U.S. ARMY

MATERIEL DEVELOPMENT AND READINESS COMMAND

MANUFACTURING METHODS & TECHNOLOGY

PROJECT EXECUTION REPORT

FIRST CY 82

PREPARED BY

USA INDUSTRIAL BASE ENGINEERING ACTIVITY

MANUFACTURING TECHNOLOGY DIVISION

ROCK ISLAND, ILLINOIS 61299

OCTOBER 1982

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE *(When Date Entered)*

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER FIRST CY82	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE *(and Subtitle)* MANUFACTURING METHODS & TECHNOLOGY PROJECT EXECUTION REPORT		5. TYPE OF REPORT & PERIOD COVERED Semiannual 1 Jan 82 - 30 Jun 82 6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) P. A. Swim		8. CONTRACT OR GRANT NUMBER(s) N/A
9. PERFORMING ORGANIZATION NAME AND ADDRESS US Army Industrial Base Engineering Activity ATTN: DRXIB-MT Rock Island, IL 61299		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS N/A
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Industrial Base Engineering Activity ATTN: DRXIB-MT Rock Island, IL 61299		12. REPORT DATE October 1982 13. NUMBER OF PAGES 193
14. MONITORING AGENCY NAME & ADDRESS *(if different from Controlling Office)* US Army Materiel Development & Readiness Command ATTN: DRCMT, Office of Manufacturing Technology 5001 Eisenhower Avenue Alexandria, VA 22333		15. SECURITY CLASS. *(of this report)* UNCLASSIFIED 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE N/A

16. DISTRIBUTION STATEMENT *(of this Report)*

DISTRIBUTION UNLIMITED

17. DISTRIBUTION STATEMENT *(of the abstract entered in Block 20, if different from Report)*

DISTRIBUTION UNLIMITED

18. SUPPLEMENTARY NOTES

N/A

19. KEY WORDS *(Continue on reverse side if necessary and identify by block number)*

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 Date Entered)*

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

REPLY TO
ATTENTION OF:

DRXIB-MT

02 Nov 82

SUBJECT: Manufacturing Methods and Technology (MMT) Program Project Execution Report, First Half CY82

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 Program 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 the progress of MMT projects. There are separate sections in the report showing projects that are new, active, and completed. Also, included is a discussion of the overall DARCOM Program.

3. 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 P. Swim, AUTOVON 793-6521.

Gordon B Ney
for 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 547 active projects which have a total authorized cost of $287,348,200. 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 1st Half, CY82 - A list divided by organization of all projects funded during the first half of CY82. Included is a narrative of the problem for each project.

b. Final Status Reports Received During 1st Half, CY82 - A list divided by organization of all projects for which final status reports were received during the first half of CY82. 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.

MMT PROGRAM HISTORY

Figures 1 and 2 depict the size and growth of the MMT Program since 1970. These charts last appeared in the March 1982 Project Execution Report and are updated here to include FY82 funding. Figure 1 shows funding levels and Figure 2 deals with number of projects. In each figure, the upper curve represents all of the MMT projects for each fiscal year shown. The lower curve represents only those projects which initiated a new effort during the fiscal year shown. The difference between the two curves on each figure represents those approved dollars (Figure 1) and number of projects (Figure 2) which were approved in the fiscal year as follow-on projects to efforts initiated in prior years.

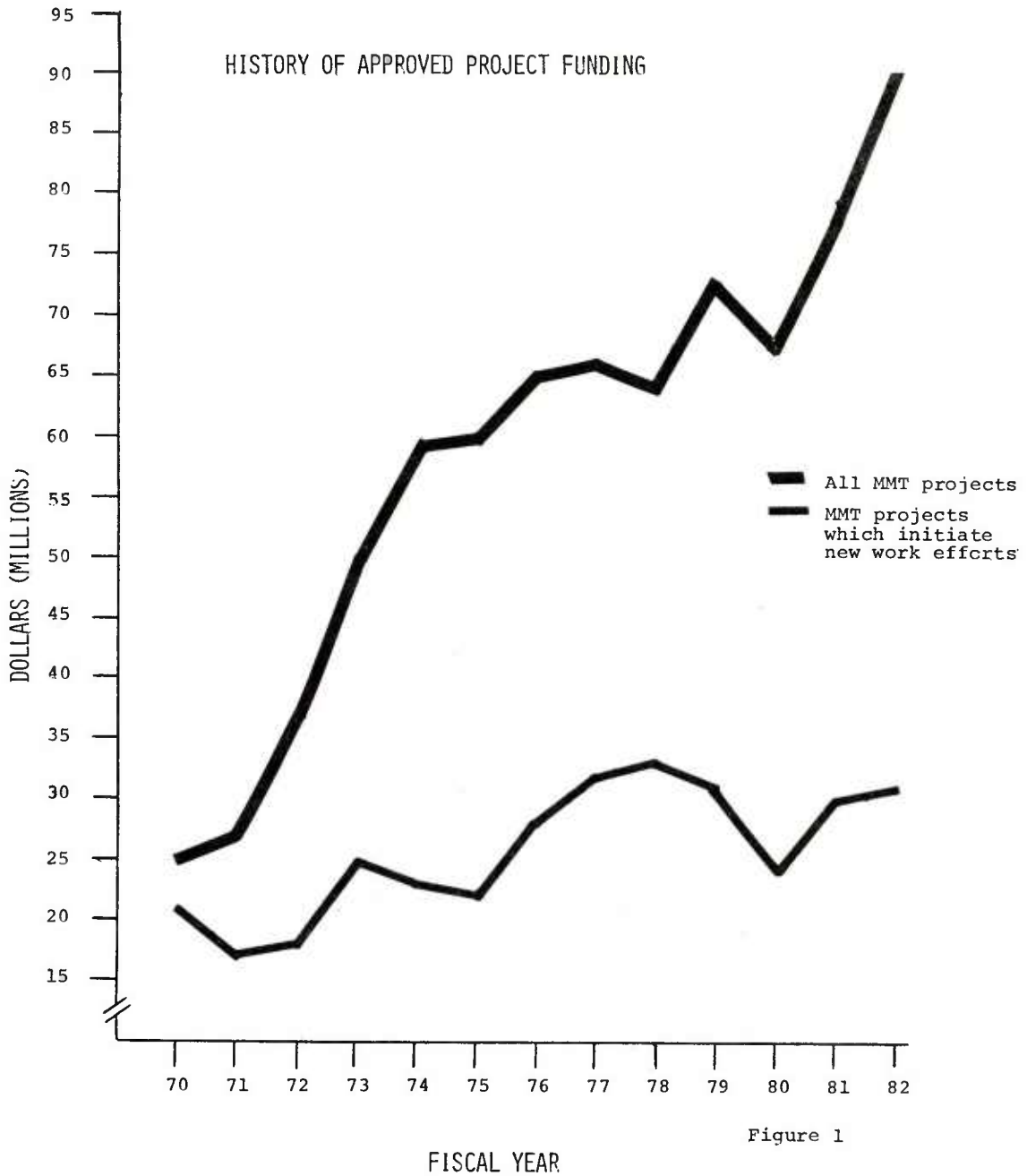


Figure 1

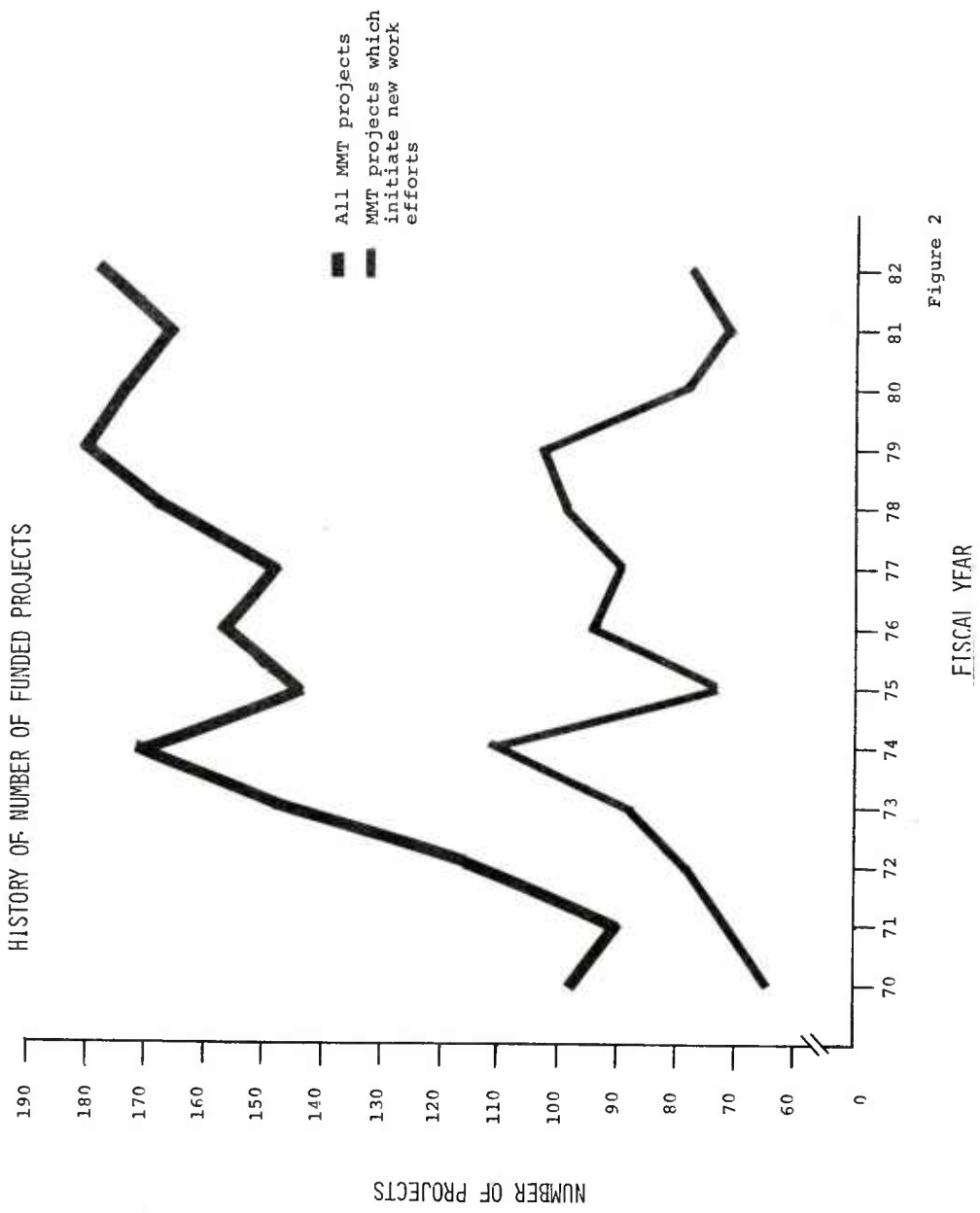


Figure 2

In the early years, these charts show a great increase in dollars, especially from FY71 to FY74. Then, there was no appreciable growth in the MMT program between FY74 and FY80. Since FY80 the funding level has risen from $67 million to $90 million. These recent increases are a reflection of both a renewed interest in our Defense posture and more importantly, perhaps, a firm commitment to take action on improving manufacturing productivity. Starting in FY72, less than 50% of each year's budget has been spent on initiating new work efforts. From FY72 to FY82, this figure has ranged between 49 and 35 percent. The majority of each year's funds has been spent for follow-on projects to efforts initiated in prior years. From FY74 to FY80 this trend, to a degree, reflected the fact that while individual work efforts were becoming more costly due to inflation and technical complexity, the overall budget had remained relatively constant permitting the initiation of fewer new work efforts. With an increasing budget in FY81 and 82, one might expect that this gap would decrease. However the advent and execution of complex large dollar, multi-year "systems" projects has continued to keep the initiation of new work efforts low.

STATUS REPORT SUBMISSIONS

Two areas which have been of concern in the past continue to show very little or no improvement. These areas are: (1) delinquent status reports, and (2) final status reports without technical reports. Figure 3 summarizes by Command these two situations. It can be noted from Figure 3 that 18% of all the required status reports (DRCMT 301) and 45% of all the required technical reports were not available.

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%)	1	N/A	N/A	
DESCOM	8	4	4	(50%)	0			
MERADCOM	17	0	17	(100%)	0			
ERADCOM	46	26	20	(43%)	3	1	2	(67%)
AMMRC	5	5	0	(0%)	0			
NLABS	5	0	5	(100%)	0			
TECOM	3	0	3	(100%)	0			
AVRADCOM	77	66	11	(14%)	11	2	9	(82%)
TSARCOM	3	0	3	(100%)	0			
CECOM	11	10	1	(9%)	0			
MICOM	59	42	17	(29%)	14	14	0	(0%)
TACOM	68	61	7	(10%)	3	2	1	(33%)
ARRADCOM/ ARRCOM (Ammo)	184	166	18	(10%)	28	14	14	(50%)
ARRADCOM/ ARRCOM (Weapons)	110	109	1	(1%)	5	3	2	(40%)
TOTAL	603	496	107	(18%)	65	36	29	(45%)

Figure 3

*Does not include FY82 projects which were recently funded and which did not require a status report.

Accuracy of MMT summary information for management depends on a complete submission of all the project status reports for each command. In June, a call letter was mailed out to each SUBMACOM. Inclosed 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 in September to those commands whose submission had not been received. As noted in Figure 3, there were still 107 reports which were not submitted by the due date of 15 September. The 18% delinquency encountered this period is an improvement over the last report period, which had a 24% delinquency. This improvement was due to the fact that the SUBMACOMS where provided a full 2 1/2 months (per the new AR 700-90, 15 Mar 82) from the end of the report period to compile and submit their status reports. When considering the initial reminder, the follow-up phone calls, and the time extension, the improvement can only be considered slight. This delinquency creates a significant void in the information presented in the compiled report. Continuing improvement in this area will insure a useful review of the progression of the MMT Program.

Relative to the second are 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 that final status reports will not be submitted without a completed technical report. Of the 54 final status reports submitted during the previous reporting period, 24 of them, or 44% did not have technical reports included. For this period, as noted in Figure 3, 65 final status reports were received with 29 of them, or 45% being delinquent the technical report. 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 43 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. AR700-90 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 funds discrete work units, called "Projects," on a yearly basis. These projects, identified by a seven-digit number, contain work requests, which upon completion will result in an end product whose technical transfer can be effected. At times, in order to have a total work package which is implementable, (i.e., which can achieve the payback for which the work was funded) the scope can be of such a magnitude that total funding in one fiscal year can be an inefficient use of resources.

In this event, the total work might be multi-year funded, (i.e., be more than one project, each having a technically transferrable end product). These total implementable work units are called "Efforts". These efforts can 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.

The following three charts (Figures 4-6) summarize MMT project reporting and funding status for the 1st Half of CY82. 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.

A summary of the MMT Program (Figure 4) indicates that the number of active projects has increased by only 1% in comparison with the 1st half

MMT PROGRAM SUMMARY

Organization	Number of Projects			Funding Status		
	1st Half CY81	1st Half CY82	Percent Change	1st Half CY81	1st Half CY82	Percent Change
AMETA/DESCOM	9	15	67	3,682,000	5,192,000	41
MERADCOM	19	18	-5	5,204,000	6,191,800	19
ERADCOM	44	44	0	28,953,300	27,166,900	-6
AMMRC	6	5	-17	13,928,000	13,734,500	-1
NLABS	4	5	25	637,100	643,500	1
TECOM	3	3	0	2,453,000	1,614,000	-34
AVRADCOM/TSARCOM	73	71	-3	25,156,300	28,739,500	14
CECOM	11	11	0	5,383,100	8,222,900	53
MICOM	66	46	-30	26,237,700	24,083,500	-8
TACOM	44	68	55	16,387,700	31,022,900	89
ARRADCOM/ARRCOM (Ammo)	172	156	-9	99,898,800	116,934,300	17
ARRADCOM/ARRCOM (Weapons)	91	105	15	18,499,500	23,802,400	29
TOTAL	542	547	1	246,420,500	287,348,200	17

Figure 4

of CY81. The comparison is made between parallel reporting periods (1st half, CY81 and 1st half, CY82) in order to observe the project number and funding changes that occur within each Command and within the total program.

