNAMIC MECH CHAR-PREPREG AGING AND CURE BEHAVIOR ***** DELINQUENT STATUS REPORT *****					JUN 84
* 81 6350 2802	PYROTECHNIC INGREDIENT ACCEPTANCE TESTING SEE PROJECT NO M 82 6350-2802 FOR STATUS.				JUN 83	JAN 84
* 81 6350 2803	AUTO MEAS OF STRENGTH + OXIDE LIMITING FLAWS IN CERAMIC TURB ***** DELINQUENT STATUS REPORT *****				AUG 83	JUN 84
81 6350 2804	BINARY MUNITIONS MECHANICAL RUPTURE PROPERTIES TEST THE PROTOTYPE APPARATUS HAS BEEN COMPLETED. THE CONTRACTOR IS PROCEEDING WITH THE FABRICATION. THE FINAL DRAWINGS AND INSTRUMENTATION MANUAL IS NEARING COMPLETION.	306.0	281.0	25.0		APR 84
* 81 6350 2806	ADVANCED NDT OF REINFORCED PLASTIC COMPOSITES-SPAR + BEAM ***** DELINQUENT STATUS REPORT *****					JUN 84
* 81 6350 2811	M42/M46 MAGNETIC FLUX LEAKAGE INSPECTION FABRICATION OF THE SYSTEM IS APPROXIMATELY 90 PCT COMPLETE. THE SYSTEM WILL BE IMPLEMENTED ON THE NEW M42/M46 GRENADE CONTRACTS. THE PROTOTYPE DEVELOPED BY THIS EFFORT WILL BE INSTALLED IN ONE OF THE EXISTING MANUFACTURERS PLANTS.	224.0	192.0	37.0		DEC 84
* 81 6350 2813	ADAPTION KIT FUNCTION EMBEDDED MICROPROCESSOR TESTING SEE PROJECT NO M 82 6350-2813 FOR STATUS.					JAN 84
* 81 6350 2815	CANNON TUBE AUTOMATED CHROME PLATE THICKNESS MEASUREMENT ONE RFP REPLY WAS RECEIVED. COST DATA WAS PROVIDED BY THE SOLE BIDDER. BASED ON A PREVIOUS AUDIT, THIS DATA WAS NOT ACCEPTABLE. AS A RESULT THE CONTRACT WAS NOT AWARDED.	69.6		58.5	OCT 82	APR 83
* 81 6350 2817	FIBER OPTIC CABLE ASSEMBLIES TEST CRITERIA DEVELOPMENT ***** DELINQUENT STATUS REPORT *****					JUN 84
* 81 6350 2829	DETECTOR DEWAR MICROPHICS PROD TEST SET + PROCEDURES THE TEST STATION DESIGN HAS BEEN COMPLETED. THE TEST STATION COMPONENTS WERE ORDERED AND ASSEMBLED. FINAL ASSEMBLY AND CHECK OUT IS SCHEDULED FOR DEC 1983.	210.0	[illegible]	[illegible]		[illegible]

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* 81 6350 2858	STRESS READING TRANSDUCER FOR LARGE COMPOSITE COMPONENTS COMPLETED THE DATA COLLECTION ACTIVITY. CORRELATION STUDIES ARE UNDERWAY.	75.0		75.0	DEC 82	MAR 84
* 81 6350 2943	DEPLETED URANIUM KE PENETRATORS ULTRASONIC INSP PROCEDURES THE TECHNICAL WORK FOR THIS EFFORT HAS BEEN COMPLETED. THE FINAL REPORT IS IN THE PROCESS OF BEING WRITTEN. THE FINAL REPORT IS SCHEDULED TO BE RELEASED FEB 28, 1984.	75.0		75.0	DEC 82	JAN 84
* 81 6350 2944	PROTECTIVE MASK CANISTER ELECTROMAGNETIC INSP PROCEDURES THE EDDY CURRENT TEST EQUIPMENT HAS BEEN FABRICATED, TESTED, INSTALLED, AND DEMONSTRATED. THE CONTRACTOR PROVIDED ON-SITE TRAINING TO GOVERNMENT PERSONNEL ON THE OPERATION OF THE CANISTER TESTER.	85.0	55.0	30.0	DEC 82	DEC 83
* 81 6350 2945	QA OF COMPUTERIZED INSPECTION EQUIPMENT SOFTWARE A MULTI-USER MICROPROSSESSOR SYSTEM PURCHASED FOR THIS WORK WILL BE USED IN THE DEVELOPMENT OF THE LIBRARY PROCEDURES. EVALUATION OF APPROPRIATE SOFTWARE TO PERFORM THIS FUNCTION HAS BEGUN ON ALTERNATE EQUIP PRIOR TO THE DELIVERY OF THE MICRO-SYSTEM.	125.0		125.0	NOV 82	DEC 83
* 81 6350 2947	MOBILITY MONITORING SYSTEM (MMS) A 4 CHANNEL COMPUTER CONTROLLED SIGNAL CONDITIONING MODULE HAS BEEN COMPLETED. ALSO, THE DATA ACQUISITION UNIT (DAU) HAS BEEN CONSTRUCTED. THE DAU IS PRESENTLY UNDERGOING HARDWARE/SOFTWARE INTEGRATION AND LABORATORY TESTING.	10.0		5.0	DEC 84	JUN 84
* 81 6350 2977	IMAGE INTENSIFIER SYSTEM VEILING GLARE TESTER THE CONTRACT WAS AWARDED 20 SEP 83. THE SYSTEM DESIGN IS UNDERWAY.	83.4	53.4		DEC 84	NOV 84
* 82 6350	MATERIALS TESTING TECHNOLOGY (MTT) FOR PROJECT STATUS, SEE SUBTASKS BELOW.	4,573.0	1,920.0	2,227.5	OCT 84	OCT 84
82 6350 2235	ACOUSTIC EMISSION WELD MONITOR PRELIMINARY RESULTS OF THE LIMA ARMY TANK PLANT TEST HAVE SHOWN GOOD CORRELATION WITH X-RAY AND ULTRASONIC NDT METHODS. WELD ENGINEERS AT GD HAVE EXPRESSED INTEREST IN USING THE AEWM TO RESEARCH POST WELD CRACKING.	185.0	185.0			JUN 84
* 82 6350 2245	CERAMIC MATL NDT EVALUATION TECHNIQUES EVALUATED THE RADIOMETRIC GAGING SYSTEM DEVELOPED FOR MEASURING OF LOCAL DENSITY GRADIANTS, CHEMICAL VARIABILITY OR THICKNESS OF MATERIALS. IT WAS CONCLUDED THAT THIS SYSTEM PERFORMANCE IS NOT AN IMPROVEMENT OVER FILM RADIOGRAPHY.	100.0	60.0	13.0	APR 83	JUN 84

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62 6350 2424	AUTOMATIC GEAR TOOTH CONTOUR INSPECTION SYSTEM THE ENGINEERING DRAWINGS HAVE BEEN COMPLETED. ALL THE COMPONENTS HAVE BEEN PROCURED AND DELIVERED. FABRICATION IS 98 PCT COMPLETE AND SOFTWARE ENGINEERING/DOCUMENTATION IS 55 PCT COMPLETE. THE PROJECT IS BEING TERMINATED DUE TO LACK OF FUNDS.					JAN 84
62 6350 2448	IMPROVED GB SIMULANT FOR LIFE TESTING OF CHARCOAL FILTERS THE CANISTER TESTING TO VERIFY THE CORRELATION FOR EACH SIMULANT HAS BEEN COMPLETED. A SERIES OF M11 CANISTERS WERE CHALLENGED WITH EACH SIMULANT AND THEN REGENERATED. AFTER REGENERATION THEY WERE SENT TO EDGEWOOD TO DETERMINE THE RESIDUAL EFFECT.	141.2	83.2	26.8	JUN 83	APR 84
* 62 6350 2611	SORPTION OF AGENTS ON ASC WHETLERITE SEE PROJECT NO M 83 6350-2611 FOR STATUS.	100.0		100.0	SEP 83	SEP 83
* 62 6350 2630	CRITICAL ULTRASONIC INSPECTION PROBLEMS WITHIN THE ARMY THIS TASK HAS BEEN COMPLETED.	92.9	20.9	49.1		MAR 84
* 62 6350 2640	TRACK TEST MACHINE ALL THE COMPONENT PARTS HAVE BEEN COMPLETED. ALL DRAWINGS ARE APPROXIMATELY 98 PERCENT COMPLETED.					DEC 84
* 62 6350 2695	ACCEPTANCE TEST FOR 20MM DECLUTCHING FEEDERS ON PROD CONTR THIS PROJECT HAS BEEN CANCELLED DUE TO THE SEVERE FUNDING REDUCTION BY JAKCOM. THE FINAL REPORT HAS BEEN PUBLISHED.	92.5			JUN 83	MAR 84
* 62 6350 2801	NEW PROPELLANT SURVEILLANCE TEST THE TECHNICAL WORK HAS BEEN COMPLETED. THE FINAL REPORT IS IN THE PROCESS OF BEING PREPARED AND IS SCHEDULED FOR COMPLETION IN MARCH 1984.	70.0		70.0	JUL 83	OCT 83
* 62 6350 2802	PYROTECHNIC INGREDIENT ACCEPTANCE TEST THIS PROJECT HAS BEEN COMPLETED. THE TECHNICAL REPORT IS IN THE PROCESS OF BEING WRITTEN AND IS SCHEDULED FOR PUBLICATION MARCH 1984.	75.0		75.0	JUN 83	JAN 84
* 62 6350 2804	BINARY MUNITIONS MECHANICAL RUPTURE PROPERTIES TEST THE CONTRACTOR COMPLETED SUBCONTRACT ACTIONS RELATING TO THE ELECTRONICS-SYSTEM. DRAWINGS FOR ALL FABRICATED PARTS WERE ESSENTIALLY COMPLETED.	40.0		40.0	JUL 83	JAN 84
* 62 6350 2811	M42/M46 MAGNETIC FLUX LEAKAGE INSPECTION THE APPLICATIONS TEST (PHASE II) CONTRACT WAS AWARDED TO NI INDUSTRIES 30 SEPT 1983.	105.0	65.0	20.0	FEB 84	DEC 84

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* 82 6350 2813	ADAPTION KIT FUNCTION EMBEDDED MICROPROCESSOR TESTING THE PROJECT HAS BEEN COMPLETED. THE TECHNICAL DATA PACKAGE IS COMPLETE. THE OPERATING INSTRUCTIONS AND THE DRAWINGS ARE FINISHED. SOFTWARE PROGRAMS ARE FINISHED, INCLUDING AN OPERATING SYSTEM BACKUP. THE RESULTS WILL BE USED ON PERSHING II AK TESTS.	615.5	615.5		APR 84	JAN 84
* 82 6350 2820	INTEGRATED FOCAL PLANE MODULE TEST STATION THE SAMPLE AND HOLD CIRCUITRY FOR FATS WAS TESTED. THE RS4000 WAS INTERFACED TO THE LEVEL SHIFTER. THE GAIN OF THE CCD OUTPUT AMPLIFIER WAS SUCCESSFULLY MEASURED USING FATS. SOFTWARE WAS DESIGNED AND WRITTEN TO STORE CCD TEST DATA.					APR 84
* 82 6350 2826	LIW CHROMATOGRAPHIC ANALYSIS-NITROCELLULOSE BASE PROPELLANTS THE COMPUTER OPERATING PROCEDURES WERE MODIFIED. SEVERAL PROPELLANT SAMPLES WERE ANALYZED. SEVERAL SAMPLES WERE ANALYZED USING BOTH THE GAS + LIQUID CHROMATOGRAPHY TECHNIQUES WHICH WILL ALLOW A COMPARISON OF THESE TECHNIQUES.	80.0		60.3		JUL 84
* 82 6350 2834	IMPROVED TRACK PIN SHOT PEENING INSPECTION SEE PROJECT NO M 83 6350-2834 FOR STATUS.				AUG 84	JUN 84
* 82 6350 2841	STANDARDIZATION OF FRACTURE TOUGHNESS TESTS ***** DELINQUENT STATUS REPORT *****					JUN 84
* 82 6350 2844	MEASURING PROJECTILE RESISTANCE TO FREE FALL IMPACT SEE PROJECT NO M 83 6350-2844 FOR STATUS.				OCT 83	OCT 84
* 82 6350 2876	PROTOTYPE INFRARED SEEKER AND AUTO PILOT TESTING AN AD-10 DIGITAL ARRAY PROCESSOR WAS PURCHASED AND CHECK-OUT. INITIAL EFFORTS TO INTERFACE UPDATED EXISTING HARDWARE/SOFTWARE AND IR SCENE GENERATOR INTERFACE SOFTWARE WITH THE AD-10 PROCESSOR WERE COMPLETED.	310.0	280.0	40.0		SEP 84
* 82 6350 2878	STRAIGHTENING OF GUN TUBE FORGINGS BY MEANS OF EMAT A CONTRACT WAS AWARDED FOR THE PURCHASE OF THE PRESSES.	63.0		42.0	JUN 86	JUN 85
* 82 6350 2880	STRAIN TEMP DEPN + SCAT MEAS TECH + EQUIP FOR LASER ROD EVAL ***** DELINQUENT STATUS REPORT *****				MAY 84	JUN 84
* 82 6350 2881	DYNAMIC LASER ROD EVALUATION ***** DELINQUENT STATUS REPORT *****				MAY 84	SEP 84
* 82 6350 2882	NUCLEAR MAG RESONANCE TEST FOR DETM MOISTURE IN COMPOSITES FABRICATION OF THE NMR SYSTEM IS NEARING COMPLETION. ALL OF THE INDIVIDUAL ELECTRONIC COMPONENTS HAVE BEEN CONSTRUCTED AND TESTED. FINAL ASSEMBLY OF THE ENTIRE SYSTEM IS IN PROGRESS AND IS EXPECTED TO BE COMPLETED BY DECEMBER 1983.	80.0	60.0		JUN 85	[illegible]

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* 82 6350 2803	AUTO REFORMATTING OF ATE LANG FOR TESTING SEMICONDUCTORS THE TECHNICAL WORK HAS BEEN SUCCESSFULLY COMPLETED AND THE FINAL REPORT HAS BEEN COMPLETED. THE RESULTS OF THIS EFFORT WILL REDUCE THE HIGH COST AND TIME DELAY CAUSED BY THE PRESENT PRACTICE OF MANUAL CONV OF TEST SOFTWARE FOR SCREENING MIL DEVICES.	144.0	144.0		DEC 82	NOV 83
* 82 6350 2807	SIMULANT PERMEATION TESTING OF PROTECTIVE CLOTHING A COMPUTER SEARCH FOR CANDIDATE SIMULANTS WAS USED TO SCREEN 225,000 COMPOUNDS. THE LIST OF CANDIDATE COMPOUNDS HAS BEEN REDUCED TO 12. IT WAS DECIDED THAT THE CONTRACTOR SHOULD START PHASE II WITH THE 12 CANDIDATE COMPOUNDS.	122.0		27.3	JUN 83	MAR 84
* 82 6350 2809	PROCEDURES FOR INSPECTING + MONITORING THERMOPLASTIC RESINS PARTIAL DRAFT OF AN ASTM TEST METHOD FOR DETERMINING THE MW'S AND MWD'S OF THERMOPLASTIC RESINS USING HIGH PERFORMANCE SIZE-EXCLUSION CHREMATOGRAPHY WAS PREPARED.	49.0			JUN 85	JUN 86
* 82 6350 2891	HG CD TE MATERIAL SCREENING TEST THE CONTRACT WAS AWARDED TO HONEYWELL. EFFORTS ARE UNDERWAY TO MODIFY THE CURRENT SETUP FOR GREATER EFFICIENCY, HIGHER THRU-PUT AND MORE COMPACT SPACE UTILIZATION.	175.0	155.0	8.9	DEC 84	DEC 85
* 82 6350 2892	REMOTE IMAGING OF PREFORM DEFECTS BY COMPUTER CONTROL THE CONTRACT FOR THE SYSTEM WAS AWARDED.	85.0	60.0	23.4	DEC 83	JUL 84
* 82 6350 2894	RESIDUAL STRESS DETERMINATION BY ACOUSTIC WAVE VELOCITY SEE PROJECT NO M 83 6350-2894 FOR STATUS.	41.5		41.5	FEB 83	JAN 84
* 82 6350 2896	STANDARDIZED SOFTWARE TEST FACILITIES SEE PROJECT M 83 6350-2896 FOR STATUS.	466.0	220.0	85.5	AUG 84	SEP 85
* 82 6350 2897	STANDARD MONITORS TO INCREASE SOFTWARE TESTABILITY SEE PROJECT M 83 6350-2897 FOR STATUS.				DEC 85	SEP 86
* 82 6350 2901	LASER AIMING DEVICE CONTRACT WAS AWARDED TO DECILOG, INCORPORATED. THE PRELIMINARY CONCEPT DESIGN HAS BEEN APPROVED. IT INCORPORATES A MEASUREMENT APPROACH USING AN ELECTRONIC AUTOCOLLINATOR. THIS INVOLVES MOUNTING INSTR ON A VERY STABLE PEDESTAL.	154.2	119.2	35.0	AUG 84	FEB 85
* 82 6350 2913	IMPROVED METHODOLOGY FOR GENERATION OF TOXIC CHEM AGENTS THIS EFFORT HAS BEEN COMPLETED. THE FINAL TECHNICAL REPORT WILL BE COMPLETED IN FEB 1984.	78.6	58.6	19.4	SEP 84	SEP 85
* 82 6350 2916	AUTOMATING DEPOT REBUILD COMPONENT DIMENSIONAL INSPECTION THE MODULAR DESIGN DEFINITION IS COMPLETE AND APPROVED. THE HOST COMPUTER HAS BEEN PROCURED IN ORDER TO EFFECTIVELY BEGIN DEVELOPMENT OF THE HARDWARE/SOFTWARE CONFIGURATION WHICH WILL BE USED IN THE FINAL SYSTEM.	200.0	[illegible]		JUL [illegible]	[illegible]

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PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
* 82 6350 2919	AUTO RESIDUAL STRESS INSP OF GUN TUBES + OTHER RELATED COMP TECHNICAL SPECIFICATIONS HAVE BEEN PREPARED. THE CONTRACT HAS NOT BEEN AWARDED. TENTATIVE DATE OF AWARD IS SCHEDULED FOR DECEMBER 1983.	120.0	96.0	22.2	NOV 83	SEP 84
82 6350 2938	EDDY CURRENT CRACK INSPEC PROCEDURE F/BORE EVACUATOR HOLES THE FABRICATION OF THE BORE EVACUATOR HOLE TEST SPECIMENS WERE COMPLETED. BOTH ABSOLUTE AND DIFFERENTIAL HOLE PROBES WERE EVALUATED UNDER SINGLE FREQUENCY EXCITATION.	54.0	4.0	34.0	MAR 83	MAR 84
* 82 6350 2945	QA OF COMPUTERIZED INSPECTION EQUIPMENT SOFTWARE THIS EFFORT HAS BEEN COMPLETED. THE FINAL REPORT IS BEING WRITTEN. IT IS SCHEDULED TO BE COMPLETED BY 30 APRIL 1984.	120.0	60.0	60.0	JUN 83	DEC 83
M 82 6350 2950	ELECTRICALLY CONDUCTIVE ADHESIVES FOR HIGH STABILITY G R B THE FINAL REPORT IS BEING PREPARED. THE REPORT WILL BE COMPLETED IN JAN 1984.	77.0	77.0		JUN 83	JAN 84
* 82 6350 2951	AN/PRS-8 MINE DETECTOR PRODUCTION TEST SET ***** DELINQUENT STATUS REPORT *****				MAR 83	JUN 84
* 83 6350	MATERIALS TESTING TECHNOLOGY (MTT) FOR PROJECT STATUS, SEE SUBTASKS BELOW.	1,243.4	656.6	586.8		OCT 84
* 83 6350 2448	IMPROVED GB SIMULANT FOR LIFE TESTING OF CHARCOAL FILTERS SEE PROJECT NO. M 82 6350-2448 FOR STATUS.					APR 84
* 83 6350 2611	SORPTION OF AGENTS ON ASC WHETLERITE ADSORPTION ISOTHERMS WERE DETERMINED FOR ASC WHETLERITE CHARCOAL AT FOUR LEVELS OF IMPREGNATION, FOR A PRODUCTION LOT OF IMPREGNATED CHARCOAL, AND FOR A STANDARD CHARCOAL OF KNOWN SURFACE AREA USING TWO INDEPENDENT METHODS.	4.0		4.1	DEC 83	JAN 84
* 83 6350 2642	ADVAN PENETRATING RADIATION TECH FOR PRODUCT EVALUATION SPEED AND SENSITIVITY OF LOW SILVER FILMS HAVE BEEN COMPARED WITH CONVENTIONAL INDUSTRIAL RADIOGRAPHIC FILM. EXPOSED CURVES ARE BEING EVALUATED FOR THE FILMS.	46.8		46.8		JUN 84
83 6350 2824	ASSESS OF PROOF TEST DAMAGE OF COMPONENT MISSILE MOTOR CASES ***** DELINQUENT STATUS REPORT *****					JUN *
* 83 6350 2834	IMPROVED TRACK PIN SHOT PEENING INSPECTION THE IMPLEMENTATION PHASE HAS BEEN COMPLETED. IT CONSISTED OF INSTALLATION OF AUTOMATED X-RAY DIFFRACTION EQUIPMENT. DURING IMPLEMENTATION, IT WAS FOUND NECESSARY TO DESIGN A NEW JIG MORE SUITABLE FOR PRODUCTION ENVIRONMENT FOR HOLDING TRACK PINS.	41.0		11.0	APR 84	JUN *

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
2ND SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

[illegible]	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
* 83 6350 2844	MEASURING PROJECTILE RESISTANCE TO FREE FALL IMPACT DURING THIS REPORTING PERIOD, IT WAS DETERMINED WHETHER THE DROP TESTER COULD BE ADAPTED FOR POSSIBLE USE BY TECOM AND THE MODIFICATIONS THAT WOULD BE REQUIRED.	61.2				OCT 84
* 83 6350 2876	PROTOTYPE INFRARED SEEKER AND AUTOPILOT TESTING SEE PROJECT NO M 82 6350-2876 FOR STATUS.					SEP 84
83 6350 2888	IN-PROCESS DETM OF LOWERED DETECTION LIMIT OF PHOTOMETRICS THE CONTRACT FOR THIS WORK WAS AWARDED IN SEPTEMBER 1983.	32.0	32.0		MAY 84	MAR 84
* 83 6350 2889	PROCEDURES FOR INSPECTING + MONITORING THERMOPLASTIC RESINS SEE PROJECT M 82 6350 2889 FOR STATUS.	49.0				JUN 86
* 83 6350 2894	RESIDUAL STRESS DETERMINATION BY ACOUSTIC WAVE VELOCITY EVALUATED THE ULTRASONIC INTERFERUMETER. THE INTERFERUMETER WILL BE USED FOR DETERMINING THE THIRD ORDER ELASTIC CONSTANTS UNDER APPLIED STRESS CONDITIONS WHICH ARE REQUIRED FOR RESIDUAL STRESS DETERMINATIONS.	41.5		41.5	OCT 83	JAN 84
* 83 6350 2895	NDT OF ADVANCED COMPOSITE STRUCTURES FOR BRIDGING A LABORATORY MODEL OF A HAND SCAN ULTRASONIC C-SCAN SYSTEM OPTIMIZED FOR BRIDGING APPLICATION HAS BEEN ASSEMBLED.	41.5		41.5	MAR 85	MAR 84
* 83 6350 2896	STANDARDIZED SOFTWARE TEST FACILITIES THE CONTRACTOR DELIVERED THE STANDARD SOFTWARE TEST FACILITY FUNCTIONAL DESCRIPTION FOR COMMENT BY THE GOVERNMENT. THE FINAL IS SCHEDULED FOR COMPLETION DEC 83. THE FUNCTIONAL SPECIFICATION WORK WAS STARTED AND IS SCHEDULED FOR COMPLETION JAN 84.	466.0	220.0	85.5	SEP 83	SEP 85
* 83 6350 2897	STANDARD MONITORS TO INCREASE SOFTWARE TESTABILITY THE PROJECT STATEMENT OF WORK WAS REVIEWED WITH THE CONTRACTOR. THIS RESULTED IN A SLIGHT REVISION OF THE DELIVERABLES.	355.0	131.5	21.4		SEP 84
* 83 6350 2914	DEV OF AN AUTL ANAL AND CONTROL SYSTEM FOR GAS LIFE TESTERS THE EQUIPMENT CONTRACT WAS AWARDED. THE EQUIPMENT HAS BEEN RECEIVED.	11.0	7.8		MAY 84	SEP 84
* 83 6350 2926	TESTING OF M55 DETONATOR STAB SENSITIVITY AND OUTPUT AN AUTOMATED SYSTEM FOR TESTING M-55 DETONATORS STAB SENSITIVITY AND OUTPUT WAS DESIGNED. ORDERS HAVE BEEN PLACED FOR THE REQUIRED EQUIPMENT. COMPONENTS WHICH CAN NOT BE PURCHASED HAVE BEEN DESIGNED AND FAB HAS STARTED.	60.0	16.0	44.0		SEP 85
* 83 6350 2932	ASSESSMENT OF GLARE/SCATTER IN FIRE CONTROL OPTICAL SYSTEMS A SURVEY OF GLARE MEASUREMENT TECHNIQUES WAS UNDERTAKEN. A NUMBER OF TECHNIQUES WERE IDENTIFIED AND WILL BE CONSIDERED FOR THIS EFFORT. ALSO, A VISIT WAS MADE TO EASTMAN KODAK CORPORATION TO DISCUSS GLARE TECHNIQUES USED.	18.0		18.0		[illegible]

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
* 83 6350 2934	APPLIC OF X-RAY TV SYSTEM FOR DIFFRACTION PATTERNS EXPERIMENTS WERE CONDUCTED TO DETERMINE THE OPTIUM HARDNESS THRESHOLD VALUES. STANDARD VICKER?S HARDNESS MEASUREMENTS WERE MADE ON FLAT AND CURVED SPECIMENS AND THEY COMPARED FAVORABLY WITH THOSE COMPUTED FROM THE X-RAY DIFFRACTION IMAGE.	60.0		60.0		SEP 83
* 83 6350 2946	IMPROVED PROGRAMMABLE HIGH RESPONSE FUNCTIONAL ACCEL TESTER FOUR PROPOSAL WERE EVALUATED. TWO WERE SELECTED FOR FURTHER CONSIDERATION. VISITS WERE MADE TO THE TWO CONTRACTOR PLANTS WHERE THE PROPOSALS WERE FURTHER DISCUSSED.	58.0		58.0		DEC 83
* 83 6350 2947	MOBILITY MONITORING SYSTEM SEE PROJECT NO M 81 6350-2947 FOR STATUS.				DEC 85	JUN 85
83 6350 2962	AUTOMATION OF 65 DEGREE-C PROPELLANT SURVEILLANCE TEST THE PROJECT FUNDS WERE USED TO PROCURE A TEXTRONIX COMPUTER WITH DISPLAY TERMINAL, MODEL NO. 4113, TOGETHER WITH ESSENTIAL PERIPHERALS SUCH AS A GRAPHICS COPIER. THE CONTRACTS FOR THIS EQUIP WERE AWARDED ON THE LAST DAY OF FY83.	60.0	31.4	18.0	SEP 85	SEP 85
* 83 6350 2968	INVEST OF SCAN PHOTOACOUSTIC MICROSCOPY F/CERAMICS INSPECT A STATEMENT OF WORK HAS BEEN PREPARED FOR THE DEMONSTRATION OF THE SCANNING PHOTOACOUSTIC MICROSCOPE (SPAM) FOR DETECTION OF SURFACE AND NEAR SURFACE DEFECTS IN STRUCTURAL CERAMIC MATERIAL.	17.0		17.0	OCT 84	NOV 84
* 83 6350 2972	CAPILLARY GAS CHROMATOGRAPHIC TEST OF ARMY SOLID PROPELLANTS THE RESULTS OF THIS EFFORT HAVE DEMONSTRATED THAT THE CAPILLARY GAS CHROMATOGRAPHY IS A SIGNIFICANT IMPROVEMENT OVER PACKED COLUMN GAS CHROMATOGRAPHY.	44.5	11.9	32.5	SEP 83	SEP 83
* 83 6350 2980	PORTABILITY OF TEST SOFTWARE FOR VHSIC CHIPS THE CONTRACT WAS AWARDED SEP 20 1983. WORK HAS STARTED ON REVIEWING THE VHSIC CHIP AND TEST SOFTWARE SPEC TO DETERMINE COMMONALITIES. ATLAS, PASCAL AND ADA LANGUAGES WERE REVIEWED FOR SUITABILITY AS COMMON INTERMEDIATE TEST DESCRIPTION LANGUAGE.	100.0	90.0		DEC 83	APR 84
* 83 6350 2981	FLUIDIC POWER SUPPLY ACCEPTANCE TESTER THE HIGH PRESSURE ACCEPTANCE TESTER BREADBOARD WORK HAS BEEN COMPLETED. ALL OF THE PURCHASED COMPONENTS HAVE BEEN RECEIVED. THE COMPUTER HAS BEEN INTEGRATED WITH THE PROTOTYPE PNEUMATIC SYSTEM. THE TRAJECTORY DATA SOFTWARE IS 90 PCT COMPLETE.	150.0	47.2	95.3	JUL 85	JUN 85
* 83 6350 3001	NEW ACCEPTANCE TESTS F/CHEM AGENT RESIST OF URETHANE PAINTS A CONTRACT FOR THE CONDUCT OF THIS EFFORT WAS AWARDED. A LITERATURE SEARCH IS UNDERWAY BY THE CONTRACTOR AND TECHNIQUES TO PREPARE THIN FILMS EVALUATED.	71.0	66.0		APR 84	APR 84