It can be noted that the largest increases in number of projects were TACOM and ARRADCOM/ARRCOM (Weapons). The largest decrease was MICOM. Percentage-wise, the largest increase in the value of active projects was TACOM with 89%. Dollarwise the largest increase was ARRADCOM/ARRCOM (Ammo) with $17 million. The largest decrease in dollars was MICOM which showed a reduction of $2 million.

A breakout of the active projects by fiscal year is shown in Figure 5. It can be noted that one FY75 project is still active. The only requirement

ACTIVE PROJECTS BY FISCAL YEAR

Organization	75	76	7T	77	78	79	80	81	82	TOTAL
AMETA/DESCOM			1		1	1	2	3	7	15
MERADCOM					1	6	4	5	2	18
ERADCOM		2		5	3	8	10	8	8	44
AMMRC							1	2	2	5
NLABS				1		1	2	1		5
TECOM							1	1	1	3
AVRADCOM/TSARCOM				2	3	4	11	27	24	71
CECOM					1	2	2	4	2	11
MICOM					3	1	11	18	13	46
TACOM			1	1	5	6	8	21	26	68
ARRADCOM/ARRCOM (Ammo)	1	1	1	2	8	26	33	36	48	156
ARRADCOM/ARRCOM (Weapons)		1		3	1	9	24	30	37	105
TOTAL	1	4	3	14	26	64	109	156	170	547
1st CY81 TOTAL	2	8	3	28	51	123	167	160	0	542

Figure 5

left for this project (5 75 6494) is the completion and distribution of the final technical report. The status report received this period indicated that it will be closed out during the next report period. Continuing emphasis is being placed on closing out older projects. The success of this effort is shown by comparing the fiscal years 75-78 for the 1st half CY81 with the current period. A year ago, there were 92 active projects for these fiscal years. There were only 48 projects for these years reported during the 1st half CY82. The number of close outs during this period would have even been greater if 18% of the status reports had not been delinquent.

Figure 6 indicates at what rate the project funds are being expended. In the past the active MMT has shown a relatively consistant 50-50 contractor/in-house ratio. But for the first CY81, these values ($132 million

PROGRAM FUNDING EXPENDITURES

(MILLIONS)

Organization	Projects	Authorized Funding	Contractor Amount	Contractor Expended	In-House Remaining	In-House Expended
AMETA/DESCOM	15	$ 5.2	$ 2.6	$ 1.3 (48%)	$ 2.5	$ 0.3 (11%)
MERADCOM	18	6.2	3.6	2.8 (78%)	2.6	0.4 (15%)
ERADCOM	44	27.2	21.5	14.7 (68%)	5.7	1.9 (33%)
AMMRC	5	13.7	5.8	0.9 (16%)	7.9	3.8 (47%)
NLABS	5	0.6	0.5	0.4 (76%)	0.1	*0.1 (76%)
TECOM	3	1.6	0.3	*0.3 (99%)	1.4	1.0 (73%)
AVRADCOM/TSARCOM	71	28.7	14.2	6.1 (42%)	14.6	2.5 (17%)
CECOM	11	8.2	3.6	1.9 (53%)	4.6	0.2 (4%)
MICOM	46	24.1	13.4	7.1 (52%)	10.7	1.9 (17%)
TACOM	68	31.0	14.1	8.1 (57%)	16.9	3.4 (20%)
ARRADCOM/ARRCOM (Ammo)	156	116.9	62.0	41.6 (67%)	54.9	20.9 (38%)
ARRADCOM/ARRCOM (Weapons)	105	23.8	6.7	3.3 (49%)	17.1	4.3 (25%)
TOTAL	547	$287.2	$148.3	$88.5 (60%)	$139.0	$40.7 (29%)
1st CY81 TOTAL	542	$246.4	$132.4	$79.8 (60%)	$114.0	$44.7 (39%)

Figure 6

*All values rounded to one decimal place.

vs. $114 million) are more heavily weighted on the contractors side, as are the first CY82 values ($148 million vs. $139 million) reflecting a greater contractor participation in the MMT program. Figure 6 also shows that compared to the same period last year, contractor expenditures are exactly the same (60%) and in-house expenditures are down (29% vs. 39%). The 107 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 1ST HALF, CY82

PROJECTS ADDED IN 1ST HALF, CY82

DARCOM

D 82 5052
ARMY ENGINEERING DESIGN HANDBOOKS

TECHNICAL SCIENTIFIC AND ENGINEERING DATA IS CONTINALLY BEING GENERATED WITHIN THE ARMY AND NEEDS TO BE COLLECTED IN APPROPRIATE DOCMENTS.

MERADCOM

E 82 3592
IMPROVED GRAPHITE REINFORCEMENT

LOW IMPACT STRENGTH OF GRAPHITE FIBERS IS DUE TO THE COMBINATION OF THEIR HIGH MODULUS AND AVERAGE TENSILE STRENGTH.

E 82 3796
COMBAT VEHICLE DEGAUSSING

PRESENT DESIGN AND FABRICATION TECHNIQUES FOR VEHICLES RESULT IN A SIGNIFICANT MAGNETIC SIGNATURE. THIS MAGNETIC SIGNATURE CAN BE USED TO FUZE LAND MINES TO ATTACK THE VEHICLE UNDERCARRIAGE.

DESCOM

G 82 2001
PROVIDE PROTOTYPE ROBOTS FOR AUTOMATED BLAST CLEANING

HULLS OF VEHICLES ARE BLAST CLEANED TO REMOVE OLD PAINT AND RUST PRIOR TO PAINTING. THE CURRENT METHOD IS MANUAL. LABOR INTENSIVE, TIME CONSUMING, AND CREATES AN UNHEALTHY SITUATION FOR THE WORKERS.

G 82 2002
LONG RANGE DEPOT PRODUCTIVITY IMPROVEMENT PROGRAM

THE LACK OF UP-TO-DATE MANUFACTURING AND PROCESSING TECHNOLOGY HAS RESULTED IN HIGHER OVERHAUL/REBUILD COSTS AND ALSO IN LIMITATIONS TO BOTH PRESENT AND FUTURE MISSION NEEDS THROUGHOUT THE DEPOT.

PROJECTS ADDED IN 1ST HALF, CY82
(CONTINUED)

G 82 4002
ROBOTIZED WELDING OF M113A2 SUSPENSION

THE CURRENT METHOD OF WELDING THE M113A2 SUSPENSION SYSTEM IS TIME CONSUMING AND LABOR INTENSIVE.

G 82 4004
AUTOMATED DISASSEMBLY OF DOUBLE PIN TRACK

DISASSEMBLY OF DOUBLE PIN TRACK SHOE SET ASSEMBLIES IS CURRENTLY LABOR INTENSIVE USING MANUAL HAND TOOLS RESULTING IN LOW PRODUCTIVITY.

G 82 4005
WATER JET MATERIAL REMOVAL SYSTEM PHASE II

CURRENT PRODUCTION METHODS OF REMOVING RUBBER FROM TRACK COMPONENTS ARE LABOR INTENSIVE AND PRESENT ENVIRONMENTAL AND SAFETY HAZARDS TO THE WORKERS.

G 82 8001
ANNISTON PRODUCTIVITY IMPROVEMENT PROGRAM

PRODUCTION AND STORAGE FACILITIES ARE OLD,CROWDED,AND/OR FUNCTIONALLY UNSUITED FOR THE ACTIVITIES HOUSED, TOOLS AND EQUIPMENT ARE ON THE AVERAGE 25 YEARS BEHIND THE STATE-OF-THE-ART.

ERADCOM

H 82 3011
MMT FOR INP GUNN DEVICES

INADEQUATE CONTROL OF EPI MATERIAL AND DEVICE PROCESSING STEPS REQUIRING CLOSE TOLERANCES FOR EFFICIENT MM OPERATION RESULTS IN LOW YIELD POOR UNIFORMITY AND HIGH UNIT COST FOR MILLIMETER-WAVE INDIUM PHOSPHIDE GUNN DEVICES.

H 82 3505
HIGH CONTRAST CRT PHOSPHOR DEPOSITION AND SEALING - PHASE II

HIGH CONTRAST CRT AVIONIC DISPLAYS FOR DAY-NIGHT NIGHT VISION GOGGLES ARE CURRENTLY UNAVAILABLE. OPTICAL FILTERS ARE ENVIRONMENTALLY LIMITED FOR THIS APPLICATION. PHOSPHOR TECHNIQUES ARE AVAILABLE BUT OPTIMIZATION AND ECONOMICS HAVE NOT BEEN SHOWN.

PROJECTS ADDED IN 1ST HALF, CY82
(CONTINUED)

H 82 5010
BONDED GRID ELECTRON GUN

PRESENT TECHNOLOGY CAN NOT BE USED TO BUILD GRIDED MILLIMETER WAVE TUBES. MUST USE HIGH VOLTAGE MODULATOR FOR PULSED OPERATION.

H 82 5019
LASER-CUT SUBSTRATES FOR MICROWAVE TUBES

PRESENT CFA JAMMER TUBES EMPLOY HIGH COST, PRECISION ANODE CIRCUITS LIMITING UTILIZATION IN OPTIMIZED EW SYSTEMS. HIGH PERFORMANCE AND LOW WEIGHT AT MINIMUM COST IS REQUIRED TO FIELD DESIRED EW SYSTEMS.

H 82 5109
PRECISION LO-COST SURF ACOUSTIC WAVE DELAY LINES-UHF APPL

BROADBAND SAW DELAY LINES ARE REQUIRED FOR SIGNAL STORAGE DEVICE BANDWIDTH IS FIXED BY NEED TO STORE SIGNALS FOR A TEN MICROSECOND DURATION FOR SIGNALS RANGING OVER 500 MHZ BAND. DEVICE INSERTION LOSS AND MULTIPLE TRANSMIT REFLECTIONS MUST BE MINIMAL

H 82 5183
MMT FOR PRODUCTION OF LARGE DIAMETER SILICON F/LASER SEEKERS

ARMY AND DOD NEED 150 KG/YEAR OF 9-30000 OHM-CM SILICON FOR DETECTORS FOR LASER SEEKERS.A FOREIGN FIRM SUPPLIES MOST OF OUT NEEDS NOW BUT A LARGER CONUS SOURCE IS WANTED.HUGHES HAS A FLOAT ZONER FOR 1 IN RODS BUT 3 IN RODS SHOULD BE PROCESSED.

H 82 5193
PROCESS ADJUSTMENTS F/ENVIRON STRESS ON ELECT CIRCUIT METALS

METALS USED IN ELECTRONIC CIRCUITS ARE CORRODED BY THE ENVIRONMENT , SOME SUBSTITUTE MATERIALS ARE EXPENSIVE.

H 82 9905
LO-COST MONOLITHIC GALLIUM ARSENIDE MICROWAVE INTEG CIRCUITS

SIZE WEIGHT COST CONSTRAINTS LIMIT APPLICATION OF MICROWAVE ICS FOR MANY SYSTEMS APPLICATIONS. DRAMATIC REDUCTIONS PARTICULARLY COST ARE POTENTIALLY AVAILABLE ALONG WITH ORDER OF MAGNITUDE RELIABILITY IMPROVEMENT.

PROJECTS ADDED IN 1ST HALF, CY82
(CONTINUED)

AMMRC

M 82 6390
PROGRAM IMPLEMENTATION AND INFORMATION TRANSFER

THE SUCCESS OF THE MMT PROGRAM IS VERY DEPENDENT ON WHETHER THE RESULTS OF MMT WORK GET IMPLEMENTED. THIS IN TURN IS DEPENDENT ON WHETHER INFORMATION CONCERNING THE MMT TECHNOLOGY IS MADE AVAILABLE AND USED BY CONCERNED PARTIES.

AVRADCOM

1 82 7119
NON-DESTRUCTIVE EVAL TECH FOR COMPOSITE STRUCTURES

IMPLEMENTATION OF COMPOSITE STRUCTURES IN THE ARMY AIRCRAFT IS DEPENDANT UPON THE ABILITY TO DETECT AND EVALUATE DEFECTS.

1 82 7241
HOT ISOSTATIC PRESSED TITANIUM CASTINGS

THE CURRENT METHOD OF MANUFACTURING ROTOR HUBS RESULTS IN EXCESSIVE USE OF MATERIALS AND MACHINING. PROJECT FOR FABRICATION OF A COMPOSITE MAIN ROTOR HUB HAS BEEN CANCELLED. THE CURRENT FORGED HUB IS A LONG-LEAD TIME ITEM.

1 82 7286
HIGH QUALITY SUPERALLOY POWDER PROD F/TURBINE COMPONENTS

WITH THE COMMITMENT OF GAS TURBINE ENGINE MANUFACTURERS TO THE PRODUCTION OF ENGINE HARDWARE FROM SUPER-ALLOY POWDER THE NEED TO IMPROVE POWDER CLEANLINESS HAS BEEN RECOGNIZED.

1 82 7298
HIGH TEMPERATURE VACUUM CARBURIZING

GEAR CARBURIZING IS PRESENTLY CARRIED OUT WITH A RELATIVELY SLOW ENDOTHERMIC PROCESS, TYPICALLY AT 1700 DEG F, WHICH REQUIRES SURFACE PROTECTION AGAINST DECARBURIZING DURING THE CYCLE OR A POST HEAT TREAT REMOVAL OF THE DECARBURIZED LAYER.

1 82 7339
FILAMENT WOUND COMPOSITE FLEXBEAM TAIL ROTOR

FILAMENT WINDING FROM A SOLID FLEXBEAM TO AN OPEN SPAR SECTION, WINDING TO NET SHAPE, IMPROVED RESIN CONTROL AND TOLERANCE CONTROL MUST BE OBTAINED TO ENHANCE THE COST EFFECTIVENESS OF FLEXBEAM TAIL ROTERS.

PROJECTS ADDED IN 1ST HALF, CY82
(CONTINUED)

1 82 7340
COMPOSITE MAIN ROTOR BLADE

CURRENT PRODUCTION COMPOSITE BLADE PROGRAMS HAVE NOT BEEN ORIENTED TOWARD OPTIMIZING MANUFACTURING TECHNIQUES/PROCESSES RELATED TO BLADE CONFIGURATIONS,FABRICATION METHODS,AND IMPROVED STRUCTURAL RELIABILITY.

1 82 7342
PULTRUSION OF HONEYCOMB SANDWICH STRUCTURES

FABRICATION OF HONEYCOMB SANDWICH PANELS IS LABOR INTENSIVE AND FACE-TO-CORE BONDING OFTEN TAKES TWO CURE OPERATIONS. PULTRUSION CAN BE USED FOR CONTINUOUS PRODUCTION BUT COMMERCIAL PARAMETERS AND TOOLING ARE NOT SUITABLE FOR MILITARY USE.

1 82 7366
SPIRAL SELF-ACTING SEALS

LABYRINTH SEALS HAVE HIGH LEAKAGE RATES AND CAUSE SIGNIFICANT POWER LOSS. T700 DATA SHOW ENGINE POWER LOSSES OF 2-17 PCT DUE TO THE SEAL LEAKAGE. ACCURACY OF GROOVES AND PARALLELISM OF FACES NEED TO BE DEVELOPED.