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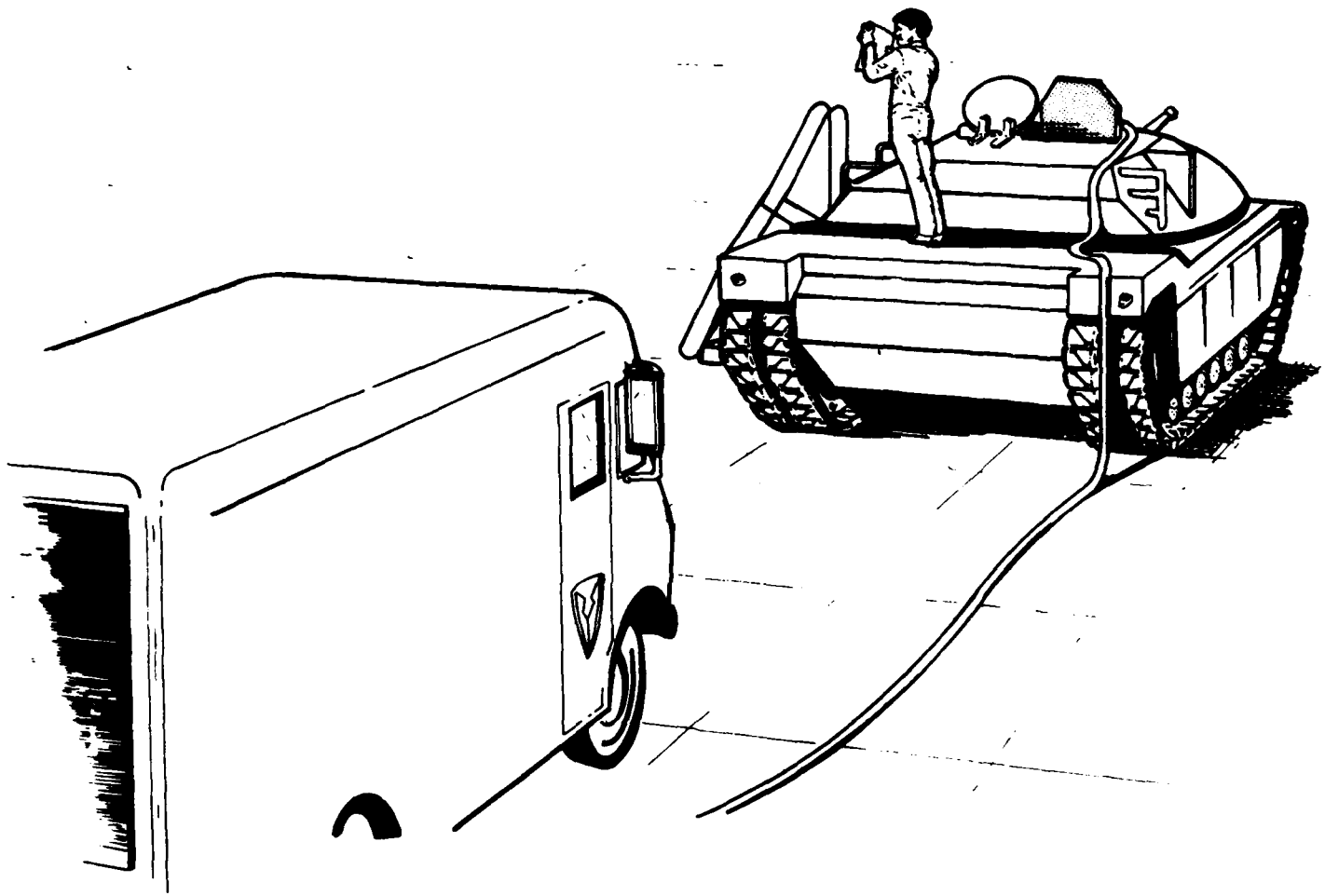
2ND SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
* 83 6350 3006	ACOUSTIC EMISSION MONITOR/CONTR OF GUN TUBE STRAIGHTENING THE GUN TUBE BEND TESTS WERE COMPLETED. INVESTIGATED THE BENEFITS OF USING NOISE ANALYSIS EQUIPMENT. PERFORMED ON LINE, FULL SCALE TESTING. ESTABLISHED AE PARAMETERS TO BE APPLIED TO PRODUCTION CANNON TUBES. COMPLETED THE FULL SCALE TESTING.	50.0	50.0		SEP 83	JAN 84
* 83 6350 3010	DIGITAL IMAGE AMPLIFICATION X-RAY SYSTEM DURING THIS REPORTING PERIOD TWO INERT STD WERE DESIGNED AND FABRICATED. MULTIPLE X-RAYS WERE TAKEN AND ANALYZED TO DETERMINE THE DEFECTS WITHIN THE INERT FILLERS.	40.0		40.0		SEP 83
* 83 6350 3011	PASSIVE/ACTIVE ROD TESTING THE ESSENTIAL COMPONENTS OF THE PARTS SYSTEM HAVE BEEN ASSEMBLED AND A NUMBER OF RODS TESTED. DELIVERY OF THE PDP-11 COMPUTER HAS BEEN DELAYED UNTIL DEC 83. THE REMAINING FY84 EFFORT TO COMPLETE PROGRAM WILL BE SUPPORTED BY IN-HOUSE NYEDL FUNDING.	520.0	268.0	252.0	SEP 85	MAR 84



TEST AND EVALUATION COMMAND
(TECOM)

TEST AND EVALUATION COMMAND

CURRENT FUNDING STATUS, 2ND CY83

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)	INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)
81	1	770,000	0	0 (0%)	770,000	759,000 (99%)
82	1	726,000	0	0 (0%)	726,000	717,4[illegible] (98.)
83	1	438,000	0	0 (0%)	438,000	360,000 (82%)
TOTAL	3	1,934,000	0	0 (0%)	1,934,000	1,836,4[illegible] (95%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 0% INHOUSE REMAINING 100%

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
2ND SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
U 81 5071	TECOM PRODUCTION TEST METHODOLOGY ENGINEERING MEASURES SEE INDIVIDUAL SUBTASKS FOR INFORMATION.	770.0		769.0	DEC 83	DEC 83
U 81 5071 01	ACCEPTANCE TEST PROCEDURES SEE SUBTASK 01 FY83 FOR DATA.				DEC 83	JUN 84
U 81 5071 10	TEST OPERATION PROCEDURES ***** DELINQUENT STATUS REPORT *****				DEC 83	DEC 85
U 81 5071 37	ROLLOVER TEST OF MILITARY VEHICLES SEE SUBTASK 37 FY82 FOR DATA.				DEC 83	JUN 84
U 81 5071 43	TEST AUTOMATION DEVELOPMENT SEE SUBTASK 43 FY83 FOR DATA.				DEC 83	DEC 84
U 81 5071 57	GENERAL PURPOSE BIT SLICE MICRO-COMPUTER * SEE SUBTASK 57 FY83 FOR DATA.				DEC 83	DEC 84
U 81 5071 59	SOLAR POWERED INSTRUMENTATION VAN * SEE SUBTASK 59 FY82 FOR DATA.				DEC 83	DEC 84
U 81 5071 60	RECEIVER OPERATING CHARACTERISTICS MEASUREMENTS NO NEW WORK INDICATED FOR THIS REPORTING PERIOD. WORK STATUS IDENTICAL TO WORK STATUS SUBMITTED DURING PREVIOUS REPORTING PERIOD.				DEC 83	DEC 84
U 81 5071 71	COPPER CRUSHER PRESSURE GAGES SEE SUBTASK 71 FY83 FOR DATA.				DEC 83	DEC 84
U 81 5071 73	INTEGRATED TEST DATA ACQUISITION NO WORK INDICATED ON STATUS REPORT. LACK OF FUNDING IN FY82 + FY83 RESULTED IN THE RESTRUCTURING TO SUPPORT RDT+E FUNDING. THIS TASK HAS BEEN TRANSFERRED TO THE RDT+E PROGRAM AND SHOULD BE DELETED FROM THE MMT PROGRAM.				DEC 83	DEC 83
U 81 5071 74	SMOKE SAMPLING/CHARACTERIZATION NO WORK INDICATED THIS REPORTING PERIOD. WORK STATUS IDENTICAL TO THAT REPORTED ON PREVIOUS STATUS REPORT.				DEC 83	DEC 83
U 81 5071 76	GAMMA DOSIMETRY IMPROVEMENT + MODERNIZATION PROGRAM SEE U 83 5071-76 FOR WORK STATUS.				DEC 83	JUN 84
U 81 5071 77	ELECTROMAGNETIC RADIATION EFFECTS/SUSCEPTIBILITY OF ARMY MAT SEE SUBTASK 77 FY82 FOR DATA.				DEC 83	DEC 84

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
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PROJ NO.	TITLE * STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
U 81 5071 79	ENVIRONMENTAL ISSUES GUIDE FOR HUMID TROPIC TESTING THE BASIC MATRIX HAS BEEN DEVELOPED AND HAS BEEN COORDINATED WITH THE US ARMY ENGINEERS TOPOGRAPHIC LABORATORY. THE FINAL REPORT HAS BEEN APPROVED AND PUBLISHED.				DEC 83	DEC 83
U 81 5071 80	COMPUTER AIDED TEST PLANNING THE FINAL REPORT HAS BEEN APPROVED AND PUBLISHED. THE REPORT CONTAINS BACKGROUND, MATERIAL DESCRIPTION, TEST OBJECTIVES, AND SCOPE, AND INDIVIDUAL SUBTESTS FOR RECEIPT INSPECTION, TROPIC STORAGE AND PERFORMANCE, RELIABILITY AND LOGISTICS SUPPORT.				DEC 83	DEC 83
U 81 5071 96	CALIBRATION PROCEDURES FOR TV TRACKING SYSTEM * SEE SUBTASK 96 FY82 FOR DATA.					DEC 84
U 82 5071	TECOM PRODUCTION TEST METHODOLOGY ENGINEERING MEASURES SEE INDIVIDUAL SUBTASKS FOR INFORMATION.	726.0		717.4	DEC 84	DEC 84
U 82 5071 01	ACCEPTANCE TEST PROCEDURES SEE SUBTASK 01 FY83 FOR DATA.				DEC 84	DEC 84
U 82 5071 10	TEST OPERATIONS PRECEDURES ***** DELINQUENT STATUS REPORT *****				DEC 84	DEC 8
U 82 5071 100	AUTO PARTICLE CONTAMINATION MEAS IN HYDRAULIC OIL WORK ON THIS SUBTASK HAS BEEN DELAYED DUE TO REPEATED BREAKDOWN OF THE AUTOMATIC PARTICLE COUNTER. A NEW LABORATORY MODEL COUNTER HAS BEEN ORDERED (NOT FUNDED BY MMT) AND SHOULD BE AVAILABLE SOON FOR USE ON THIS SUBTASK.				DEC 84	DEC 84
U 82 5071 101	GENERAL PURPOSE TRANSPORTABILITY TEST AREA THE FINAL REPORT HAS BEEN REVIEWED AND APPROVED FOR PUBLICATION.				DEC 84	DEC 84
U 82 5071 37	ROLLOVER TEST OF MILITARY VEHICLES NO WORK ACCOMPLISHED THIS PERIOD. STATUS REPORT IDENTICAL TO ONE SUBMITTED PREVIOUSLY.					DEC 84
U 82 5071 43	TEST AUTOMATION SEE SUBTASK 43 FY83 FOR DATA.					DEC 84
U 82 5071 57	GENERAL PURPOSE BIT SLICE MICROCOMPUTER * SEE SUBTASK 57 FY83 FOR DATA.					DEC 84
U 82 5071 59	SOLAR POWERED INSTRUMENTATION VAN THE THERMO-ELECTRIC DEVICE (TED) HEATER/COOLER SYS DID NOT OPERATE PROPERLY DURING TESTS. THE SYS WAS USED TO SUPPORT THE PATRIOT HEMTT OUTRIGGER TEST AT LC-38 IN DECEMBER 1983 WITHOUT ANY PROBLEMS.					DEC 84

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
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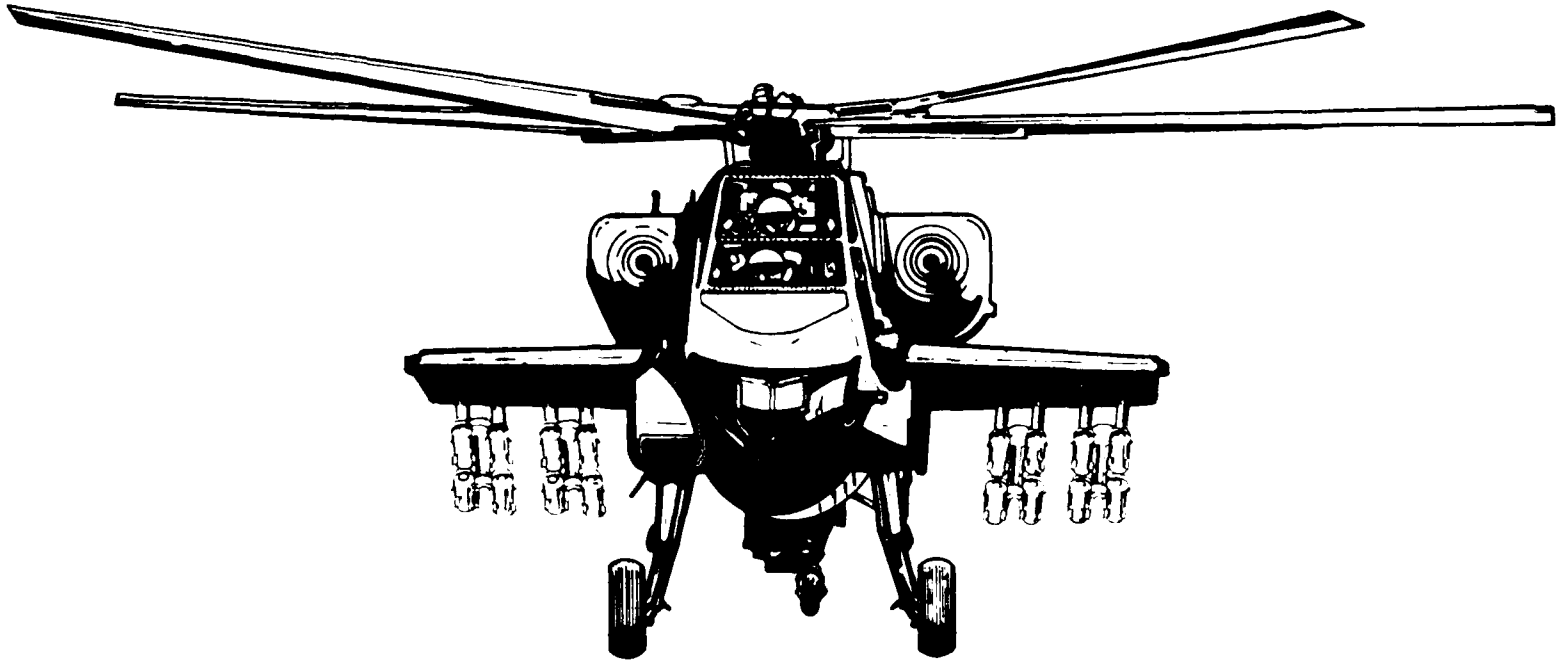
PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 82 5071 71	COPPER CRUSHER PRESSURE GAGES SEE SUBTASK 71 FY83 FOR DATA.					DEC 84
6 82 5071 76	GAMMA DESIMETRY IMPROVEMENT + MODERNIZATION PROGRAM SEE SUBTASK 76 FY83 FOR DATA.					DEC 84
6 82 5071 77	ELECTROMAGNETIC RADIATION EFFECTS + SUSCEPTIBILITY OF ARMY M NO NEW WORK INDICATED FOR THIS REPORTING PERIOD. WORK STATUS IDENTICAL TO WORK STATUS SUBMITTED DURING PREVIOUS REPORTING PERIOD.					DEC 84
6 82 5071 81	BINARY MUNITIONS PRODUCTION TEST METHODOLOGY NO WORK ACCOMPLISHED THIS REPORTING PERIOD. SUBTASK DELAYED DUE TO LACK OF FY83 FUNDS. STATUS IS THE SAME AS STATUS PREVIOUSLY REPORTED.					DEC 85
6 82 5071 90	TOXIC GAS ANAL BY GAS CHROMATOGRAPHY PROBLEMS HAVE BEEN ENCOUNTERED WITH THE GAS CHROMATOGRAPHIC ANALYZER. A NEW INSTRUMENT HAS BEEN PURCHASED (NOT FUNDED WITH MMT) AND WILL SOON BE AVAILABLE FOR USE ON THIS SUBTASK.				DEC 84	DEC 84
6 82 5071 92	EFFECTS OF RAIN + VEGETATION ON FUZES + IMPACT SWITCHES PHASE II OF THIS TASK HAS BEEN CANCELLED DUE TO LACK OF FY83 AND FY84 FUNDING AND REVIEW OF FUTURE PRIORITIES.					DEC 83
6 82 5071 95	RAPID EVALUATION OF ENVIRONMENTAL HAZARDS IT WAS DETERMINED THAT THE PRIMARY HAZARDS OF EXPOSURE ASSOCIATED WITH LEAVES CONTAMINATED WITH GL ARE VIA INGESTION OR DERMAL CONTACT.					DEC 85
6 82 5071 96	CALIBRATION PROCEDURES FOR TV TRACKING SYSTEM NO WORK ACCOMPLISHED ON THIS SUBTASK DURING REPORTING PERIOD. THE FINAL REPORT WILL BE COMPLETED IN FY84.					DEC 84
6 82 5071 97	IMP METH FOR PERFORMANCE TESTING MORTARS AT EXTREME TEMP NO CHANGE INDICATED IN STATUS REPORT. REPORT STATES SUBTASK WAS PARTIALLY FUNDED IN FY82, ADDITIONAL FUNDING HAS BEEN PROVIDED IN FY84.				DEC 84	DEC 84
6 83 5071	TECOM PRODUCTION TEST METHODOLOGY ENGINEERING MEASURES SEE INDIVIDUAL SUBTASKS FOR INFORMATION.	438.0		38[illegible].6	DEC [illegible]	DEC [illegible]
6 83 5071 01	ACCEPTANCE TEST PROCEDURES THE CENTRAL LIBRARY FOR THE TOTAL ATP PROGRAM (AMMUNITION, ARMOR PLATE AND WEAPONS) WAS MAINTAINED.				[illegible]	[illegible]

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
[illegible] 83 3071 10	TEST OPERATIONS PROCEDURES ***** DELINQUENT STATUS REPORT *****				DEC 83	DEC 83
[illegible] 83 3071 43	TEST AUTOMATION THIS SUBTASK IDENTIFIED PROCEDURES/EQUIPMENTS NEEDED TO AUTOMATE EXISTING RF SIMULATORS + RF MONITORS. RESULTS ARE REPORTED IN JPL REPORT (JPL D1052), OCT 83, SUBJ. OVAL/GPRS AUTOMATION AND INTEGRATION.					DEC 85
[illegible] 83 3071 57	GENERAL PURPOSE BIT SLICE MICROCOMPUTER THE FINAL REPORT IS BEING WRITTEN. THIS PROJECT HAS PROVIDED KNOWLEDGE IN BIT-SLICE HARDWARE TECHNOLOGY, MICROPROGRAMMING, AND MINICOMPUTER INTERFACE APPLICATIONS.					DEC 84
[illegible] 83 3071 72	IMPROVED COPPER CRUSHER PRESSURE GAGES THE INTERNAL BALLISTICS DIVISION COMPLETED ITS ANALYSIS OF THE GAGE PARAMETERS USING FINITE ELEMENTS AND PREPARED A GAGE DESIGN. THE DESIGN WAS MODIFIED BY MTD TO FULLY SATISFY KNOWN REQUIREMENTS.					DEC 85
[illegible] 83 3071 74	IMPROVE OF SMOKE MONIT/GENERATOR PRODUCTION TEST PROCEDURES NO WORK INDICATED THIS REPORTING PERIOD. WORK STATUS IDENTICAL TO THAT REPORTED ON PREVIOUS STATUS REPORT.					MAR 84
[illegible] 83 3071 76	GAMMA DOSIMETRY IMPROVEMENT + MODERNIZATION PROGRAM THE BASIC PRODUCTION GAMMA DOSIMETER WAS CHANGED TO A CALCIUM FLUORIDE CHIP FROM LITHIUM FLUORIDE POWDER. AN AUTOMATED GAMMA DOSIMETRY DATA BASE PROGRAM FOR DATA STORAGE AND RETRIEVAL, AND REPORT PREPARATION HAS BEEN COMPLETED.					DEC 84



AVIATION SYSTEMS COMMAND
(AVSCOM)

A V I A T I O N S Y S T E M S C O M M A N D

CURRENT FUNDING STATUS, END CY83

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)	INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)
81	8	1,642,200	1,155,300	971,400 (84%)	486,900	477,900 (97%)
82	19	19,259,300	16,378,000	11,499,800 (70%)	2,881,300	1,322,200 (45%)
83	6	4,137,400	3,199,100	139,300 (4%)	938,300	503,200 (53%)
TOTAL	33	25,038,900	20,730,400	12,600,500 (60%)	4,308,500	2,303,300 (53%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 83% INHOUSE REMAINING 17%

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
. 81 7136	ISOTHERMAL ROLL-FORGING OF COMPRESSOR BLADES IT WAS DETERMINED THAT HOT FORMING OF AM350 ALLOY MUST BE USED TO IMPART THE AIRFOIL TWIST.	190.2	124.4	65.6	NOV 82	AUG 84
. 82 7219	NON-DESTRUCTIVE EVALUATION TECH FOR COMPOSITE STRUCTURES STATE-OF-THE-ART REVIEWS ON RADIOGRAPHY AND THERMOGRAPHY TECHNIQUES WERE COMPLETED. WORK ON ULTRASONIC AND LIQUID CHROMOTOGRAPHIC TECHNIQUES IS IN PROCESS. A QA ANALYSIS OF THE AH-1 COMPOSITE BLADE MANUFACTURE WAS COMPLETED.	450.0	127.0	312.6	NOV 83	JUN 84
. 81 7143	CERAMIC GAS PATH SEAL-HIGH PRESSURE TURBINE PHASE 1, DEVELOPING THE MANUFACTURING PROCESS, WAS COMPLETED. THE VACUUM PLASMA DEPOSITION PROCESS WAS SELECTED. THERMAL SHOCK TESTS WERE SUCCESSFULLY COMPLETED. PHASE 2, APPLICATION OF THE MFG PROCESS TO FULL SCALE HARDWARE WAS INITIATED.	430.0	396.8	33.2	FEB 83	JUN 84
. 82 7143	CERAMIC HIGH-PRESSURE GAS PATH SEAL WORK WILL BE INITIATED UPON COMPLETION OF PROJECT 1 81 7143.	405.0	357.2	45.0	FEB 83	DEC 85
. 82 7197	FABRICATION OF INTEGRAL ROTORS BY JOINING ALL WORK COMPLETE WAITING ON FINAL PREPARATION OF TECHNICAL REPORT.	314.0	290.5	23.0	SEP 82	APR 84
. 81 7202	APPLICATION OF THERMOPLASTICS TO HELICOPTER SECONDARY STRUC ALL TECHNICAL WORK HAS BEEN COMPLETED. THE FINAL REPORT IS BEING PRINTED.	185.0	127.6	57.4	OCT 81	JUN 84
. 82 7241	HOT ISOSTATIC PRESSED TITANIUM CASTINGS TASK I IS COMPLETE AND SUPPLIER SELECTION FOR TASK II IS COMPLETE. TASK III HEAT TREAT MICROSTRUCTURE INDICATES ACCEPTABLE FATIGUE AND TENSILE STRENGTHS ALSO INDICATIONS THAT BETA SOLUTION TREATMENT W/OIL QUENCH IS REPEATABLE AND ACCEPTABLE.	500.0	309.0	67.0	JAN 83	OCT 84
. 81 7285	CAST TITANIUM COMPRESSOR IMPELLERS CONTRACTOR PROGRESS HAS BEEN DELAYED DUE TO OVERALL PROGRAM SLIPPAGE DUE TO MELTING STOCK AVAILABILITY.	174.0	120.0	54.0	OCT 81	JUN 84
. 82 7285	CAST TITANIUM COMPRESSOR IMPELLERS CONTRACTOR PROGRAM HAS BEEN DELAYED DUE TO OVERALL PROGRAM SLIPPAGE DUE TO MELTING STOCK AVAILABILITY.	350.0	312.0	34.0	MAR 84	JUN [illegible]
. 82 7286	HIGH QUALITY SUPERALLOY POWDER PROD F/TURBINE COMPONENTS EFFORT INITIATED WITH INGOT PROCESSING BY ELECTRON BEAM REMELT, NOW COMPLETE. DELAY DUE TO POWDER VENDOR NOT HAVING COMPLETED MODIFICATIONS TO IMPROVE POWDER QUALITY CONTROL.	360.0	300.0	49.0	AP[illegible] 85	JAN [illegible]

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

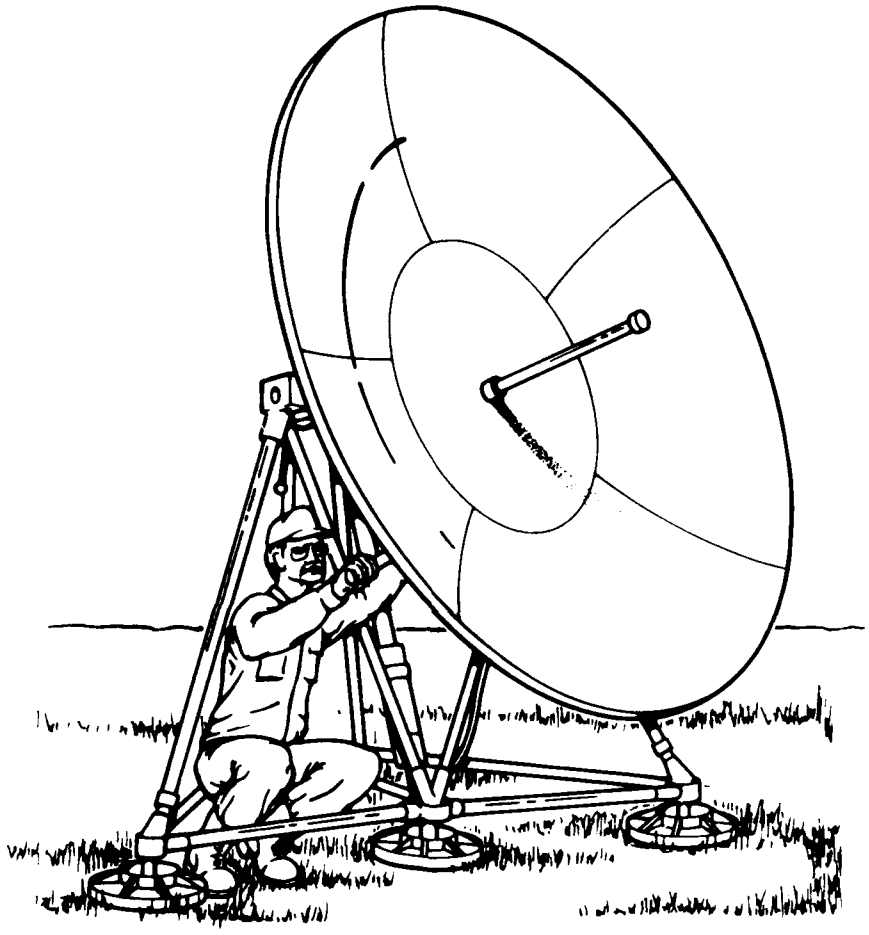
PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
3 81 7286	NMI DETERMINATION OF OPTIMAL CURING CONDITIONS ALL TENSILE, FLEXURE, AND SHORTBEAM SHEAR TESTS HAVE BEEN COMPLETED ON E- AND S-2 GLASS/EPOXY LAMINATES. SOME IR THERMOGRAPHY RUNS HAVE BEEN CONDUCTED ON THICK LAMINATES (OVER 100 PLYS).	158.0		158.0	AUG 82	SEP 84
3 81 7291	TITANIUM POWDER METAL COMPRESSOR IMPELLER NEW TOOLING FOR SHAPE TRIALS IS COMPLETE AND CONTRACTOR IS ASSEMBLING FLUID DIES FOR CONSOLIDATION IN JANUARY 1984.	240.0	200.0	29.0	JAN 83	JAN 85
3 82 7294	TITANIUM POWDER METAL COMPRESSOR IMPELLER NEW EFFORT TO INCORPORATE LOW-COST DIE APPROACHES AND TOOLING/FIXTURE IMPROVEMENTS. THIS EFFORT WAS ADDED IN OCT 83.	275.0	209.0	27.0	MAR 84	JAN 85
3 82 7296	HIGH TEMPERATURE VACUUM CARBURIZING MODIFICATION TO THE AISI GEAR STEEL VACUUM CARBURIZING HAS BEEN COMPLETED. COMPONENTS HAVE BEEN REMANUFACTURED, HEAT TREATED AND SHIPPED TO BOEING-VERTOL FOR EVALUATION. METALLURGICAL EVALUATION OF ALL THE SPECIMENS IS STILL ON-GOING.	240.0	180.5	47.7	APR 83	JAN 84
3 83 7298	HIGH TEMPERATURE VACUUM CARBURIZING PHASE II CONTRACTUAL WORK HAS NOT BEGUN DUE TO DELAYS IN THE COMPLETION OF PHASE I. WORK IS EXPECTED TO BEGIN IN JANUARY 1984.	375.5	340.0	35.5	SEP 84	SEP 84
3 82 7300	IMPROVED LOW CYCLE FATIGUE CAST ROTORS MATERIAL SCREENING TESTS COMPLETE AND FINAL PROCESS SELECTED. PILOT PRODUCTION INITIATED IN DECEMBER 1983.	480.0	425.0	46.0	JUN 85	APR 84
3 81 7319	PROD METH F/DIGITAL ADDRESSABLE MULTI-LEGEND DISPLAY SWITCH AVRADA PERFORMED ALL WORK IN-HOUSE. TEN SWITCH/DISPLAY MANUFACTURERS INCLUDING MICROSWITCH AND SYLVANIA WERE SURVEYED + VISITED. PHASE I IS COMPLETED. TECH REPORT WILL BE SUBMITTED BEFORE 31 DEC 1984. PHASE II WILL NOT BE FUNDED.	50.0		50.0	OCT 83	DEC 84
3 82 7322	LOW-COST TRANSPIRATION-COOLED COMBUSTOR LINER WORK CONTINUES ON IMPROVING THE BOND QUALITY AND REDUCING FABRICATION TIME. THIS IS DONE BY PLACING THE SHEETS INSIDE A METAL BAG PRIOR TO PLACING IN THE FURNACE.	530.0	460.0	51.3	MAR 85	MAY 84
3 82 7342	PULTRUSION OF HONEYCOMB SANDWICH STRUCTURES A DRAFT FINAL REPORT HAS BEEN RECEIVED FROM THE CONTRACTOR. THE REPORT WILL BE COMPLETED BEFORE JUN 84.	93.0		[illegible]	APR 84	JUN [illegible]
3 82 7351	COMPOSITE SHAFTING FOR TURBINE ENGINES FABRICATION OF THE FULL SCALE DIAMETER AND HALF SIZE LENGTH SHAFT IS CONTINUING.	3.5.0		[illegible].0	[illegible]	[illegible]