1 82 7382
LOW-COST COMPOSITE MAIN ROTOR BLADE FOR THE UH-60A

MANUFACTURING TECHNOLOGY FOR COCURING GLASS AND GRAPHITE FILAMENT WOUND MAIN ROTOR BLADES HAS NOT BEEN ESTABLISHED FOR THE PRODUCTION ENVIRONMENT.

1 82 7389
PRODUCTION OF ALUMINUM AIRFRAME COMPONENTS

CURRENT METHODS OF MACHINING ALUMINIUM FORGINGS ARE EXPENSIVE AND REQUIRE AN EXCESSIVE NUMBER OF PARTS.

1 82 7415
MMT T700 BLISK REPAIR

BLISKS (INTEGRAL BLADES AND DISKS) ARE USED IN THE T700 ENGINE COMPRESSOR STAGES 1 THRU 5. DAMAGE TO ANY ONE BLADE DURING MANUFACTURING OR IN THE FIELD RESULTS IN SCRAPPING THE WHOLE BLISK.

1 82 7426
MMT-IPI PROGRAM-MARTIN MARIETTA TADS/PNVS

ELECTRONICS MANUFACTURING FACILITIES ARE IN NEED OF MODERNIZATION. AGING FACILITIES, TECHNOLOGY, AND METHODS HAVE RESULTED IN HIGH MANUFACTURING COSTS AND SLOW DELIVERIES.

CECOM

F 82 3073
TACTICAL GRAPHICS DISPLAY PANEL

FAB OF ELECTROLUMINESCENT DISPLAY PANELS REQUIRES REPRODUCIBLE DISPOSITIONS OF ELECTROLUMINESCENT PHOSPOR DIELECTRIC LAYER AND TRANSPARENT CONDUCTORS. INTERCONNECTION OF INTEGRATED DRIVER AND SHIFT REGISTER CIRCUITS IS NECESSARY.

F 82 3083
MM WAVE COMMUNICATIONS FRONT END MODULE (CFEM)

PRESENT METHODS OF MANUAL ASSY, TESTING, TRIMMING AND ADJUSTING OF SUBASSEMBLIES AND FINAL ASSY IS COSTLY. SUCH METHODS WILL NEGATIVELY EFFECT PROVISIONING AND MAINTENANCE BECAUSE OF PARTS INTERCHANGEABILITY PROBLEMS

MICOM

3 82 1050
LOW COST BRAIDED ROCKET MOTOR COMPONENTS

ROCKET MOTOR COSTS TO MEET DESIGN-TO-COST PRODUCTION GOALS HAVE DICTATED REEVALUATION OF MATERIALS AND PROCESSES. MISSILE CASES COMPRISE 1/2 OF PROPULSION SYSTEM COST. EMPHASIS MUST BE PLACED ON ESTABLISHING NEW COMPONENT MFG PROCESSES.

3 82 1060
ELECTRICAL TEST AND SCREENING OF CHIPS

ONE UNRELIABLE CHIP IN MILITARY ELECTRONIC ASSEMBLIES CAUSES REJECTION OR DESTRUCTION OF THE ENTIRE PACKAGE. PRESENT MEANS FOR DETERMINING CHIP RELIABILITY OR INTEGRITY IS A PROBE TESTING TECHNIQUE WHICH IS TIME CONSUMING AND DESTRUCTIVE.

PROJECTS ADDED IN 1ST HALF, CY82
(CONTINUED)

3 82 1073
REAL TIME ULTRASONIC IMAGING

EXISTING ACOUSTICAL HOLOGRAPHY INSP. SYS PRODUCES UNSATISFACTORY VIDEO IMAGES DUE TO POOR RESOLUTION, SIGNAL NOISE AND LOW SPATIAL FREQ. ABERRATIONS.

3 82 1076
AUTOMATIC RECOGNITION OF CHIPS

INABILITY TO RECOGNIZE THE TOPOGRAPHY OF MORE THAN SIX TO SEVEN CHIPS ON A HYBRID SUBSTRATE. MILITARY HYBRID CIRCUITS CARRY TEN TO FIFTEEN TYPE ACTIVE COMPONENTS.

3 82 1086
COBALT REPLACEMENT IN MARAGING STEEL F/ROCKET MOTOR COMPONTS

CURRENT HIGH PERFORMANCE ROCKET MOTOR COMPONENTS UTILIZE MARAGING STEELS IN LARGE QUANTITIES. COBALT, ONE OF THE KEY INGREDIENTS COMES FROM POLITICALLY SENSITIVE AREAS AND IS BECOMING DIFFICULT TO OBTAIN.

3 82 1088
OPTIMIZED MANDREL FAB + UTILIZATION F/COMPOSITE MOTOR CASES

OPTIMIZING PRODUCTION PROCEDURES TO OBTAIN LOWEST UNIT COST WHILE MAINTAINING RELIABILITY IN FABRICATION.

3 82 1108
RF AND LASER HARDENING OF MISSILE DOMES

CURRENT RADOMES ARE SUSCEPTIBLE TO DAMAGE BY LASER ENERGY AND ALSO PERMIT LASER AND RADIO FREQUENCY ENERGY TO DAMAGE THE DETECTOR.

3 82 1109
ROBOTIZED WIRE HARNESS ASSEMBLY SYSTEM

WIRE HARNESS FABRICATION IS A LABOR INTENSIVE PROCESS. APPROXIMATELY 50% OF HARNESS FABRICATION TIME IS DEVOTED TO HANDLING, SORTING, AND IDENTIFICATION. HARNESS ASSEMBLY IS DONE BY HAND. PROCEDURES USE SEVERAL WORKSTATIONS AND REPEATED HANDLING.

3 82 1121
MISSILE MANUFACTURING PRODUCTIVITY IMPROVED PROGRAM

THE HELLFIRE MISSILE WILL BE BUILT IN FACILITIES THAT ARE NOT MODERN, WITH PROCESSES THAT ARE NOT OPTIMUM AND WITH EQUIPMENT THAT IS NOT UPDATED. A STUDY OF METHODS, EQUIPMENT AND FACILITIES IS NEEDED WITH A VIEW TOWARD MODERNIZATION.

PROJECTS ADDED IN 1ST HALF, CY82
(CONTINUED)

3 82 1126
WOUND ELASTOMER INSULATOR PROCESS

LARGE TACTICAL ROCKET MOTOR INSULATORS ARE COSTLY, LACK DESIGN CHANGE FLEXIBILITY AND SUFFER LONG LEAD TIMES. CURRENT PROCESSES INVOLVE BONDING TOGETHER FINISHED SECTIONS OR LAY-UP OF GREEN STOCK FOLLOWED BY STITCHING, CURING AND FINISHING TO SIZE.

3 82 3411
NON-PLANAR PRINTED CIRCUIT BOARDS

USE OF FLAT CIRCUIT BOARDS RESULTS IN COMPLEX AND EXPENSIVE INTERCONNECTIONS WITH LOWERED RELIABILITY.

3 82 3423
LOW COST/HIGH PERFORMANCE CARBON-CARBON NOZZLES

ROCKET SYSTEMS USING HIGH PERFORMANCE CARBON/CARBON OR PYROLYTIC GRAPHITE NOZZLES INCUR HIGH COMPONENT COST.

TACOM

T 82 4575
LASER WELDING TECHNIQUES FOR MILITARY VEHICLES

NO MANUFACTURING BASELINE EXISTS FOR WELDING HIGH STRENGTH MATERIAL BY ADVANCED HIGH-SPEED WELDING TECHNIQUES.

T 82 5005
COMPUTER AIDED DESIGN FOR COLD FORGED GEARS (PHASE I)

MACHINING AND OTHER PROCESSES ADD COST TO THE FINISHED COMPONENT.

T 82 5053
FABRICATION TECHNIQUES FOR HIGH STRENGTH STRUC CERAMICS

FABRICATION OF HIGH EFFICIENCY, HIGH TEMPERATURE DIESEL ENGINES REQUIRES ADVANCED MATERIALS. ENGINES FABRICATED WITH CERAMIC COMPONENTS HAVE BEEN DEMONSTRATED IN R+D BUT MANUFACTURING METHODS FOR SERIAL PRODUCTION COMPONENTS ARE LACKING.

T 82 5054
LASER SURFACE HARDENED COMBAT VEHICLE COMPONENTS

PRESENT METHODS OF SURFACE HARDENING INPUTS HEAT OVER LARGE SURFACE AREA.

PROJECTS ADDED IN 1ST HALF, CY82
(CONTINUED)

T 82 5067
PLASTIC BATTERY BOX

METALLIC BATTERY BOXES ARE SUBJECT TO CORROSION, THEREBY, DAMAGING THE VEHICLE.

T 82 5083
UPSCALING OF ADVANCED PM PROCESSES PHASE 4

POWDER METALS PROCESSES HAVE NOT BEEN UTILIZED IN LARGE COMPONENTS

T 82 6025
LASER MANUFACTURING

THE FEASIBILITY OF USING LASERS FOR METAL PROCESSING IS ESTABLISHED. IMPLEMENTATION IS IMPEDED BY THE COST OF FACILITIZATION.

T 82 6038
HIGH DEPOSITION WELDING

WELDING IS LABOR INTENSIVE AND HIGH COST IT IS A MAJOR COST DRIVER IN ARMOR VEHICLE MANUFACTURE.

T 82 6054
ADVANCED METROLOGY SYSTEMS INTEGRATION

THE METROLOGY METHODS USED IN MILITARY VEHICLE MANUFACTURE, IN GENERAL, EMPLOYS CONTACT GAUGES MANUALLY EMPLOYED. THIS REPRESENTS A SUBSTANTIAL PART OF THE COST OF OUR MILITARY VEHICLES.

T 82 6067
FRAME WELDING FIXTURES

THE WELDING OF SPECIALIZED TRUCK AND TRAILER FRAMES BY THE MANUAL METHOD IS TIME CONSUMING AND COSTLY.

T 82 6078
AUTO DYNAMOMETER CONTROL F/STANDARDIZATION INSP TESTING

CURRENTLY, ENGINE OVERHAUL REQUIRES APPROXIMATELY ONE THIRD OF THE ACTUAL OVERHAUL COST BECAUSE THE ACCEPTABILITY CRITERIA SPECIFIES A 4 HOUR DYNAMOMETER TEST FOR REBUILT ENGINES.

T 82 6079
AGT-1500 ENGINE

THE NEED TO REDUCE COST AND IMPROVE PERFORMANCE OF THE AGT-1500 TURBINE ENGINE REQUIRES NEWER AND MORE INNOVATIVE MANUFACTURING TECHNOLOGY.

T 82 6090
TOOELE ARMY DEPOT PRODUCTIVITY IMPROVEMENT PROGRAM

THE AGING FACILITY AND OUTDATED TECHNIQUES HAVE RESULTED IN AN INEFFICIENT OPERATION AND SLOW DELIVERIES.

T 82 6107
IMPROVED MBT TRACK

INCREASED VEHICLE PERFORMANCE REQUIREMENTS NECESSITATE HIGHER PERFORMANCE TRACKS THAN THOSE AVAILABLE TODAY. TO IMPLEMENT NEW METAL COMPOSITE, HIGHER STRENGTH FERROUS ALLOYS, AND TITANIUM NEW MANUFACTURING PROCESSES MUST BE ESTABLISHED.

ARRADCOM-ARRCOM (AMMO)

5 82 0904
CHEMICAL REMOTE SENSING SYSTEMS

FIRST GENERATION CHEMICAL REMOTE SENSING SYSTEMS HAVE HIGH PRIORITY. THEY REQUIRE COMPLEX, UNIQUE, SOPHISTICATED COMPONENTRY WHICH IS NOT AVAILABLE TOO MEET PRODUCTION REQUIREMENTS. COMPONENTS WILL BE HAND FABRICATED FOR INITIAL DEVELOPMENT.

5 82 0905
MANUFACTURE OF IMPREGNATED CHARCOAL-WHETLERITE

ONLY ONE COMPANY (CALGON, INC) SUPPLIES WHETLERIZED CHARCOAL AND CONSIDERS ITS PROCESS PROPRIETARY. THIS MATERIAL IS VITAL FOR NEW PROTECTIVE MASKS. A PROCESS MUST BE DEVELOPED TO DIVERSIFY PRODUCTION BASE AND REDUCE COST THROUGH COMPETITION.

5 82 0909
AUTOMATED AGENT PERMEATION TESTER

MMT PROJECT 5 75 1314 DEVELOPED INSTRUMENTATION FOR AN IMPROVED PERMEATION TESTER. HOWEVER BECAUSE OF COST ($5,000 PER TEST UNIT) AN ANTIQUATED METHOD USING FRUIT FLIES IS STILL USED FOR MOST OF THESE TESTS.

PROJECTS ADDED IN 1ST HALF, CY82
(CONTINUED)

5 82 0913
SPIN COATING OF DECON AGENT CONTAINERS

CURRENT METALLIC DECON AGENT CONTAINERS CORRODE BEFORE THE REQUIRED SHELF LIFE OF THE AGENTS IS REACHED. ALTERNATIVE CONTAINERS ARE NOT AVAILABLE, BUT PLASTIC LINERS HAVE BEEN SHOWN TO EXTEND THE LIFE OF CURRENT CONTAINERS SIGNIFICANTLY.

5 82 1019
MMT PENTABORANE PROCESS ENGINEERING

THE DIBORANE (B2) USED IN THE MANUFACTURE OF DECABORANE (B10) IS A COST DRIVER.

5 82 1500
EVAL INDUST CAPABILITY F/LOAD COMMERCIAL EXPL-HIGH USE MUNIT

DURING MOBILIZATION THERE CAN BE A SHORT FALL IN AVAILABILITY OF MILITARY EXPLOSIVES. INDUSTRY HAS MANY SAFE EXPLOSIVE FORMULATIONS. THEIR APPLICABILITY TO MILITARY USAGE IS UNKNOWN. INDUSTRIAL CAPABILITY FOR MILITARY FILLING THESE EXPL IS UNKNOWN.

5 82 1701
BULK TRANSFER OF CHEMICAL MATERIALS

CURRENT TECHNIQUE FOR RETRIEVAL WEIGHING AND TRANSPORTING PYROTECHNIC CHEMICAL CONSTITUENTS ARE ACCOMPLISHED BY LABOR INTENSIVE OPERATION AND ARE UNSAFE.

5 82 1709
IMPROVED PROCESSING OF PYROTECHNIC MIXTURES

ACCIDENTAL INVITATION OF MIXTURES DURING PROCESSING IS A SERIOUS PERSONNEL SAFETY PROBLEM DUE TO EXPOSURE TO FIRE AND EXPLOSIVE HAZARDS.

5 82 1711
RED PHOSPHORUS POLLUTION ABATEMENT EVALUATIONS

THE NEW IMPROVED WHITE SMOKE FORMULATION CONTAINS 51 PCT RED PHOSPHORUS WHICH IS NOT TREATABLE IN PBAS CENTRAL WASTE TREATMENT FACILITY. ALSO OTHER CHEMICALS IN THE NEW RP FORMULATION HAVE NOT BEEN EVALUATED FOR COMPATICILITY WITH EXISTING FACILITY.

PROJECTS ADDED IN 1ST HALF, CY82
(CONTINUED)

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

SIGNIFICANT IMPROVEMENT OF MELT POUR FACILITIES IS NOT BEING REALIZED BECAUSE DESIGN APPROACHES FOR COST-EFFECTIVE INTERMEDIATE UPGRADING ARE NOT AVAILABLE.

5 82 4145
CONTROL DRYING AUTO SB + BALL PROPELLANT MANUFACTURING

OFF-LINE ANALYSIS FOR MOISTURE AND VOLATILES MAKES IT DIFFICULT TO CONTROL A CONTINUOUS DRYING OPERATION SINCE THE TIME REQUIRED FOR ANALYSIS IS LONG COMPARED TO THE RESIDENCE TIME FOR THE PROPELLANT IN A CONTINUOUS DRYER.

5 82 4161
PRODUCTION TECH FOR IMPROVED SMOKE MUNITION (81 MM)

A REQUIREMENT EXISTS FOR APPLYING THE IMPROVED SMOKE CONCEPT TO FILLING THE WARHEAD FOR THE 81 MM MORTAR.

5 82 4231
IN-PLANT REUSE OF POLLUTION ABATED WATERS

MORE STRINGENT STANDARDS FOR MILITARY UNIQUE POLLUTANTS. 1985 GOAL OF ZERO DISCHARGE. EXPENSE OF TREATING POLLUTION. CONTINUE THIS REUSE OF TREATED WATER IN OTHER PROCESSES.

5 82 4267
CONTINUOUS PROCESS FOR GRANULAR COMP B

THE BATCHWISE COOLING PROCESS OF RDX/TNT/WAX SLURRY ALLOWS ONLY A LIMITED CONTROL OF GRANULATION.

5 82 4273
AUTOMATED PRODUCTION OF STICK PROPELLANT

PRESENT BATCH TECHNIQUES FOR STICK PROPELLANT MFG INVOLVE MUCH HAND LABOR THEREBY RESULTING IN LIMITED PRODUCTION CAPACITY, HIGH COST, AND HAZARD EXPOSURE.

5 82 4285
TNT EQUIVALENCY TESTING FOR SAFETY ENGINEERING

PRESENT CRITERIA FOR BLAST RESISTANT STRUCTURES IS IN TERMS OF SURFACE BURST OF HEMISPHERICAL TNT. IN STRUCTURAL DESIGN, TO PROTECT FROM THE OUTPUT OF OTHER ENEGETICS, THE DESIGNERS MUST HAVE DATA PERTINENT TO THE MATERIAL IN QUESTION.

PROJECTS ADDED IN 1ST HALF, CY82
(CONTINUED)

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

EFFLUENT FROM AMONIA RECOVERY COLUMN CONTAINS SIGNIFICANT AMOUNTS OF DMN. DMN IS ONE OF THE EPA CONSENT DECREE COMPOUNDS FOR WHICH WATER QUALITY CRITERIA MUST BE PROVIDED. EPA INSISTS ON LEVELS BELOW 0.3 PPB.

5 82 4309
AMMUNITION FOR THE 120MM TANK MAIN ARMAMENT

MASS PRODUCTION IN THE US OF W. GERMAN 120MM TANK AMMUNITION POSES PROBLEMS IN FOUR FUNCTIONAL AREAS - METAL PARTS, PROPELLANT, FUZE, AND LAP.

5 82 4312
ANTI-ARMOR CLUSTER MUNITION PRODUCTION EXPLOSIVE INVECTION

MELT LOADING OF SMALL EXPLOSIVE ITEMS NORMALLY REQUIRES LARGE SURPLUSES OF MOLTEN EXPLOSIVE TO OBTAIN GOOD FILLING CHAR. SURPLUS RISER MATERIAL CAN BE TWICE THE AMOUNT LOADED INTO END ITEMS. VERY SMALL ITEMS CANNOT BE EFFECTIVELY MELT LOADED AT ALL.

5 82 4341
IMPROVED NITROCELLULOSE PURIFICATION PROCESS

EXISTING NITROCELLULOSE PURIFICATION FACILITIES WERE BUILT IN EARLY 1940'S AND ARE IN DETERIORATED CONDITION. THE PROCESS USED DATES BACK TO WW1 AND CONSUMES LARGE QUANTITIES OF ENERGY AND WATER.

5 82 4357
NONDESTRUCTIVE TEST EQUIP F/LARGE CALIBER MUNITIONS F/M483A1

THERE IS NO NONDESTRUCT INSP METHOD WITH FLOW DETECTION RELIABILITY ESTAB F/M483. A MAGNETIC FLUX LEAKAGE DEVICE PURCHASED F/LOUISIANA AAP DEMONSTRATED FEAS BUT COST OF OPERATION MUST BE DETERMINED.

5 82 4359
IMPROVED PROCESS TECHNOLOGY FOR INSPECTION OF CLOTH

REDUCE TIME AND COST OF VISUAL INSPECTION OF CLOTH USED IN PROPELLANT BAGS, FLASH REDUCERS, ADDITIVE LINERS AND IGNITER PADS.

PROJECTS ADDED IN 1ST HALF, CY82
(CONTINUED)

5 82 4364
ON-LINE BIO SENSORS TO MONITOR MIXED WASTE STREAMS

PL92-500 REQUIRES THAT WASTE DISCHARGES BE MONITORED TO ASSURE THAT AQUATIC LIFE ARE PROTECTED FROM TOXIC/HAZARDOUS SUBSTANCES. IN ADDITION, BIOLOGICAL MONITORING WILL SOON BE REQUIRED IN SOME NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM PERMITS.

5 82 4406
IMPROVING THE YIELD OF HMX DURING RDX NITROLYSIS

THE CURRENT MANUFACTURING PROCESS FOR HMX IS INEFFICIENT IN THAT YIELDS OBTAINED ARE STILL LESS THAN THEORETICAL.

5 82 4417
PROCESS TECHNOLOGY FOR BLENDING RP SMOKE COMPOSITIONS

SMOKE PRODUCED FROM HC HAS LED TO SOME INJURIES AND IS SUSPECTED OF BEING A CARCINOGEN. R+D WORK IS BEING DONE TO DEVELOP A RED PHOSPHORUS MIX TO REPLACE HC. HOWEVER NO LARGE SCALE RP PREPARATION FACILITIES CURRENTLY EXIST.

5 82 4489
ADVANCED POLLUTION ABATEMENT TECHNOLOGY F/DARCOM FACILITIES

MUCH WORK HAS BEEN DONE IN THE PROPELLANTS AND EXPLOSIVES PLANTS TO MEET THE POLLUTION ABATEMENT STANDARDS. HOWEVER, ALL OF THE GOALS HAVE NOT YET BEEN MET.

5 82 4503
NEW PROCESS FOR SAWS TRACER AMMUNITION

THERE IS NO U.S. CAPABILITY FOR MANUFACTURING THE PROPOSED NATO 5.56MM TRACER BULLET IN THE QUANTITIES REQUIRED FOR THE SAW SYSTEM.

5 82 4506
5.56MM CARTRIDGE LINKING SYSTEM

THERE ARE CURRENTLY NO LINKING MACHINES AVAILABLE FOR LINKING PRODUCTION QUANTITIES OF 5.56MM AMMUNITION. THE MANUAL AND SEMIMANUAL METHODS AVAILABLE ARE SLOW AND COSTLY.

5 82 4508
PROCESS IMPROVEMENT OF PRESSABLE RDX COMPOSITIONS

HSAAP IS HINDERED WITH PROCESS BOTTLENECKS IN MANUFACTURING A COMPS. PROCESSING USES JOB SHOP TECHNIQUES AND IS LABOR INTENSIVE. OVERALL PRODUCTION FACILITIES ARE SEVERELY CONSTRAINED AND OPERATE UNDER SAFETY WAIVERS DUE TO OUTDATED TECHNOLOGY USED.

PROJECTS ADDED IN 1ST HALF, CY82
(CONTINUED)

5 82 4511
DISPOSAL OF FINAL SLUDGE FROM ACID RECOVERY OPERATIONS

RECOVERY OF SODIUM NITRATE AFTER HMX/RDX PROD AT HSAAP IS COSTLY AND CAUSES POLLUTION. SODIUM NITRATE RESULTS BECAUSE SODIUM HYDROXIDE IS USED IN THE ACID PLANT TO NEUTRALIZE RESIDUAL NITRIC ACID AND EXPLOSIVES IN THE SPENT ACID.

5 82 4529
MANUFACTURE OF PRECISION CONES FOR HEAT PROJECTILES

THE HEAT PROJECTILE LINER MUST BE HELD TO .003' IN ANY TRANSVERSE PLANE AND WITHIN .006' ALONG ITS LENGTH. THE TOLERANCES ARE AT THE EXTREME LIMIT OF ACCURACY. THE XM815 LINER REQUIRES PRECISION AN ORDER OF MAGNITUDE GREATER (.0005').

5 82 4534
XM855 BULLET CONVERSION OF SCAMP EQUIPMENT

AN AMERICANIZED VERSION OF BELGIUM SS-109 WILL BE USED IN THE SAW SYSTEM. THIS EFFORT IS DIRECTED TOWARD DEVELOPMENT OF CONVENTIONAL PROCESSES TO MASS PRODUCE SAWS AMMUNITION ON SCAMP EQUIPMENT.

5 82 4548
PYRO SAFETY ENHANCEMENT

PYROTECHNIC MIXING REQUIRES INCREASED PERSONNEL SAFETY FEATURES.

5 82 4551
MFG PROCESS PARAMETER FOR XM855/856 AMMO

THE ARMY IS DEVELOPING A PRODUCTION BASE FOR THE NATO 5.56MM AMMUNITION. HOWEVER, THERE IS NO PROCESS UNDER WHICH U.S. PRODUCED ROUNDS CAN BE PROVEN OUT FOR ACCEPTABILITY OF PERFORMANCE OR THE SUITABILITY OF THE MANUFACTURING TOOLING AND PROCESSES.

5 82 4553
PROCESS PARAMETERS FOR COLD DRAWING ALLOY STEELS

THE USE OF MORE HIGHLY ALLOYED STEELS TO MEET PROPERTY REQUIREMENTS MAY NEGATE USE OF COLD DRAW PROCESS, WITH RESULTANT COST INCREASES.

5 82 4557
ARBAT

THE ENGINEERING PROTOTYPE ARBAT SYSTEM DOES NOT HAVE THE CAPABILITY TO SUPPORT THE PRODUCTION ACCEPTANCE TESTING OF FIELD AMMUNITION?S ACCURACY, RANGE AND CARGO-CARRY ROUNDS. THIS IS DUE TO OUT-DATED UNSTRUMENTATION TECHNOLOGY.

5 82 4558
THERMAL DEHYDRATION PROCESS SAFETY AND OPERATIONAL REDESIGN

THERMAL DEHYS WERE EVALUATED UNDER 2 MMT PROGRAMS, ONE FOR CASBL AND ONE FOR CAMBL. A THIRD THERMAL DEHY WAS CONSTRUCTED FOR C-LINE, AND DURING PROVE-OUT, AN INCIDENT OCCURRED. THE EXACT SOURCE OF INITIATION WAS NOT DETERMINED BY INVESTIGATION BOARD.

5 82 4560
MOD TAPE-STIFFENER ASSEMBLY PROCESS - M42/M46 GRENADES

THE PURCHASED TAPE STIFFENERS ARE RECEIVED IN BULK SOME ARE TANGLED AND ACQUIRE A -SET-. THIS INTENSIFIES THE LABOR REQUIRED AS THEY HAVE TO BE MANUALLY SORTED BEFORE PLACING ON THE GRENADE.

5 82 4563
XM803 METAL PARTS PRODUCTIVITY

CURRENT PRODUCTION PROCESSES ARE INCAPABLE OF MEETING TIME CYCLES AND QUANTITIES OF B/U PROJECTILES AS PLANNED IN FACILITIZATION STUDIES.

5 82 6599
ELECTRO OPTICAL INSP OF ARTY PROJ OPT CAVITY

INSPECTION OF THE QUALITY OF THE INSIDE SURFACE OF 155 AND 175MM PROJECTILESTHROUGH THE 2? FUZE HOLE IS DIFFICULT, SLOW, AND NOT ALWAYS ACCURATE.

ARRADCOM-ARRCOM (WPNS)

6 82 7707
AUTOMATED PROCESS CONTROL FOR MACHINING

MACHINING OPERATIONS ARE SELECTED, PARAMETERS ARE SET, AND STANDARDS ARE ESTABLISHED EMPIRICALLY WITH LITTLE OR NO ENGINEERING ANALYSES, CONTROL OR FEEDBACK.

PROJECTS ADDED IN 1ST HALF, CY82
(CONTINUED)

6 82 7940
SYNERGISTIC PLATINGS WITH INFUSED LUBRICANTS

LOW FRICTION, WEAR RESISTANT SURFACES ARE NEEDED FOR COMPONENTS IN SLIDING CONTACT.

6 82 7966
MANUFACTURE OF TRITIUM POWERED RADIOLUMINOUS LAMPS

CURRENT METHODS OF CONTROLLING MOISTURE CONTENT, SEALING AND ALUMINIZING TRITIUM LAMPS ARE BELIEVED RESPONSIBLE FOR THE PRESENT LACK OF DEPENDABILITY.

6 82 7985
SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY

GUN BARREL MFG PROCEDURES REFLECT ANTIQUATED TECHNOLOGY AND RELY ON MASS REMOVAL OF MATERIAL BY CONVENTIONAL MACHINING METHODS. CURRENT EQUIP REPRESENTS 1940-50 TECHNOLOGY. NEW MATERIALS COMPOUND THE PROBLEM.

6 82 8030
MANUFACTURING GUIDE FOR ELASTOMERIC SEALS

CONSTANT PROBLEMS IN THE PROCUREMENT OF SATISFACTORY SEALS FOR WEAPONS SYSTEMS, I.E., M140, M127, ETC., ARE EXPERIENCED WITH RESULTANT SOLE SOURCE PURCHASES.

6 82 8050
RECYCLING SPENT GUN TUBES BY ESR MELTING

BECAUSE OF ANTICIPATED SHORTAGES IN THE AVAILABILITY OF CRITICAL ALLOYS, IT IS ADVANTAGEOUS TO UTILIZE SPENT GUN TUBES.

6 82 8080
HIGH SPEED FABRICATION OF ASPHERIC OPTICAL SURFACES

THE BULK OF THE COST OF OPTICS FOR FIRE CONTROL SYSTEMS LIES IN THE FIGURING AND POLISHING STAGE.

6 82 8103
HIGH VELOCITY MACHINING

SPEED OF MACHINING CANNON TUBES IS LIMITED WITH CURRENT EQUIPMENT.

PROJECTS ADDED IN 1ST HALF, CY82
(CONTINUED)

6 82 8108
PRODUCTION/IN-PROCESS INSPECTION OF OPTICAL BONDS

THE BOND BETWEEN OPTICAL ELEMENTS AND THEIR STRUCTURAL SUPPORTS MUST BE FREE OF VOIDS, OF UNIFORM THICKNESS AND OF SUFFICIENT STRENGTH TO HOLD FAST AND MAINTAIN ALIGNMENT UNDER SEVERE SHOCK.

6 82 8113
ESTABLISHMENT OF ION PLATING PROCESS FOR ARMAMENT PARTS

DOD IS REPLACING TOXIC CADMIUM WHEREVER POSSIBLE. CURRENTLY, CADMIUM PLATING IS SPECIFIED FOR APPROXIMATELY 3000 ARMAMENT COMPONENTS. EQUALLY IMPORTANT IS THE ELIMINATION OF THE HYDROGEN EMBRITTLEMENT OF STEEL CAUSED BY ALL ELECTROPLATING PROCESSES.