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
[illegible] 7871	INTEGRATED BLADE INSPECTION SYSTEM (IBIS) COMPLETED THE WORK ON THE IRIM FLAW AND AIRFOIL SECTION INCLUDING THE PERFORMANCE AND VALIDATION TEST PLANS. IRIM HARDWARE INCLUDING HIGH SPEED IMAGE ACQUISITION AND MANIPULATION EQUIPMENT IS BEING ACQUIRED AND FABRICATED.	500.0	475.0	12.0	SEP 84	DEC 84
[illegible] 7876	AUTO INSPECT AND PRECISION GRINDING OF SB GEARS CONTRACT AWARDED FOR PURCHASE OF INSPECTION EQUIPMENT.	210.0	184.5	30.5	DEC 84	MAY 85
[illegible] 7876	AUTO INSPECT AND PRECISION GRINDING OF SB GEARS THIS PROJECT HAS BEEN DELAYED BY NEED OF PROTOTYPE INSPECTION MACH AND SPIRAL BEVEL GRINDER. BOTH UNDERESTIMATED NEEDS OF THE PROGRAM. GEAR GRINDER NOW REQUIRED ON PRIORITY BASIS. DETAILED PLAN TO RESTORE SCHEDULE HAS BEEN REQUESTED.	1,012.0	939.5	70.6	JUN 85	JUN 86
[illegible] 7882	LOW-COST COMPOSITE MAIN ROTOR BLADE FOR THE UH-60A A NEW, IMPROVED, SINGLE PIECE MANDREL WAS EVALUATED AND FOUND TO REDUCE MANPOWER TIME. FABRICATION OF FULL SIZED BLADES, PHASE 2, WAS INITIATED. THE PHASE 1 INTERIM REPORT WAS WRITTEN, AND A PHASE 1 BRIEFING IS BEING PLANNED.	2,895.3	2,775.3	120.0	JUN 83	JAN 84
[illegible] 7882	LOW-COST COMPOSITE MAIN ROTOR BLADE FOR THE UH-60A CONTRACTURAL FUNDS WERE NOT DELIGATED. WORK WAS CONDUCTED IN-HOUSE, AND CONSISTED OF FATIGUE TESTS ON A BALLISTICALLY DAMAGED BLADE SECTION, AND EXTENSIVE NEGOTIATIONS WITH THE CONTRACTOR.	446.0		296.0	SEP 84	JUN 84
[illegible] 7889	PRODUCTION OF ALUMINUM AIRFRAME COMP (SUPERPLASTIC FORMING) DETAIL DESIGN REFINEMENT AND TOOL DESIGN IS COMPLETED. TOOLS ARE FABRICATED AND PROVEN. DRAWINGS ARE RELEASED. PROJECT ON SCHEDULE AND WITHIN BUDGET.	125.0	100.0	29.0	MAR 85	JUL 85
[illegible] 7912	INFRARED DETECTOR FOR LASER WARNING RECEIVER PERKIN-ELMER CORP MADE 86 INDIUM ARSENIDE IR DETECTORS. PROCESSES INCLUDE DIFFUSION OF ZINC-DIARSENIDE, LAPPING + PLATING WAFER BACKSIDE, CHROME-GOLD PLATING OF FRONTSIDE, MASKING, ETCHING AN INTERDIGITATED PATTERN, + MOUNTING + WIRING TO HEADER.	250.0	21 .0	[illegible].0	JUN 82	JUL 84
[illegible] 7919	MMT T700 BLISK REPAIR TWO WELDING OPERATIONS HAVE BEEN DEFINED FOR THIS REPAIR PROGRAM, PLASMA AND TIG. COUPONS FOR HIGH CYCLE FATIGUE AND CORROSION TESTS HAVE BEEN FABRICATED.	800.0	60[illegible].0	1[illegible]	MAR 85	JU[illegible]
[illegible] 7926	MMT-IPI PROGRAM-MARTIN MARIETTA TADS/PNVS MICOM AND AVSCOM ARE STILL NEGOTIATING A BUSINESS ARRANGEMENT WITH MARTIN MARIETTA. HQ-DA AND DARCOM WANT THE AGREEMENT TO BE SIGNED BEFORE THEY PROCEED WITH PHASE I WORK. MARTIN WILL STUDY WHAT MMT AND BUSINESS SYSTEMS ARE NEEDED FOR MOB REQMT.	110.[illegible]				

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
[illegible] 83 1427	ATTACK HELICOPTER PRODUCTIVITY IMPROVEMENT (API) PROGRAM CONTRACT WAS SIGNED SEP 83, AND BOOZ ALLEN AND HAMILTON HIRED BY HUGHES AS A CONSULTANT. A TOP-DOWN ANALYSIS IS IN PROCESS. EXISTING COST, SCHEDULE AND QUALITY DRIVERS ANALYSIS WAS COMPLETED. AN ASSESSMENT AND IDENTIFICATION STUDIES ARE IN PROCESS.	1,585.0	1,285.0	70.0	MAR 84	MAR 84
[illegible] 83 1435	MMT - IPI PGM - BELL HELICOPTER, INC. - AHIP PHASE I WORK IS 75 PCT COMPLETE. TEN MAJOR THRUST AREAS WERE IDENTIFIED. THE AS-IS WRITEUPS HAVE BEEN COMPLETED AND THE TO-BE ITEMS ARE BEING REVIEWED BY THE BELL UPPER MANAGEMENT. SIX INITIAL PROJECTS ARE BEING CONDUCTED ON THE EA MODEL.	1,034.2	1,024.1	10.1	MAY 84	MAY 84
[illegible] 83 1465	ADVANCED COMPOSITE SENSOR SUPPORT STRUCTURE (ACS-3) CONTRACT WAS AWARDED TO MCDONNELL DOUGLAS ASTRONAUTICS COMPANY. A CRITICAL DESIGN REVIEW TO BE HELD 4 JAN WILL RELEASE WORK ON TOOLING FABRICATION.	571.7	450.0	64.6	APR 84	APR 84
[illegible] 82 5192	TURBINE ENGINE PRODUCTIVITY IMPROVEMENT DETAILED FACTORY FLOOR DESIGN IS PROGRESSING WITH ANTICIPATED SLIPPAGE OF 60 DAYS.	9,370.0	8,300.0		MAR 84	MAY 84



COMMUNICATIONS AND ELECTRONICS COMMAND (CECOM)

COMMUNICATIONS + ELECTRONICS COMMAND

CURRENT FUNDING STATUS, 2ND CYCS

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)	INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)
78	1	314,500	292,500	153,300 (54%)	22,000	[illegible] (107%)
79	1	550,000	497,000	480,000 (96%)	53,000	[illegible] (109%)
80	1	780,100	706,100	604,600 (85%)	74,000	75,500 (99%)
81	4	4,269,200	3,970,700	2,592,300 (65%)	298,500	[illegible] (64%)
82	2	2,040,000	1,645,600	531,400 (32%)	394,400	124,700 (32%)
83	2	1,269,000	1,253,700	167,600 (13%)	15,300	[illegible] (65%)
TOTAL	11	9,222,800	8,365,600	4,534,900 (54%)	557,200	[illegible] (64%)

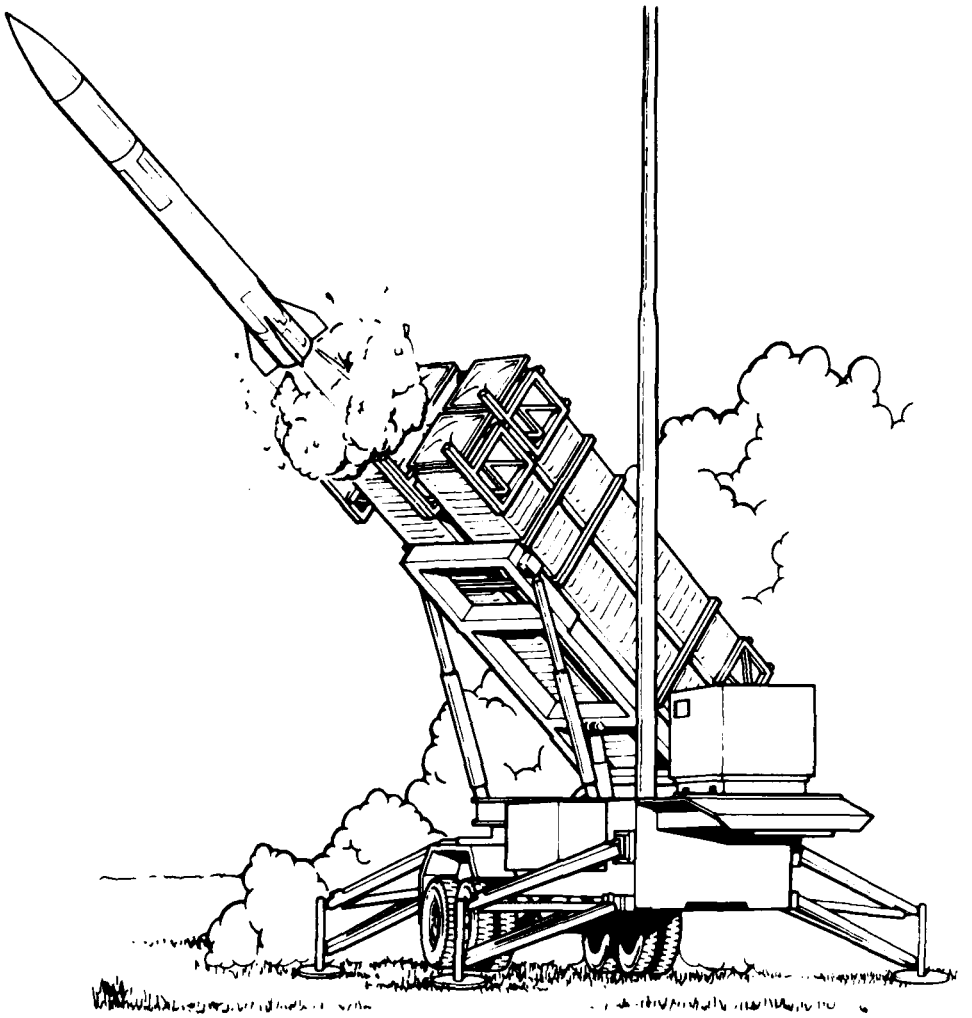
AUTHORIZED FUNDING CONTRACT ALLOCATED 91% INHOUSE REMAINING 9%

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
E 81 3650	EPITAXY OF III-V SEMICONDUCTOR PHOTODETECTORS RCA QUEBEC BREADBOARDED FOUR AMPLIFIER CIRCUITS. LOOKING FOR A 15 MHZ BANDWIDTH AND 40 DB DYNAMIC RANGE. FIRST SAMPLES WERE STARTED IN NOVEMBER 1983 AND MET OPTICAL AND ELECTRICAL REQUIREMENTS. A TEST EXERCISER WAS BUILT. MATERIAL IS IN-GA-AS-P.	670.0	586.2	37.0	DEC 83	SEP 85
E 82 3654	PRODUCTION METHODS FOR MULTI-LAYER FOLDED CIRCUITS HUGHES SELECTED COMPATIBLE MATERIALS + DEVELOPED PROCESS SPECS FOR MULTILAYER RIGID-FLEX CIRCUIT BOARDS. A 4 1/2 MONTH SLIPPAGE HAS OCCURRED DUE TO HUGHES BUILDING 100 PILOT SAMPLES USING INCORRECT DWGS. ERROR WILL NOT BE CHARGED TO THE GOVT.	780.1	706.1	73.5	SEP 82	JUN 84
E 81 3655	ELECTROLUMINESCENT NUMERIC MODULES ROCKWELL/COLLINS CONTRACT WAS MODIFIED TO PROVIDE EL DISPLAY PANELS FOR DMD + FISTDMD. DISPLAY LUMINANCE IS 150 FOOTLAMBERTS WHICH EXCEEDS SPEC. CERAMIC PACKAGES RECEIVED BUT DECODER-DRIVER CHIPS ARE STILL UNDERGOING ITERATIONS BY SUBCONTRACTOR.	1,270.7	1,131.7	139.0	DEC 82	NOV 84
E 81 3657	HIGH STABILITY VIBRATION RESISTANT QUARTZ CRYSTALS FREQUENCY ELECTRONICS HAD COST OVERRUN IN BUILDING PILOT LINE FOR 5 MHZ SC CUT QUARTZ CRYSTALS. $50OK PROPOSAL TO COMPLETE WORK HAS BEEN SUBMITTED. ACHIEVEMENTS INCLUDE PARALLEL GAP WELDING, SEALING, PLATING AND A CRYSTAL HANDLING ROBOTICS SYSTEM.	1,261.3	1,193.6	67.7	JUL 83	FEB 85
E 83 3668	INCREASE PRODUCIBILITY OF VARACTORS AND PIN DIODES CO-PLANAR CONTACT-SIDE VIA-HOLE GAAS VARACTOR CHIP DESIGN IS ABANDONED. PROCESS NOW INCORPORATES THERMAL EPITAXY AND ION IMPLANT. DEEP LEVEL TRAP MEASUREMENT EQ IS SETUP. PROBLEMS WITH THE OXIDE/NITRIDE PASSIVATION PROCESS STILL EXIST.	215.0	210.0		JUL 85	JUL 85
E 82 3675	TACTICAL GRAPHICS DISPLAY PANEL GTE RESOLVED HIGH LINE RESISTANCE + SHORTING PROBLEMS FOR 10X12 IN. THIN FILM ELECTROLUMINESCENT DISPLAY PANELS. BRIGHTNESS ACHIEVED IS BETWEEN 60 TO 100 FOOTLAMBERTS. EXERCISER WAS COMPLETED + DEMONSTRATED ON A CRT. NEW INSULATOR WILL BE TRIED.	950.0	881.6	50.4	OCT 84	MAR 85
E 82 3683	MM WAVE COMMUNICATIONS FRONT END MODULE (CFEM) MICROWAVE ASSOCIATES DESIGNED THE MIXER, IF AMPLIFIER, DETECTOR, ISOLATOR AND VOLTAGE CONTROLLED OSCILLATOR FOR THE MILLIMETER WAVE COMMAND POST RADIO. A LOCK-ON MODULE IS BEING CONSIDERED. DESIGN OF THE PIN DIODE ATTENUATOR, COUPLER + FILTER CONT.	1,090.0	764.0	7[illegible].3	JUN 84	SEP 85
E 83 3694	COMMUNICATIONS TECHNOLOGY TECHMOD FOR JTIDS COLLINS DEVELOPED PRELIMINARY SPECS FOR A WORK CELL FOR PLACING SURFACE MOUNTED COMPONENTS ON PRINTED CIRCUIT BOARDS. ALSO WROTE A SPEC FOR DATA AND DISTRIBUTION SYSTEM. NO CONTRACT HAS BEEN SIGNED WITH SINGER KEARFOTT YET BUT EXPECTED IN FEB. 1984.	1,054.0	1,[illegible]4.7	1[illegible]	[illegible] 84	FEB [illegible]

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
F 81 9651	TACTICAL MINIATURE CRYSTAL OSCILLATORS BENDIX SELECTED MICROPLASMA WELDING SYSTEM FOR SEALING 1 CU. IN. PROTOTYPE TMXO. ENGR SAMPLE SUBMISSION HAS SLIPPED 5 MONTHS DUE TO SUBCONTRACTOR DELAYS IN DELIVERING HYBRID PACKAGES. VACUUM ASSY PROCESSES INCLUDE BRAZING, BONDING, AND OUTGASSING.	1,067.2	1,057.2	10.0	MAR 84	FEB 85
F 78 9696	RUGGEDIZED TACTICAL FIBER OPTIC CABLES ITT HAS NOT ADEQUATELY ADDRESSED LOW TEMPERATURE ATTENUATION. PILOT LINE CABLES HAD LOSS GREATER THAN 1DDB/KM SPEC. SUCCESSFUL PERFORMANCE OF SUML CABLES IS BECAUSE OF FIBER PRE-SELECTION. CLOSE TOLERANCE FIBER MADE FOR WESTERN ELEC. PERFORMING OK.	314.5	292.5	24.0	NOV 79	APR 84
F 79 9936	THREE COLOR LIGHT EMITTING DIODE DISPLAY UNIT ALL WORK ON THIS PROGRAM HAS BEEN COMPLETED EXCEPT THE FINAL REPORT. AN INDUSTRY DEMONSTRATION WAS HELD ON SEPT. 20, 1983. THE ARMY SYSTEM FOR IMPLEMENTATION OF THIS PROJECT HAS BEEN PHASED OUT. HOWEVER, OTHER SERVICES MAY HAVE APPLICATIONS.	550.0	497.0	58.0	SEP 81	MAR 84



MISSILE COMMAND
(MICOM)

M I S S I L E C O M M A N D

CURRENT FUNDING STATUS, 2ND CYBS

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED (%)	CONTRACT FUNDING EXPENDED ($)		INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED (%)	
79	1	400,000	200,000	200,000	(100%)	200,000	200,000	(100%)
80	1	300,000	298,800	294,400	(98%)	1,200	1,200	(100%)
81	5	3,815,000	2,951,300	2,776,100	(94%)	865,700	475,900	(71%)
82	10	5,965,000	5,918,600	3,334,700	(85%)	2,046,400	961,800	(46%)
83	7	2,365,000	1,696,100	1,050,600	(61%)	668,900	109,100	(25%)
TOTAL	24	12,845,000	9,064,800	7,675,800	(84%)	3,580,200	1,808,000	(90%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 72% INHOUSE REMAINING 28%

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
2ND SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
1 [illegible]	PRODUCTION OF COMPOSITE ROCKET STRUCTURES ROCKWELL IS PLANNING AN INDUSTRY DEMO AND THE FINAL REPORT IS BEING WRITTEN. THE CURING EQUIPMENT BECAME OPERATIONAL AND A PERSHING ROCKET WAS STARTED INTO THE CYCLE. THE FIRST PATRIOT ROCKET WAS ASSEMBLED AND PRESSED. AN INTEGRATED ASSY DID NOT WORK.	755.0	543.6	174.8	SEP 83	SEP 84
2 [illegible]	REPLACEMENT OF ASBESTOS IN ROCKET MOTOR INSULATIONS NO PROGRESS MADE.	475.0	420.0	55.0	MAR 84	APR 84
3 [illegible]	REPLACEMENT OF ASBESTOS IN ROCKET MOTOR INSULATIONS WORK IS PROCEEDING SUCCESSFULLY. KEVLAR FILLED PROPELLANT GRAIN INHIBITORS PROVED TO BE EQUAL TO ASBESTOES FILLED INHIBITORS. KEVLAR FILLED SMOKELESS INSULATORS WERE TESTED AND ARE BEING ANALYZED. WORK IS LEADING TO THE TEST PHASE IN THE OTHER WORK.	380.0	346.8	33.2	APR 84	APR 84
4 [illegible]	ELECTRICAL TEST AND SCREENING OF CHIPS ***** DELINQUENT STATUS REPORT *****				OCT 83	JUN 84
5 [illegible]	ELECTRICAL TEST AND SCREENING OF CHIPS THE MACHINE STRUCTURE AND ARCHITECTURE IS SO DEVISED AS TO ALLOW IMPLEMENTATION AS A STAND ALONE OR A HOST OPERATED SYSTEM. THE INTERNAL CONTROLLERS ARE PARTITIONED INTO LOGICAL WORK STATIONS.	395.0	235.5	159.4	DEC 84	OCT 84
6 [illegible]	REAL TIME ULTRASONIC IMAGING THE END OF PROJECT DEMONSTRATION WAS HELD IN NOV 1982. THE 16MM MOTION PICTURE FILM WAS DELIVERED IN DEC 1983. THE CONTRACT WILL BE COMPLETED IN APRIL 84. THE UNIT WILL BE SHIPPED TO MICOM UPON CONTRACT COMPLETION.	960.0	839.4	120.6	JAN 84	APR 84
7 [illegible]	ELECTRONICS COMPUTER AIDED MANUFACTURING (ECAM) BATTELLE REVISED THE DRAFT MASTER PLAN AND DELIVERED THE DRAFT FINAL REPORT. THE MASTER PLAN INCLUDED A SEQUENCE OF 69 MANUFACTURING STEPS AND A LIST OF 103 MMT PROJECT TITLES.	1,985.0	1,817.9	167.0	[illegible]	MAR 84
8 [illegible]	ELECTRONICS COMPUTER AIDED MANUFACTURING (ECAM) NO WORK HAS BEEN DONE ON THIS FY83 PORTION. BATTELLE REVISED THE DRAFT MASTER PLAN AND DELIVERED THE TASK 3 REPORT FROM THE FY81 PROJECT. IT CONTAINS 500 PAGES OF IDEF CHARTS ON 7 TECHNOLOGIES.	265.0			DEC 86	DEC 86
9 [illegible]	AUTOMATIC RECOGNITION OF CHIPS RACTRAC + SOFFA CANNOT FINISH WORK DUE TO COST GROWTH. AUTOMATIC HYBRID DIE BONDER + SOFTWARE ARE WITHIN 5 PERCENT AND 15 PERCENT OF COMPLETION RESPECTIVELY. US AIR FORCE OFFER TO ABSORB COST NEEDED TO COMPLETE THE EFFORT IS UNDER EVALUATION.	700.0	495.8	204.1	FEB 84	AUG 84

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
2ND SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
[illegible] 1082	COBALT REPLACEMENT IN MARAGING STEEL-ROCKET MOTOR COMPONENTS SCALE UP TO 14 INCH DIAMETER AND CONCEPT DEMONSTRATION HAVE BEEN STARTED AND PROGRAM IS ON SCHEDULE.	[illegible].0	462.7		DEC 84	MAR 84
[illegible] 1085	OPTIMIZED MANDREL TAB + UTILIZATION F/COMPOSITE MOTOR CASES THE PROGRAM IS IN A HOLD STATUS AWAITING A CASE INSULATOR FROM THE ELASTOMERIC INSULATION MMT PROGRAM.	400.0	305.2	80.7	MAY 83	MAY 84
[illegible] 1089	INTEGRAL ROCKET MOTOR COMPOSITE ATTACHMENTS THE CONTRACT WAS AWARDED TO HERCULES INC., BACCHUS WORKS, MAGNA, UTAH. STRUCTURAL REQUIREMENTS DETERMINATION, COMPONENT SELECTION, AND STATIC/DYNAMIC ANALYSIS HAVE BEEN COMPLETED. AN INTERIM REPORT WILL BE PREPARED.	50.0	49.9		DEC 83	FEB 84
[illegible] 1088	RF AND LASER HARDENING OF MISSILE DOMES BATTELLE COLUMBUS DEVELOPED A PLATED-UP COPPER AND NICKEL SCREEN OVER WHICH A POLYCARBONATE DOME IS MOLDED, THE SCREEN REJECTS UNWANTED RF. BATTELLE NW DEVELOPED AN INDIUM TIN OXIDE COATING FOR PASSING X MICKEN AND BLOCKING ALL OTHER FREQUENCIES.	400.0	249.0	100.0	MAY 82	DEC 84
[illegible] 1087	ROBOTIZED WIRE HARNESS ASSEMBLY SYSTEM REPORT SHOWS NO ACTION ACCOMPLISHED ON THIS PROJECT DURING THIS REPORTING PERIOD.	1,000.0	561.5	289.0	DEC 81	MAR [illegible]
[illegible] 1121	MISSILE MANUFACTURING PRODUCTIVITY IMPROVEMENT PROGRAM A SCOPE OF WORK WAS PREPARED AND CONTRACT DOCUMENTS ARE IN THE APPROVAL CHAIN. MEETINGS HAVE BEEN HELD WITH NAVY AND AIR FORCE. MARTIN MARIETTA WILL STUDY ITS PLANT AND DETERMINE WHAT MMT AND BUSINESS SYS MUST BE IMPLEMENTED FOR HELLFIRE PRODUCTION.	800.0			JUN 83	[illegible]
[illegible] 1122	ROUND ELASTOMER INSULATOR PROCESS STATUS REPORT RETURNED TO MICOM ON 20 MAR 84. IT WAS AN EXACT COPY OF THE ONE SUBMITTED FOR THE PREVIOUS REPORTING PERIOD.	650.0	569.2	40.[illegible]	MAR 84	[illegible]
[illegible] 1126	ROUND ELASTOMER INSULATOR PROCESS STATUS REPORT RETURNED TO MICOM ON 20 MAR 84. IT WAS AN EXACT COPY OF THE ONE SUBMITTED FOR THE PREVIOUS REPORTING PERIOD.	625.0	611.2	1.0	[illegible] 83	[illegible]
[illegible] 1269	PRINTED WIRING BOARDS UTILIZING LEADLESS COMPONENTS FOLLOW-ON TO 3 80 3263. HUGHES OPTIMIZED METHODS FOR ATTACHING LEADLESS CHIP CARRIERS (LCC) TO PRINTED CIRCUIT BOARDS. TASKS WERE PRETINNING, SOLDERING, BONDING, CONFORMAL COATING, + TESTING. ALL WORK IS COMPLETED EXCEPT FOR FINAL REPORT.	400.0	[illegible].0	[illegible]	[illegible]	[illegible]
[illegible] 1278	TESTING OF ELECTRO-OPTICAL COMPONENTS AND SUBSYSTEMS ALL TECHNICAL WORK HAS BEEN COMPLETED. FINAL TECHNICAL REPORT DRAFT HAS BEEN RECEIVED AND APPROVED. THE FINAL REPORT MASTER AND COPIES WILL BE FORWARDED TO MICOM IN THE NEAR FUTURE.	300.0	[illegible]	[illegible]	[illegible]	[illegible]

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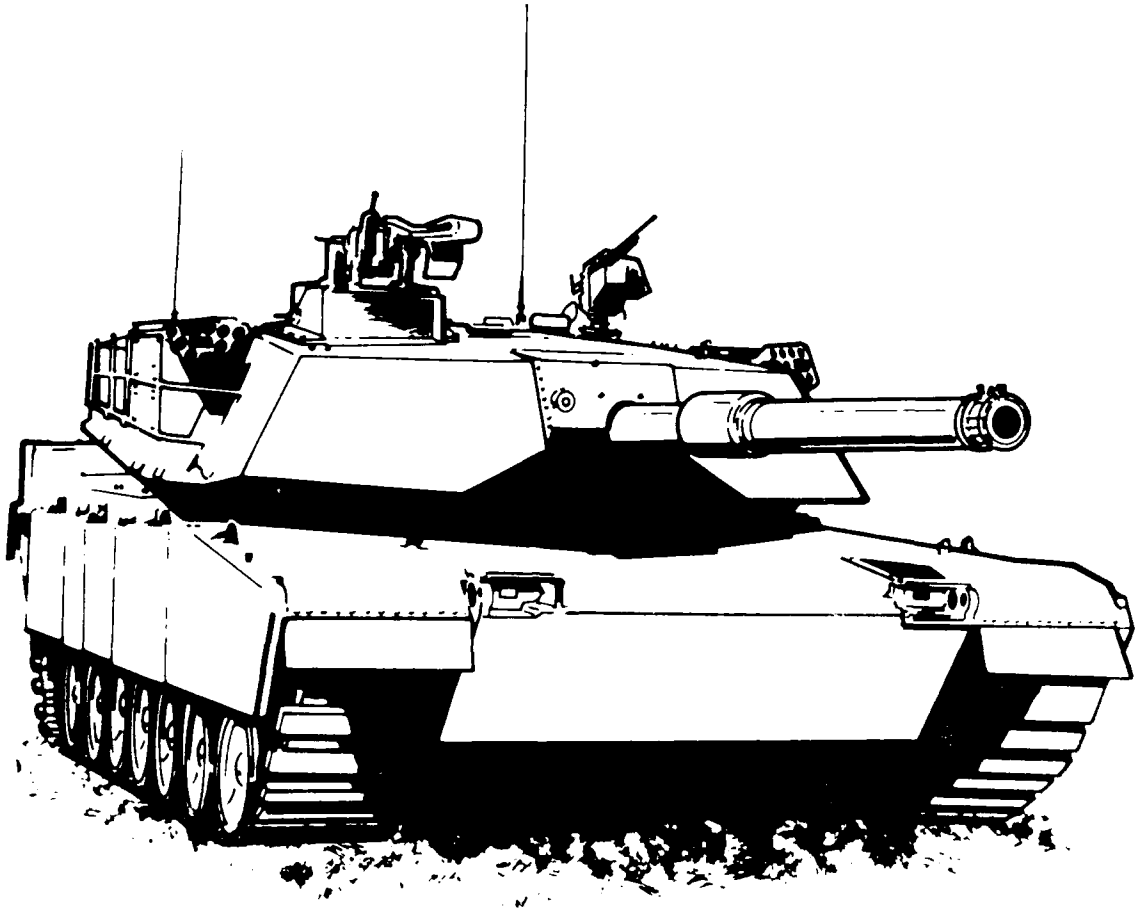
PROJECT NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUE ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
[illegible]	NON-PLANAR PRINTED CIRCUIT BOARDS ALL WORK HAS BEEN COMPLETED AND A FINAL STATUS REPORT WILL BE RECEIVED IN MARCH 84. MULTILAYER CYLINDRICAL CIRCUIT BOARDS AND A MICROWAVE DISH ANTENNA WERE USED AS SAMPLES FOR DEVELOPING THE MANUFACTURING PROCESSES.	35[illegible]	[illegible]3.2	[illegible].8	OCT 8[illegible]	MAR 84
[illegible]	LOW COST/HIGH PERFORMANCE CARBON-CARBON NOZZLES STATUS REPORT RETURNED TO MICOM ON 23 MAR 84. IT WAS ALMOST AN EXACT COPY OF THE ONE SUBMITTED FOR THE PREVIOUS REPORTING PERIOD. COMPLETION DATE HAS SLIPPED TO 5/31/84, A 10 MONTH DELAY.	5[illegible]	3[illegible]	[illegible]	[illegible] 83	MAY 84
[illegible]	APPLICATION OF HIGH ENERGY LASER MANUFACTURING PROCESSES ALL WORK COMPLETED WAITING ON FINAL TECHNICAL REPORT.	430.0	200.0	200.0	SEP 79	JUN 84
[illegible]	ALTERNATE PROCESS FOR IPDI ***** DELINQUENT STATUS REPORT *****				SEP 84	SEP 84
[illegible]	ALTERNATE PROCESS FOR IPDI CONTRACT IS READY AND WILL BE LET SHORTLY. IT WILL BE FOR APPROXIMATELY $126K.	150.0		5.0	SEP 85	SEP 85



TANK-AUTOMOTIVE COMMAND
(TACOM)

TANK-AUTOMOTIVE COMMAND

CURRENT FUNDING STATUS, 2ND CY83

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)		INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)	
77	1	750,000	742,200	742,200	(100%)	7,800	0	(0%)
78	1	520,000	233,800	233,800	(100%)	286,200	286,200	(100%)
79	2	1,871,000	1,682,000	1,192,000	(70%)	189,000	189,000	(100%)
80	2	2,304,000	2,076,900	1,619,900	(77%)	225,100	161,000	(7[illegible]%)
81	12	9,388,000	1,773,100	1,426,800	(80%)	7,614,900	5,97[illegible]	(7[illegible]%)
82	25	10,220,000	7,536,900	4,761,400	(63%)	2,683,100	1,231,100	(45%)
83	1[illegible]	6,081,000	4,823,900	1,575,100	(32%)	1,257,100	[illegible]	[illegible]
TOTAL	55	31,134,000	18,873,800	11,551,200	(61%)	12,265,200	[illegible]	([illegible]7%)

AUTHORIZED FUNDING   CONTRACT ALLOCATED 61%   INHOUSE REMAINING 39%

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PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
[illegible] 3749	HYDRAULIC ROTORY ACTUATORS ORIGINAL AND MODIFIED ACTUATORS WERE VEHICLE TESTED. PRODUCIBILITY PLAN AND CRITICAL ITEM SPECIFICATION HAVE BEEN DELIVERED. THE TECHNICAL DATA PACKAGE IS COMPLETE PENDING ECP APPROVAL.	750.0	742.2		MAY 79	JUN 84
[illegible] 3749	HYDRAULIC ROTARY ACTUATERS SEE MMT E 77 3749.	145.0	143.9		DEC 81	SEP 84
[illegible] 3749	HYDRAULIC ROTARY ACTUATERS FOR M9 SEE MMT E 77 3749. PREVIOUS TEST EQUIP PROBLEMS HAVE BEEN CORRECTED. CONTRACTOR INTENDS TO REQUEST AN EXTENTION AN CONDUCT 100 HOURS OF ENDURANCE TESTING AND COMPLETE FINAL TEST REPORT.	157.0	150.0		JUL 81	SEP 84
[illegible] 4674	TRACK INSERTS AND FILLERS FOR TRACK RUBBER PADS TORSION TEST MACHINE HAS BEEN INSTALLED AND INITIAL TESTING IS UNDERWAY. MIL-T-11641 SPEC NOW BEING CHANGED TO INCLUDE ALL RECENT AND FUTURE IMPROVEMENTS IN TRACK RUBBER COMPONENTS. FINAL DOT IS NOW BEING GENERATED AND SHOULD BE COMPLETED BY JUNE 84.	520.0	233.8	200.2	JAN 81	JUN 84
[illegible] 4979	LASER WELDING TECHNIQUES FOR MILITARY VEHICLES CONTRACT AWARDED. CURRENTLY ADDRESSING POROSITY PROBLEM THROUGH DEOXIDANTS AND BEAM OSCILLATION.	248.0	224.0	[illegible].0	OCT 84	FEB 85
[illegible] 5165	COMPUTER AIDED DESIGN FOR COLD FORGED GEARS (PHASE I) THE COMPUTER PROGRAM, GEAR01, DEVELOPED IN THIS PHASE CORRECTED TOOL GEOMETRY FOR ELASTIC DEFORMATION, MODIFY GEOMETRY FOR TEMPERATURE DIFFERENTIALS, AND COMPUTE WIRE ELECTRICAL DISCHARGE MACHINING PATHS FOR MANUFACTURING BOTH THE DIE AND PUNCH.	307.0	256.0	[illegible].0	JAN 84	MAR 84
[illegible] 5165	COMPUTER AIDED DESIGN FOR COLD FORGED GEARS (PHASE II) A SPUR GEAR, EATON PART NUMBER 27952, AND A HELICAL GEAR, EATON PART NUMBER 49261, WERE APPROVED FOR FORGING.	376.0	346.0	13.5	OCT 85	OCT 85
[illegible] 5014	FOUNDRY CASTING PROCESSES USING FLUID FLOW + THERM ANALYS SOFTWARE PROCEDURES WERE UPDATED TO IMPROVE GEOMETRIC CAPABILITIES. WORK PROGRESSED ON DOCUMENTATION PREPARATION FOR END OF CONTRACT PRESENTATION AND FINAL REPORT. ALL TECHNICAL WORK IS COMPLETED.	100.0	80.0	17.0	MAR 84	JUN [illegible]
[illegible] 5014	STORAGE BATTERY LOW MAINTENANCE FIELD TESTS CONTINUE AT YPG, CRTC AND CRANE LABS. BATTERY PROTOTYPE PERFORMANCE CHARACTERISTICS TEST RESULTS TO DATE EXCEED EXPECTED RESULTS. FIELD TESTS NOW APPROX 85PCT COMPLETE. TESTING EXTENDED 4 MONTHS TO ALLOW TESTING THRU TEMPERATURE EXTREMES.	130.0		80.[illegible]	JAN 84	AUG [illegible]

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[illegible]	TITLE + STATUS	AUTHO-RIZED	CONTRACT VALUES	EXPENDED LABOR AND MATERIAL	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
		($000)	($000)	($000)		
[illegible]	GEAR DIE DESIGN + MFG UTILIZING COMPUTER TECHNOLOGY (CAM) THE MOVIE ON CAL/CAM OF SPIRAL BEVEL GEARS HAS BEEN APPROVED. A 10.5 INCH SPIRAL BEVEL GEAR HAS BEEN SELECTED FOR FORGING. THE SPIRAL BEVEL GEAR PROGRAM, SPBEVL, WAS EXECUTED TO PREDICT SETTINGS TO PRODUCE THE EDM ELECTRODES TO CUT THE FORGING DIES.	[illegible]	287.0	33.0	[illegible] 83	NOV 84
[illegible]	FABRICATION TECHNIQUES FOR HI STRENGTH STRUCTURAL CERAMICS AMMRC HAS INITIATED EFFORTS TO HOT PRESS COMPOSITES OF SI3N4 AND VARYING LAYERS OF ZRO2 CLOTH.	[illegible]	340.0	153.1	JUN 83	FEB 84
[illegible]	ADIABATIC DIESEL ENGINE COMPONENTS (PHASE II) CONTRACTOR HAS INITIATED EFFORTS TO OPTIMIZE MATERIAL AND MANUFACTURING TECHNOLOGIES.	[illegible]	350.0	5.0	FEB 85	JAN 85
[illegible]	LASER SURFACE HARDENED COMBAT VEHICLE COMPONENTS FIELD HEAT TREATING OF TEST SAMPLES IS COMPLETE. SAMPLES HAVE BEEN DELIVERED TO TACOM FOR EVALUATION AND MARKING. LABORATORY TESTING IS COMPLETE. FIELD TESTING HAS BEEN INITIATED. FINAL REPORT IS BEING PUBLISHED AND DISTRIBUTED.	175.0	120.0	54.0	SEP 83	JAN 84
[illegible]	LASER SURFACE HARDENED COMBAT VEHICLE COMPONENTS LASER HEAT TREATING OF HARDWARE IS COMPLETE. HARDWARE TESTING IS COMPLETE. FINAL REPORT IS BEING DRAFTED. ESTABLISHMENT OF AN END OF PROJECT DEMONSTRATION HAS BEEN INITIATED.	170.0	123.0	37.0	JAN 84	JAN 84
[illegible]	LIGHT WEIGHT SADDLE TANK (PHASE III) LEAK DEVELOPED AT RETURN LINE WHICH HAS DELAYED TESTING AT APG. NEW TESTS WERE REQUESTED BY POTENTIAL USERS PRIOR TO THEIR IMPLEMENTATION. THESE ARE BEING CARRIED OUT UNDER FY83 FUNDING.	85.0		85.0	SEP 83	JUN 84
[illegible]	LIGHT WEIGHT SADDLE TANK (PHASE III) NEW TESTING TO SATISFY FEDERAL MOTOR SAFETY REGULATIONS CONTINUE. POTENTIAL USERS WHO WOULD IMPLEMENT PROJECT RESULTS ARE THE INTERESTED PARTIES.	125.0		73.1	JUN 84	JUN 84
[illegible]	PLASTIC BATTERY BOX MODIFICATIONS TO BATTERY BOX LID ARE BEING MADE BY CONTRACTOR. THIS IS NECESSARY TO COMPLY WITH MULTI-TEMPERATURE STRESS TEST. THIS ADDITIONAL TESTING WAS REQUESTED BY DRSTA-G FOR THE 5-TON VEHICLE. TEST RESULTS MAY AFFECT TDP.	85.0		80.0	DEC 82	MAY 84
[illegible]	NEW ANTI-CORROSIVE MATERIALS AND TECHNIQUES (PHASE II) CONTRACTOR IS PREPARING FINAL TECHNICAL REPORT.	450.0	419.0	45.0	SEP 82	JUN 84
[illegible]	NEW ANTI-CORROSIVE MATERIALS AND TECHNIQUES (PHASE III) SCOPE OF WORK REVISED. PROCUREMENT ACTION INITIATED FOR PHASE III.	142.0	[illegible]		[illegible]	[illegible]

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PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
[illegible] 5075	MILITARY ELASTOMERS FOR TRACK VEHICLES (PHASE II) T152 TRACK PADS HAVE BEEN MANUFACTURED. TESTING OF THE T156 (ABRAMS M1) TRACK SHOE IS ONGOING.	200.0	55.3	99.4	SEP 82	SEP 84
[illegible] 5075	MILITARY ELASTOMERS FOR TRACK VEHICLES (PHASE III) T142 TRACK PADS HAVE BEEN MANUFACTURED AND TESTED. ALSO T142 TRACK PADS CONTAINING KEVLAR FIBERS HAVE BEEN MANUFACTURED. T152 TRACK PADS ARE CURRENTLY BEING TESTED.	200.0	[illegible]	[illegible]	[illegible] 83	SEP 84
[illegible] 5075	MILITARY ELASTOMERS FOR TRACK VEHICLES PROCUREMENT ACTIONS AND TESTING ARRANGEMENTS ARE BEING MADE FOR T156 (ABRAMS M1) TRACK SHOES.	150.0		6.7	JAN 86	JAN 86
[illegible]	FLEXIBLE MACHINING SYSTEM, PILOT LINE FOR TCV COMPONENTS THE FMS HANDBOOK IS BEING UPDATED. A SEMINAR AND PRESENTATION ON THE PROGRAM AND TECHNOLOGY ARE PLANNED. BATCHING AND SCHEDULING SOFTWARE SUPPORTING M1 TURRET STABILIZATION COMPONENTS WAS DEVELOPED. ASSISTANCE TO M2/M3. SEE MMT PROJECT 4 83 5082.	750.0	607.9	105.1	MAR 83	MAY 84
[illegible]	FLEX MACHINING SYS (FMS) PILOT LINE F/TCV COMPS (CAM) (PH V) SEE MMT PROJECT T 82 5082. SUSPENSION COMPONENTS MANUFACTURER WAS PROVIDED. THIS EFFORT INCLUDED MODELING BATCH MODE OPERATIONS, ALTERNATE PRODUCTION STRATEGIES AND CAPACITY.	350.0	349.9		OCT 84	OCT [illegible]
[illegible]	UPSCALING OF ADVANCED POWDERED METALLURGY PROCESSES-PH 3 THE DIES FOR THE M2/M3 GEAR HAVE BEEN DESIGNED BY THE INTERACTIVE COMPUTER PROGRAM.	325.0	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	UPSCALING OF ADVANCED POWDERED METALLURGY PROCESSES-PH 4 THE FUNDS FROM THIS PROJECT HAVE BEEN UTILIZED TO MONITOR PROJECT T795083.	30.0		[illegible]	SEP 83	[illegible]
[illegible]	IMPROVED AND COST EFFECTIVE MACHINING TECHNOLOGY (PHASE IV) FINAL DRAFT OF TECH REPORT HAS BEEN REVIEWED AND HANDBOOKS HAVE BEEN DELIVERED.	250.0	[illegible]	[illegible]	JAN 84	JAN [illegible]
[illegible]	IMPROVED AND COST EFFECTIVE MACHINING TECHNOLOGY (PHASE V) CONTRACTOR HAS SELECTED 4 OF 6 CANDIDATE COMPONENTS WHICH WILL BE USED TO SHOW FEASIBILITY OF NON TRADITIONAL MACHINING PROCESSES APPLICATION.	123.0	69.0	[illegible]	SEP 84	SEP [illegible]
[illegible] 5091	HEAVY ALUMINUM PLATE FABRICATION (PHASE I) ALUMINUM ARMOR PLATE + WELDING ELECTRODES ORDERED. HOLDING FIXTURES AND WELD JOINTS DESIGNED.	100.0		[illegible]	MAR 84	DEC [illegible]

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PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
* 83 6029	HEAVY ALUMINUM PLATE FABRICATION (PHASE I) ARMOR PLATE AND WELDING ELECTRODES ON ORDER. HOLDING FIXTURE DESIGNED. TEST RUNS TO DETERMINE CURRENT AND SPEED SETTINGS OF PLASMA TORCH UNDERWAY.	70.0		35.0	DEC 84	DEC 84
82 6011	SPRINGS FROM FIBER/PLASTIC COMPOSITES 10 REAR SPRING ASSYS WERE FATIGUE TESTED BY TACOM. THEY FAILED PREMATURELY AT 20 PERCENT OF THE REQD NUMBER OF CYCLES. IF IN-HOUSE FUNDS PERMIT, A SHORT STEEL LEAF WILL BE ADDED TO IMPROVE FATIGUE LIFE BY DISTRIBUTING BENDING FORCES.	158.0	143.0	15.0	JAN 83	MAR 84
* 82 6011	SPRINGS FROM FIBER/PLASTIC COMPOSITES FRONT SPRING ASSYS ARE SCHEDULED TO BE DELIVERED TO TACOM IN FEB 84. THEY WILL BE TESTED IN-HOUSE TO VERIFY SPRING RATE AND FATIGUE LIFE.	137.0	73.0	25.0	JUN 83	MAR 84
81 6028	PRODUCTION QUALITY CONTROL BY AUTOMATED INSPECT EQUIPMENT THE AIDS EQUIP EVALUATION IS INCLUDED IN A TACOM M113 INSPECT + REPAIR PROGRAM AT KRAD. THE I+R EVALUATION WILL RUN FROM JAN 84 TO THE END OF THE FY. HARDWARE AND SOFTWARE CHANGES TO THE AIDS ARE REQUIRED FOR IMPLEMENTATION.	60.0	47.8	12.2	JUL 82	SEP 84
* 79 6036	HIGH DEPOSITION WELDING WELDING PARAMETERS WERE ESTABLISHED AND BALLISTIC PLATES WELDED AND SATISFACTORILY TESTED. PLASMA MIG DETERMINATION OF WELDING OPERATIONS BEING MADE.	1,543.0	1,478.0	65.0	JUL 80	JUN 85
* 82 6036	HIGH DEPOSITION WELDING SUBMERGED ARC WELDING PROCEDURES ARE PROGRESSING WELL WITH FLUX CORED ELECTRODES AND WITH POWDER ADDITIONS. WELDING OF NARROW GAP GROOVES IS LOOKING FAVORABLE.	1,503.0	1,478.0	5.1	DEC 84	APR 84
* 82 6054	ADVANCED METROLOGY SYSTEMS INTEGRATION SEE PROJECT T 83 6054 FOR STATUS.	848.0	826.0	10.0	FEB 85	JUN 85
* 83 6054	ADVANCED METROLOGY SYSTEMS INTEGRATION (PHASE II) ALL TASK FOR PHASE I HAVE BEEN COMPLETED, AND THE GUIDELINES FOR FUTURE IMS HAVE BEEN ESTABLISHED. HOWEVER, THE SIMULATION MODEL COMPUTER SOFTWARE PROGRAM REQUIRES MODIFICATION, SINCE IT IS NOT COMPATIBLE WITH TACOMS PRIME COMPUTER SYSTEM.	100.0		60.0	DEC 85	DEC 85
* 82 6057	XM1 COMBAT VEHICLE SEE SUBTASKS.	2,502.0	1,462.0	1[illegible].0	SEP 85	NOV 84
* 82 6057 03	AUTOMATED METALLIZING AUTOMATED METALLIZING WAS CANCELLED BECAUSE GENERAL DYNAMICS HAS IMPROVED THE PROCESS AND THE PROPOSED TASK IS NO LONGER COST EFFECTIVE.	51.0				

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PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
T 82 6057 05	MACHINE DIAGNOSTICS CONTRACT AWARDED TO GENERAL DYNAMICS. SUBCONTRACT AWARDED TO SHAKER RESEARCH CORP.				SEP 83	DEC 84
T 82 6057 13	LASER CUTTING CONTRACT AWARDED TO GENERAL DYNAMICS. WORK ORDERS AND SAMPLE MATERIALS WERE ISSUED TO SIX SUBCONTRACTORS WHO WILL CUT TEST PATTERNS FOR EVALUATION.				MAY 83	MAY 84
T 83 6057	ABRAMS M1 COMBAT VEHICLE SEE SUBTASKS.	56.0		46.0	FEB 84	NOV 84
T 83 6057 05	AUTOMATED METALLIZING AUTOMATED METALLIZING WAS CANCELLED BECAUSE GENERAL DYNAMICS HAS IMPROVED THE PROCESS AND THE PROPOSED TASK IS NO LONGER COST EFFECTIVE.	70.0		5.0	FEB 84	SEP 84
T 83 6057 05	MACHINE DIAGNOSTICS SEE T 82 6057-05.				FEB 84	DEC 84
T 83 6057 13	LASER CUTTING OF TRACKED COMBAT VEHICLE PARTS SEE T 82 6057-13.				FEB 84	MAY 84
T 82 6059	LARGE CAST ALUMINUM COMPONENTS SEE SUBTASKS.	2,159.0	1,945.0	161.0	JUL 81	DEC 84
T 82 6059 01	M2 AND M3 CAST ALUMINUM COMPONENTS DRAFT OF FINAL REPORT FOR PHASE I SUBMITTED FOR REVIEW AND APPROVAL.	738.0	720.0	14.0		SEP 84
T 82 6059 02	SELF-THREADING FASTENERS PHYSICAL WORK COMPLETE. IMPLEMENTATION UNDERWAY. FINAL REPORT PREPARATION UNDERWAY.	116.0				JUN 84
T 82 6059 03	ADHESIVE BONDING SEE STATUS FOR T 82 6059-03.	170.0	125.0	36.0		SEP 84
T 82 6059 06	LASER HEAT TREATING MATERIAL HAS BEEN PROCURED FOR ALL ELEMENTS OF THIS TASK. APPROPRIATE FIXTURES AND HARDWARE HAVE BEEN FABRICATED. LASER HEAT TREATING AND METALLURGICAL TESTING HAVE BEEN COMPLETED.	257.0	237.0	.0		DEC 84
T 82 6059 08	PRODUCTION METHODS FOR COMPOSITE TURRET BASKET SEE STATUS FOR T 82 6059-08.	217.0	205.0	11.0		SEP 84

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[illegible] 6059	M2 AND M3 FIGHTING VEHICLE SYSTEM SEE SUBTASK.	291.0	285.0	5.0	NOV 84	FEB 84
[illegible] 6059 04	RESIN MOLDED COMPOSITE MATERIALS ALL TECHNICAL WORK HAS BEEN COMPLETED. THE FINAL REPORT IS BEING WRITTEN.	291.0	285.0	5.0		FEB 84
[illegible] 6059	M2 AND M3 FIGHTING VEHICLE SYSTEM SEE SUBTASK.	490.0	445.0	40.0	DEC 84	SEP 84
[illegible] 6059 01	M2 AND M3 CAST ALUMINUM COMPONENTS DRAFT OF FINAL REPORT FOR PHASE II SUBMITTED FOR REVIEW AND APPROVAL.	490.0	445.0	40.0	DEC 83	OCT 84
[illegible] 6059 02	SELF-THREADING FASTENERS PHYSICAL WORK COMPLETED. IMPLEMENTATION UNDERWAY. FINAL REPORT IN PREPARATION.	130.0			FEB 83	JUN 84
[illegible] 6059 03	ADHESIVE BONDING PRODUCTION APPLICATION TECHNIQUES HAVE BEEN ESTABLISHED AND LISTED. DRAWING CHANGES HAVE BEEN INITIATED.	130.0	125.0			SEP 84
[illegible] 6059 06	LASER HEAT TREATING SIMULATED FIELD TESTING IS COMPLETE AND ACTUAL FIELD TESTING IS UNDERWAY. TEST EVALUATIONS HAVE BEEN INITIATED.	130.0	100.0	18.0	SEP 84	DEC 84
[illegible] 6059 08	PRODUCTION METHODS FOR COMPOSITE TURRET BASKET PROTOTYPE TEST PLAN AND TEST FIXTURES HAVE BEEN PROCURED, AND PROTOTYPE TESTING HAS BEEN INITIATED.	131.0	[illegible]	[illegible]	JUN 83	SEP [illegible]
[illegible] 6059 20	CARC APPLICATION PROCESSING TECH ALL PAINT SAMPLES HAVE BEEN PROCURED AND DELIVERED TO THE CONTRACTOR. ROBOTIC PAINTING EQUIPMENT HAS BEEN PROCURED, INSTALLED, AND DEBUGGED. ROBOTIC CAMOUFLAGE PATTERNS AND MAINTENANCE REQUIREMENTS ARE BEING ESTABLISHED.	418.0	368.0	38.0	DEC 84	MAY 85
[illegible] 6059	M2 AND M3 FIGHTING VEHICLE SYSTEM SEE SUBTASKS.	805.0	689.0	[illegible]	APR 85	[illegible] 85
[illegible] 6059 13	METAL ARC SPRAYING INVESTIGATION OF PROCESSES AND PROCESS SPECIFICATION DEVELOPMENT ARE COMPLETE. PRELIMINARY PROCESS EVALUATION HAS BEEN INITIATED.	310.0	260.0	25.0	[illegible] 84	[illegible] 7
[illegible] 6059 17	PRE-PAINT CLEANING SYSTEM LITERATURE SURVEY HAS BEEN CONDUCTED AND PROJECT COORDINATION HAS BEEN ESTABLISHED WITH BRADC. TEST SPECIFICATION HAS BEEN ESTABLISHED.	525.0	[illegible]	[illegible]	[illegible]	[illegible]

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[illegible] 6579 19	SQUEEZE CAST ROAD WHEELS A TURRET MATCH HAS BEEN DESIGNED SUITABLE FOR THE SQUEEZE CASTING PROCESS. SPECIFICATION EVALUATION HAS BEEN INITIATED.	170.0	154.0	4.0	APR 85	MAR 85
[illegible] 6576	AUTOMATED DEPOT INSPECTION OF ROADWHEELS ALL ROADWHEELS SCHEDULED FOR DESTRUCTIVE TESTING THROUGH MAY 1983 WERE ULTRASONICALLY TESTED. THE NDT DATA IS BEING STATISTICALLY COMPARED TO DETERMINE WHETHER A CORRELATION EXISTS. SOME 800 ROADWHEELS HAVE BEEN NDT TESTED.	247.0	225.0	22.0	SEP 83	MAY 84
[illegible] 6579	AGT-1500 ENGINE SEE SUBTASKS 1, 2, 3.	1,360.0	1,366.0	201.0	MAR 85	SEP 84
[illegible] 6579 01	MONOCRYSTAL ALLOY FOR HIGH PRESSURE TURBINE BLADES CASTING PARAMETERS SUCH AS POURING TEMPS, TEMP WINDOWS AND WITHDRAWL RATES HAVE BEEN ESTABLISHED FOR THE ALLOY. QUALITY ANALYSIS IS IN PROGRESS AND BEING EVALUATED.	400.0	300.0	69.0	SEP 83	SEP 84
[illegible] 6579 02	RAPIDLY SOLIDIFIED TECHNOLOGY -RST- NICKLE-BASE SUPERALLOY CRS/CAP PROCESS DEFINITION AND VARIABILITY STUDY IS COMPLETED. POWDER FOR THE HP TURBINE DISK WAS PRODUCED, CHARACTERIZED AND CONSOLIDATED INTO BILLETS. MULTS SECTIONED FROM THE BILLETS WERE CROSS-ROLLED SUCCESSFULLY.	450.0	350.0	69.0	SEP 83	JUN 84
[illegible] 6579 03	BI-CAST HIGH PRESSURE TURBINE NOZZLE DESIGN ANALYSIS ON SCHEDULE TO DETERMINE THE BEST CANDIDATE DESIGN PRELIMINARY CONFIGURATION WAS MODIFIED TO ENHANCE PRODUCIBILITY BASED ON MOCK UP CASTING TRIALS.	510.0	416.0	63.0	OCT 83	MAY 84
[illegible] 6579	AGT-1500 ENGINE SEE SUBTASKS.	1,534.0	1,442.0	32.0	OCT 85	OCT 85
[illegible] 6579 04	MONOCRYSTAL ALLOY FOR HIGH PRESSURE TURBINE BLADES MONOCRYSTAL APPLICATION ANALYSIS HAS BEEN INITIATED FOR COOLING AIR TRADE OFF, PROPERTY VERIFICATION AND STRESS ANALYSIS.	231.0	208.0	5.0		OCT 85
[illegible] 6579 02	RAPIDLY SOLIDFIED RATE (RSR) NICKEL-BASE SUPERALLOY UNDER COMPONENTS QUALIFICATION, COMPONENT INSPECTION AND EVALUATION HAS BEEN STARTED.	363.0	340.0	1.0		JUN 8
[illegible] 6579 05	BI-CAST HIGH PRESSURE TURBINE NOZZLE TOOLING AND GAGING IS BEING FABRICATED EXPECTED DELIVERY OF TOOLING IS APRIL 1984.	490.0	475.0	[illegible]		[illegible]
[illegible] 6579 06	AUTOMATED LASER DRILLING OF COMBUSTOR COMPONENTS ***** DELINQUENT STATUS REPORT *****					

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PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
[illegible]	AUTOMATIC DEBURRING OF ENGINE COMPONENTS REVIEW OF THE STATE-OF-THE-ART OF AUTOMATED DEBURRING UNITS HAS BEEN COMPLETED. A ROBOTIC DEBURRING APPROACH HAS BEEN SELECTED. AVCO LYCOMING IS CURRENTLY SELECTING THE ROBOTIC UNIT. REQUIREMENTS ARE TO DEBURR AS MANY COMPONENTS AS PRACTICABLE.	442.[illegible]	419.0	[illegible].0		MAY 85
[illegible]	ABRAMS TANK PLANT - TECH MOD PROGRAM PHASE I OF THE CD/IPIP IS ON SCHEDULE. A GOVERNMENT ADVISORY GROUP HAS BEEN FORMED TO ASSIST THE TACOM PROGRAM MANAGER.	100.0		[illegible].0	[illegible] 83	SEP 84
[illegible]	LOCKE ARMY DEPOT PRODUCTIVITY IMPROVEMENT PROGRAM THE MAJORITY OF THE PREPARATORY WORK FOR THE DEPOT PROGRAM HAS BEEN COMPLETED. THE PROJECT IS NOW AWAITING FURTHER FUNDING ENABLING PHASE I TO BEGIN.	100.0		11.0	MAY [illegible]	JUN 84
[illegible]	ABRAMS TRANSMISSION PRODUCTIVITY IMPROVEMENTS (PHASE I) TASK 3 AWARDED 29 SEP 83.	300.0	132.0			SEP 84
[illegible]	MACHINING AND ADAPTIVE CONTROL ***** DELINQUENT STATUS REPORT *****					JUN 84
[illegible]	SI-METAL PARTS ***** DELINQUENT STATUS REPORT *****					JUN 84
[illegible]	SURFACE TREATMENT AND CAST HARDENING OF STEEL COMPONENTS CONTRACT WAS AWARDED 29 SEP 83. EFFORT TO DATE HAS BEEN CAD GEOMETRIC MODELLING OF GUIDE DESIGN FOR CANDIDATE GEARS. COILS, TOOLING, AND TEST GEARS ARE BEING PROCURED.	150.0	132.0		[illegible]	JUN 84
[illegible]	PRODUCTION OF SPECIAL ARMOR STEEL STEEL PLATE FROM 3/16 TO 2 IN HAS BEEN SUCCESSFULLY ROLLED TO THE DESIRED TEXTURE SOME PROBLEMS WITH FLATNESS STILL EXIST TO BE RESOLVED.	900.0	528.0	384.0	[illegible]	OCT [illegible]
[illegible]	MANUFACTURING METHODS FOR SPECIALIZED ARMOR MATERIALS AMMRC, AMCCOM, AND PBM HAVE PROGRESSED IN THE AREAS OF MATERIALS, PROCESSES AND FACILITIES TOWARD REALIZING THE PROGRAM OBJECTIVE.	6,550.0		[illegible]	[illegible]	[illegible]
[illegible]	IMPROVED M3T TRACK SEE SUBTASKS FOR WORK STATUS.	735.0	637.0	67.[illegible]	AU[illegible]	[illegible]
[illegible]	COMP MFG FRM HI STR/LTWEIGHT FERROUS, NON-FERR + MTL MATRIX TWO CONTRACTS WERE AWARDED. ONE HAS COMPLETED THE DIN DESIGN, WHICH CONSISTS OF DWAL20 TUBES WITH A STEEL JACKET. THE OTHER HAS COMPLETED THE CASTING DESIGN FOR THE PINS, AND IS MODIFYING THE LOOM FOR WEAVING THE SILICON CARBIDE FIBERS.	304.0	271.[illegible]	[illegible]	[illegible]	[illegible]

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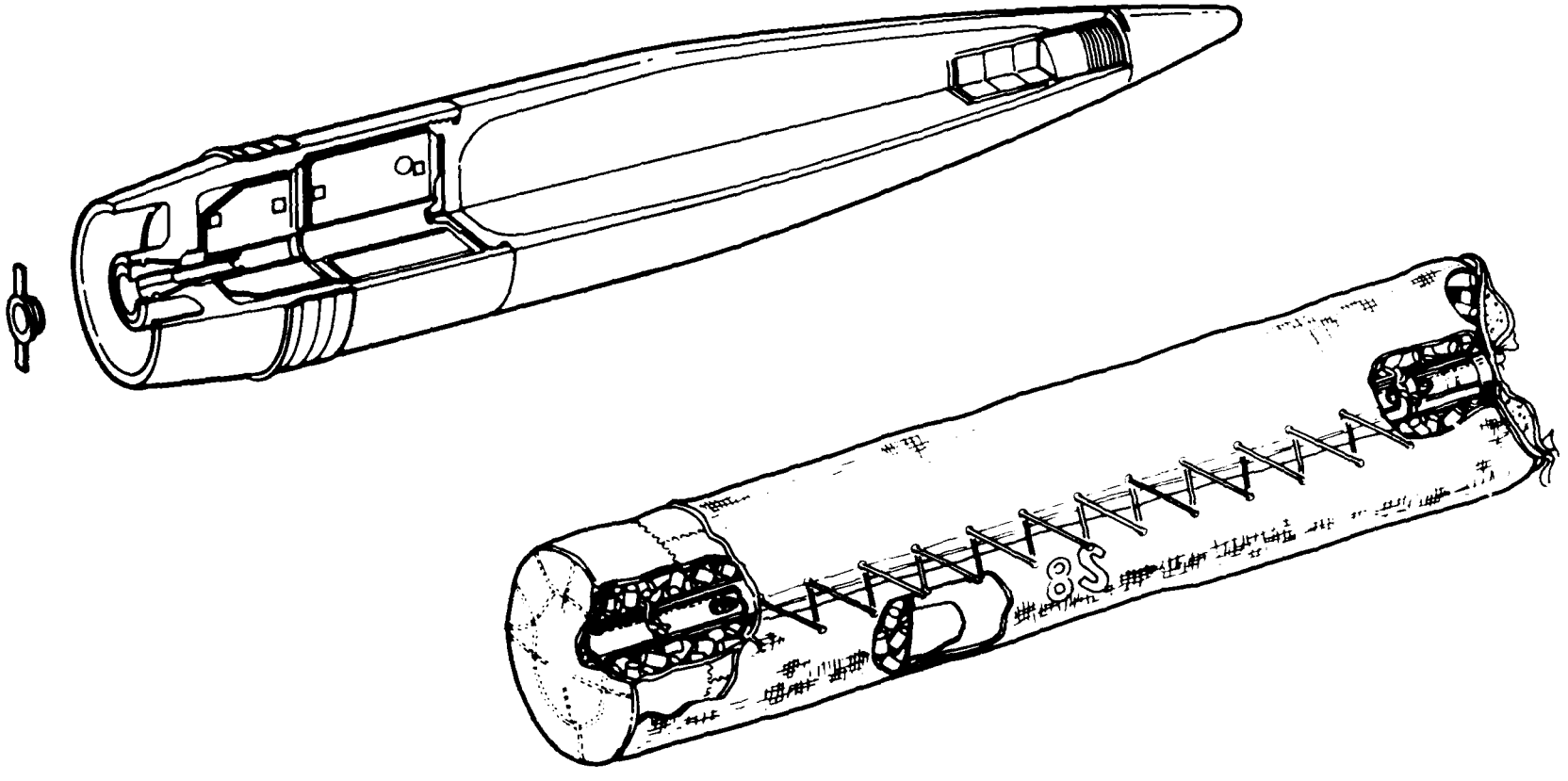
+ 83 6107 02	ADAPTIVE FLUIDIC DAMPER THE MANUFACTURING PROCESS, ALTERNATE MATERIALS AND AN ECONOMIC ANALYSIS HAVE BEEN COMPLETED. THE CONTRACTOR'S REPORT IS DUE AT THE END OF MARCH. NO FUNDS HAVE BEEN ALLOCATED FOR PHASE II.	90.0	57.0	29.0	MAR 84	MAR 84
+ 83 6107 03	ORGANIC COMPOSITE ROAD WHEEL A COMPOSITE ROADWHEEL WAS DESIGNED USING GLASS AND GRAPHITE FIBERS IN AN EPOXY MATRIX. THE CURRENT ALUMINUM ROADWHEEL DESIGN IS BEING COMPARED TO THE COMPOSITE WHEEL TO DETERMINE ADEQUACY.	343.0	309.0	29.0	AUG 84	AUG 84
+ 83 6121	CAD/CAM FOR THE BRADLEY FIGHTING VEHICLE PROGRAM BUDGETS AND SCHEDULES COMPLETED. PROCUREMENT OF A ROBOTIC SYSTEM HAS BEEN INITIATED. AT-ARC HARDWARE + SOFTWARE COMPATIBILITY HAS BEEN COMPLETED. VISION SUBSYSTEM PROCUREMENT HAS BEEN INITIATED.	750.0	724.0	7.0		DEC 84