6 82 8135
IN-PROCESS CONTROL OF MACHINING

DURING MFG. OF RECOIL CONTROL ORIFICES, ERRORS ARE INTRODUCED WHICH REQUIRE REWORK. CORRECTIVE ACTIONS INVOLVE COSTLY DETAILED INSPECTION AND REANALYSIS WITH COMPUTERIZED DESIGN PROGRAMS TO DEFINE POSSIBLE REWORK ALTERNATIVES.

6 82 8165
STANDARDS FOR DIAMOND TURNED OPTICAL PARTS

EXISTING SURFACE FINISH STANDARDS AND TESTING EQUIPMENT AND TECHNIQUES DO NOT COVER THE RANGE OF DIAMOND TURNED OPTICAL SURFACES FOR A PRODUCTION ENVIRONMENT (1/2 TO 1 MICROINCH).

6 82 8231
IMPROVED CASTING TECHNOLOGY

EXCESSIVE METAL MUST BE MELTED IN CASTING OPERATIONS. THE YIELD RATIO OF SOME CASTS IS TOO LOW AND THE GATES AND RISERS TOO DIFFICULT TO CUT OFF. MATERIAL PROPERTIES OFTEN VARY WITH CASTING PROCEDURES.

6 82 8238
BORING BREECH RING LUGS

PRESENT METHODS OF PRODUCING THE VARIOUS HOLES ON BREECH RINGS ARE TREPANNING, TWIST DRILLING, GUN DRILLING, AND FINISH BORING. PRODUCTION OF THESE HOLES IS A TIME CONSUMING AND COSTLY OPERATION.

PROJECTS ADDED IN 1ST HALF, CY82
(CONTINUED)

6 82 8241
COMPUTER DIAGNOTSTICS + CONTROL FOR BORE GUIDANCE

THE BORE GUIDANCE SYSTEM CONSISTS OF MANY INTERDEPENDENT ELEMENTS MAKING IT DIFFICULT AND TIME CONSUMING TO DIAGNOSE PROBLEMS. ALSO, TUBES WITH LARGE WALL VARIATIONS GREATLY INCREASE THE DIFFICULTY IN MAINTAINING CONTROL.

6 82 8242
DUAL PRESS STRAIGHTENING GUN TUBES

ABOUT 20 PCT OF GUN TUBE FORGINGS REQUIRE STRAIGHTENING AT TEMPERATURES ABOVE 600 DEG F BECAUSE THE CRITERIA FOR 'COLD' STRAIGHTENING ARE RELATIVELY TIGHT. SINGLE LOADING INDUCES STRESSES THAT CREATE MACHINING PROBLEMS.

6 82 8243
COMPUTER CONTROL FOR ELECTRODEPOSITION SYSTEMS

CHROMIUM PLATING OF CANNON BARRELS IS A COMPLICATED, MULTI-STAGE PROCESS WHICH IS MANUALLY CONTROLLED. MANUAL MANIPULATION OF VALVE STRESS, SWITCHES, ETC., IS SLOW, SOMETIMES HAZARDOUS, AND CAN RESULTIN DEGRADED DEPOSIT QUALITY DUE TO HUMAN ERROR.

6 82 8244
OPTIMIZE THE HEAT TREATMENT OF ROTARY FORGE TUBES

ROTARY FORGED TUBES ARE CURRENTLY HEAT TREATED BASED ON HISTORICAL DATA. IF THE INITIAL CYCLE DOES NOT RESULT IN ADEQUATE PROPERTIES ADDITIONAL CYCLES ARE PERFORMED UNTIL ACCEPTABLE PROPERTIES ARE ATTAINED.

6 82 8245
APPLICATION OF EROSION RESISTANT LC CHROMIUM PLATE

HIGH CONCENTRATION CHROMIUM COATING IS CURRENTLY USED TO RESIST EROSION IN GUN BORES. INHERENT PROPERTIES MAKE THE COATING SUSCEPTABLE TO SHEARING AND FLAKING.

6 82 8246
GAS CHECK SEAT FINISHING

MACHINING OF GAS CHECK SEATS IS A PRECISION PROCESS INVOLVING GRINDING AND LAPPING OF A CRITICAL AREA OF THE CANNON WHICH RESULTS IN 30 TO 50 PERCENT REWORK TO PASS CONTACT GAGE REQUIREMENTS.

PROJECTS ADDED IN 1ST HALF, CY82
(CONTINUED)

6 82 8248
APPLICATION OF HIGH-RATE CUTTING TOOLS

APPLICATION OF NEW HIGH-RATE CUTTING TOOLS LAG DUE TO LACK OF TESTING, ANALYSES AND ENGINEERED APLICATIONS. MANUFACTURERS PROVIDE INSUFFICIENT DATA FOR EFFICIENT APPLICATIONS OF CERAMICS, OXIDES, NITRIDES, BORIDES, AND DIAMONDS.

6 82 8251
IMPROVED MELTING PRACTICES

THERE IS A HIGH REJECTION RATE FOR CASTING POURED AT RIA BECAUSE MODERN TECHNIQUES ARE NOT USED TO MEASURE AND CONTROL PROCESS PARAMETERS AND POROSITY.

6 82 8252
INDUCTION HEATING OF A VARYING DIAMETER PREFORM

TO FORGE A PREFORM REQUIRES HEATING IN THE INDUCTION SYSTEM. THE PRESENT SYS HAS 4 LINES WHICH OSCILLATE THE PREFORM THRU THE INDUCTION COIL CONTROLLED BY A NONVARYING POWER SUPPLY WHICH PRECLUDES PRECISE HEATING OF A VARYING DIAMETER PREFORM.

6 82 8253
MACHINE TOOL DYNAMIC MEASUREMENTS AND DIAGNOSTICS

VIBRATIONS IN MACHINE TOOLS CAN CAUSE POOR MACHINING OPERATIONS AND BREAKDOWNS. IT IS ESSENTIAL TO RAPIDLY DETERMINE BOTH THE CAUSE OF THE CHATTER AND MACHINE TOOL PROBLEMS BEFORE THEY CAUSE A FAILURE.

6 82 8259
IMP MFG PROCESS FOR FIRE CONTROL REGISTERS

DIFFICULTY IN MEASURING AND CORRECTLY MARKING THE FIRE CONTROL REGISTER, ON VARIOUS MID CALIBER WEAPON SYSTEMS, INDICATING COMPENSATION FOR MANUFACTURING VARIANCE DUE TO TOLERANCE ALLOWANCES.

6 82 8262
PRODUCTION METHODS FOR OPTICAL WAVEGUIDES

MANUFACTURE OF INTEGRATED WAVEGUIDES IS COMPLICATED AND TIME CONSUMING INVOLVING PROCESSES RELATED TO METHODS USED TO MAKE SEMICONDUCTOR INTEGRATED CIRCUITS.

PROJECTS ADDED IN 1ST HALF, CY82
(CONTINUED)

6 82 8263
PRODUCTION/IN-PROCESS INSPECTION OF LRF

CURRENT PRODUCTION/IN-PROCESS INSP. TECHNIQUES ARE REJECTING GOOD LASER RANGE FINDERS. THE REJECTION OF GOOD LRF IS ATTRIBUTED TO INACCURACIES OF RADIOMETERS AND INCANDESCENT LIGHT SOURCES USED TO MEASURE THE LASER POWER OUTPUT AND SENSITIVITY.

6 82 8267
STRESS PEENING OF HELICAL COMPRESSION SPRINGS

THE FATIGUE LIFE AND RELIABILITY OF CRITICAL SPRINGS IN SOME WEAPON SYSTEMS IS LESS THAN DESIRABLE.

6 82 8370
AUTOMATIC INSP AND PROC CONTROL OF WPNS PARTS MFG

FOR BARREL MFG, CURRENT HAND GAGED INSPECTION IS A MAJOR TIME FACTOR. BARREL STRAIGHTENING IS ALSO DONE MANUALLY AS MANY AS 13 TIMES DURING THE MFG CYCLE. NEW DNC EQUIP BEING PROCURED VIA PIF 68X7986 REQUIRES CENTRAL CONTROL.

TOTAL PROJECTS ADDED IN 1ST HALF, CY82 127

MMT PROGRAM

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY82

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY82

DARCOM

4 77 5052
ARMY ENGINEERING DESIGN HANDBOOK FOR PRODUCTION SUPPORT

SEVERAL BOOKS HAVE BEEN COMPLETED IN THE 706 SERIES WITH FINAL IMPLEMENTATION TO BE PUBLISHED AS DARCOM PAMPHLETS.

ERADCOM

H 78 3511
FAB OF SUBMICRON PHOTOMASKS FOR INTEGRATED CIRCUIT DEVICES

OPTIMETRICS BUILT A DIRECT-STEP-ON-WAFER EXPOSURE MACHINE THAT PROVIDES 1.25 MICROMETER FEATURE SIZES OVER A 1 CM AREA. STEPPER IS 10X FASTER THAN ELECTRON BEAM WRITER. TWO VHSIC FIRMS MAY USE IT TO EXPOSE CHIPS FOR HDL. THE EQUIPMENT WAS PUBLICIZED.

H 79 9783
PRODUCTION OF HIGH RESISTIVITY SILICON MATERIAL

HUGHES COMPLETED INSTALLATION AND CHECKOUT OF A 1 INCH ZONE REFINER BUILT BY WESTECH INDUSTRIES. FOLLOW-ON WORK LED TO 2 INCH CAPABILITY. PROJECT H825183 IS FOR 3 INCH CAPABILITY. 1 INCH SILICON WAS TESTED BY MARTIN FOR USE ON COPPERHEAD DETECTORS.

2 77 9845
NUMERICALLY CONTROLLED OPTICAL FABRICATION

AGREED UPON HARDWARE HAS BEEN RECD. FINAL RPT. HAS BEEN RECD. THE DD 250 AND INVENTION FORMS HAVE BEEN SIGNED.

AVRADCOM

1 81 7113
COMPOSITE REAR FUSELAGE MANUFACTURING TECHNOLOGY

PROJECT WORK, PHASE III, WAS COMPLETED. PROJECTED BENIFITS ARE 35 PERCENT COST SAVINGS AND 13 PERCENT WEIGHT SAVINGS. BLACK HAWK PM WAS BRIEFED ON IMPLEMENTATION NECESSITIES. EFFORT IS CONTINUING WITH PROJECT 1 82 7113.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY82
(CONTINUED)

1 80 7119
NON-DESTRUCTIVE EVAL TECHNIQUES FOR COMPOSITE STRUCTURES

PROJECT WORK WAS COMPLETED. THE EFFORT IS BEING CONTINUED UNDER MMT PROJECT 1 82 7119. AN ANNOTATED BIBLIOGRAPHY ON NDE TECHNIQUES IS BEING PREPARED AS WELL AS A TECHNICAL REPORT AND A STATE-OF-THE-ART REVIEW. TRANSDUCERS ARE BEING FABRICATED.

1 78 7155
MFG METHODS FOR IMPROVED HIGH PERFORMANCE HELICOPTER GEARS

A FIXTURE FOR POSITIONING AND ASSEMBLY OF THE PRE-ROLLED GEAR TO A BEARING SHAFT UNDER HOT OIL HAS BEEN BUILT. FUNDING FOR THIS FY IS EXPENDED. EFFORT WILL CONTINUE UNDER FY80 PROJECT.

1 80 7202
APPLICATION OF THERMOPLASTICS TO HELICOPTER SECONDARY STRUCS

PROJECT WORK WAS COMPLETED. ATTEMPT TO ELIMINATE WRINKLING IN BOTH THE INNER AND OUTER SKINS WERE NOT TOTALLY SUCCESSFUL. THE EFFORT IS BEING CONTINUED WITH PROJECT 1 81 7202.

1 79 7241
HOT ISOSTATIC PRESSING OF TITANIUM CASTINGS

PHASE 2 IS COMPLETE. CHANGES IN HIP AND HEAT TREAT VARIABLES WERE MADE TO OPTIMIZE PROPERTIES OF CAST HUBS. HDE SPECS TIGHTENED TO INSURE FULL EXAMINATION OF HUB. 4 HUBS ARE BEING SUPPLIED TO REVISED REQUIREMENTS.

1 80 7241
HOT ISOSTATIC PRESSED TITANIUM

EXTENSIVE TENSILE AND FATIGUE TESTING IS IN PROGRESS ON SMALL TEST SPECIMENS PREPARED FROM PREMIUM CAST HUBS.

1 80 7243
MACHINING OPERATIONS ON KEVLAR LAMINATED CONSTRUCTIONS

ALL PROJECT WORK HAS BEEN COMPLETED WITH THE ISSUANCE OF THE FINAL TECHNICAL REPORT IN JANUARY 1982. THE EFFORT IS CONTINUING WITH PROJECT 1 81 7243.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY82 (CONTINUED)

1 81 7243
MACHINING OPERATIONS ON KEVLAR LAMINATED CONSTRUCTIONS

ALL PROJECT WORK WAS COMPLETED. BENEFITS OF THE PROGRAM ARE IDENTIFIED IMPROVED MACHINING AND CUTTING TECHNIQUES FOR KEVLAR LAMINATES. IMPLEMENTING ACTIONS ARE THE DISTRIBUTION OF THE FINAL REPORT AND DESIGN GUIDE HANDBOOK.

1 79 7298
HIGH TEMPERATURE VACUUM CARBURIZING

PREPARATION AND REVIEW OF SCOPE OF WORK WAS COMPLETED. REVIEW OF BIDS FOR CONTRACTUAL EFFORT HAS BEEN COMPLETED.

1 79 7315
LOW COST MANUFACTURE OF PULSE GIMBAL

PROJECT WORK WAS SUCCESSFULLY COMPLETED. THE PROJECT DEMONSTRATED A MANUFACTURING TECHNIQUE FOR COMPOSITE GIMBLES. TESTS DEMONSTRATED A 40 PCT WEIGHT SAVINGS + IMPROVED DAMPING. TECHNICAL REPORT WAS PUBLISHED. WORK WILL CONTINUE UNDER 1 80 7315.

1 80 7339
FILAMENT WOUND COMPOSITE FLEXBEAM TAIL ROTOR

PROJECT WORK WAS COMPLETED. THE EFFORT IS BEING CONTINUED WITH PROJECT 1 81 7339.

MICOM

R 80 1026
LOW COST MANUF TECH F/THE HIGH PROD OF MISSILE VANES

THIS PROJECT IS COMPLETE. COMPOSITE AIR VANES WERE DEMONSTRATED TO BE ADEQUATE. LABOR AND MATERIALS SAVINGS CAN BE SUBSTANTIAL BY USING COMPOSITE AIR VANES. WORK IS CONTINUING UNDER 3 81 1026.

3 81 1073
REAL TIME ULTRASONIC IMAGING

THE REAL TIME ULTRASONIC IMAGING SYSTEM BREADBOARD DEMONSTRATION WAS CONDUCTED 3 MAY 1982 BY BATTELLE-PNL. SEVEN DIFFERENT TEST SPECIMENS WERE USED DURING THE DEMO. APPROX. TEN MINUTES SET-UP TIME WAS REQUIRED FOR EACH SPECIMEN.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY82
(CONTINUED)

R 80 1075
ELECTRONICS COMPUTER AIDED MANUFACTURING (ECAM)

BATTELLE COMPLETED TASK 1 WHICH INCLUDES A DETAILED PLAN FOR THE FULL EFFORT, TRAINING OF PARTICIPANTS IN IDEF METHODS, DESCRIPTION OF DESIGN, BUILD AND TEST OF 7 COMMODITIES, AND WRITING OF TASK 1 REPORT. COPIES OF THE REPORT WERE SENT TO 60 FIRMS.

3 81 1108
RF AND LASER HARDENING OF MISSILE DOMES

BATTELLE NORTHWEST COMPLETED WORK ON MAGNETRON-SPUTTERING INDIUM TIN OXIDE ONTO THE INNER SURFACE OF POLYCARBONATE AND POLYSULFONE NOSECONES. ZINC OR NICKEL WAS PLASMA SPRAYED ONTO THE RIM FOR CONDUCTIVITY. PROCESSES MUST BE CONTROLLED ACCURATEL

3 81 1109
ROBOTIZED WIRE HARNESS ASSEMBLY SYSTEM

THE FEASIBILITY STUDY IS COMPLETED. THE STUDIES + TESTS PERFORMED UNDER THIS SCOPE OF WORK PROVIDE FIRM SUPPORT FOR A CONTINUATION OF THE PROJECT TO COMPLETION + DEMONSTRATION OF A PROTOTYPE MACHINE + CONTROL SYSTEM.

R 79 3160
CLEANLINESS + PROCESS CRITERIA FOR CIRCUIT BOARDS

MARTIN MARIETTA BUILT A PROFILE SYSTEM TO IDENTIFY, QUANTIFY + REMOVE CONTAMINANTS ON PWBS AFTER NORMAL CLEANING. IONIC + NON-IONIC SPECIES CONCENTRATION IS MEASURED IN PARTS PER BILLION. ALL WORK IS COMPLETED. SAVINGS IS ESTIMATED AT $965K PER YR.

R 79 3217
AUTOMATED PRODUCTION METHODS FOR TRAVELING WAVE TUBES

LITTON HAS SUCCESSFULLY DEVELOPED PROCESSES TO PRODUCE TWTS WHICH MEET THE REQUIREMENTS OF MIS-28636. THE FINAL CONFIGURATION OF THE HEATER ASSEMBLY WAS A PURE ALUMINA COATING AND A MOLYBDENUM-RUTHENIUM POTTING. COST PROJECTED TO BE $6K-$7K PER TWT.

R 80 3217
AUTOMATED PRODUCTION METHODS FOR TRAVELING WAVE TUBES

TECH TRAN DEVELOPED A TOP-DOWN METHODOLOGY TO QUANTIFY AND TRANSFER MANUFACTURING TECHNOLOGY IN THE MOST APPROPRIATE FORMAT. THIS INSURES THAT EFFICIENT DATA FOR IMPLEMENTATION OF TWT TECHNOLOGY REACHES DECISION-MAKING PERSONNEL.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY82
(CONTINUED)

R 80 3219
AUTOMATIC POLYMER ATTACHMENT PRODUCTION METHODS

HUGHES CONCEPTUALIZATION OF AN AUTOMATIC POLYMER ATTACHMENT SYSTEM BY KULICKE AND SOFFA ADDRESSED TECHNIQUES OF SUBSTRATE, POLYMER AND CHIP HANDLING. PHASE III WILL BUILD A PROTOTYPE SYSTEM

R 79 3268
AUTOMATIC CONTROL OF PLATING (CAM)

AN AUTOMATIC MONITORING + CONTROL SYS WAS COMPLETED AND IS TO BE IMPLEMENTED AT GENERAL DYNMAICS + HUGHES AIRCRAFT COMPANY PRODUCTION FACILITIES.

R 79 3381
LOW COST, IMPROVED 2-D HEAT SHIELDS

HEATSHIELD MATERIALS WERE MADE FROM RMSP AND GLASS REINFORCED PHENOLIC RESINS. BRAIDING OF TAPES OFFER ADVANTAGES OVER COMMERCIAL BIAS-CUT MATERIALS. TECHNOLOGY OF FABRICATING HEATSHIELD MATERIALS USING BRAIDS DEMONSTRATED. NARROW TAPE WIDTHS POSSIBLE

R 80 3436
CERAMIC CIRCUIT BOARDS + LARGE AREA HYBRIDS

THE RESULTS OF THIS PROJECT RELATE TO THE MANUFACTURE OF HYBRIDS GREATER THAN 3 1/2 IN SQUARE. THE MAJOR ADVANCES WERE IN CHIP ATTACHMENT TO INCREASE RELIABILITY. CHIP TESTING PRIOR TO MOUNTING AND REWORK METHODS WERE DEVELOPED TO INCREASE YIELDS.

R 79 3438
DELIDDING, PARALLEL SEAM SEALED HYBRID MICROELECT PACKAGES

WESTINGHOUSE COMPLETED THIS PROJECT WHICH DEMONSTRATED DELIDDING AND RESEALING OF HYBRID PACKAGES WITHOUT CONTAMINATING THE INSIDE OF THE PACKAGE, WITHOUT INHIBITING THE RESEALING WITH A NEW LID, AND WITH SAFETY AND ECONOMY IN PRODUCTION ASSURED.

R 78 3454
LO COST - HI VOLUME RADIOGRAPHIC INSPECTION

THIS EFFORT HAS BEEN COMPLETED. THE FINAL REPORT HAS BEEN RECEIVED ALONG WITH 2 SETS OF SLIDES, VIDEO TAPE (15MIN).

TACOM

T 79 5090
IMPROVED AND COST EFFECTIVE MACHINING TECHNOLOGY

ALL MACHINING TESTS FOR PHASE I COMPLETED. DATA HAS BEEN COMPUTERIZED AND WILL BE PRODUCED IN THE FORM OF A MACHINABILITY HANDBOOK AT THE CONCLUSION OF PHASE III. AN INTERIM REPORT SUMMARIZING PHASE I HAS BEEN ISSUED.

T 79 5094
ARMOR STEEL TREATED WITH RARE EARTH ADDITIONS

CONTRACT COMPLETED BY BATTELLE AND TECHNICAL REPORT WRITTEN. BATTELLE RECOMMENDS CONTINUING INTO PHASE 2 USING CALCIUM-SILICON TREATMENT RATHER THAN RARE EARTH TO IMPROVE DUCTILITY. TOUGHNESS AND HARDNESS.

T 81 6053
WELDING SYSTEMS INTEGRATION

PROCUREMENT REQUEST PREPARED. CONTRACT TO BE LET 4QFY82.

ARRADCOM-ARRCOM (AMMO)

5 77 1295
MODERNIZATION OF CHARCOAL FILTER TEST EQUIPMENT

THE FINAL DESIGN CONCEPT WERE APPROVED AND FINALIZED. ALSO, THE ENGINEERING DRAWINGS WERE REVIEWED AND APPROVED. A FINAL REPORT WAS SUBMITTED BY THE CONTRACTOR DETAILING THE EFFORT WXPENDED UNDER THE SCOPE OF THE CONTRACT.

8 78 1296
MT FOR CB FILTERS

PROJECT COMPLETED.

8 78 1345
BIOLOGICAL WARNING SYSTEM

PROJECT COMPLETED.

5 78 3907
MNOS COUNTER-MEMORY CIRCUIT FOR FUZES

NITRON BUILT SILICON METAL NITRIDE OXIDE SEMICONDUCTOR (MNOS) MEMORY ICS IN DUAL-IN-LINE PLASTIC PACKAGES. USEAGE IS M724 FUZE. GOLD WIRE BENDING + MOLDING WERE SUBCONTRACTED TO NORSK ENGINEERING. WORK COMPLETED BUT A FINAL REPORT IS NOT PEXPECTED.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY82
(CONTINUED)

5 81 4027
COMBINED SOLVENT RECOVERY/DRYING OF S-B PROPELLANT

ENGINEERING ANALYSIS WAS PERFORMED IN SUPPORT OF THE DESIGN OF THE CONTINUOUS AUTOMATED SINGLE-BASE LINE. PROJECT PLANNING WAS COORDINATED WITH RADFORD AAP. EFFORT WAS ENDED WHEN PROJECT WAS DEFERRED FOR FUTURE YEAR FUNDING.

5 80 4033
CAUSTIC RECOVERY FROM SODIUM NITRATE SLUDGE

CATALYTIC HYDROGENATION OF AMMONIUM NITRATE SLUDGE FOLLOWED BY RESALE OF THE PURIFIED SOLUTION WAS THE MOST ECONOMICAL ALTERNATIVE FOR PROCESSING SLUDGES. TECHNICAL REPORTS WERE PREPARED. FUTURE WORK WILL CONTINUE UNDER MMT PROJECT 5844511.

5 80 4061
NITROGUANIDINE PROCESS OPTIMIZATION

THE VARIABLES FOR OPTIMIZATION WERE DETERMINED AND THEIR HIGH AND LOW VALUES WERE SET. THE CORRESPONDING REQUIRED ANALYSES WERE DETERMINED. THE SET POINT SHEETS FOR ALL SN AND NQ OPTIMIZATION TESTS WERE COMPILED.

5 79 4062
AUTO MFG SYSTEM FOR MORTAR INCREMENT CONTAINERS

THE FY79 PROJECT EFFORT PROVIDE ENGINEERING + MANAGEMENT SUPPORT TO THE DEVELOPMENT OF PROTOTYPE MANUFACTURING + SUBSYSTEM FOR THE 60181MM M205/204 PROPELLANT CHARGE INCREMENT CONTAINERS. CONTRACT AWARDS WERE ACHIEVED + TECH. AREAS WERE ADDRESSED.

5 80 4062
AUTO MANUFACTURE SYS F/MORTAR INCREMENT CONTAINERS

THE FY 80 PROJECT EFFORT COMPLETED THE DESIGN OF THE SLURRY VACUUM FORMING BASED + PAPER MOLDING BASED MFG SYS + THE AUTOMATED ASSY SYS. FAB OF THE SLURRY VACUUM FORMING BASED MFG SYS WAS INITIATED WITH THE EFFORT TO BE COMPL BY SUBSEQUENT PROJECTS.

5 81 4145
CONTROL OF DRYING IN AUTOMATED SB AND BALL PROPELLANTS MFG

THIS EFFORT IS CONTINUED UNDER MMT PROJECT 5 82 4145. INSTRUMENTATION AND CONTROLS WERE PROCURED AND ESTABLISHED FOR THE SOLVENT RECOVERY, WATER DRY AND AIR DRY AREAS OF THE CASBL LINE. PROVE OUT WILL BE TIME PHASED WITH CASBL INSTALLATION.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY82
(CONTINUED)

5 79 4214
POLLUTION ENGINEERING FOR 1983-85 REQUIREMENTS

TECHNICAL REQUIREMENTS FOR FY79 COMPLETED. REFER TO INDIVIDUAL TASKS FOR DETAILS.

5 79 4214 P1
TECHNOLOGY REQUIREMENTS

FINAL TECHNICAL REPORTS WERE PREPARED ON THE TWO MAIN PHASES OF THIS PROJECT- 1) ACETONE/ETHANOL SOLVENT SYSTEM FOR ACCEPTABLE VAPOR LEVELS IN THE MANUFACTURE OF S-B PROPELLANTS, AND 2) REMOVAL OF NOX FUMES BY HYDROGEN PEROXIDE SCRUBBING.

5 79 4214 P2
IN-PLANT REUSE OF POLLUTION ABATED WATERS

ALL TECHNICAL COMPLETED AT RAAP. RESULTS OF THE ECONOMIC AND ENERGY EVALUATION INDICATE THAT IT IS NOT NOW ECONOMICAL TO IMPLEMENT RECYCLE/REUSE MEASURES AT RAAP. DESIGN CRITERIA FOR FULL-SCALE FACILITY DEVELOPED. FINAL TECHNICAL REPORT WRITTEN.

5 79 4214 P3
LOW COST SYSTEM TO ABATE NITROBODY POLLUTION

FINAL TECHNICAL REPORTS ON ALTERNATIVE TECHNOLOGIES FOR THE TREATMENT OF PINK WASTEWATER HAVE BEEN COMPLETED. THESE INCLUDE- 1)UV/OZONOLYSIS, 2)WHITE OIL SOLVENT EXTRACTION, 3)SURFACTANT TECHNOLOGY AND 4)RDX, UV/OZONOLYSIS.

5 79 4214 P4
NG-NITRATE ESTER REMOVAL BY ABSORPTION/RECYCLE

A FINAL TECHNICAL REPORT HAS BEEN PREPARED COVERING ALL RESULTS ON THIS PROJECT.

5 80 4266
MFG, IHSP AND TEST EQUIPMENT FOR MAGNETIC POWER SUPPLY

THE CONTRACT WAS AWARDED 24 JULY 1980. THE DETAILED DESIGN OF THE ASSEMBLY STATION WAS COMPLETED AND FUNCTIONAL LAYOUT OF THE LINE ESTABLISHED. FABRICATION AND PROCUREMENT OF THE HARDWARE NECESSARY TO SET-UP THE CRITICAL ASSEMBLY STATION HAS STARTED.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY82
(CONTINUED)

5 80 4285
TNT EQUIVALENCY TESTING FOR SAFETY ENGINEERING

FINAL REPORTS PUBLISHED ON HMX, RDX, A-3, BALL POWDER, PBXC-203, JA-2, DIGL-4P, AND CYCLOTOL 70/30. INITIATED PREPARATION OF PRELIMINARY TNT EQUIVALENCY COMPILATION REPORT. THIS EFFORT COMPLETED.

5 80 4288
EXPLOSIVE SAFE SEPARATION AND SENSITIVITY CRITERIA

TESTING HAS BEEN COMPLETED ON THE M509 PROJECTILE ESTABLISHING A SAFE SEPARATION DISTANCE OF 5 FEET. SECONDARY FRAGMENT IMPACT STUDIES WERE COMPLETED. TESTING OF M74AP AND M75AT/AV MINES WAS DEFERRED TO THE FY81 PROJECT.

5 80 4291
BLAST EFFECT IN THE MUNITION PLANT ENVIRONMENT

A FINAL REPORT WAS PUBLISHED ON STEEL STRUCTURES SUBJECT TO BLAST. TEST PLAN DEVELOPED FOR EVALUATING ALTERNATE CONSTRUCTION MATERIALS IN FY83. TESTING WAS COMPLETED ON ONE FOURTH SCALE REINFORCED CONCRETE CYLINDER FOR EXPLOSION CONTAINMENT.

5 79 4310
DMSO RECRYSTALLIZATION OF HMX/RDX

OPERATION AND EVALUATION OF DMSO PILOT HAS BEEN COMPLETED. INTERIM QUALIFICATION TESTS OF RECRYSTALLIZED EXPLOSIVES WERE SUCCESSFULLY COMPLETED. RESULTS SHOW NO ADVERSE AFFECTS DUE TO DMSO RECRYSTALLIZATION.

5 80 4312
INJECTION MOLDING FOR PRODUCTION EXPLOSIVE LOADING

A TECHNICAL REPORT HAS BEEN PREPARED SUMMARIZING THE WORK ACCOMPLISHED.

5 80 4322
CHARACTERIZE DORMANCY EFFECT ON ELECTRONIC EQUIPMENT

THIS MMT EFFORT HAS DEVELOPED THE ONLY KNOWN LAYAWAY METHODOLOGY FOR COMPLEX ELECTRONIC PROCESS CONTROL SYSTEMS. THE METHODS MINIMIZE MOBILIZATION TIMES BY APPLICATION OF USER ADAPTED PROCEDURES AND STRUCTURED DOCUMENTATION LENDNG TO CYCLE PLANTS.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY82
(CONTINUED)

5 79 4335
ALTERNATIVE PROC F/TITANIUM GYROSCOPE COMPONENTS-COPPERHEAD

THE PROJECT WAS SUCCESSFULLY COMPLETED. ALL SELECTED PM PROCESSES WERE PROVEN TO PRODUCE STRUCTURALLY SOUND HARDWARE.