ARMAMENT, MUNITIONS AND CHEMICAL COMMAND
(AMCCOM)
(AMMUNITION)

A M C C L M (AMMUNITION)

CURRENT FUNDING STATUS, 2ND QTR

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)	INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)
77	1	1,452,900	1,184,100	1,156,000 (97%)	268,800	265,900 (100%)
78	1	0	0	0 (0%)	0	0 (0%)
79	7	6,274,500	3,574,200	3,111,600 (87%)	2,700,300	1,840,100 (68%)
80	11	4,854,000	2,063,000	2,596,200 (90%)	1,991,000	1,069,900 (53%)
81	24	14,458,900	8,183,500	6,990,800 (85%)	6,275,400	3,915,400 (62%)
82	40	27,237,000	17,093,200	12,050,600 (70%)	10,143,800	5,162,200 (50%)
83	27	11,235,700	6,626,800	980,400 (14%)	4,608,900	1,783,300 (38%)
TOTAL	111	65,513,000	39,524,800	26,884,000 (68%)	25,988,200	14,033,400 (53%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 60% INHOUSE REMAINING 39%

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PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
3 83 3900	AUTOMATED MULTIPLE FILTER LIFE TESTER SEVERAL COMPONENT PARTS IN THE TESTER WERE REPLACED TO REDUCE COSTS, INCREASE ACCURACY, ELIMINATE CONDENSATION, AND REDUCE THE SYSTEM SIZE.	367.0	311.0	23.0	SEP 84	OCT 84
2 82 3904	CHEMICAL REMOTE SENSING SYSTEMS NO FUNDS WERE EXPENDED OR WORK ACCOMPLISHED DURING THIS PERIOD.	300.0	180.0	95.0	DEC 82	JUN 84
2 [illegible] 3905	MANUFACTURE OF IMPREGNATED CHARCOAL-WHETLERITE TWO PROCESSES WERE SELECTED FOR INVESTIGATION. SAMPLES WERE PREPARED REPRESENTING DIFFERENT PROCESS CONDITIONS AND CYANOGEN CHLORIDE TESTS PERFORMED. WORK WAS COMPLETED ON PROCUREMENT PACKAGE FOR FABRICATION OF A PILOT PLANT.	256.0	103.0	112.0	DEC 84	NOV 85
[illegible]	AUTOMATED AGENT PERMEATION TESTER THE PROTOTYPE WAS DEMONSTRATED IN SEPTEMBER 1983. VERIFICATION TESTING WAS COMPLETED WITH EMPHASIS ON SOFTWARE. SAFETY ASSESSMENT REPORT AND OPERATING INSTRUCTIONS WERE REVIEWED AND ACCEPTED.	224.0	150.0	57.0	JUN 83	JUN 84
[illegible]	[illegible] COATING OF DECON AGENT CONTAINERS CONTRACT FOR PHASE I EFFORT AWARDED IN SEP 83. MOST PROMISING CANDIDATES FOR COMPATIBILITY TESTING WERE SELECTED.	255.0	201.2	55.0	FEB 83	JUN 84
[illegible]	[illegible] COATING OF DECON AGENT CONTAINERS VARIOUS APPLICATION TECHNIQUES WERE EVALUATED. QUALITY CONTROL REQUIREMENTS WERE DEVELOPED.	90.0		29.2	APR 84	NOV 84
[illegible]	MANUFACTURING PROCESS FOR GAS MASK CANISTERS TECHNICAL EVALUATION OF PROPOSALS WAS COMPLETED AND PROVIDED TO PROCUREMENT.	283.0		19.0	SEP 85	SEP 85
[illegible]	PROTECTIVE MASK LEAKAGE TESTING A TECHNICAL REPORT WAS PREPARED BY THE CONTRACTOR AND IS BEING EVALUATED.	199.0	150.9	19.0	JUN 84	NOV 84
[illegible]	PILOT LINE FOR FUZE FLUIDIC POWER SUPPLIES PHASE II TEST EQUIPMENT DESIGN AND CONSTRUCTION IS COMPLETE. PHASE III DESIGN AND FABRICATION OF COIL-MAGNET ASSEMBLY MACHINE IS COMPLETE. THE AUTOMATIC TESTER AND ASSEMBLY MACHINE HAVE BEEN SUCCESSFULLY DEMONSTRATED AND ACCEPTED.	591.0	422.0	100.0	APR 84	APR 84
[illegible]	[illegible] PROCESS ENGINEERING ***** DEVELOPMENT STATUS REPORT *****					JUN 84

AD-A142 723 MANUFACTURING METHODS AND TECHNOLOGY PROJECT EXECUTION REPORT(U) ARMY INDUSTRIAL BASE ENGINEERING ACTIVITY ROCK ISLAND IL C FULLER MAY 84 SBI-AD-E700 008 2/2

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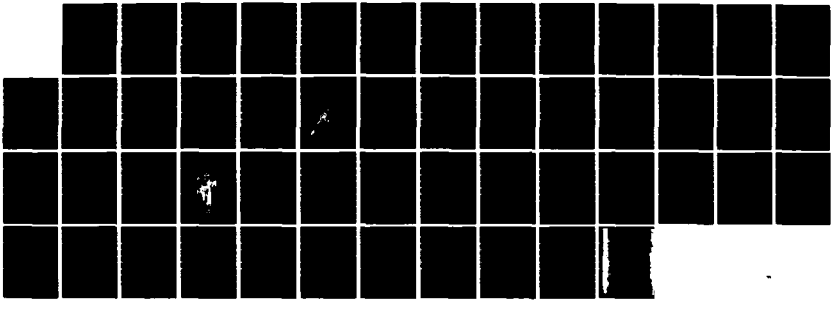

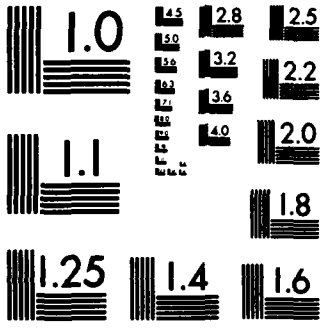

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3 83 1295	MODERNIZATION OF CHARCOAL FILTER TEST EQUIPMENT THE SPENT FILTER PACKAGING SYSTEM WAS REEXAMINED FOR POSSIBLE SIMPLIFICATION AND INCREASED RELIABILITY. DETAILED ENGINEERING WAS COMPLETED ON VARIOUS PARTS OF THE CONTAINMENT CHAMBER.	219.0	148.0	23.0	JUL 84	JUL 84
3 79 1318	CHEMICAL PRODUCTION FILL, CLOSE AND LAP FOR 8 IN XM736 PROJ ***** DELINQUENT STATUS REPORT *****				MAR 81	JUN 84
3 80 1318	PRODUCTION, FILL, CLOSE AND LAP 8 IN XM736 AND BLU 80 BOMB ***** DELINQUENT STATUS REPORT *****				JUN 81	JUN 84
3 81 1318	PRODUCTION, FILL, CLOSE AND LAP 8 IN XM736 AND BLU 80 BOMB ***** DELINQUENT STATUS REPORT *****				JUL 82	JUN 84
3 80 1346	SUPER TROPICAL BLEACH THIS PROJECT HAS BEEN COMPLETED.	202.0	170.7	31.3	MAR 81	MAR 84
3 81 1346	SUPER TROPICAL BLEACH PLANT DESIGN, FABRICATION AND SETUP HAS BEEN COMPLETED. PILOT PLANT DRYER EVALUATION CONTINUED.	822.0	629.1	173.5	APR 84	APR 84
3 83 1346	SUPER TROPICAL BLEACH ENVIRONMENTAL CONSTRAINTS ARE BEING DEFINED. ENVIRONMENTAL CONTROL EQUIPMENT HAS BEEN PROCURED.	340.0	194.8	68.1	APR 84	APR 84
3 80 1354	SLUDGE VOLUME REDUCTION AND DISPOSAL PROCESS STUDY CONTRACT INSTALLATION OF PILOT EQUIPMENT AT THE CENTRAL WASTE TREATMENT PLANT (CWT) WAS INITIATED. IT IS NOW 15 PCT COMPLETE. FUNDING FOR THESE PILOT FACILITIES IS SPLIT AMONG THREE MMT PROJECTS AT PBA DEALING WITH POLLUTION ABATEMENT.	156.0	4.0	116.1	DEC 80	SEP 84
3 81 1354	SLUDGE VOLUME REDUCTION AND DISPOSAL PROCESS CONTRACT LET FOR INSTALLATION OF PILOT DEWATERING EQUIPMENT. SEVERE WINTER WEATHER DELAYED CIVIL WORK ON EQUIPMENT SUPPORT PADS AND UNDERGROUND PIPING. ENVIR CONSIDERATIONS NOW REQUIRE THAT SLUDGE BE PUT IN HAZARD WASTE LANDFILL INSTEAD OF CHEMICAL.	110.0	44.3	7.9	SEP 83	SEP 84
3 81 1500	EVAL INDUST CAPABILITY F/LOAD COMMERCIAL EXPL-HIGH USE MUNIT ***** DELINQUENT STATUS REPORT *****				SEP 82	JUN 84
3 82 1500	EVAL INDUST CAPABILITY F/LOAD COMMERCIAL EXPL-HIGH USE MUNIT ***** DELINQUENT STATUS REPORT *****				OCT 83	JUN 84
3 82 1600	THREE PIECE SHAFT FOR THE 500-65/B TAILCONE ***** DELINQUENT STATUS REPORT *****					JUN 84

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PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
5 83 0900	AUTOMATED MULTIPLE FILTER LIFE TESTER SEVERAL COMPONENT PARTS IN THE TESTER WERE REPLACED TO REDUCE COSTS, INCREASE ACCURACY, ELIMINATE CONDENSATION, AND REDUCE THE SYSTEM SIZE.	367.0	311.0	23.0	SEP 84	OCT 84
5 82 0904	CHEMICAL REMOTE SENSING SYSTEMS NO FUNDS WERE EXPENDED OR WORK ACCOMPLISHED DURING THIS PERIOD.	300.0	180.0	95.0	DEC 82	JUN 84
5 82 0905	MANUFACTURE OF IMPREGNATED CHARCOAL-WHETLERITE TWO PROCESSES WERE SELECTED FOR INVESTIGATION. SAMPLES WERE PREPARED REPRESENTING DIFFERENT PROCESS CONDITIONS AND CYANOGEN CHLORIDE TESTS PERFORMED. WORK WAS COMPLETED ON PROCUREMENT PACKAGE FOR FABRICATION OF A PILOT PLANT.	256.0	103.0	112.0	DEC 84	NOV 85
5 82 0909	AUTOMATED AGENT PERMEATION TESTER THE PROTOTYPE WAS DEMONSTRATED IN SEPTEMBER 1983. VERIFICATION TESTING WAS COMPLETED WITH EMPHASIS ON SOFTWARE. SAFETY ASSESSMENT REPORT AND OPERATING INSTRUCTIONS WERE REVIEWED AND ACCEPTED.	224.0	150.0	57.0	JUN 83	JUN 84
5 82 0913	SPIN COATING OF DECON AGENT CONTAINERS CONTRACT FOR PHASE I EFFORT AWARDED IN SEP 83. MOST PROMISING CANDIDATES FOR COMPATIBILITY TESTING WERE SELECTED.	255.0	201.2	55.0	FEB 83	JUN 84
5 83 0915	SPIN COATING OF DECON AGENT CONTAINERS VARIOUS APPLICATION TECHNIQUES WERE EVALUATED. QUALITY CONTROL REQUIREMENTS WERE DEVELOPED.	90.0		29.2	APR 84	NOV 84
5 83 0924	MANUFACTURING PROCESS FOR GAS MASK CANISTERS TECHNICAL EVALUATION OF PROPOSALS WAS COMPLETED AND PROVIDED TO PROCUREMENT.	283.0		19.0	SEP 85	SEP 85
5 83 0925	PROTECTIVE MASK LEAKAGE TESTING A TECHNICAL REPORT WAS PREPARED BY THE CONTRACTOR AND IS BEING EVALUATED.	199.0	150.9	19.0	JUN 84	NOV 84
5 81 1201	PILOT LINE FOR FUZE FLUIDIC POWER SUPPLIES PHASE II TEST EQUIPMENT DESIGN AND CONSTRUCTION IS COMPLETE. PHASE III DESIGN AND FABRICATION OF COIL-MAGNET ASSEMBLY MACHINE IS COMPLETE. THE AUTOMATIC TESTER AND ASSEMBLY MACHINE HAVE BEEN SUCCESSFULLY DEMONSTRATED AND ACCEPTED.	591.0	422.0	100.0	APR 84	APR 84
5 82 1019	MMT PENTAGURANE PROCESS ENGINEERING ***** DELINQUENT STATUS REPORT *****					JUN 84

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> 82 1701	BULK TRANSFER OF CHEMICAL MATERIALS COORDINATED WITH A/E FIRM ON SCENARIO FOR CONSOLIDATED SMOKE COMPLEX. ANALYZED CURRENT AND PROPOSED HANDLING PROCEDURES.	221.0	91.2	126.3	SEP 85	JUN 84
> 83 1701	BULK TRANSFER OF CHEMICAL MATERIALS PERFORMED MATERIAL HANDLING EQUIPMENT SURVEY. SAFETY STUDY AND FIRE SUPPRESSION METHODS COORDINATED WITH A/E FIRM.	207.0	91.2	36.7	SEP 85	SEP 85
> 82 1709	IMPROVED PROCESSING OF PYROTECHNIC MIXTURES VENDOR SHIPPED JAYCO MIXER FOR INSTALLATION AT PBA. COMPLETED DESIGN FOR INSTALLATION OF MIXER AND FIRE PROTECTION SYSTEM.	500.0	72.2	274.8	JUL 84	JUL 84
> 83 1709	IMPROVED PROCESSING OF PYROTECHNIC MIXTURES ISSUED FUNDS TO CAAA, LSAAP, AND LHAAP FOR PYRO MIX SAMPLES AND RAW MATERIALS. RECEIVED RAW MATERIALS, WATER CHILLER AND OTHER EQUIPMENT.	446.0	103.4	148.6	JUL 84	JUL 84
> 82 1711	RED PHOSPHORUS POLLUTION ABATEMENT EVALUATIONS PROCESS AND CRITERIA SURVEYS HAVE BEEN CONDUCTED. SMALL SCALE TESTS INDICATE RP VERY TOXIC TO AQUATIC LIFE. A SPECIAL WASTE COLLECTION AND TREATMENT SYSTEM REQUIRED PRIOR TO SENDING TO CWTF. INSTALLATION SPECS AND DRAWINGS PREPARED. PKG ADVERTISED.	125.0	75.3	41.9	OCT 83	OCT 84
> 81 1907	AUTOMATED GAGING FOR MEDIUM CAL. PROJECTILE BODIES (CAM) SPECIFICATIONS FOR PROCUREMENT OF ULTRASONIC GAGING SYSTEM HAS BEEN WRITTEN. AGREEMENT HAS BEEN REACHED ON INTERPRETATION OF THE 5 INCH/54 CALIBER PROJECTILE DRAWINGS AND METHODS.	544.0	136.0	294.0	SEP 83	DEC 84
> 81 3961	IMPRVD VIBR ACCEPTANCE TESTING F/M732,XM587/724 FUZES ? S?A APPROXIMATELY 90 PCT OF THE SYSTEM HAS BEEN FABRICATED AT VARIOUS SUBCONTRACTORS SITES. FACILITY MODIFICATIONS HAVE BEEN MADE TO ACCOMMODATE THE SYSTEM. INSTALLATION IS PLANNED FOR MAY 1984.	650.0	645.0	5.0	DEC 83	JUN 84
> 79 4000	AUTOMATED M55 DETONATOR PRODUCTION EQUIPMENT CONTRACTUAL EFFORT WITH MRC ON THE INSPECTION MODULE IS BEING TERMINATED DUE TO UNRELIABLE TESTING. REMAINING FUNDS WILL BE USED FOR IN-HOUSE FAILURE ANALYSIS AND FINAL REPORTS.	1,750.0	868.4	881.6	MAR 81	MAR 84
> 81 4000	AUTOMATED M55 DETONATOR PRODUCTION EQUIPMENT TECHNICAL IS BEING TERMINATED DUE TO LACK OF EQUIPMENT FROM FY79 EFFORT. REPROGRAMMING OF 50K FROM IOWA AAP TO ARDC IS PLANNED.	403.5	67.5	324.0	SEP 81	MAR 84
> 79 4024	DSN DEV BLD PROT CLMP AND AUTO ASSY MACH M223 FUZE THE CONTRACTOR SUBMITTED FOR REVIEW THE MANUFACTURED AND ASSEMBLED PORTIONS OF THE MACHINE FOR THE SLIDER AND SAFETY PIN FEEDERS, THE SLIDER, SAFETY PIN AND M55 MERGING DIALS, AND THE UPPER AND LOWER TURNTABLES AND QUILLS FOR THE 20 SS ASSY MACHINE.	1,935.0	1,506.1	316.0	SEP 81	DEC 84

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> 83 4061	NITROGUANIDINE PROCESS OPTIMIZATION PRELIMINARY DESIGN CRITERIA WERE WRITTEN FOR THE TREATMENT OF NQ PROCESS WASTE WATERS BASED ON LABORATORY TESTS. PILOT SCALE EQUIPMENT WAS INSTALLED AND TREATMENT OF PLANT WASTE WATER BEGUN.	640.0	350.0	92.0	SEP 84	SEP 84
> 82 4062	AUTO MANUFACTURE SYSTEM FOR MORTAR INCREMENT CONTAINERS ACCEPTANCE TESTING/SLURRY VACUUM FORMING BASED MFG F181 MR M205 INCREMENT CONTAINER HALVES + TOOLING FAB + PART MFG COMPLETED. ACC TESTING OF ASSY/INSP SYS RESCHEDULED F/2084. PAPER MOLD BASED MFG SYS FAB COMPLETED + ASSY + DEBUG UNDERWAY.	4,149.9	3,697.3	386.0	SEP 84	SEP 84
> 82 4062 01	SLURRY VACUUM FORMING MFG SYS CONTRACT MODIFIED TO COMPLETE INSTALLATION OF THE WATER + HALON FIRE PROTECTION SYS AT ARMTEC. MANUF SYS AT ARMTEC REFURBISHED AND SYS OPERATED OVER A 3 DAY PERIOD TO EVALUATE DIE MAINTENANCE PROCEDURES AND INTERVALS.				SEP 83	JUN 84
> 82 4062 02	PAPER MOLDING MANUFACTURING SYSTEM THE MAIN FRAME IS COMPLETE AND THE NC PAPER FEED AND BLANKING SUBSYSTEM IS OPERATIONAL. STATIONS ARE MOUNTED AND ARE BEING DEBUGGED. OIL HEATING HARDWARE AND DUST COLLECTION SYS ON HAND AND READY TO BE INSTALLED.				JUL 84	JUN 84
> 82 4062 03	ASSEMBLY SYSTEM THE IMAGING/CAMERA SYSTEMS WERE TROUBLE-SHOOTED AND DEFECTIVE ROM AND CPU CARDS RETURNED TO MANUFACTURER. HARDWARE REQUIRING MOD WAS REMOVED AND SHIPPED TO INNOVA. THESE MODS WERE COMPLETED AND RETURNED FOR RE-INSTALLATION.				SEP 83	JUN 84
> 82 4062 06	PROTOTYPE PRODUCTION TOOLING 2600 M205 PARTS WERE MANUFACTURED AND DELIVERED FOR BALLISTIC TESTING + EVALUATION. M204 PROTOTYPE TOOLING WAS COMPLETED AND 4000 PARTS WERE DELIVERED FOR BALLISTIC + EVALUATION. ALL TESTING EXCEPT COLD FIRINGS WAS COMPLETED.					JUN 84
> 83 4062	AUTO MANUFACTURE SYSTEM FOR MORTAR INCREMENT CONTAINERS CONTRACT ADMIN CONTINUED ADDRESSING THE PROCESSING OF CONTRACT MODS, WITNESSING OF EQUIP TESTING, AND CONTRACT REVIEW MEETINGS. MAJOR ON-GOING EFFORT IS REVIEWING + FINALIZATION OF TECH DATA PACKAGES + TEST RESULTS.	250.0		226.5	JUN 84	SEP 84
> 82 4145	CONTROL DRYING AUTO SB + BALL PROPELLANT MANUFACTURING SEE INDIVIDUAL TASKS (1 AND 2).	479.2	260.1	145.1	SEP 83	DEC 84
> 82 4145 01	CONTROL DRYING AUTO SB PROP MFG A PROCESS GAS CHROMATOGRAPH (PGC) WAS INSTALLED AND OPERATED TO MEASURE THE SOLVENT CONTENT OF CONDENSATE FROM THE CASBL SOLVENT RECOVERY AND WATER DRY OPERATIONS. SEVEN UNIT PROVEOUT RUNS WERE MONITORED WITH THE PGC.	335.6	218.7	81.0	SEP 83	DEC 84

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6 82 4145 02	CONTROL DRYING AUTO BALL PROP MFG PLANT TESTS HAVE BEEN COMPLETED. THE RESULTS SHOWED THAT THE M+V CONTENT OF BALL POWDER PROPELLANT CAN BE CONTROLLED BY THE TEMPERATURE OF THE PROPELLANT BED.	143.4	41.4	65.1	SEP 83	MAR 84
6 80 4150	NEW MANUFACTURING PROCESSES FOR SAWS AMMUNITION THE DUPLEX TOOLED BULLET ASSEMBLY MACHINE FINAL ACCEPTANCE TEST WAS CONDUCTED. ACCEPTANCE DATA COLLECTION IS SCHEDULED FOR FEB 84.	489.0	332.7	156.3	JUN 82	FEB 84
6 81 4150	NEW MANUFACTURING PROCESSES FOR SMALL CALIBER PENETRATORS THE SKEWED AXIS ROLL FORMING PROTOTYPE EQUIPMENT FOR MANUFACTURE OF THE STEEL PENETRATOR IS SCHEDULED FOR COMPLETION BY 30 MAR 84. INSTALLATION, PROCUREMENT OF TOOLS AND MATERIALS IS PROCEEDING ON SCHEDULE.	211.0	64.2	141.9	JUL 82	APR 84
6 82 4161	PRODUCTION TECHNIQUES FOR IMPROVED SMOKE MUNITION (81 MM) A SUFFICIENT AMOUNT OF THE PROCESS BASELINE WAS COMPLETED TO MEET THE FACILITIES CRITICAL DATE. EQUIPMENT TOPS WERE COMPLETED AND SUBMITTED TO MPBMA DURING DEC 83.	476.0	97.5	260.0	JUL 83	OCT 84
6 82 4200	TNT CRYSTALLIZER FOR LARGE CALIBER MUNITIONS A DETAIL DRAWING PACKAGE FOR FINAL EQUIPMENT AND REMOTE CONTROL SYSTEM DESIGNS HAVE BEEN PREPARED AND SUBMITTED TO ARDC FOR APPROVAL.	364.8	188.4	160.0	DEC 84	MAR 84
6 80 4210	DRY CUTTING OF ENERGETIC MATERIALS APPROX. 40 LBS OF BENITE WAS SUCCESSFULLY CUT ON THE PROTOTYPE EQUIPMENT. M83 PRIMERS WERE LOADED WITH JET CUT AND SAW CUT BENITE AND STATICALLY TESTED. FINAL TECHNICAL REPORT IS UNDER PREPARATION AT RADFORD AAP.	622.2	453.7	158.0	MAY 82	MAR 84
6 81 4226	ON-LINE MONITORS FOR WATER POLLUTANTS TESTING OF THE FIELD MONITORS AT THE TNT PRODUCTION SITE HAS BEEN SUCCESSFULLY CONCLUDED, WITH TNT MONITORED TO 20 PPB. ONE POLAROGRAPHIC MONITOR WAS REJECTED. TESTING IS CONTINUING AT THE NG SITE.	432.6	318.6	107.0	SEP 82	MAR 85
6 81 4231	IN-PLANT REUSE OF POLLUTION ABATED WATERS EQUIPMENT REQUIRED FOR THE PILOT-SCALE EVALUATION OF TREATMENT TECHNOLOGIES AT MAAP HAS BEEN PROCURED AND INSTALLED. PILOT EVALUATIONS HAVE BEEN DELAYED UNTIL 3QFY84.	460.5	265.6	194.9	JUN 83	SEP 84
6 82 4231	IN-PLANT REUSE OF POLLUTION ABATED WATERS WORK TO EVALUATE THE USE OF CONTINUOUS CONDUCTIVITY AND PH INSTRUMENTATION AT PBA TO CONTROL BOTH THE TREATMENT CHEMICAL UTILIZATION AND FLOW RATE THROUGH THE CWTF HAS BEEN INITIATED.	313.0		180.1	JUN 84	SEP 84

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> 01 4266	MANUF, INSPECT + TEST EQUIP FOR MAGNETIC POWER SUPPLY ALL WORK INVOLVED IN THE DESIGN AND FABRICATION OF ALL TOOLING AND EQUIPMENT NEEDED FOR THE MANUFACTURE OF MAGNETIC POWER SUPPLY TO SUPPORT THE PRODUCTION OF M509A2E1 FUZE IS COMPLETE. THE FINAL REPORT IS SCHEDULED FOR COMPLETION 31 MARCH 1984.	782.0	483.0	299.0	SEP 83	SEP 84
> 31 4267	CONTINUOUS PROCESS FOR GRANULAR COMP B ***** DELINQUENT STATUS REPORT *****				SEP 82	JUN 84
> 02 4267	CONTINUOUS PROCESS FOR GRANULAR COMP B NO SIGNIFICANT WORK ACCOMPLISHED PENDING RESTRUCTURE OF EFFORT.	80.0		68.0	MAR 84	APR 84
> 02 4273	AUTOMATED PRODUCTION OF STICK PROPELLANT A PILOT LINE ARRANGEMENT USING A 4-IN PRESS HAS BEEN USED TO SELECT A DC SERVO MOTOR CUTTER, JET STREAM CONVEYOR, AND DUAL OPTIC LENGTH SENSOR FOR PROTOTYPE USE. WORK IS CONTINUING ON HANDLING/TRAYER DESIGN.	821.2	689.2	130.0	DEC 83	DEC 84
> 01 4281	CONSERVATION OF ENERGY AT ARMY AMMUNITION PLANTS SEE THE FOLLOWING INDIVIDUAL TASKS FOR WORK STATUS.	1,281.4	632.7	600.9	SEP 84	SEP 85
> 01 4281 A04	ENERGY RECOVERY FROM WASTE HEAT THE CONTRACT SOW WAS AMENDED. ENGINEERING ANALYSIS HAS BEEN INITIATED TO ESTABLISH ESSENTIAL ENGINEERING DESIGN INFORMATION AND ANTICIPATED STEAM SAVINGS. EQUIPMENT PROCUREMENT HAS BEEN INITIATED.	361.7	194.1	166.2		SEP 84
> 01 4281 A06	UNCOOLED PRODUCER GAS FOR KETENE MANUFACTURE HOLSTON AAP HAS CONDUCTED A BENCH SCALE INVESTIGATION TO DETERMINE THE FEASIBILITY OF USING HOT, CRUDE PRODUCER GAS AS A FUEL FOR KETENE FURNACE OPERATIONS. THE TECHNICAL REPORT IS IN EDITORIAL REVIEW AND WILL BE DISTRIBUTED SOON.	129.6	76.6	50.8	MAR 84	DEC 84
> 01 4281 A08	CAVITATIONAL REMOVAL OF EXPLOSIVES THE DESIGN, INSTALLATION, AND TESTING OF THE PROTOTYPE SYSTEM THAT INCLUDES WATER RECIRCULATION AND EXPLOSIVE RECOVERY HAS BEEN COMPLETED. THE REPORT RECEIVED FROM THE CONTRACTOR IS BEING PREPARED FOR PUBLICATION.	375.8	269.6	56.0	JUN 83	SEP 84
> 01 4281 A10	USE OF BIOMASS AS ENERGY SOURCES AT ARMY AMMUNITION PLANTS THE FINAL TECHNICAL RPT 'FEASIBILITY STUDY OF USING BIOMASS AS AN ALTERNATE BOILER FUEL AT MILAN, INDIANA, AND KANSAS AAPS' WAS COMPLETED. IT CONCLUDED THAT ALTHOUGH FEASIBLE, IT IS NOT COST EFFECTIVE AT THIS TIME.	271.8	222.8	41.6	SEP 83	MAR 84

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6 81 4281 A12	POWER PRODUCTION FROM WASTE HEAT NO ACCOMPLISHMENTS REPORTED.	147.8	93.8	54.0	SEP 84	SEP 84
6 82 4281	CONSERVATION OF ENERGY AT ARMY AMMUNITION PLANTS SEE FOLLOWING INDIVIDUAL TASKS FOR WORK STATUS.	1,361.9	773.2	358.6	SEP 84	MAR 87
6 82 4281 A01	PROCESS ENERGY INVENTORY INSTRUMENTATION HAS BEEN INSTALLED IN THE TNT LINE AT RADFORD AAP. THE MEASURING OF PROCESS VARIABLES WAS BEGUN. STEAM AND ELECTRICITY MEASUREMENTS WILL DETERMINE THE AVERAGE ENERGY USAGE PER POUND OF TNT.	193.7	136.7	56.5	JUN 84	JUN 85
6 82 4281 A04	ENERGY RECOVERY FROM WASTE HEAT EQUIPMENT EVALUATION FOR THE HEAT PIPE WASTE HEAT RECOVERY SYSTEM WAS COMPLETED. TEST RESULTS HAVE INDICATED THAT THE SYSTEM IS ABLE TO RECOVER HEAT FROM THE HOT WASTEWATER TO PREHEAT COLD FRESH WATER AT A RATE OF 12 MILLION BTU/HR.	419.4	282.0	118.2	SEP 84	MAR 87
6 82 4281 A12	POWER PRODUCTION FROM WASTE HEAT NO ACCOMPLISHMENTS REPORTED.	426.9	354.9	66.6	JUN 84	JUN 85
6 82 4281 C01	PROCESS ENERGY INVENTORY AT PINE BLUFF ARSENAL PBA IS CONTINUING AN ENERGY AUDIT OF ITS PRODUCTION, PRODUCTION SUPPORT, AND POLLUTION ABATEMENT FACILITIES, TO IDENTIFY PROBLEMS AND SOLUTIONS TO INEFFICIENT ENERGY USE.	322.0	297.0	23.8		SEP 86
6 82 4285	TNT EQUIVALENCY TESTING FOR SAFETY ENGINEERING TESTING WAS COMPLETED ON CAST TNT CHARGES TO DETERMINE SHAPE EFFECT AT CLOSE IN DISTANCES. SAFETY APPROVAL OF M8 PROPELLANT TEST PLAN WAS OBTAINED. FINAL REPORT ON XM37 PROPELLANT WAS PUBLISHED.	251.0	60.0	105.0	JUN 84	SEP 84
6 83 4296	EVALUATION OF DIMETHYLNITROSAMINE DISPOSAL ON HAAP B-LINE PROCUREMENT PACKAGE FOR CATALYTIC HYDROGENATOR AND ANCILLARY EQUIPMENT HAS BEEN COMPLETED. PROCUREMENT OF ALL EQUIPMENT, MATERIALS AND INSTRUMENTATION INITIATED. EVALUATION OF SLUDGE TREATMENT SYSTEM CONTINUED.	295.0	120.0	27.2	DEC 84	DEC 85
6 81 4309	AMMUNITION FOR THE 120MM TANK MAIN ARMAMENT SEE INDIVIDUAL SUBTASKS FOR WORK STATUS.	3,520.9	2,990.9	487.7	JUN 85	SEP 84
6 81 4309 01	MFG METHODS FOR STICK + JA-2 PROPELLANT DRUM CUTTER TAKEAWAY LINE PROVED TO BE UNSUCCESSFUL. DC SERVO CUTTER-JET STREAM CONVEYOR SYSTEM PERFORMED SATISFACTORY AND RECOMMENDED FOR IMPLEMENTATION. FINAL VOLUME OF TECHNICAL REPORT UNDER PREPARATION.	982.9	793.9	180.9	JUN 85	SEP 84

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> 81 4309 02	EXPLOSIVE LOADING OF 120MM HEAT-MP-T MATERIAL HANDLING AND PRESS TOOLING DESIGNS WERE COMPLETED. INERT AND EXPLOSIVE PRESSING OPERATION WERE COMPLETED. LOAD ACCEPTANCE CRITERIA AND STATIC TEST FIRING PROCEDURES APPROVED.	516.0	438.0	64.9	JUN 83	SEP 84
> 81 4309 03	ASSEMBLY PROCESS DEVELOPMENT PRIMER TORQUING, STAKING, DEPTH GAGING AND RESISTANCE TEST STATIONS HAVE BEEN CONSTRUCTED AND INSTALLED AT IOWA AAP. TESTING, DEBUGGING, AND ACCEPTANCE OF THE STATIONS HAS BEEN COMPLETED.	917.0	807.0	100.7	JUN 83	SEP 84
5 81 4309 04	COMBUSTIBLE CARTRIDGE CASE PROCESS - 120MM ALL TECHNICAL WORK ON THIS PROJECT IS COMPLETE. A TECHNICAL REPORT WAS PREPAREL BY THE CONTRACTOR, REVIEWED BY ARDC AND RETURNED TO THE CONTRACTOR FOR CORRECTIONS.	215.0	185.0	26.6	JUN 83	DEC 84
5 81 4309 05	FORMING OF SABOT SEGMENTS TO NET SHAPE ON APFSDS AMMO AN ECONOMIC ANALYSIS OF FORGING VS EXTRUSION SHOWS A 33 PERCENT COST SAVINGS. DECISION ON THE USE OF THE ORIGINAL FORGINGS FOR TESTING WILL BE MADE IN THE NEXT QUARTER.	466.0	413.0	46.9	JUN 83	SEP 84
> 81 4309 09	INVESTIGATE FORMING + HEAT TREAT METHODS F/CORE, APDS ADDITIONAL REDUCTIONS IN THE MACHINING CYCLE TIME WERE ACHIEVED THROUGH OPTIMIZATION OF MACHINING PARAMETERS. A FINAL REPORT WAS PREPARED, REVIEWED AND APPROVED.	313.0	263.0	47.7	JUN 83	SEP 84
5 81 4309 12	INJECTION MOLDING OF XM829 OBTURATOR THE CONTRACTOR CONVENTIONALLY INJECTION MOLDED 25 NYLON OBTURATOR BLANKS SUCCESSFULLY. THE BLANKS WERE INSPECTED AND ACCEPTED. A FINAL REPORT WAS PREPARED BY THE CONTRACTOR AND REVIEWED.	111.0	91.0	20.0	JUN 83	SEP 84
5 82 4309	AMMUNITION FOR THE 120MM TANK MAIN ARMAMENT SEE INDIVIDUAL TASKS.	3,956.6	3,319.3	480.9	SEP 84	DEC 85
5 82 4309 02	EXPLOSIVE LOADING OF 120MM HEAT-MP VARIOUS PRESSING CONCEPTS HAVE BEEN STUDIED AND THE OPTIMUM PROCESS FOR PRESS LOADING THE 120MM XM830 PROJECTILE DETERMINED. SPIN FIRE TEST FACILITY COMPLETED. EXPLOSIVE FOR HE PROJECTILE CHANGED FROM GERMAN TYPE OF COMP A3 TYPE 2.	502.0	392.0	106.8		DEC 84
> 82 4309 04	COMBUSTIBLE CARTRIDGE CASE, 120MM ALL EQUIPMENT FOR CONTINUOUS COMBUSTIBLE CARTRIDGE CASE IMPREGNATION IS INSTALLED AND READY FOR TESTING. A SAFETY TEST ON THE EQUIPMENT WILL BE CONDUCTED PRIOR TO USING ANY LIVE MATERIAL. MILESTONES WILL BE REVISED AS A RESULT.	2,704.0	2,295.0	299.0		DEC 85

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5 82 4309 09	INVESTIGATE FORMING + HEAT TREAT METHODS F/CORE, APDS THIS WORK WAS CANCELLED BECAUSE OF THE HIGH RISK NATURE OF THE EFFORT. ALSO RECENT APPROVAL OF ROTARY STRAIGHTENING NEGATED MOST OF THE EXPECTED BENEFITS.	433.3	373.3	58.0		JUN 84
5 82 4309 21	BLENDING EXPLOSIVE, COMP R8151 THIS PROJECT HAS BEEN COMPLETED. THE BALANCE OF CONTRACT FUNDS WILL BE RETURNED.	103.7	75.4	21.2		JAN 84
5 82 4309 22	INSTALLATION OF VENTILATION EQUIPMENT IN BUILDING 5006-2 TASK COMPLETED. VENTILATION EQUIPMENT PROCURED, INSTALLED AND PROVED OUT. SINCE ONLY PROCUREMENT, INSTALLATION AND PROVEOUT OF STD COMMERCIAL EQUIPMENT INVOLVED, NO TECHNICAL REPORT WILL BE PREPARED.	62.1	62.1			JAN 84
5 77 4311	DEVELOP AUTOMATED PRODUCTION EQUIPMENT FOR XM 692 DEBUGGING OF THE OVERLAY/KILL MECHANISM MACHINE AT LOUISIANA AAP WAS CONTINUED. PREPARATIONS FOR COMPATIBILITY TESTING BY THE DUTCH WEIGHT LOSS METHOD OF THE VYDAX 525 AND THE CYANOACRYLATE ADHESIVE USED ON THE CORD WRAP MACHINE WERE COMPLETED.	1,452.9	1,184.1	266.8	AUG 78	JUN 84
5 81 4311	DEVELOP AUTOMATED PRODUCTION EQUIPMENT FOR XM 692 NO ADDITIONAL WORK ACCOMPLISHED DUE TO DEFERRED EQUIPMENT PURCHASES.	460.0	429.0	32.0	SEP 82	JUN 84
5 82 4312	ANTI-ARMOR CLUSTER MUNITION PRODUCTION EXPLOSIVE INVECTION A PROTOTYPE PRODUCTION INJECTOR FOR LOADING CEM SUBMUNITIONS WAS FABRICATED. AN INSPECTION PLAN AND PROCESS OPERATIONS CONTROL SYSTEM WAS PREPARED BY THE CONTRACTOR.	846.1	651.4	132.0	JUN 83	DEC 84
5 80 4341	IMPROVED NITROCELLULOSE PURIFICATION PROCESS A HYBRID PROCESS (PARTIAL BATCH ACID BOIL FOLLOWED BY CONICELL TREATMENT) IS BEING EVALUATED. THIS PROCESS MAY BE ECONOMICALLY ATTRACTIVE.	982.0	815.8	166.2	DEC 81	JUN 84
5 81 4341	IMPROVED NITROCELLULOSE PURIFICATION PROCESS LAB TESTS ARE IN PROGRESS USING SHORT TERM TESTS FOR ESTABLISHING THE ACCEPTABILITY OF STORAGE OF PROPELLANT MADE WITH CONICELL PURIFIED NC. THE TESTS ARE BASED ON MEASURING STABILIZER DEPLETION AFTER HIGH TEMPERATURE STORAGE.	617.0	215.6	363.0	MAR 83	JUN 84
5 82 4341	IMPROVED NITROCELLULOSE PURIFICATION PROCESS M31A1, M30, AND M6 PROPELLANTS HAVE BEEN MANUFACTURED USING HYBRID PROCESSED NC. THIS MATERIAL IS BEING USED FOR BALLISTIC TESTS AND LABORATORY EVALUATION. A PILOT PRODUCTION LOT OF IMR 5010 (CAL .50) PROPELLANT WILL BE MANUFACTURED AND TESTED.	359.0	196.0	17.0	SEP 83	JUN 84

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5 81 4344	ESTABLISH WASTE DISPOSAL TECHNIQUE FOR M687 BINARY PROJECT THIS PROJECT IS COMPLETED.	200.0		200.0	DEC 82	JUL 83
5 82 4344	ESTABLISH WASTE DISPOSAL TECHNIQUE FOR M687 BINARY PROJECT THE DISTILLATION COLUMN WAS INSTALLED AT CRDC. SOP AND TEST RUN PLANS WERE SUBMITTED TO THE SAFETY OFFICE. MATERIALS TO SUPPORT PILOT EFFORT WERE ORDERED.	380.0	180.0	101.0	NOV 83	NOV 84
5 78 4349	MODERNIZATION OF PRESS LOADING FOR HEP PROJECTILES ***** DELINQUENT STATUS REPORT *****				JUN 80	JUN 84
5 80 4357	NONDESTRUCTIVE TEST EQUIP F/LARGE CALIBER MUNITIONS F/M483A1 THE TECHNICAL DATA PACKAGE HAS BEEN COMPLETED. DEBUGGING TESTS TO CORRECT THE AUTOMATED MAGNETIC FLUX LEAKAGE INSPECTION SYSTEM SHORT COMINGS IS UNDERWAY AND IS SCHEDULED FOR COMPLETION IN MAY 1984.	554.0	450.0	104.0	JUN 83	MAY 84
5 82 4357	NONDESTRUCTIVE TEST EQUIP F/LARGE CALIBER MUNITIONS F/M483A1 DEMONSTRATION TEST FOR PROVE-OUT OF AUTOMATED MAGNETIC FLUX LEAKAGE INSPECTION SYSTEM PRIOR TO IMPLEMENTATION IS SCHEDULED FOR JUNE 1984. THE APPLICATION TEST HAS BEEN COMPLETED. THE AMFLIS HAS BEEN DELIVERED AND INSTALLED AT MSAAP.	124.0	69.0	41.0	OCT 83	OCT 84
5 82 4364	ON-LINE BIO SENSORS TO MONITOR MIXED WASTE STREAMS VENTILATORY MONITORING, SUPPORTING BIOASSAYS AND CHEMICAL ANALYSES WERE COMPLETED, THUS ENDING THE DATA GATHERING PHASE OF THE PROJECT. DRAFTING OF THE TECHNICAL MANUAL AND PROTOCOL DEVELOPMENT CONTINUED.	315.0	252.0	56.0	SEP 83	DEC 83
5 82 4406	IMPROVING THE YIELD OF HMX DURING RDX NITROLYSIS THE NITROLYSIS STUDY, COPRODUCT SEPARATION PROCESS DEVELOPMENT, INTEGRATED PROCESS EVALUATION, DATA ANALYSIS, AND COMPUTER MODELING WAS COMPLETED. TECHNICAL REPORTS ARE IN PREPARATION.	870.0	498.1	118.0	DEC 83	MAR 84
5 80 4417	PROCESS TECHNOLOGY FOR BLENDING RP SMOKE COMPOSITIONS THIS PROJECT HAS BEEN COMPLETED.	115.0		115.0	MAY 81	SEP 81
5 81 4417	PROCESS TECHNOLOGY FOR BLENDING RP SMOKE COMPOSITIONS THIS PROJECT IS COMPLETED.	165.0	30.0	135.0	SEP 82	SEP 83
5 82 4417	PROCESS TECHNOLOGY FOR BLENDING RP SMOKE COMPOSITIONS COMPLETED DESIGN OF INTERIM PRODUCTION BLENDING FACILITY AT PINE BLUFF ARSENAL. AWARDED CONTRACTS FOR DESIGN AND INSTALLATION OF EQUIPMENT IN INTERIM BLENDING FACILITY.	458.0	288.0	143.0	SEP 83	SEP 84

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> 79 4444	BODY FOR M42/M46 GRENADE GRENADES WERE LOADED AND SHIPPED TO YUMA PROVING GROUND FOR TEST SIX GRENADES WERE SHIPPED TO ARDC FOR PANEL TESTS AWAITING THE TEST RESULTS.	563.0	238.7	302.3	SEP 80	SEP 84
> 83 4444	BODY FOR M42/M46 GRENADE ***** DELINQUENT STATUS REPORT *****					JUN 84
> 83 4449	PROCESS IMPROVEMENT FOR COMP C-4 DRYING TESTS ON PBX-0280, LX-14-0 AND W109 PRELOAT INDICATE THAT NAUTA BLENDER/DRYER IS INEFFICIENT. WOLVERINE DRYER IS BEST FOR PBX-0280 AND LX-14-0 COMPOSITIONS.	500.9	305.9	58.8	MAR 85	DEC 84
> 83 4455	DETERMINE SPACING OF MUNITION ITEMS TO PREVENT PROPAGATION A TECHNICAL REPORT WAS PREPARED FOR THE SAFE SEPARATION DISTANCE FOR CLOUD DETONATORS. AN INITIAL TEST PLAN WAS PREPARED FOR THE SUBMUNITION BLU-97B. EXPLORATORY TESTS WERE CONDUCTED.	213.0		148.0	SEP 84	SEP 84
> 79 4454	AUTO INSPECTION DEVICE EXPLOS CHARGE SHELL (AIDECS) CAM SEE PROJECT NO. 5 82 4454 FOR STATUS.	709.0			DEC 81	DEC 84
> 80 4454	AUTO INSPECTION DEVICE EXPLOS CHARGE SHELL (AIDECS) CAM SEE PROJECT NO. 5 82 4454 FOR STATUS.	878.0			APR 82	DEC 84
> 80 4454 01	AUTOMATIC INSPECTION DEVICE FOR EXPLOSIVE CHARGE IN SHELL (A SEE SUBTASK NO. 5 82 4454-1 FOR STATUS.	1,298.0			APR 82	JUN 84
> 80 4454 02	AUTOMATIC X-RAY INSPECTION SYSTEM (AXIS) SEE SUBTASK NO. 5 82 4454-2 FOR STATUS.				AUG 80	DEC 84
> 81 4454	AUTO INSPECTION DEVICE EXPLOS CHARGE SHELL (AIDECS) CAM SEE PROJECT NO. 5 82 4454 FOR STATUS.	1,885.0			OCT 82	DEC 84
> 81 4454 01	AUTOMATIC INSPECTION DEVICE FOR EXPLOSIVE CHARGE IN SHELL SEE SUBTASK NO. 5 82 4454-1 FOR STATUS.	1,885.0			MAY 82	JUN 84
> 81 4454 02	AUTOMATIC X-RAY INSPECTION SYSTEM (AXIS) SEE SUBTASK 5 82 4454-2 FOR STATUS.				OCT 82	DEC 84
> 82 4454	AUTO INSPECTION DEVICE EXPLOS CHARGE SHELL (AIDECS) CAM SEE SUBTASKS BELOW FOR PROJECT STATUS.	1,822.0			JUL 83	DEC 84
> 82 4454 01	AUTO INSP DEVICE FOR EXPLOSIVE CHARGE IN SHELL (AIDECS) SCANNING OF THE 105A SHELL WAS COMPLETED. THIS DATA WAS PREPARED FOR USE IN POST-MMT EFFORTS FOR ENHANCEMENT OF PRODUCTION SOFTWARE.	1,362.0			JUL 83	JUN 84

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> 82 4454 02	AUTO X-RAY INSPECTION SYSTEM (AXIS) NEW ANALYSIS ROUTINES ARE BEING DEVELOPED TO COPE WITH ANOMOLIES IN M456 IMAGES. THE AXIS SYSTEM IS PLANNED TO BE INSTALLED AT MILAN AAP IN FY84.	460.0			JUL 83	DEC 84
> 79 4469	AUTOMATIC INSERTION OF GRENADE LAYERS THIS PROJECT REMAINS OPEN FOR ARDC ENGINEERING SUPPORT IN CONJUNCTION WITH THE INSTALLATION OF THE EQUIPMENT AT KANSAS AAP. NO SUPPORT WAS NECESSARY DURING THIS REPORTING PERIOD. A TDP FOR THE GRENADE INSERTION SYSTEM IS AVAILABLE AT ARDC.	1,146.5	933.5	213.0	JAN 80	JUN 84
> 80 4469	AUTOMATIC INSERTION OF GRENADE LAYERS ALL MECHANICAL ITEM NECESSARY FOR INSTALLATION OF THE GRENADE INSERTION MACHINE WERE COMPLETED. THE ELECTRICAL INSTALLATION DRAWINGS WERE COMPLETED AND ALL THE REQUIRED ELECTRICAL COMPONENTS RECEIVED. EQUIPMENT INSTALLATION BEGAN IN DEC 83.	350.0	302.3	47.7	JAN 81	JUN 84
> 82 4489	ADVANCED POLLUTION ABATEMENT TECHNOLOGY F/DARCOM FACILITIES SEE INDIVIDUAL TASKS.	1,350.3	1,002.3	325.7	DEC 84	MAR 85
> 82 4489 01	DISPOSAL OF WASTEWATER TREATMENT SLUDGES EPA LEACHATE EXTRACTION TESTS ON PILOT SLUDGE/FIXATION AGENT COMPOSITIONS COMPLETED AT LSAAP WITH NO DETECTABLE PB IN LEACHATE. FOR RAAP PILOT SCALE EQUIP WITH 10-IN FLUIDIZED BED REACTOR AND GRANULATION EQUIP INSTALLED AT ISU. PILOT TSTG INITIATED.	420.9	367.9	53.0	DEC 84	SEP 84
> 82 4489 02	ADVANCED PINK WATER TREATMENT (TNT/RDX/HMX IN WATER) PROCUREMENT/INSTALLATION OF SURFACTANT COMPLEXING/CARBON ADSORPTION SYSTEM COMPLETED. LOGIC PROGRAM DRAFTED FOR PROGRAMMABLE CONTROLLER AND IS READY FOR USE IN DEBUGGING THE PROTOTYPE HYBRID SYSTEM.	370.5	255.5	113.0	DEC 84	MAR 84
> 82 4489 03	TERTIARY TREATMENT OF HOLSTON WASTEWATER A SKID MOUNTED MODULAR CARBON ADSORPTION SYSTEM HAS BEEN INSTALLED AT HOLSTON AAP. IT WILL BE EVALUATED AS A TERTIARY TREATMENT SYSTEM.	148.8	110.8	34.0	DEC 84	SEP 84
> 82 4489 05	ADVANCED AIR EMISSIONS ABATEMENT TESTING OF THE PILOT PLANT LED TO IMPROVEMENTS IN ITS DESIGN, INCREASING THE FLOW RATE OF THE SCRUBBING LIQUID BY A FACTOR OF 10 AND INCREASING THE DROPLET DISPERSAL.	410.0	268.0	125.7	DEC 82	MAR 85
> 83 4489	ADVANCED POLLUTION ABATEMENT TECHNOLOGY F/DARCOM FACILITIES SEE INDIVIDUAL TASKS.	86.0	65.0	11.0	SEP 86	DE 84

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5 83 4489 03	TERTIARY TREATMENT OF HOLSTON WASTEWATER THE CARBON ADSORPTION PILOT SYSTEM HAS PROVEN SUCCESSFUL IN THE ABATEMENT OF NITROBODY/NITRAMINE POLLUTION IN THE ILWTF WASTEWATER AT A 0.4 GPM FLOW RATE.	86.0	65.0	11.0	SEP 86	DEC 64
> 81 4503	NEW PROCESS FOR SAWS TRACER AMMUNITION THE PROJECT HAS BEEN SUSPENDED FOR ROOT CAUSE ANALYSIS OF FUNCTION AND CASUALTY FAILURES UNDER PROJECT 5 81 4551 AND WILL RESUME UPON SUCCESSFUL COMPLETION OF THAT EFFORT.	500.0	402.0	97.6	AUG 82	JUN 84
> 82 4503	NEW PROCESS FOR SAWS TRACER AMMUNITION THE PROJECT HAS BEEN SUSPENDED FOR ROOT CAUSE ANALYSIS OF FUNCTION AND CASUALTY FAILURES UNDER PROJECT 5 81 4551 AND WILL RESUME UPON SUCCESSFUL COMPLETION OF THAT EFFORT.	129.0		75.0	SEP 83	JUN 84
> 81 4506	5.56 MM CARTRIDGE LINKING SYSTEM THE DEMONSTRATION REPORT, OPERATING MANUALS AND TDP FOR THE SAWS 5.56MM CARTRIDGE LINKING MACHINE SYSTEM WERE COMPLETED. THE LINK UNSCRAMBLE, ORIENT AND FEED SYSTEM DESIGN WAS COMPLETED AND FABRICATION INITIATED.	573.0	408.0	165.0	JAN 83	SEP 84
> 82 4506	5.56MM CARTRIDGE LINKING SYSTEM THE DEMONSTRATION REPORT, OPERATING MANUALS, AND TDP FOR THE SAWS 5.56MM CARTRIDGE LINKING MACHINE SYSTEM WERE COMPLETED. THE LINK UNSCRAMBLE, ORIENT AND FEED SYSTEM DESIGN WAS COMPLETED AND FABRICATION INITIATED.	522.0	283.0	178.0	JAN 84	SEP 84
> 80 4508	PROCESS IMPROVEMENT OF PRESSABLE RDX COMPOSITIONS DELIVERY OF WYSSMONT DRYER EXPECTED IN MAR 1984.	505.8	333.8	171.3	APR 82	JUN 84
> 82 4508	PROCESS IMPROVEMENT OF PRESSABLE RDX COMPOSITIONS WYSSMONT DRYER LIABILITY INDEMNIFICATION ISSUE RESOLVED IN JUL 83. DELIVERY DATE FOR DRYER IS MAR 84. CONTRACT TO TEST VACUUM DRY. THE A COMPOSITIONS RELEASED FOR BIDS IN NOV 83.	615.9	337.9	77.0	SEP 84	SEP 85
> 82 4511	DISPOSAL OF FINAL SLUDGE FROM ACID RECOVERY OPERATIONS DESIGN CRITERIA PACKAGE FOR SLUDGE TREATMENT FACILITY COMPLETED IN JULY 1983. DESIGN OF FACILITY INITIATED 15 DEC 1983. INTERIM TECHNICAL REPORT DETAILING ALL ASPECTS OF BENCH SCALE PROGRAM INCLUDING ALL RESULTS OBTAINED BEGUN IN DEC 1983.	301.9	216.9	78.0	DEC 83	MAR 84
> 83 4511	DISPOSAL OF FINAL SLUDGE FROM ACID RECOVERY OPERATIONS PROCUREMENT AND INSTALLATION SCHEDULE FOR THE CATALYTIC HYDROGENATION PORTION OF THE PROTOTYPE PLANT WAS REVISED TO REFLECT A REVISED COMPLETION DATE FOR THE PROTOTYPE PLANT DESIGN.	420.0	337.0	22.0	OCT 85	MAR 85

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5 82 4529	MANUFACTURE OF PRECISION CONES FOR HEAT PROJECTILES ONE YEAR SLIPPAGE EXPERIENCED IN CONTRACT AWARD ACTIVITY.	525.0		30.0	SEP 82	JUN 85
5 83 4533	LOVA PROPELLANT PROCESSING THE USE OF HITRIS METHODOLOGY TO IN-PROCESS HAZARDS CLASSIFICATION WAS INVESTIGATED. THIS PROCEDURE CONSISTS OF CONDUCTING A SERIES OF SENSITIVITY, SCREENING AND EFFECTS TESTS ON THE DESIGNATED LOVA PROP FORMULATIONS, THE INDIV INGRED AND COMBNATION	398.0		123.6	SEP 84	SEP 84
5 82 4534	XM855 BULLET CONVERSION OF SCAMP EQUIPMENT THE CARTRIDGE BULKFEEDER WAS SUCCESSFULLY TESTED FOR 11 HOURS OF CONTINUOUS OPERATION WITH ONLY THREE STOPPAGES DUE TO TAMS/MISFEEDS. A COST GROWTH OF $135,000 WAS AUTHORIZED.	399.0	299.0	100.0	SEP 83	JUN 84
5 83 4534	SAWS BULLET CONVERSION OF SCAMP EQUIPMENT THE PENETRATOR FEED SYSTEM WAS AWARDED NON-COMPETITIVE TO GULF + WESTERN. SYSTEM DESIGN WAS INITIATED. LAKE CITY WILL PERFORM THE BULLET SUBMODULE CONVERSION. SCOPES OF WORK FOR BOTH ACTIVITIES HAVE BEEN PREPARED FOR THE SECOND YEARS EFFORTS.	760.0	641.0	119.0	APR 85	APR 85
5 83 4536	5.56 SAWS LINK ORIENTER AND FEED SYSTEM A CONTRACT WAS AWARDED TO BATTELLE NW LAB. RICHLAND, WA IN MARCH 83. THEY HAVE COMPLETED THE INITIAL DESIGN OF THE LINK AUTOMATIC INSPECTION SYSTEM.	398.0	323.0		MAR 85	MAR 85
5 83 4540	CACO3 COATING OF 7.62MM BALL PROPELLANT THE CONCEPT STUDY, SITE SUBMISSION, EQUIPMENT SURVEY AND RELOCATION OF THE TWO-STAGE COATER FROM ST. MARKS, FLORIDA TO BADGER AAP HAVE BEEN COMPLETED.	114.6	56.6	44.5	JUL 84	JUL 84
5 83 4547	PROC TECH FOR XM76 IR SCREENING GREN + XM49 SMOKE GENERATOR A CLOSED SYSTEM MIXER HAS BEEN IDENTIFIED FOR THE POWER BLENDING OPERATION. AN EXTRUDER HAS BEEN INSTALLED, AND OPERATED. A PROCESS FLOW CHART HAS BEEN PREPARED FOR CURRENT MANUFACTURING PROCEDURE.	519.0	400.0	29.0	JUN 84	JUN 84
5 83 4548	PYRO SAFETY ENHANCEMENT SEE THE FOLLOWING TASKS FOR WORK STATUS.	1,110.8	439.0	261.4	SEP 84	SEP 84
5 83 4548 01	MIXER SAFETY ENHANCEMENT SCRAPE-DOWN TESTING WAS CONTINUED USING A MULLER WITH A TEFLON LINER. VARIOUS PYRETECHNIC COMPOSITIONS WERE EVALUATED IN THE TEFLON LINED MULLER. A PRODUCTION SIZE MULLER WAS MODIFIED WITH TEFLON BLADES AT CRANE AAA.	299.0	115.0	105.6	SEP 84	SEP 84

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5 83 4548 02	TRANSPORT AND CONVEYING SAFETY ENHANCEMENT SWRI WAS AWARDED A CONTRACT TO DESIGN, FABRICATE OR PROCURE A REMOTE TRANSPORT SYSTEM. DESIGN PACKAGES FOR CONVEYOR SYSTEMS WERE RECEIVED.	335.8	255.0	38.1	SEP 84	SEP 84
5 83 4548 03	QUENCHING SAFETY ENHANCEMENT FIRE SUPPRESSION TESTS WERE CONDUCTED WITH SI/AL STARTER MIXES AND M206 COMPOSITIONS.	280.0	170.0	51.1	SEP 84	SEP 84
5 83 4548 04	BAY DESIGN SAFETY ENHANCEMENT OPEN AIR BURN TESTS ON M206 FLARE COMPOSITIONS WERE CONDUCTED AT NSTL TO OBTAIN BURNING CHARACTERISTICS.	196.0	125.0	44.6	APR 84	SEP 84
5 82 4551	MANUFACTURING PROCESS PARAMETER FOR XM855/856 AMMO FN PRODUCED BALL CARTRIDGES VALIDATED AS REFERENCE LOT. A ROOT CAUSE INVESTIGATION IS IN PROGRESS TO DETERMINE THE CAUSE OF THE CURRENT CASE DESIGN DEFICIENCIES. SEVERAL NEW CASE DESIGNS HAVE BEEN BUILT AND TESTED. INITIAL RESULTS ARE SATISFACTORY.	619.0	83.0	288.0	MAR 83	DEC 84
5 81 4555	INFRARED MONITORING OF PYROTECHNIC BLENDING BASED ON THE RESULTS OF THE STUDY, SCREENING OF MIXES SHOULD BE ACCOMPLISHED WITH ULTRA VIOLET EMISSION. THIS WILL REDUCE THE COST OF SURVEILLANCE.	250.0		185.0	JUN 82	JUN 84
5 82 4557	ARBAT AS A RESULT OF THE LIGHTNING DAMAGE THE PROGRAM SLIPPED 5 MONTHS. DURING THIS DOWN TIME SOFTWARE WAS CONTINUALLY BEING UPGRADED AND CHECKED. FUNDS HAVE BEEN REQUESTED TO COVER THE CONTRACTOR COST TO REPAIR THE SYSTEM.	2,500.0	2,247.0	171.0	JUN 84	DEC 84
5 82 4560	MOD TAPE-STIFFENER ASSEMBLY PROCESS - M42/M46 GRENADES ON-LINE INSTALLATION, INTERFACING AND DEBUGGING WAS STARTED DURING THIS REPORTING PERIOD. RAM/ACCEPTANCE TESTING AND FINAL REPORTS ARE SCHEDULED TO BE COMPLETED DURING 2084.	141.5	106.5	22.0	JUN 83	MAR 84
5 82 4563	XM803 METAL PARTS PRODUCTIVITY SEE SUBTASK FOR WORK STATUS.	749.7	425.2	117.0	JUN 84	JUN 84
5 82 4563 01	IMPROVED STRAIGHTNESS OF DU PENETRATOR BLANKS CONTRACTOR HAS COMPLETED ALL WORK WITH ROTARY ROLL STRAIGHTENING PROVING TO BE THE OPTIMUM PROCESS. DATA BEING CORRELATED FOR SUBMISSION OF FINAL REPORT.	303.1	278.1	20.5	JUN 84	JUN 84
5 82 4563 02	SALT BATH SOLUTION HEAT TREAT FOR DU PENETRATORS CONTRACTOR HAS COMPLETED PROCESSING OF 40 BLANKS TO FINISHED PENETRATORS TO PROVE OUT THE OUTGAS/SALT CYCLE. CYCLE ESTABLISHED IS OUTGAS AT 1560 DEGREES F FOR 2 HRS, SALT RESIDENCE AT 1560 DEGREES F FOR 20 MIN. AND 15 SECOND QUENCH DELAY.	167.1	147.1	18.5	MAR 84	MAR 84