5 78 4341
IMPROVED NITROCELLULOSE PURIFICATION PROCESS

A CONICELL PURIFICATION SYSTEM WAS PURCHASED FROM MUSER PROCESSING, SWITZERLAND. EQUIPMENT DESIGN WAS BASED UPON A SWISS UNIT CONSISTING OF 5 LOOPS AND AN APPROXIMATE RESIDENCE TIME OF 45 MIN. THE SYSTEM WAS MODIFIED TO ALLOW SODA ASH SOLN INJECTION.

5 79 4341
IMPROVED NITROCELLULOSE PURIFICATION PROCESS

INSTALLATION OF THE CONICELL SYSTEM WAS COMPLETED. THIS INCLUDED INSULATION, TANKS, PUMPS, AND ALL OTHER MAJOR EQUIPMENT ITEMS. ALSO COMPLETED WAS INSTALLATION OF ALL NECESSARY ELECTRICAL AND INSTRUMENTATION SYSTEMS, AND UTILITY SUPPLY PIPING.

5 79 4508
PROCESS IMPROVEMENT OF PRESSABLE RDX COMPOSITIONS

DELAYS IN RESOLVING A REQUEST FOR INDEMNIFICATION FOR WYSSMONT COMPANY NECESSITATED RESTRUCTURING THIS PROJECT. INSTALLATION AND EVALUATION OF DRYER ARE RESCHEDULED FOR FY82 PROJECT. A TECHNICAL REPORT HAS BEEN PREPARED.

5 77 6200
SMALL CALIBER AMMO PROCESS IMPROVEMENT PROGRAM

THIS FY OF THE EFFORT DEVELOPED THE TOOLING FOR PRODUCING 5.56MM CUPS WITH REDUCED WALL AND BASE THICKNESS VARIATIONS. THREE NEW CUPPING SYSTEMS ARE BEING FABRICATED UNDER FACILITIES PROJECT 5 79 3002. THIS PROJECT IS NOW COMPLETE.

5 78 6596
BALL PROPELLANT PILOT PLANT STUDIES

THE FINAL TECHNICAL REPORT WAS COMPLETED AND SUBMITTED TO ARRADCOM FOR APPROVAL AND SUBSEQUENTLY APPROVED. PROJECT CLOSED OUT EFFECTIVE 30 SEPT 1981. FINAL 301 REPORT SUBMITTED 15 JUN 1982.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY82
(CONTINUED)

5 76 6599
2ND GENER ELEC-OPTC PROJO CAVITY INS EQ FOR 155-175MM PROJOS

THE INSPECTION SYSTEM WAS ACCEPTED WITH MINIMUM PROVE-OUT AS THE CONTRACTOR HAD EXPENDED ALL THE FUNDS. FY 82 MMT FUNDS HAVE BEEN APPROVED FOR ADDITIONAL PROVE-OUT ACTIVITIES. A SUITABLE SITE FOR THIS WORK HAS NOT BEEN ESTABLISHED.

5 79 6736
TECH READINESS ACCEL THRU COMPUTER INTEGRATED MFG (CAD)

SEE THE WORK ACCOMPLISHED UNDER SUBTASKS 01 AND 02.

5 79 6736 01
TECH READINESS ACCEL THRU COMPUTER INTEGRATED MFG (TRACIM)

AN ARCHITECTURE OF MANUFACTURING FOR AMMUNITION PROJECTILE METAL PARTS WAS ESTABLISHED. ALL MANUFACTURING ACTIVITIES INCLUDING ASSEMBLY ARE COVERED IN THE FACTORY MODELS OF TWO PLANTS. A COMPOSITE MODEL WAS DEVELOPED. ALL TECH REPORTS HAVE BEEN DISTR

5 79 6736 02
DATA ACQUISITION FEASIBILITY STUDY

A PROTOTYPE MANUFACTURING CONTROL SYSTEM UTILIZING DATA ACQUISITION TECHNIQUES WAS EVALUATED. THE PRIME CONTRACTOR PUBLISHED A FINAL REPORT, WHICH PROVIDED AN EVALUATION OF THE SYSTEM AND ESTIMATE OF IMPLEMENTATION COSTS FOR A FULL PRODUCTION LINE.

5 80 6736
TECH READINESS ACCEL THRU COMPUTER INTEGRATED MFG (CAM)

SEE THE WORK ACCOMPLISHED UNDER SUBTASKS 01 AND 02.

5 80 6736 01
TECH READINESS ACCEL THRU COMPUTER INTEGRATED MFG (TRACIM)

A PROTOTYPE MANUFACTURING COMPUTER DATA BASE SYSTEM WAS COMPLETED. THE OGIVE OF THE 155MM M483 ARTILLERY PROJECTILE WAS USED TO DEMONSTRATE THE INFORMATION FLOW. A FINAL TECHNICAL REPORT WAS MADE AVAILABLE AT AN INDUSTRY AND GOVERNMENT DEMO.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY82
(CONTINUED)

5 80 6736 03
ARMY SUPPORT F/INITIAL GRAPHICS EXCHANGE SPEC (IGES)

TWO YEARS OF ARMY SUPPORT FOR THE TRI-SERVICE FUNDED INITIAL GRAPHICS EXCHANGE SPECIFICATION (IGES) ARE COMPLETED. THIS PROJECT PROVIDED SEED MONEY FOR THE IGES EFFORT. THE IGES EFFORT HAS RESULTED IN A SPECIFICATION ANSI Y14.26M.

5 80 6738
ULTRA-HIGH SPEED METAL REMOVAL, ARTILLERY SHELL

ALL MACHINING TESTS HAVE BEEN COMPLETED AND THE FINAL REPORT IS BEING PRINTED. TEST RESULTS INDICATE THAT SIGNIFICANT INCREASES IN METAL REMOVAL RATES CAN BE OBTAINED USING NEW GENERATION TOOLING

ARRADCOM-ARRCOM (WPNS)

6 78 7808
LEAK DETECTION TECHNIQUES FOR SMALL SEALED FIRE CON ASSM

SEVERAL METHODS OF LEAK TESTING WERE EXAMINED AND THEIR AREAS OF APPLICABILITY REPORTED ON. THE BEST METHOD FOR TESTING SEALED FIRE CONTROL ASSEMBLIES IS TO EMPLOY A VARIETY OF TECHNIQUES SINCE NO SINGLE TECHNIQUE WAS FOUND TO BE OPTIMUM.

6 77 7943
ANALYSIS FOR MODERNIZATION OF INDUSTRIAL OPERATIONS

THE PURPOSE OF THIS EFFORT WAS TO DEVELOP A MODERNIZATION PROGRAM CALLED REARM F/ROCK ISLAND ARSENAL. AN ECONOMIC ANALYSIS WAS PREPARED FOR THE REARM PROGRAM INCLUDING NEW CONSTRUCTION + EQUIPMENT COSTS. A MACHINE TOOL REPLACEMENT STUDY WAS INCLUDED.

6 78 7943
ANALYSIS FOR MODERNIZATION OF INDUSTRIAL OPERATIONS

A SYSTEMS APPROACH WAS USED BY A.T. KEARNEY TO REVIEW THE MANUFACTURING FACILITIES, EQUIPMENT, SERVICES AND DEVELOP A PLAN FOR IMPROVEMENT FOR ROCK ISLAND ARSENAL. WORK WAS ACCOMPLISHED IN TWO PHASES. TECHNICAL REPORTS ON BOTH PHASES ARE AVAILABLE.

FINAL STATUS REPORTS RECEIVED DURING 1ST HALF, CY82
(CONTINUED)

6 78 8048
IMPRVD INSPECTION TECH F/INGOTS + PREFORMS F/ROTARY FORGING

THIS PROJECT HAS BEEN COMPLETED. THE INCREASED SENSITIVITY OF ULTRASONICS AND THE USE OF FOCUSED ULTRASONIC BEAMS HAS RENDERED THIS APPLICATION OF NDT FROM PROTOTYPE STATUS TO FUNCTIONAL UNIT IN THE ROTARY FORGE PRODUCTION LINE.

6 81 8246
IMPROVED GAS CHECK SEAT FINISHING

THIS FIRST YEAR OF A TWO-YEAR EFFORT HAS RESULTED IN AN ACCEPTABLE DESIGN FOR AN IMPROVED GAS CHECK SEAT FINISHING PROCESS.

TOTAL PROJECTS COMPLETED IN 1ST HALF, CY82 65

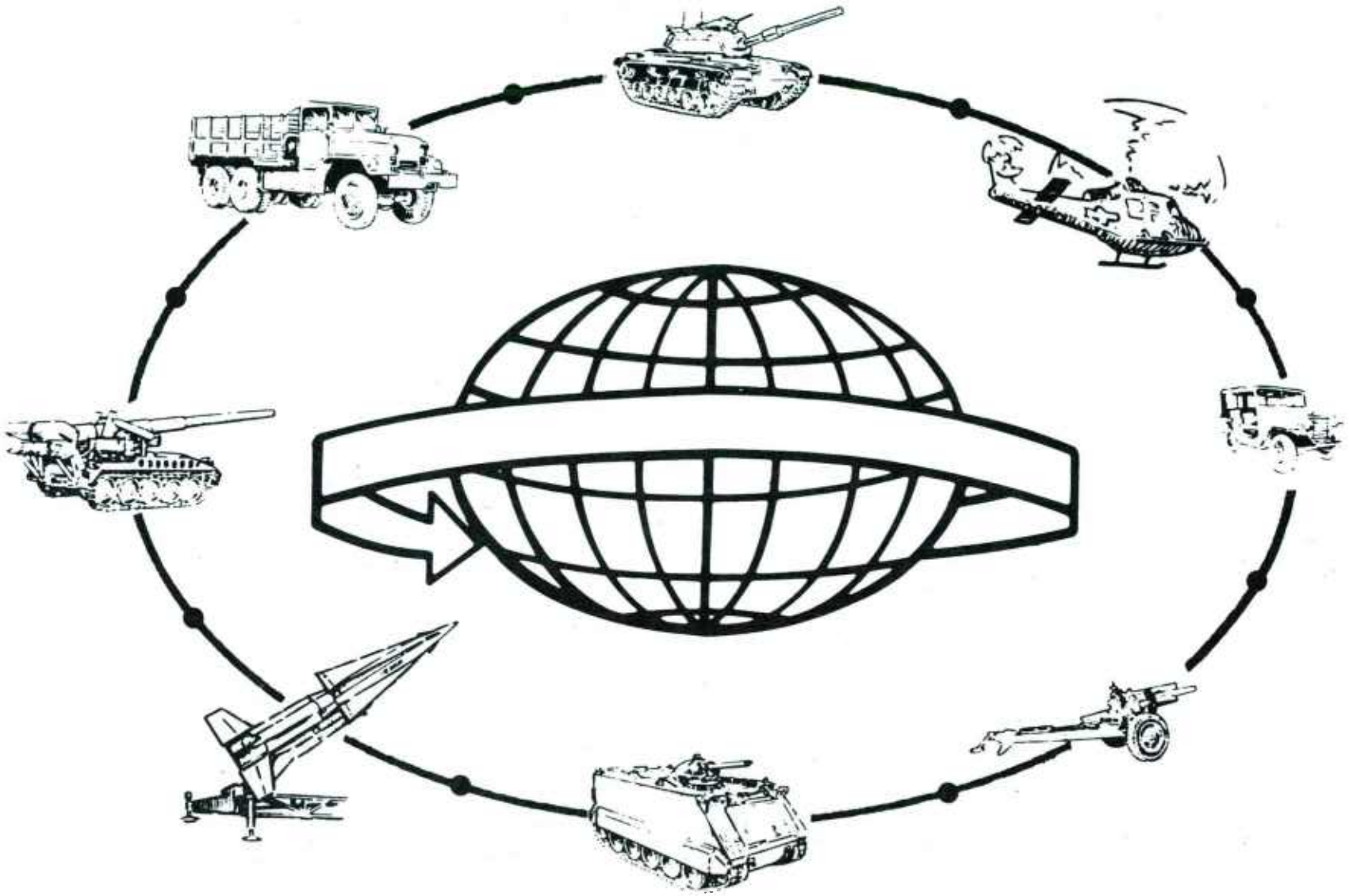
MMT PROGRAM

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.



US ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND
(DARCOM)

US ARMY DEPOT SYSTEM COMMAND
(DESCOM)

HQ-DARCOM AND DEPOT SYSTEMS COMMAND

CURRENT FUNDING STATUS, 1ST CY82

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	262,400 (68%)	0	0 (0%)
77	0	0	0	0 (0%)	0	0 (0%)
78	1	870,000	743,000	505,600 (68%)	127,000	127,000 (100%)
79	1	495,000	388,000	200,800 (51%)	107,000	107,200 (100%)
80	2	552,000	503,300	227,300 (45%)	48,700	27,500 (56%)
81	3	1,077,000	392,000	75,000 (19%)	685,000	35,100 (5%)
82	7	1,815,000	238,800	0 (0%)	1,576,200	0 (0%)
TOTAL	15	5,192,000	2,648,100	1,271,100 (48%)	2,543,900	296,800 (11%)

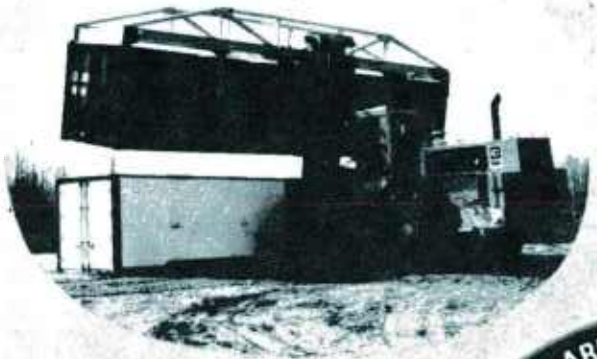
AUTHORIZED FUNDING CONTRACT ALLOCATED 51% INHOUSE REMAINING 48%

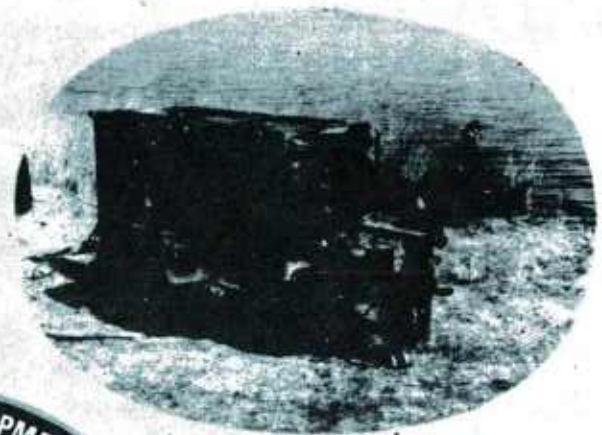
MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
1ST SEMIANNUAL SUBMISSION CY 82 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
4 7T 5052	ARMY ENGINEERING DESIGN HANDBOOK FOR PRODUCTION SUPPORT WORK IS CONTINUING ON 706-100 + 706-158 AND 159 AND OTHERS. THESE AND OTHERS ARE EXPECTED TO BE COMPLETED BY THE END OF CY82.	383.0	383.0		JUN 78	MAR 81
D 78 5052	ARMY ENGINEERING DESIGN HANDBOOK FOR PRODUCTION SUPPORT VARIOUS PAMPHLETS ARE IN DIFFERENT STAGES OF COMPLETION WITH WORK CONTINUING AT THIS TIME.	870.0	743.0	127.0	NOV 79	JAN 84
D 79 5052	ARMY ENGINEERING DESIGN HANDBOOK FOR PRODUCTION SUPPORT ALL BUT TWO CHAPTERS OF THE FOM 706-100 WERE ACCEPTED + THE CAREC IS BEING PREPARED. THE TWO UNACCEPTABLE CHAPTERS WERE SENT TO PLASTEC FOR REWRITE.	495.0	388.0	107.2	MAY 83	MAY 83
D 80 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT WORK ON 706-480 PRELIMINARY FINAL DRAFT MANUSCRIPT STARTED. WORK ON 706-177 FINAL DRAFT MANUSCRIPT CONTINUING AT ARRADCOM. DELAYS EXPERIENCED IN GETTING TECHNICAL WORK PROUPS TO FINALIZE OUTLINE FOR 706-123, 706-210, AND 706-XXX.	460.0	432.0	27.5	JAN 83	JAN 83
D 81 5052	ARMY ENGINEERING DESIGN HANDBOOKS WORK CONTINUING ON HANDBOOKS STARTED WITH PRIOR YEAR FUNDS. DELAY EXPERIENCE IN GETTING TECHNICAL WORK GROUP TO FINALIZE REVISED OUTLINE FOR 706-245.	531.0	392.0	35.1	JAN 84	JAN 84
D 82 5052	ARMY ENGINEERING DESIGN HANDBOOKS WORK CONTINUING ON HANDBOOKS STARTED WITH PRIOR YEAR FUNDS. TECHNICAL WORKING GROUPS FORMED OR BEING FORMED FOR HANDBOOK EFFORTS BEING INITIATED WITH FY82 FUNDS.	580.0	238.8		SEP 83	SEP 83