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> 82 4563 03	OPTIMIZATION OF AGE HARDENING IN DU PENETRATORS ***** DELINQUENT STATUS REPORT *****				MAR 84	JUN 84
> 82 4563 04	HEAT TRANSFER AND RESIDUAL STRESS AMMRC HAS COMPLETED PRELIMINARY EFFORTS INTO X-RAY STRESS ANALYSIS OF DU MATERIAL, AND IS IN THE PROCESS OF FORWARDING THE COMPLETED FINAL REPORT TO ARDC AS AN INPUT TO THE FINAL 301 REPORT.	110.5	50.0	60.5	MAR 84	JUN 84
> 82 4563 05	REDUCTION OF CHIPS OXIDATION FINAL REPORT RECEIVED.	169.0	99.9	52.5	MAR 84	MAR 84
> 83 4563	PROCESS INPROVEMENT FOR TANK DU PENETRATORS SEE SUBTASKS.	2,729.4	2,073.0	203.4	JUN 85	JUN 85
> 83 4563 04	HEAT TRANSFER AND RESIDUAL STRESSES DUE HAS DEVISED A PRELIMINARY COMPUTER PROGRAM FOR THE QUENCHING OF DU PENETRATOR BLANKS AND ARE AWAITING DU MATERIAL CHARACTERISTICS TO REFINE IT. TENSILE SPECIMENS HAVE BEEN MACHINED, AND TESTS ARE IN PROGRESS.	283.5		105.5	JUN 85	JUN 85
> 83 4563 05	REDUCTION OF CHIP OXIDATION CONTRACT HAS BEEN AWARDED.	201.9	94.8	20.4	MAR 85	MAR 85
> 83 4563 06	RECYCLING OF STABALLOY MACHINING CHIPS CONTRACTS AWARDED TO NUCLEAR METALS INC. AND TO AEROJET ORDNANCE CORP. AND TESTING HAS BEEN INITIATED.	788.7	700.7	45.7	JUL 85	JUL 85
> 83 4563 07	FORMING TO NEAR NET SHAPE CONTRACT AWARDED TO AEROJET ORDNANCE. FENN SWAGER INSTALLED. FURNACE DELIVERED. PERFORM DESIGN ESTABLISHED. EXTRUDED MATERIAL RECEIVED.	345.9	299.4	23.4	JUN 85	JUN 85
> 83 4563 08	NON-DESTRUCTIVE TESTING OF A PREFORMED SHAPE ROCKY FLATS RECEIVED THE FUNDING AND HAS INITIATED EVALUATIONS. THREE XM829 BLANKS WERE SENT TO ROCKY FLATS CORRELATION STUDIES. THESE STUDIES ARE IN-PROCESS.	227.5	158.0	7.8	SEP 85	SEP 85
> 83 4563 11	PROCESS IMPROVE FOR DU PENETRATORS-MG F2 LINERS CONTRACT AWARDED TO NMI. PCO APPROVAL HAS BEEN GIVEN TO NUCLEAR METALS INC TO PROCURE LINER FORMING EQUIPMENT AND PURCHASE ORDERS HAVE BEEN AWARDED.	317.6	276.1	19.8	JUL 85	JUL 85
> 83 4563 16	QUENCH PARAMETERS FOR HEAT TREATING DU A CONTRACT HAS BEEN AWARDED TO THERMO ELECTRON CORP. EQUIPMENT FOR HEAT TRANSFER RATE TESTING HAS BEEN DELIVERED. A 2D COMPUTER PROGRAM TO SIMULATE QUENCHING AND RESULTANT RESIDUAL STRESSES IS OPERATIONAL.	498.3	451.8	20.8	JUN 85	JUN 85

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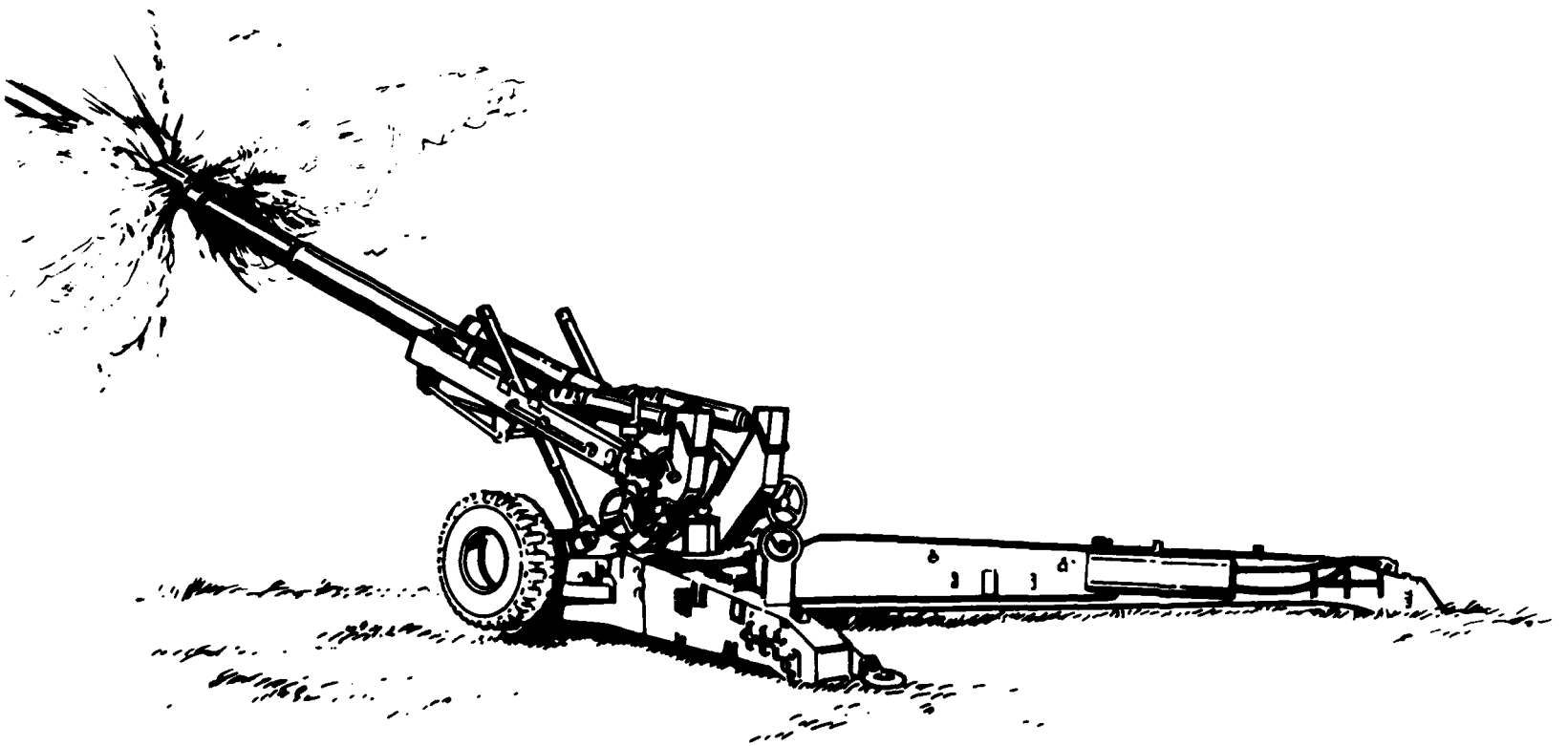
5 83 4563 20	IMPROVED DD REDUCTION PROCESSING SCOPE OF WORK HAS BEEN COMPLETED AND A PROCUREMENT PACKAGE ASSEMBLED AND FORWARDED TO PROCUREMENT FOR CONTRACT AWARD BY APRIL 1, 1984.	66.0	50.0		JUL 85	JUL 85
5 83 4580	UV-CURE PAINT FOR LARGE CALIBER PROJECTILES CONTRACT SCOPE OF WORK WAS PREPARED. NI INDUSTRIES SUBMITTED A CONTRACT PROPOSAL BUT WAS REVISED DUE TO HIGH COST. MODIFIED PROPOSAL WAS ACCEPTED AND NI INDUSTRIES SIGNED CONTRACT IN DEC 1983.	80.0	65.0		MAR 85	MAR 85
5 83 4583	MANUFACTURE OF STEEL FOLDING FINS --- JUST FUNDED. NL 301 REQUIRED. ---					
5 83 4605	PROPELLANT BED DEPTH CONTROL IN CASBL AIR DRY A MARKET SURVEY ON STATE OF THE ART AND AVAILABILITY OF EQUIPMENT WAS CONDUCTED. AN RFQ WAS FORWARDED TO INTERESTED VENDORS.	570.0	452.0	56.0	JUL 84	DEC 84
5 83 4663	REMOVAL OF BARIUM FROM COMP A-3, TYPE II WASTEWATER --- JUST FUNDED. NL 301 REQUIRED. ---					
5 82 6599	ELECTRO-OPTICAL INSPECTION OF ARTILLERY PROJ OPT CAVITY THE DEBUGGING PHASE WAS UNSUCCESSFUL, DUE TO PRESENCE OF CONTINUOUS FALSE DEFECT SIGNALS, WHICH IN THE AUTOMATIC MODE WOULD REJECT EVERY SHELL, GOOD OR BAD. FURTHER TECHNICAL EFFORT WAS STOPPED SINCE A CURE IS NOT FEASIBLE.	75.0		56.8	SEP 83	JUN 84
5 79 6693	BALL PROPELLANT DETERRENT COATING-CAM RELATED DRAFT OF FINAL REPORT WAS INITIATED. IT SHOULD BE FINISHED BY JUNE 1984. DISTRIBUTION OF REPORT PLANNED BY OCTOBER.	171.0	27.5	125.2	NOV 80	OCT 84
5 81 6716	DEV COMP-AID MODEL OF FORMING OPERATIONS FOR ARTILLERY MPTS ***** DELINQUENT STATUS REPORT *****				DEC 82	JUN 84



ARMAMENT, MUNITIONS AND CHEMICAL COMMAND
(AMCCOM)
(WEAPONS)

A N C C O M (WEAPONS)

CURRENT FUNDING STATUS, 2ND CY83

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)		INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)	
76	1	350,000	285,200	285,200	(100%)	64,800	45,900	(70%)
77	0	0	0	0	(0%)	0	0	(0%)
77	2	1,205,000	984,300	984,300	(100%)	220,700	196,500	(89%)
78	0	0	0	0	(0%)	0	0	(0%)
79	2	414,600	289,500	289,500	(100%)	125,100	121,600	(97%)
80	10	2,900,500	1,504,600	1,245,000	(82%)	1,395,900	1,225,300	(87%)
81	16	4,756,000	3,077,800	1,715,100	(55%)	1,678,200	1,142,900	(68%)
82	39	9,231,500	2,299,000	760,000	(33%)	6,932,500	2,860,000	(40%)
83	16	4,165,000	646,000	20,000	(3%)	3,519,000	450,200	(12%)
TOTAL	86	23,022,600	9,086,400	5,299,100	(58%)	13,936,200	5,982,600	(42%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 39% INHOUSE REMAINING 60%

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o 77 7201	ARTILLERY WEAPON FIRING TEST SIMULATOR THE EQUIPMENT HAS BEEN INSTALLED AND IS OPERATIONAL. THE FINAL REPORT IS BEING PREPARED. THIS PROJECT IS ALMOST COMPLETE. IMPLEMENTATION IS PLANNED.	820.0	699.6	120.4	OCT 78	JUN 84
o 76 7580	PILOT AUTOMATED SHOP LOADING AND CONTROL SYSTEM- CAM REPORT INDICATES NO WORK ACCOMPLISHED THIS PERIOD.	350.0	285.2	45.9	SEP 78	JUL 84
6 79 7605	CHEMICALLY BONDED SAND FOR CLOSE TOLERANCE CASTING ALL WORK COMPLETE WAITING ON TECHNICAL REPORT.	127.0	22.0	105.0	MAR 80	JUN 84
o 80 7605	CHEMICALLY BONDED SAND FOR CLOSE TOLERANCE CASTING THE MILESTONES WERE CHANGED TO PROVIDE TIME FOR MORE PERMEABILITY AND HOT TEAR TESTS, AND TO PREPARE A FINAL TECHNICAL REPORT.	252.8		240.3	FEB 82	JUN 84
6 82 7707	AUTOMATED PROCESS CONTROL FOR MACHINING TRAINING OF ENGINEERS AND TECHNICIANS AT ROCK ISLAND ARSENAL CONTINUED. CARBIDE AND CERAMIC CUTTING INSERTS ARE EVALUATED TO DETERMINE MACHINING OPERATIONS. ESTIMATES WERE MADE FOR TOOL STOCKING.	135.0	63.2	57.7	SEP 83	APR 84
6 81 7724	GROUP TECHNOLOGY OF WEAPON SYSTEMS (CAM) A VARIANT PROCESS PLANNING WAS DEVELOPED. SOFTWARE AND HARDWARE FOR A SOLID MODELING SYSTEM WAS INSTALLED. PERSONNEL ARE CURRENTLY BEING TRAINED TO USE THE NEW SYSTEMS.	180.0	157.5	22.5	JUN 83	APR 83
6 83 7724	GROUP TECHNOLOGY OF WEAPON SYSTEMS (CAM) MICROCOMPUTER HARDWARE WAS INSTALLED TO SUPPORT THE COMPUTER AIDED PROCESS PLANNING (CAPP) SOFTWARE. A CAPP LITERATURE SEARCH WAS CONDUCTED.	250.0	51.0	24.7	SEP 85	SEP 85
o 80 7730	MANUFACTURE OF SPLIT RING BREECH SEALS TEST SPLIT RINGS WERE MANUFACTURED. INTERCHANGEABLE JAW EVAL CONTINUED. PARTS HAVE BEEN ORDERED. CONTACT WAS AWARDED FOR A RING SPLITTING DEVICE. SANDING MACHINES ARE BEING INCORPORATED INTO POLISHING PHASE OF PROJECT.	363.0	87.7	227.8	DEC 82	SEP 84
6 82 7730	MANUFACTURE OF SPLIT RING BREECH SEALS KINKING MACH JAWS HAVE BEEN REDESIGNED. PARTS ARE ON ORDER. CONTRACT FOR AUTOMATIC ABRASIVE SAW HAS BEEN AWARDED, WITH DELIVERY SCHEDULED FOR MAY 1984. A TABLE AND FIXTURING HAS BEEN OBTAINED TO ACCOMMODATE BELT SANDERS FOR THE POLISHING OPERATIONS.	108.0		42.0	SEP 84	SEP 84
o 77 7753	NOISE SUPPRESSOR F/POWDER TYPE RECOIL MECHANISM TEST MACHINE MODIFICATIONS ARE BEING MADE TO THE ORIGINAL DESIGN AND ARE ALMOST COMPLETE. THIS PROJECT WILL BE IMPLEMENTED DURING FY84.	385.0	284.7	76.1	FEB 80	APR 84

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6 79 7802	ESTABLISH MACHINE TOOL PERFORMANCE SPECIFICATIONS FINAL CORRECTIONS TO PHASE I + PHASE II TECHNICAL REPORTS HAVE BEEN MADE AND REPORTS HAVE BEEN SUBMITTED FOR FINAL REVIEW.	287.6	267.5	16.8	JUN 81	JUN 84
6 81 7807	PROGRAMMED OPTICAL SURFACING EQUIPMENT AND METHODOLOGY (CAM) THE PROCESS CONTROL OPTICAL INTERFEROMETER WAS INSTALLED ON THE OSC/CNC FOR MODULATION TESTING TO EVALUATE STABILITY AND REPEATABILITY. ADDITIONAL SPOT BLOCKS WERE FABRICATED.	126.0	109.0	14.0	JUL 83	SEP 84
6 81 7925	BORE EVACUATOR BORING PRELIMINARY ACCEPTANCE TESTS WERE SUCCESSFULLY CONDUCTED AT THE CONTRACTORS PLANT, AND EQUIP WAS DELIVERED TO WVA ON 31 AUG 83. CONSIDERABLE EFFORT HAS BEEN EXPENDED TO FIND A SITE FOR EQUIP INSTALLATION AND TEST, BUT NONE HAS BEEN FOUND.	248.0	174.5	71.7	SEP 83	JUN 84
6 82 7926	HOT ISOSTATIC PRESSING (HIP) OF LARGE ORDNANCE COMPONENTS TWO HIPPED LOW ALLOY STEEL BILLETS WERE ANALYZED. NEITHER BILLET MET DESIRED MECHANICAL PROPERTY EXPECTATIONS. RESULTS OF EVALUATIONS TO DATE HAVE BEEN INCORPORATED INTO A PROCUREMENT FOR SIX BREECH BLOCKS PREFORMS. DELIVERY EXPECTED 30 MARCH 1984.	259.0	89.0	131.0	SEP 84	SEP 84
6 81 7927	GENERATION OF BASE MACHINING SURFACES A PRELIMINARY ACCEPTANCE TEST WAS CONDUCTED ON 25-26 OCT 83. TESTS WERE RUN AND CONSIDERED ACCEPTABLE. THE MACHINE WAS DELIVERED TO WATERVLIET ARSENAL ON 4 NOV 83. A SITE AT WATERVLIET TO INSTALL AND TEST HAS NOT BEEN FOUND.	422.0	382.0	24.0	SEP 84	JUN 84
6 81 7928	ROBOTIZED BENCHING OPERATIONS (CAM) THE ROBOT HAS BEEN DELIVERED TO WATERVLIET. ACCEPTANCE TESTING HAS NOT YET BEEN ACCOMPLISHED. ROBOT LANGUAGE HAS BEEN DEVELOPED AND IS BEING TESTED. SOFTWARE TO PERFORM GRINDING OPERATIONS ON THE INTERNAL THREADS HAS NOT BEEN TESTED.	287.0	251.2	30.0	SEP 83	JUN 84
6 80 7949	APPLICATION OF GROUP TECHNOLOGY TO RIA MFG (CAM) THIS PROJECT IS ALMOST COMPLETE. A CLASSIFICATION AND CODING/GROUP TECHNOLOGY SYSTEM HAS BEEN IMPLEMENTED. THE SYSTEM HAS BEEN USED TO DEVELOP PLANT LAYOUTS AND SUPPORT A FMS FEASIBILITY STUDY.	155.0	98.6	44.9	MAY 82	JUN 84
6 80 7963	GROUP TECHNOLOGY FOR FIRE CONTROL PARTS AND ASSEMBLIES THIS EFFORT IS MORE OR LESS AT A STAND-STILL WAITING ON THE AF TO DELIVER THE GTSS SOFTWARE.	348.5	21.8	290.0	DEC 81	SEP 84
6 81 7985	SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY MACH MODIFICATIONS TO ULTRASONICALLY ASSISTED GUN DRILLER COMPLETED. HONED BARRELS RECEIVED. KENNAMETAL BORING BARS RE-DESIGNED. COLD FORGING MANDRELS HAVE BEEN ACCEPTED.	436.0	250.0	171.0	OCT 82	MAY 84

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6 82 7985	SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY PROJECT 40 PERCENT COMPLETE. RAPID FLOW PLATING SUBTASK DELETED. CONTRACT COMPLETION SCHEDULE FOR AUGUST 1984.	620.0	316.0	108.0	OCT 83	AUG 84
6 82 7985 B	SMALL ARMS WEAPONS NEW PROCESS TECH-BARREL BROACHING THE STATUS REPORT WAS NOT BROKEN DOWN ACCORDING TO SUBTASKS. SEE 6 82 7985 FOR STATUS.					OCT 84
6 82 7985 C	SMALL ARMS WEAPONS NEW PROCESS TECH-HS MACHINING THE STATUS REPORT WAS NOT BROKEN DOWN ACCORDING TO SUBTASKS. SEE 6 82 7985 FOR STATUS.					OCT 84
6 82 7985 D	SMALL ARMS WEAPONS NEW TECH-RAPID FLOW PLATING 40 PERCENT OF SOW IS COMPLETE. CAL .50 RAPID FLOW PLATING EFFORT HAS BEEN DELETED. H-11 STEEL FOR COLD FORGED CAL .50 CHAMBERS HAS BEEN RECEIVED. A CONTRACT WAS AWARDED TO FLOW INDUSTRIES TO DEVELOP A STRAIGHTENING ALGORITHM.	620.0	316.0	108.0		AUG 84
6 83 7985	SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY PROJECT 5 PERCENT COMPLETE. CONTRACTOR TOOK ISSUE WITH GOVERNMENT MATERIAL ESTIMATE. ACTION TO OBTAIN 5300 POUNDS ADDITIONAL IS IN PROCESS.	530.0	355.0	36.0	OCT 84	OCT 84
6 80 8017	POLLUTION ABATEMENT PROGRAM THE BATCH TYPE RECYCLING SYSTEM FOR USED CUTTING FLUIDS HAS BEEN IN FULL OPERATION. A TOTAL OF 336 MACHINES HAVE BEEN CLEANED UP AND PLACED IN THE PROGRAM FOR PERIODIC PUMP OUT AND RECYCLE. THE FINAL TECH REPORT WAS WRITTEN AND IS NOW BEING REVISED.	86.0		85.9	JAN 81	JUN 84
6 80 8024	HIGH SPEED ABRASIVE BELT GRINDING EQUIPMENT HAS BEEN RECEIVED AT WVA AND ARRANGEMENTS ARE BEING MADE FOR ITS INSTALLATION.	324.0	297.5	21.8	SEP 82	DEC 83
6 82 8024	HIGH SPEED ABRASIVE BELT GRINDING HIGH SPEED ABRASIVE BELT GRINDER HAS BEEN SHIPPED TO WVA. FLOOR SPACE HAS BEEN READIED FOR INSTALLATION OF THE EQUIP.	142.0		71.8	SEP 84	SEP 84
6 82 8030	MANUFACTURING GUIDE FOR ELASTOMERIC SEALS AN ECP HAS BEEN INITIATED TO REVISE THE LOW TEMPERATURE BRITTLENESS REQUIREMENT TO A HIGHER TEMPERATURE. THIS WILL RESULT IN A MORE REALISTIC MATERIAL REQUIREMENT. CHEMIGUM HR967 WAS EVALUATED, AND M140 GUN SEAL MOLDS ARE BEING FABRICATED.	123.0		39.4	MAY 83	SEP 84
6 81 8033	COATING TUBE SUPPORT SLEEVES WITH BEARING MATERIALS THE RESULTS OF THE LAST FIRING TEST OF GUN MOUNDS CONTAINING M1 PISTONS AND FOLLOWERS WITH IMPROVED SURFACES WERE GOOD. AN ECP HAS BEEN WRITTEN AND IS BEING REVIEWED BY THE M1 PROGRAM MANAGER.	200.0	20.8	166.0	JUN 82	JUN 84

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6 80 8047	PASS THRU STEADY RESTS FOR TUBE TURNING CONTRACTOR WAS DECLARED TO BE IN DEFAULT. EQUIP WAS RETURNED TO SENECA ARMY DEPOT. EVAL IS BEING CONDUCTED TO DETERMINE FEASIBILITY OF COMPLETING WORK IN-HOUSE.	369.0	273.5	89.1	JUL 83	SEP 84
6 82 8050	RECYCLING SPENT GUN TUBES BY ESR MELTING THREE ESR INGOTS HAVE BEEN FORGED TO 105MM M68 PREFORM-SIZED SOLID FORGINGS. THESE WILL BE FURTHER REDUCED TO STEP FORGINGS WITH DIAMETERS OF 6.79 AND 9.46 INCHES AND HEAT TREATED FOR MECHANICAL PROPERTY TESTING.	204.0		76.0	MAY 84	SEP 84
6 80 8051	APPLICATION AND CONTROL OF MACHINE TOOLS (CAM) CUTTING TOOL DATA BASE WAS ANALYZED WITH ADD PERSONNEL. MACH TOOL PERF AND MAINT DATA BASES WERE REVIEWED IN ORDER TO ESTAB A PREVENTATIVE MAINT PROGRAM. FINAL TECH REPORT HAS BEEN REVIEWED AND CONTRACTOR IS MAKING THE REQUIRED CHANGES.	208.5	150.6	49.8	AUG 81	JUN 84
6 81 8054	OPTICAL SCRATCH AND DIG STANDARDS FOR FIRE CONTROL SYSTEMS SCRATCH SAMPLES DID NOT CORRELATE WITH STANDARDS BUT WERE USED AS BASIS FOR PATTERN REEVALUATION. NEW SAMPLES SHOULD HAVE NO COLOR AND HAVE UNIFORM SCATTERING. PRINTING MASK IS NOT IN SPEC. IT HAS BEEN SENT BACK TO QUALITRON AND ANOTHER IS EXPECTED.	266.0	146.1	76.9	AUG 84	AUG 84
6 80 8057	DUAL RIFLING BROACH REMOVAL SYSTEM RIFLING BARS HAVE BEEN REMACHINED. FOUNDATIONS HAVE BEEN PREPARED AND BASIC MECHANISMS INSTALLED. FURTHER WORK HAS BEEN CURTAILED BECAUSE THE RIFLING EQUIP WAS NEEDED TO PRODUCE 105MM M2A2 TUBES.	215.0	21.5	148.4	SEP 82	SEP 84
6 82 8062	RAPID INTERNAL THREADING FIVE TECHNICAL PROPOSALS WERE RECEIVED AND ARE BEING EVALUATED. A BULLARD IS PRESENTLY BEING RESERVED BY DIPEC FOR THIS PROJECT.	366.0		23.7	JUL 84	APR 85
6 82 8102	POWDER METALLURGY FORGINGS WEAPONS COMPONENTS A CONTRACT TO ESTABLISH PRODUCTION PARAMETERS FOR SPLIT RING COMPONENTS HAS BEEN LET. IN ADDITION, A MINIMUM OF 20 PROTOTYPE SPLIT RINGS WILL BE PRODUCED BY P/M FORGING TO BE USED IN EVALUATING THE EFFECTS OF THIS PROCESS.	110.0	76.0	28.0	SEP 84	SEP 84
6 83 8102	APPL OF POWDER METALLURGY FORGING TO WEAPON COMPONENTS NO PROGRESS REPORTED THIS PERIOD.	142.0		18.8	SEP 85	SEP 85
6 82 8103	HIGH VELOCITY MACHINING DARPA AMRP EOPP WAS ATTENDED, USING FY83 FUNDING. FUNDS FROM THIS PROJECT ARE BEING HELD FOR PREPARATION OF FINAL REPORTS.	37.0		35.0	SEP 83	SEP 84

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6 83 8103	HIGH VELOCITY MACHINING A LATHE HAS BEEN OBTAINED FROM MECHANICSBURG AND ARRANGEMENTS HAVE BEEN MADE FOR INSTALLATION. ADDITIONAL INSTRUMENTATION HAS BEEN ORDERED.	285.0		23.1	SEP 85	SEP 85
6 81 8105	ESTABLISH ROUGH THREAD BLANKS, 8 IN M201 BUSHING NECESSARY EQUIP MODIFICATIONS HAVE BEEN MADE. FIXTURE DESIGN AND HARDWARE HAS BEEN COMPLETED. THE SLOTTING HEAD HAS BEEN INSTALLED THE CONTRACTOR IS PRESENTLY PROGRAMMING THE CONTROLS IN PREPARATION FOR TESTING, TO BEGIN IN JAN 1984.	292.0	194.9	25.3	SEP 83	DEC 84
6 82 8106	LARGE CALIBER POWDER CHAMBER BORING PRECISION POSITIONING SYSTEM WAS INITIALLY TESTED AND SEVERAL DEFICIENCIES WERE DISCOVERED. ALL IDENTIFIED PROBLEMS WERE CORRECTED, AS DETERMINED BY RETESTING.	72.0	55.0	17.0	SEP 84	SEP 84
6 80 8107	CREEP FEED CRUSH FORM GRINDING CONTINUED EFFORTS TO HAVE EQUIP INSTALLED.	578.7	553.4	27.3	MAY 83	SEP 84
6 81 8107	CREEP FEED CRUSH FORM GRINDING COMMUNICATED WITH WATERVLIET ARSENALS OPERATIONS DIRECTORATE (AUD) ON SEVERAL OCCASIONS IN AN ATTEMPT TO HAVE THE EQUIPMENT INSTALLED. BLDG 20 HAS BEEN IDENTIFIED FOR INSTALLATION OF THE EQUIPMENT.	73.0		41.0	JUL 84	SEP 84
6 82 8108	PRODUCTION/IN-PROCESS INSPECTION OF OPTICAL BONDS SAMPLE ADHESIVE BONDS OF OPTICAL COMPONENTS HAVE BEEN TESTED. HEAT CYCLING CAUSED DISTORTIONS. PRODUCTION FIRE CONTROL UNITS SUBJECTED TO SAME TESTS DID NOT EXHIBIT SAME PHENOMENA. TESTS ARE UNDERWAY TO DETERMINE BOND CONFIGURATION EFFECTS.	205.0		160.2	DEC 83	AUG 84
6 82 8113	ESTABLISHMENT OF IoN PLATING PROCESS FOR ARMAMENT PARTS THE IVD ALUMINUM PROCESS HAS BEEN ESTABLISHED AND IS A VIABLE REPLACEMENT FOR CADMIUM COATING. ALL PROCESSES AND PARAMETERS WILL BE DOCUMENTED IN A FORTHCOMING TECHNICAL REPORT.	142.0		112.0	SEP 83	FEB 84
6 83 8120	ADAPTIVE CONTROL TECHNOLOGY (CAM) DIPEC IS SEARCHING FOR A GRINDER. AS SOON AS ONE IS LOCATED THE RETROFIT EQUIPMENT SPECIFICATION WILL BE FINISHED.	495.0		54.3	SEP 85	SEP 85
6 81 8135	IN-PROCESS CONTROL OF MACHINING A BOSTOMATIC MILLING MACHINE WAS PURCHASED. A DIFRACTO LIGHT BEAM GAUGE AND SONY ELECTRONIC SCALES WERE MOUNTED ON THE MACHINE. A HP MODULAR COMPUTER WAS PROCURED AND FITTED INSIDE THE NC CONSOLE. THESE ITEMS WERE TESTED. SEE MMT PROJECT 6 82 8135.	906.0	647.3	190.2	OCT 82	AUG 84

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6 02 8135	IN-PROCESS CONTROL OF MACHINING SEE MMT PROJECT 6 81 8135. BOTH INDIVIDUALLY AND AS A SYSTEM. A FINITE ELEMENT ANALYSIS WAS CONDUCTED TO DETERMINE WORKPIECE DEFLECTIONS WITH RESPECT TO CUTTING FORCES FOR THE CUTTERS PRESENTLY USED.	841.0	594.3	10.3	FEB 84	JUL 85
6 01 8130	IMPROVED IMPULSE PROGRAMMERS FOR HYDRAULIC SIMULATORS A COMPUTER MODEL WAS GENERATED TO AID IN DETERMINING THE BEST REDESIGN OPTION. THE PROGRAMMER PISTON AND SLEEVE HAVE BEEN REDESIGNED AND SUBMITTED FOR FABRICATION.	80.0		29.5	SEP 83	JUL 84
6 02 8151	PORTABLE ENGRAVING SYSTEM SEVERAL CONTRACT MODIFICATIONS HAVE BEEN MADE. COMPUTER SYSTEM HAS BEEN CHANGED TO A COLUMBIA/QUAD SCREEN SYSTEM. THE ENGRAVER HEAD TRAVEL AREA HAS BEEN REDUCED FROM 24X24 INCHES TO 14X14 INCHES.	171.0	95.0	20.8	JAN 84	SEP 84
6 81 8154	COMPUTER INTEGRATED MANUFACTURING (CIM),DDNC A CONTRACT FOR A PILOT DNC SYSTEM WAS AWARDED TO WHITE SUNDSTRAND MACHINE TOOL CO. EQUIPMENT DELIVERY IS SCHEDULED FOR MAY 1984.	442.0	326.5	108.2	DEC 83	SEP 84
6 83 8154	COMPUTER INTEGRATED MANUFACTURING (CIM) FOR CANNON A CONTRACT HAS BEEN AWARDED TO WHITE SUNDSTRAND MACHINE TOOL CO. EQUIPMENT DELIVERY IS SCHEDULED FOR MAY 1984.	650.0	121.5	12.0	SEP 84	NOV 85
6 81 8165	STANDARDS FOR DIAMOND TURNED OPTICAL PARTS COMMERCIALLY AVAILABLE INSTRUMENT IS NOW MARKETED THAT MEETS THE NEEDS OF THE EFFORT. THE INSTRUMENT COSTS LESS THAN $50K AND CAN USE EITHER THE TOTAL INTEGRATED SCATTERING TECHNIQUE OR THE BIDIRECTIONAL REFLECTANCE DISTRIBUTION FUNCTION.	189.0	84.0	105.0	DEC 82	JUN 84
6 02 8165	STANDARDS FOR DIAMOND TURNED OPTICAL PARTS A SURVEY OF DOD POTENTIAL USERS INDICATED AN ACCEPTANCE OF A TALANDIC INSTRUMENT AND RELATED TECHNIQUES. REFLECTIVE OPTICAL SURFACES-MIRRORS AND PRECISION MACHINING SURFACE EVALUATION WERE THE AREAS OF EMPHASIS FOR THE DOD SURVEY.	238.0	125.0	75.0	OCT 83	JUN 84
6 01 8209	PILOT PRODUCTION OF GRADIENT INDEX OPTICS REDESIGN OF M19 BINOCULAR EYEPIECE WITH CAD EQUIPMENT IS COMPLETE. CANDIDATE GLASSES AND DIFFUSANTS FOR FINAL GRIN LENS FAB PHASE HAVE BEEN DESIGNATED. PROTOTYPE GRIN LENS BLANKS HAVE BEEN FABRICATED AND MEET THE REQUIRED GRADIENT CHARACTERISTICS.	374.0	334.0	25.0	MAY 83	JAN 85
6 82 8231	IMPROVED CASTING TECHNOLOGY (CAD/CAM) CURRENT PRODUCTION RECORDS WERE SCREENED TO DETERMINE LIKELY CANDIDATES FOR DETAILED ANALYSIS. A TEST WAS DESIGNED TO COMPARE COOLING RATES FOR CHEMICALLY BONDED SAND AND GREEN SAND.	250.0		54.2	MAR 84	FEB 85

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o 83 6231	IMPROVED CASTING TECHNOLOGY (CAD/CAM) CASTING DESIGN COMPUTER PROGRAMS HAVE BEEN EVALUATED FOR USE AT RIA. COMPUTER SYSTEMS WERE PROCURED AND ARE BEING USED.	136.0		0.5	FEB 85	FEB 85
o 82 6236	BORING BREECH RING LUGS HORIZONTAL MILLING MACH HAS BEEN SET UP IN MACHINE PROCESSES SHOP FIXTURE FAB IS ON SCHED. MOST TOOLING HAS BEEN RECD. ROTABROACH CUTTER EVAL WAS VERY SUCCESSFUL. WORK ON HIGH VOL COOLANT AND ELECTRICAL SYSTEMS HAS BEEN INITIATED.	203.0		71.8	AUG 84	SEP 84
o 82 6241	COMPUTER DIAGNOSTICS AND CONTROL FOR BORE GUIDANCE THE SPECIFICATIONS AND TECHNICAL DATA PACKAGE FOR A COMPUTER AIDED BORE-GUIDANCE SYSTEM WERE DEVELOPED.	308.0		28.4	JUN 85	SEP 85
o 82 6242	DUAL PRESS STRAIGHTENING OF GUN TUBES MADE AND TRIED TWO POINT LOADING DEVICE ON A 105M68 AND DETERMINED CHANGE IN FRACTURE TOUGHNESS. VERIFIED BY TRIAL THE EQUATIONS FOR RESIDUAL STRESS, LOAD VS DEFLECTION AND DEFLECTION VS STRAIN. CHECKED COLD STRAIGHTENING EFFECT ON AUTOFRET STRESS.	120.0	1.7	83.3	NOV 83	SEP 84
o 82 6243	COMPUTER CONTROL FOR ELECTRODEPOSITION SYSTEMS DEFINITIONS OF INPUT/OUTPUT REQUIREMENTS FOR THE NEW 120MM CHROME PLATING FACILITY AND NEW MEDIUM CALIBER CHROME PLATING FACILITY HAVE BEEN COMPLETED. A DIAGNOSTICS SIMULATOR HAS BEEN DEFINED AND ACQUISITION OF COMPONENTS INITIATED.	301.0	51.2	225.0	MAY 84	OCT 84
o 83 6243	COMPUTER CONTROL FOR ELECTRODEPOSITION SYSTEMS THE SIMULATOR CONSTRUCTION IS ABOUT 20 PCT COMPL. APPROX 50 PCT OF THE HARDWARE FOR CONSOLE IS ON HAND AND THE REMAINDER IS ON ORDER. THE CONTROLLER PROCUREMENT PACKAGE REQUIRED FOR PURCHASING THE REST OF THE SYSTEM IS COMPLETED AND IS BEING STAFFED.	260.0		15.4	SEP 84	SEP 84
o 82 6244	OPTIMIZE THE HEAT TREATMENT OF ROTARY FORGE TUBES ANALYSES OF TWO 120MM HEATS OF GUN STEEL HAVE SHOWN SIGNIFICANT DIFFERENCES IN THE OXYGEN CONTENT. ADDITIONAL HEATS OF GUN STEEL ARE BEING PROCURED TO VERIFY THE EFFECT OF OXYGEN LEVEL. THE HEATS WILL BE MADE INTO 105MM PREFORMS FOR FOLLOW-UP WORK.	290.0		68.9	MAR 84	SEP 85
o 82 6245	APPLICATION OF EROSION RESIS LOW CONTRACTION CHROMIUM PLATE EIGHT FULL SCALE GUN TUBES HAVE BEEN PARTIALLY PLATED IN BORE LENGTH WITH L.C. CHROME. LIMITED POWER CURRENT CAPACITY PREVENTS FULL LENGTH PLATING. A NEW 30,000 AMP RECTIFIER HAS BEEN DELIVERY AND ITS INSTALLATION WILL BE COMPLETE IN 2-3 MONTHS.	241.0	81.5	155.3	JUN 84	SEP 84
o 83 6245	APPLICATION OF EROSION RESIS LOW CONTRACTION CHROMIUM PLATE PLATING LC CHROMIUM DEPOSITS IN GUN BORES HAS BEEN EXPANDED FROM 105MM BORES TO 155MM BORES. EACH TUBE WAS PARTIALLY PLATED IN BORE LENGTH. A NEW 30,000 AMP RECTIFIER IS BEING INSTALLED SO FULL LENGTH PLATING OF THE BORES CAN BE ACCOMPLISHED.	195.0		103.7	SEP 84	SEP 84

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6 82 8246	GAS CHECK SEAT FINISHING A CONTRACT HAS BEEN AWARDED.	153.0	42.2	62.9	JUN 84	JUN 85
6 82 8248	APPLICATION OF HIGH-RATE CUTTING TOOLS LITERATURE ON HS METAL REMOVAL HAS BEEN REVIEWED. WORKPIECE MATERIAL/COATED CARBIDES/CERAMIC AND CERMET TOOLS HAVE BEEN SELECTED FOR TEST. DEDICATED EQUIPMENT FOR TURNING AND DRILLING TESTS HAS BEEN OBTAINED. TOOL GRADES AND GEOMETRIES ALSO SELECTED.	102.0		56.4	JUN 83	DEC 84
6 82 8251	IMPROVED MELTING PRACTICES A CONTRACT WAS AWARDED TO ANALYZE HYDOGEN, NITROGEN AND OXYGEN IN THE METAL. CERAMIC FILTERS FOR THE GATING SYSTEM HAVE BEEN ORDERED.	193.0	38.5	115.0	JUN 83	FEB 85
6 83 8251	IMPROVED MELTING PRACTICES THE ARGON OXYGEN DECARBURIZATION (AOD) PROCESS HAS BEEN SELECTED FOR TRIAL STEEL HEATS. THE SCOPE OF WORK FOR THE AOD TESTS HAS BEEN PREPARED AND A CONTRACT WILL BE AWARDED.	164.0		20.3	FEB 85	FEB 85
6 82 8252	INDUCTION HEATING OF A VARYING DIAMETER PREFORM PURCHASE REQUISITION ISSUED TO MODIFY ONE OF THE FOUR COIL LINES FOR EVALUATION. IF PERFORMANCE IS SATISFACTORY THE OTHER THREE WILL BE MODIFIED.	241.0	53.9	88.3	MAR 84	MAR 85
6 82 8253	MACHINE TOOL DYNAMIC MEASUREMENTS AND DIAGNOSTICS NINE TECHNICAL PROPOSALS WERE RECEIVED AND EVALUATED.	190.0		64.7	APR 84	SEP 84
6 82 8254	AUTOMATED SURFACE COATING OF CANNON - PAINTING A CONCEPT FOR MATERIAL HANDLING IS BEING REVIEWED. THIS CONCEPT IN CONJUNCTION WITH AUTOMATIC SURFACE COATING EQUIPMENT IS BEING CONSIDERED IN THE DESIGN OF AN AUTOMATED PAINT SPRAY CONCEPT.	80.0		24.9	JAN 84	SEP 84
6 82 8259	IMPROVED MANUFACTURING PROCESS FOR FIRE CONTROL REGISTERS THE MECHANICAL ELEMENTS OF THE MACHINE HAVE BEEN FABRICATED. THIS STRUCTURE MUST BE STRESS RELIEVED AND FINISHED MACHINED. WORK IS CONTINUING ON THE ELECTRICAL AND ELECTRONIC HARDWARE.	261.0		109.6	SEP 84	SEP 85
6 82 8262	PRODUCTION METHODS FOR OPTICAL WAVEGUIDES ARMY EVALUATION OF FIRST SAMPLES OF ARSENIC-IMPLANTED WAVEGUIDES IS IN PROGRESS. PLANNING FOR THIS EFFORT INDICATES PILOT LINE EQUIPMENT WILL BE PURCHASED AND PUT ON-LINE.	480.0	336.0	102.0	JAN 83	OCT 85
6 82 8263	PRODUCTION/IN-PROCESS INSPECTION OF LASER RANGEFINDERS A CONTRACT MODIFICATION IS UNDERWAY TO INCLUDE DYNAMIC RECEIVER SENSITIVITY FOR M60A3 VEHICLE, MATCHING THE RECEIVER/TRANSMITTER. THE PROCESS ACCEPTANCE AND VALIDATION TECHNIQUES HAVE BEEN COMPLETED.	355.0	100.0	189.0	AUG 83	SEP 84

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6 82 8267	STRESS PEENING OF HELICAL COMPRESSION SPRINGS SPRINGS OF THREE DIFFERENT WIRE SIZES HAVE BEEN FABRICATED AND STRESS PEENED. FATIGUE TESTING OF THE SMALLER WIRE SIZE SPRINGS HAS BEEN COMPLETED AND IS 75 PERCENT COMPLETE FOR THE TWO LARGER WIRE SIZE SPRINGS.	139.5	80.5	49.7	AUG 83	JUL 84
6 81 8305	INTEGRATED MANUFACTURING SYSTEM (IMS) - (CAM) SCOPE OF WORK HAS BEEN UPDATED AND REVISED. INTERVIEWS AND BRIEFINGS WERE CONDUCTED WITH VARIOUS ROCK ISLAND ARSENAL PEOPLE. THE ARMY AUTOMATION MANAGEMENT APPROVALS HAVE BEEN RECEIVED TO PROCEED TO MILESTONE TWO OF THE PROJECT LIFE CYCLE.	235.0		42.6	JUL 82	SEP 85
6 82 8305	INTEGRATED MANUFACTURING SYSTEM (IMS) - (CAM) NO SIGNIFICANT WORK ACCOMPLISHED UNDER THIS PROJECT. SEE PROJECT 6818305 FOR EFFORT STATUS.	204.0			SEP 86	SEP 85
6 83 8305	INTEGRATED MANUFACTURING SYSTEM (IMS) - (CAM) NO SIGNIFICANT WORK ACCOMPLISHED UNDER THIS PROJECT. SEE PROJECT 6818305 FOR EFFORT STATUS.	75.0		41.7	OCT 84	SEP 85
6 82 8306	ON-LINE PRODUCTION INFORMATION SYSTEM (CAM) AN RFP WAS RELEASED FOR TECHNICAL SERVICES. A STRUCTURED ANALYSIS IS IN PROGRESS TO DETERMINE THE REQUIREMENTS FOR MANUFACTURING COMPUTER SUPPORT. MANUFACTURING PLANNING AND CONTROL ARE AREAS OF EMPHASIS, AT ROCK ISLAND ARSENAL.	70.0		6.5	OCT 84	SEP 84
6 83 8306	ON-LINE PRODUCTION INFORMATION SYSTEM - RIA (CAM) TWO APPLICATIONS, TOOL ISSUING AND CONTROL AND MAINTENANCE PLANNING HAVE BEEN SELECTED FOR DEVELOPMENT. ANALYSIS OF THE DETAILED FUNCTIONAL REQUIREMENTS WAS INITIATED. REVIEW OF THE APPLICABILITY OF COMMERCIALLY AVAILABLE HARDWARE AND SOFTWARE DONE.	200.0			SEP 84	SEP 84
6 83 8324	PROCESS CONTROLS FOR POWDERED METAL WEAPON COMPONENTS A CONTRACT WAS AWARDED TO SPS TECHNOLOGIES, JENKINTOWN, PA FOR $118,546 ON 5 JAN 84.	161.0	118.5	28.5	SEP 84	FEB 85
6 82 8341	HOLLOW CYLINDER CUT OFF MACHINE STEP TWO OF THE PROCUREMENT ACTION TO PROCURE A HOLLOW CYLINDER CUTOFF MACH WAS UNSUCCESSFUL. IT WAS DECIDED TO COMBINE MONIES REMAINING ON THIS PROJECT WITH 6838354 AND PURCHASE EQUIP TO SATISFY THE NEEDS OF BOTH SCOPES OF WORK.	655.0		4.2	SEP 84	SEP 85
6 82 8346	DEBURRING OF BORE EVACUATOR HOLES TWO 120MM TUBES WERE EXPERIMENTALLY ELECTROPOLISHED. THE PUMP THRU PROCESS WAS THE MOST SUCCESSFUL.	224.0		166.4	NOV 84	SEP 84

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6 83 8351	IMP MANUFACTURE OF QUADRANT FLATS AND MUZZLE BRAKE KEYWAY ENG EVAL COMPLETED AND EQUIP DESIGN BEGUN.	88.0		21.7	SEP 84	SEP 84
6 83 8352	SKIVING (METAL SHAVING) GUN TUBE BORES PROCUREMENT ACTION FOR A 'PILOT TEST PROGRAM' HAS BEEN INITIATED.	120.0		36.0	SEP 84	SEP 84
6 83 8354	CUTTING OF HOT ROTARY FORGE TUBES TWO STEP PROCUREMENT UNDERWAY. 7 TECH PROPOSALS RECD, OF WHICH 3 WERE ACCEPTABLE. CURRENTLY AWAITING PRICE QUOTES.	414.0		13.5	SEP 85	SEP 85
6 82 8416	FLEXIBLE MACHINING SYSTEM - RIA (CAM) THIS PROJECT IS ALMOST COMPLETE. A FMS FEASIBILITY STUDY WAS CONDUCTED. THE STUDY SUPPORTS THE PURPOSE OF A FMS SYSTEM.	138.0	100.0	2.0	SEP 83	MAY 84
6 82 8448	BRAIDED PROCESS FOR BORE EVACUATOR THE ONE BID RECEIVED WAS TOO HIGH. IT WAS DECIDED TO CONDUCT ALL OF THE PROJECT WORK IN-HOUSE. THIS WILL INCLUDE THE BUILDING OF A BRAIDING MACHINE.	260.0		63.6	SEP 84	MAY 85

TROOP SUPPORT COMMAND
(TROSCOM)

TROOP SUPPORT COMMAND

CURRENT FUNDING STATUS, 2ND QTR

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)	IN-HOUSE FUNDING REMAINING ($)	IN-HOUSE FUNDING EXPENDED ($)
79	1	295,000	280,000	280,000 (100%)	15,000	15,000 (100%)
80	0	0	0	0 (0%)	0	0 (0%)
81	1	422,000	322,000	322,000 (100%)	100,000	100,000 (100%)
82	2	1,170,000	997,300	940,900 (94%)	172,700	103,400 (59%)
83	0	0	0	0 (0%)	0	0 (0%)
TOTAL	4	1,887,000	1,599,300	1,542,900 (96%)	287,700	218,400 (75%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 85% IN-HOUSE REMAINING 15%

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PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
E 79 3532	MOLTEN SALT LITHIUM-CHLORIDE BATTERY FIVE PROTOTYPE CELLS FOR A 30-CELL, 24KWH, 36V MOLTEN SALT LITHIUM-ALUMINUM/IRON SULFIDE BATTERY HAVE NOW BEEN CYCLED FOR OVER 900 CYCLES. THEY HAD A PROJECTED MEAN CYCLE LIFE GREATER THAN 1000 CYCLES. DRAFT TECHNICAL REPORT PREPARED.	295.0	280.0	15.0	AUG 80	JUN 84
E 82 3592	IMPROVED GRAPHITE REINFORCEMENT TEMPERATURE + LINE SPEED WERE VARIED TO OPTIMIZE THE GRAPHITIZATION STEP. BEST STRENGTH AND MODULUS VALUES WERE FOUND AT 2500 DEGREES AT ONE FT PER MIN LINE SPEED. THE CONTRACTOR IS PREPARING THE FINAL TECHNICAL REPORT AFTER PROVIDING 20 LB OF FIBER.	257.0	231.5	12.0	SEP 84	SEP 84
E 81 3717	HIGH TEMPERATURE TURBINE NOZZLE FOR 10 KW POWER UNIT ENGINE TESTING OF CERAMIC NOZZLE ASSEMBLIES IS IN PROCESS. APPROXIMATELY 200 HOURS OF OPERATION HAS BEEN ACCOMPLISHED ON EACH MATERIAL TYPE.	422.0	322.0	100.0	APR 82	JUN 84
E 82 3790	COMBAT VEHICLE DEGAUSSING PHASE I (DESIGN) WAS COMPLETED EXCEPT FOR MINOR DRAWING CHANGES. STUDY + VEHICLE SIGNATURE MEASUREMENT WILL BE COMPLETED BY FEB 84. THIS LATTER TASK WILL NOT AFFECT THE FABRICATION PHASE TO BEGIN IN EARLY 84 AND BE OF TWO YEARS DURATION.	913.0	765.8	91.4	AUG 83	FEB 84

APPENDICES

APPENDIX I: COMMAND IDENTIFICATION

APPENDIX: ARMY ACTION COMMAND/ACTIVITY IDENTIFICATION

Action Command Identifier	Acronym	Command
Management Engineering Training Activity	AMETA	D
Depot Systems Command	DESCOM	G
Electronics R&D Command	ERADCOM	H
Test Measurement Diagnostic Equipment Support Group	TMDE	K
Army Materials and Mechanics Research Center	AMMRC	M
Test & Evaluation Command	TECOM	0
Aviation Systems Command	AVSCOM	1
Communications & Electronics Command	CECOM	2
Missile Command	MICOM	3
Tank-Automotive Command	TACOM	4
Armament, Munitions, & Chemical Command (Munitions)	AMCCOM (Ammo)	5
Armament, Munitions, & Chemical Command (Weapons)	AMCCOM (Wpns)	6
Troop Support Command	TROSCOM	7

NOTE: Abbreviation - R&D - Research and Development

APPENDIX II: PROJECT SLIPPAGE STUDY

PROJECT SLIPPAGE STUDY

The purpose of this study is to monitor trends in the timeliness of the MMT Project Execution. Figure 1 is a slippage profile for each command and for the program as a whole. In the past, the slippage profile has tended to be very consistent. The large number of projects in the "No Data" column is due to the recent funding of the FY84 projects for which no status reports or milestone charts were submitted. The number in this column is usually larger during the 2nd period of the year than the 1st since that is the period when most new projects are funded. When combined with the figures from the "0 Mo" column, you have that part of the program for which no slippage problems exist. There is a significant increase in the "No Data" columns for this period (27%) and the "No Data" column for the corresponding 2nd half CY82 period (17%). This is due to the fact that the FY83 program had a severe funding reduction which resulted in fewer projects funded. As a result there were only half as many projects for which status reports were not submitted. The other five columns continue to remain within the ± 3 percentage point range which has consistently been exhibited from reporting period to reporting period. A general improvement in overall slippage is, nonetheless, evident from the fact that the percentage of projects which have slipped more than 1 year is, for the first time under 30%. Over the years, this number has varied between 32% and 37%.

There are two problems that affect accurate project slippage reporting. One problem is delinquent status reports which during the current reporting period, numbered 17. This delinquency results in a larger number of active projects because final status reports are not submitted for those delinquent projects that have in actuality been closed out. These "completed" projects then increase in months of slippage which could account for a larger than actual percentage of projects in the "25+ Mo" columns. Although delinquency has gone down, there continues to be delinquent status report every period so the general consistency still remains. A further decrease in delinquency of project status reports will improve the accuracy of the project slippage profile.

Another problem that affects accurate project slippage reporting is the basis on which final status reports are submitted. Some organizations await financial close-out before submitting final status reports. By doing this, several months might be added to the apparent duration of the project. The general policy has been that final status reports should be submitted when the technical work has been physically completed. If outstanding financial action does not hinder project implementation, then the time required for financial close-out is not meant to be added to an indicator which measures engineering achievement. Continued emphasis on using a consistent basis for project close-out, namely technical completion, will provide a more accurate accounting of the technical life of MMT projects.

P R O J E C T S L I P P A G E S T U D Y

COMMAND	NO. ACTIVE PROJECTS	NO DATA	0 MO	1-6 MO	7-12 MO	13-18 MO	19-24 MO	25+ MO
	PROJECT SLIPPAGE DISTRIBUTION (PERCENT)							
AMETA	8	13		25	13	25		25
DESCOM	10	20	40	10	10			20
ERADCOM	45	24	18	11	11	4	7	24
THDE	4	25	50					25
AMMRC	6	50	17		17	17		
TECOM	4	25	75					
AVSCOM	54	39	17	13	9	4	9	9
CECOM	14	21	7	14	7	7	29	14
MICOM	31	23	29	16	13	3	3	13
TACOM	58	12	29	12	17	10	5	14
AMCCOM (AMMO)	155	32	15	10	14	8	8	14
AMCCOM (WPNS)	116	26	21	8	19	9	7	10
TROSCOM	6	33	17		17			33
SUMMARY (DARCOM WIDE)	511	27	20	10	14	8	7	14
2ND CY82 SUMMARY	521	17	25	12	12	10	7	17

*FIGURES REFLECT DATA ON THE ACTIVE PROGRAM AS OF 9 MAY 1984.

FIGURE 1 - SLIPPAGE PROFILE

APPENDIX III: USER'S GUIDE

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
1ST SEMIANNUAL SUBMISSION CY 83 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
3 83 4563 08	NON-DESTRUCTIVE TESTING OF A PREFORMED SHAPE A DOW HAS BEEN PREPARED AND SENT TO THE DOE ROCKEY FLATS FACILITY FOR INITIATION OF WORK IN 1ST QTR 1984.	227.5		5.4	JUN 85	JUN 85
3 83 4563 11	PROCESS IMPROVE FOR DU PENETRATORS-MG F2 LINERS SCOPE OF WORK COMPLETED AND PROCUREMENT PACKAGES FORWARDED TO PROCUREMENT WITH ANTICIPATED CONTRACT AWARD DATE OF 1 OCT 1984.	331.5		5.3	SEP 85	SEP 85
3 83 4563 10	QUENCH PARAMETERS FOR HEAT TREATING DU A SCOPE OF WORK HAS BEEN COMPLETED AND A PROCUREMENT PACKAGE ASSEMBLED AND FORWARDED TO PROCUREMENT FOR CONTRACT AWARD BY 1 OCT 83.	427.5		8.5	JUN 85	JUN 85
3 83 4600	PROPELLANT BED DEPTH CONTROL IN CASEL AIR DRY FUNDS WERE RECEIVED AND OBLIGATED TO RADFORD AAP. TWO VENDORS WERE CONTACTED TO DISCUSS TYPE OF INSTRUMENTATION AVAILABLE TO DETERMINE PROPELLANT DEPTH.	579.0	461.0	10.0	JUL 84	JUL 84
3 82 0099	ELECTRO-OPTICAL INSPECTION OF ARTILLERY PROJ OPT CAVITY ALL DEFECT DETECTING ELECTRONICS CIRCUITRY HAS BEEN CHECKED FOR PROPER OPERATION AND ADJUSTMENTS OPTIMIZED. THE ONLY CIRCUIT STILL REQUIRING ADJUSTMENT IS ONE THAT INHIBITS FALSE REJECT SIGNALS.	75.0		36.0	SEP 83	SEP 83
3 79 0093	BALL PROPELLANT DETERRENT COATING-CAM RELATED DRAFT OF FINAL REPORT BEGUN DURING THE PERIOD. IT WILL BE FINISHED, REVIEWED AND EDITED BY THE END OF THE NEXT REPORTING PERIOD.	171.0	27.5	132.4	NOV 80	DEC 83
3 81 6710	DEV COMP-AID MODEL OF FORMING OPERATIONS FOR ARTILLERY MPTS THIS PROGRAM IS COMPLETE. THE FOUR INDIVIDUAL METALFORMING MODELS WERE CONSOLIDATED INTO AN INTEGRATED SYSTEM. THE SYSTEM IS OPERATIONAL AT BATTELLE AND IS BEING TRANSFERRED TO ARRCOM.	177.0	131.0	36.0	DEC 82	DEC 83
(1) (2) (3)		(5)	(6)	(7)	(8)	(9)

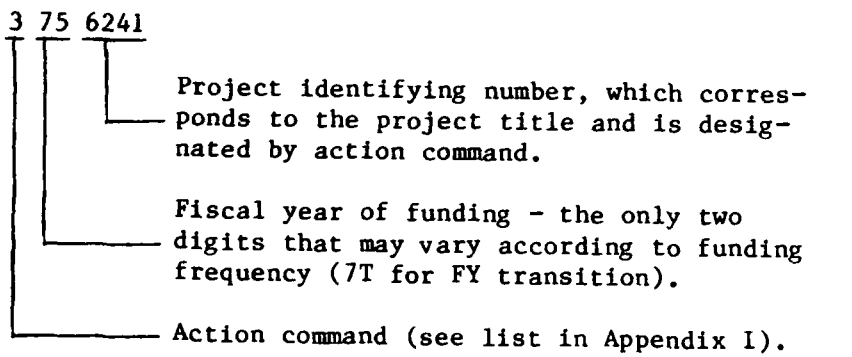
(4)

THIS FORM IS USED FOR SUMMARIZING THE MMT PROGRAM PROJECTS' STATUS. USER'S GUIDE BELOW EXPLAINS THE SIGNIFICANCE OF EACH COLUMN HEREIN.

USER'S GUIDE
to
SUMMARY PROJECT STATUS REPORT

COLUMN 1. PROJECT NUMBER

A project identified by the first and last four digits which corresponds to the project title for the life of its execution. However, for accounting and reporting purposes, a project is recognized by the totality of its seven-digit numeric or alphanumeric number. Example:



COLUMN 2. Subtask identifier, if any.

COLUMN 3. PROJECT TITLE

The title descriptive of project effort.

COLUMN 4. An abstract of project status taken from the Project Status report. Whenever possible, technical accomplishments during the report-

COLUMN 5. AUTHORIZED

The total amount of funds authorized in dollars, to complete the project.

COLUMN 6. CONTRACT VALUES

The portion of authorized funds actually expended or obligated for work performed by private industry.

COLUMN 7. EXPENDED LABOR AND MATERIAL

The portion of authorized funds actually expended in-house, namely within the Government.

COLUMN 8. ORIGINAL PROJECTED COMPLETION DATE

Calendar date clearly given in, or the nearest calendar month and year as could be read from the Milestone Chart of, the very first Project Status Report, RCS DRCMT-301.

COLUMN 9. PRESENT PROJECTED COMPLETION DATE

Calendar date clearly given in, or the nearest calendar month and year as could be read from Milestone Chart of, the latest Project Status Report, RCS DRCMT-301.

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ARMY MMT PROGRAM REPRESENTATIVES

HQ, DARCOM
US Army Materiel Development and Readiness Command
ATTN: DRCMT, Mr. F. Michel
5001 Eisenhower Avenue — C: 202 274-8284/8298
Alexandria, VA 22333 — AV: 284-8284/8298

AMCCOM
US Army Armament, Munitions & Chemical Command
ATTN: DRSMC-IRI-A (R), Ms. Geri Kopp (Ammo)
ATTN: DRSMC-IRW (R), Mr. Joseph Pohlman (Wpns)
Rock Island Arsenal — C: 309 794-3666/3166
Rock Island, IL 61299 — AV: 793-3666/3166

US Army Armament, Munitions & Chemical Command
ATTN: DRSMC-PMP-P (D), Mr. Donald J. Fischer — C: 201 724-6092
Dover, NJ 07801 — AV: 880-6092

US Army Armament, Munitions & Chemical Command
Chemical Research and Development Center
ATTN: DRSMC-CLR-I (A), Mr. Joe Abbott
Building E5101 — C: (301) 724-3418/3586
Aberdeen Proving Grounds, MD 21010 — AV: 584-3418/3586/3010

AMETA
US Army Management Engineering Training Activity
ATTN: DRXOM-SE, Mr. Paul Wagner — C: 309 794-4041
Rock Island, IL 61299 — AV: 793-4041

AMMRC
US Army Materials & Mechanics Research Center
ATTN: DRXMR-PP, Mr. John Gassner — C: 617 923-5521
Watertown, MA 02172 — AV: 955-5521

AMRDL
US Army Applied Technology Laboratory
Army Research Technology Lab (AVSCOM)
ATTN: DAVDL-ATL-ATS, J. Waller — C: 804 878-5921/2401
Fort Eustis, VA 23604 — AV: 927-5921/2401

AVSCOM
US Army Aviation Systems Command
ATTN: DRSAV-PEC, Mr. Fred Reed
4300 Goodfellow Blvd. — C: 314 263-3079/3080
St. Louis, MO 63120 — AV: 693-3079/3080

BRDC
US Army Belvoir R&D Center
ATTN: STRBD-HE, Mr. K. K. Harris — C: 703 664-5433
Fort Belvoir, VA 22060 — AV: 354-5433

CECOM
US Army Communications Electronics Command — C: 201 535-4926
ATTN: DRSEL-POD-P-G, Messr Feddeler/Esposito/Resnic — AV: 995-4926

US Army Communications Electronics Command
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DESCOM
US Army Depot System Command
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Chambersburg, PA 17201 — AV: 238-6591

ERADCOM
US Army Electronics R&D Command
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2800 Powder Mill Road — C: 202 394-3812
Adelphi, MD 20983 — AV: 290-3812

HDL
Harry Diamond Laboratories
ATTN: DELHD-PO-P, Mr. Julius Hoke
2800 Powder Mill Road — C: 202 394-1551
Adelphi, MD 20783 — AV: 290-1551

IBEA
US Army Industrial Base Engineering Activity
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Rock Island, IL 61299 — AV: 793-5113

MICOM
US Army Missile Command
ATTN: DRSMI-RST, Mr. Bobby Park — C: 205 876-2604
Redstone Arsenal, AL 35898 — AV: 746-2604

MPBMA
US Army Munitions Production Base Modernization Agency
ATTN: SMCPM-PBM-DP, Mr. Joseph Taglairino — C: 201 724-6708
Dover, NJ 07801 — AV: 880-6708

NRDC
US Army Natick R&D Center
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Natick, MA 01760 — AV: 256-4883/4882

RIA
Rock Island Arsenal
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AV: 793-4142

TACOM
US Army Tank-Automotive Command
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AV: 786-6378

TECOM
US Army Test & Evaluation Command
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AV: 283-3677

TMDE
US Army TMDE Support Group
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TROSCOM
US Army Troop Support Command
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4300 Goodfellow Blvd.
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WVA
Watervliet Arsenal
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