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 82 RCS DRCMT-301

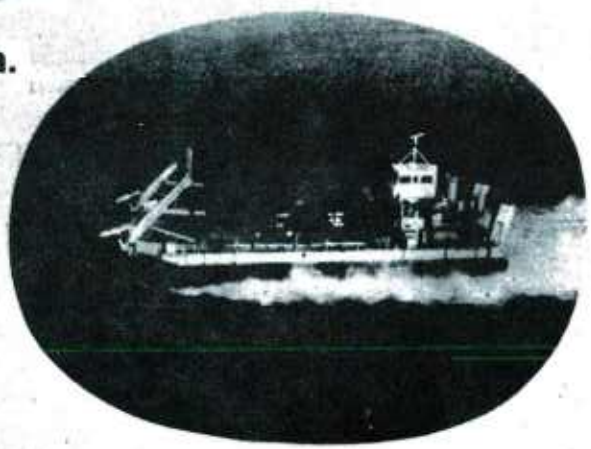
PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
G 80 0001	VOICE CONTROLLED PROGRAMMING OF COMPUTERS A SYSTEM WAS ESTABLISHED USING EXISTING HARDWARE AND SOFTWARE. VOCABULARY AND OPERATORS VOICE PATTERNS STORED IN TURNKEY CADCAM SYSTEM. VOICE COMMANDS USED TO GENERATE APT SOURCE, GEOMETRY, TOOL MOTION, CUTTER LOCATION, TOOL DATA.	92.0	71.3		NOV 81	JAN 83
G 82 2001	PROVIDE PROTOTYPE ROBOTS FOR AUTOMATED BLAST CLEANING ***** DELINQUENT STATUS REPORT *****	162.0				
G 82 2002	LONG RANGE DEPOT PRODUCTIVITY IMPROVEMENT PROGRAM ***** DELINQUENT STATUS REPORT *****	100.0				
G 81 4002	ROBOTIZED WELDING OF M113A2 SUSPENSION AWAITING APPROVAL OF ADDITIONAL $300K FUNDING NEEDED FOR PURCHASE OF 3 ROBOTS. EXPECT TO ISSUE CONTRACT BY SEP 82.	421.0			SEP 81	SEP 83
G 82 4002	ROBOTIZED WELDING OF M113A2 SUSPENSION ***** DELINQUENT STATUS REPORT *****	374.0				
G 82 4004	AUTOMATED DISASSEMBLY OF DOUBLE PIN TRACK A PERFORMANCE SPECIFICATION IS BEING WRITTEN FOR THE DESIGN OF EQUIPMENT TO AUTOMATICALLY DISASSEMBLE DOUBLE PIN TRACK.	299.0			SEP 83	SEP 83
G 81 4005	WATER JET MATERIAL REMOVAL SYSTEM AN RFQ HAS BEEN SUBMITTED FOR THE DESIGN AND FABRICATION OF A WATER JET MATERIAL REMOVAL SYSTEM.	125.0			MAR 82	SEP 82
G 82 4005	WATER JET MATERIAL REMOVAL SYSTEM PHASE II ***** DELINQUENT STATUS REPORT *****	200.0				
G 82 8001	ANNISTON PRODUCTIVITY IMPROVEMENT PROGRAM --- JUST FUNDED. NO 301 REQUIRED. ---	100.0				





U.S. ARMY MOBILITY EQUIPMENT
MERADCOM
RESEARCH & DEVELOPMENT COMMAND

Fort Belvoir, Va.



MOBILITY EQUIPMENT RESEARCH AND DEVELOPMENT COMMAND

CURRENT FUNDING STATUS, 1ST CY82

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)	INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)
78	1	350,000	295,000	204,000 (69%)	55,000	55,000 (100%)
79	6	2,314,500	2,073,500	1,827,500 (88%)	241,000	199,800 (82%)
80	4	846,000	635,200	388,300 (61%)	210,800	92,000 (43%)
81	5	1,508,000	620,000	422,000 (68%)	888,000	54,000 (6%)
82	2	1,173,300	0	0 (0%)	1,173,300	0 (0%)
TOTAL	18	6,191,800	3,623,700	2,841,800 (78%)	2,568,100	400,800 (15%)

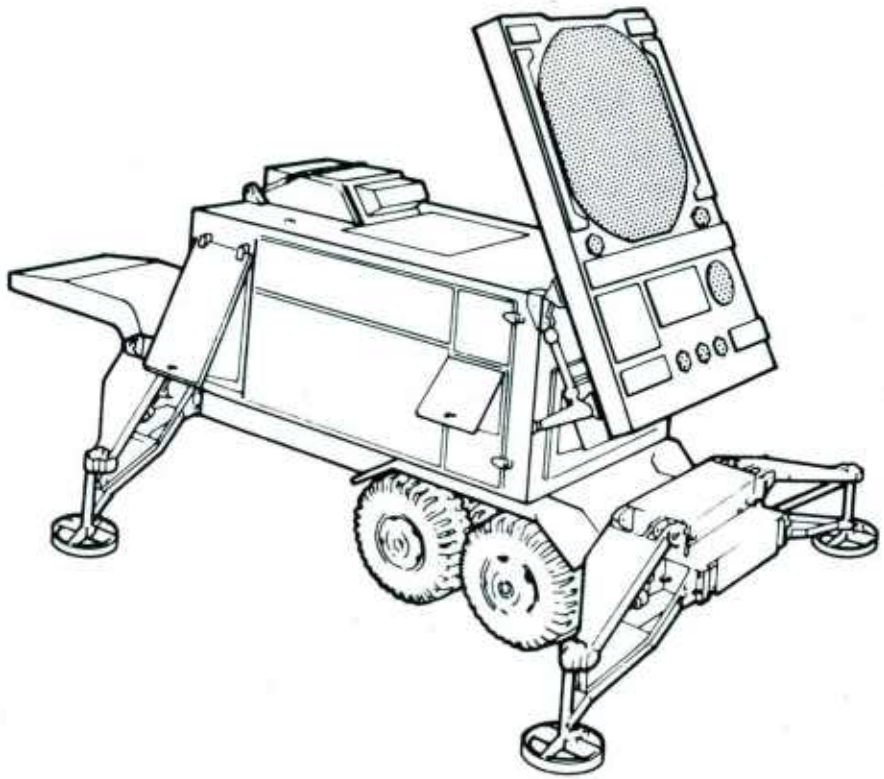
AUTHORIZED FUNDING CONTRACT ALLOCATED 59% INHOUSE REMAINING 41%

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
1ST SEMIANNUAL SUBMISSION CY 82 RCS DRCMT-3D1

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 ***** DELINQUENT STATUS REPORT *****	295.0	280.0	15.0	AUG 80	SEP 83
E 79 3592	IMPROVED GRAPHITE REINFORCEMENT-PHASE 3 ***** DELINQUENT STATUS REPORT *****	307.0	272.0	34.5	SEP 80	DEC 82
E 82 3592	IMPROVED GRAPHITE REINFORCEMENT --- JUST FUNDED. NO 301 REQUIRED. ---	257.0				
E 78 3604	SOLID STATE POWER SWITCH ***** DELINQUENT STATUS REPORT *****	350.0	295.0	55.0	JUN 80	DEC 82
E 79 3604	SOLID STATE POWER SWITCH ***** DELINQUENT STATUS REPORT *****	85.0	54.0	21.0	JUN 81	DEC 82
E 79 3708	COATED FABRIC COLLAPSIBLE FUEL TANK-CIRCULAR SEAM WEAVING ***** DELINQUENT STATUS REPORT *****	97.0	87.0	10.0	AUG 79	DEC 82
E 80 3708	COATED FABRIC COLLAPSIBLE FUEL TANK PROGRAM - CIRCULAR SEAML ***** DELINQUENT STATUS REPORT *****	76.0	15.7	45.3	SEP 81	DEC 82
E 79 3709	CONTINUOUS LENGTH FUEL HOSE ***** DELINQUENT STATUS REPORT *****	245.0	164.5	65.3	SEP 81	DEC 82
E 80 3709	CONTINUOUS LENGTH FUEL HOSE ***** DELINQUENT STATUS REPORT *****	179.0	138.5	18.7	SEP 83	SEP 83
E 80 3717	HIGH TEMPERATURE TURBINE NOZZLE FOR 10 KW POWER UNIT ***** DELINQUENT STATUS REPORT *****	400.0	375.0	25.0	OCT 82	DEC 82
E 81 3717	HIGH TEMPERATURE TURBINE NOZZLE FOR 10KW PU ***** DELINQUENT STATUS REPORT *****	422.0	322.0	50.0	APR 82	DEC 82
E 79 3743	COMPOSITE SPUN MATERIAL LAUNCHING BEAM FOR BRIDGES ***** DELINQUENT STATUS REPORT *****	1,285.5	1,216.0	54.0	SEP 80	DEC 82
E 81 3743	COMPOSITE SPUN MATERIAL LAUNCHING BEAM FOR BRIDGES ***** DELINQUENT STATUS REPORT *****	454.0	100.0		JAN 82	DEC 82
E 81 3745	MMT AL SKIN-GRAPHITE/EPOXY SANDWICH BRIDGE REINFORCEMENT ***** DELINQUENT STATUS REPORT *****	350.0			JUN 82	DEC 83
E 80 3747	LIGHTER, LACV-30, SKIRT AND FINGER COMPONENTS ***** DELINQUENT STATUS REPORT *****	191.0	106.0	3.0	NOV 80	DEC 82

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 82 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
E 81 3747	LACV-30, SKIRT + FINGER COMPONENTS ***** DELINQUENT STATUS REPORT *****	69.0			FEB 83	DEC 82
E 81 3759	KEVLAR CABLE REINF FOR MILITARY BRIDGES ***** DELINQUENT STATUS REPORT *****	213.0	198.0	4.0	MAY 82	DEC 82
E 82 3796	COMBAT VEHICLE DEGAUSSING ***** DELINQUENT STATUS REPORT *****	916.3				



ELECTRONICS R&D COMMAND
(ERADCOM)

ELECTRONICS R + D CUMMAMD

CURRENT FUNDING STATUS, 1ST CY82

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)	INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)
76	2	451,700	375,500	349,800 (93%)	56,200	36,800 (65%)
77	0	0	0	0 (0%)	0	0 (0%)
77	5	4,581,800	4,345,200	3,973,800 (91%)	236,600	237,000 (100%)
78	3	1,801,300	1,597,500	1,573,500 (98%)	203,800	203,800 (100%)
79	8	4,521,800	4,067,600	2,756,200 (67%)	454,200	410,400 (90%)
80	10	6,078,700	4,874,700	3,328,600 (68%)	1,204,000	799,100 (66%)
81	8	4,913,700	4,495,200	2,683,900 (59%)	418,500	209,500 (50%)
82	8	4,837,900	1,728,100	20,000 (1%)	3,109,800	20,300 (0%)
TOTAL	44	27,166,900	21,483,800	14,685,800 (68%)	5,683,100	1,916,900 (33%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 79% INHOUSE REMAINING 20%

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 82 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
H 80 3010	MILLIMETER-WAVE SOURCES FOR 60, 94, AND 140 GHZ MODIFICATIONS TO REACTOR GAVE SMALL VARIATION TO BREAKDOWN AND CAPACITIVE CHARACTERISTICS. EB EVAPORATION OF METAL TO WAFER AND SPUTTER METAL TO DIAMOND. STANDARDIZED OUTSIDE DIMENSIONS FOR ALL 3 BANDS WAVEGUIDE. MICROPILL PACKAGE IS SUPERIOR.	1,039.6	997.3	34.1	JUL 82	JAN 83
H 82 3011	MMT FOR INP GUNN DEVICES A CONTRACT IS BEING NEGOTIATED. A HIGH TECHNOLOGY FIRM WILL DEVELOP AUTOMATED PRECISION CONTROL OF MULTI-LAYER EPITAXIAL GROWTH ON INDIUM PHOSPHIDE WAFERS. WANT A VERY THIN 10 MICROMETER DIODE STRUCTURE, AUTOMATED DIODE ASSEMBLY AND AUTOMATED TEST.	1,070.0		5.0	AUG 84	AUG 84
H 80 3012	INFRA-RED SOURCE FOR AN/ALQ-144 ***** DELINQUENT STATUS REPORT *****	351.9	321.9	30.0	JAN 81	DEC 82
H 80 3023	TUBULAR PLASMA PANEL A BALZER ELECTRON-BEAM DEPOSITION SYSTEM HAS BEEN INSTALLED AND SAMPLE PLATES WERE PLATED. THESE ARE BEING BUILT INTO EXPERIMENTAL PANELS. THIS PROJECT WILL BE DELAYED ONE ADDITIONAL YEAR BECAUSE THE EQUIPMENT IS BEING USED FOR BCS AND MIFASS WORK.	800.0	674.0	95.0	APR 82	JUN 83
H 80 3026	HIGH PRESSURE OXIDE IC PROCESS AUTOCLAVE CO. BUILT, INSTALLED AND TESTED A DUAL FURNACE AND PROCESS CHAMBER. FURNACE OPERATED TO 800 DEGREES C AT ATMOSPHERE BUT WOULD NOT HEAT ABOVE 300 C AT PRESSURE. COST OVERRUN OF $460K IS PREDICTED, BUT GD. MUST COVER MUST OF IT.	404.5	230.0	174.5	MAY 82	OCT 83
H 81 3031	10.6 UM CO-2 TEA LASERS ***** DELINQUENT STATUS REPORT *****	550.0	486.4	47.8	MAR 83	SEP 83
H 80 3501	THIRD GENERATION PHOTOCATHODE ON FIBER OPTIC FACEPLATE ***** DELINQUENT STATUS REPORT *****	572.4	492.4	53.2	MAR 82	DEC 82
H 81 3505	HIGH CONTRAST CRT PHOSPHOR DEPOSITION AND SEALING THE PRIME CONTRACTOR HUGHES HAS RECEIVED 10 ENG MODEL FACEPLATES FROM LOCKHEED. HUGHES HAS SPUTTER COATED WITH EUROPIUM AND HAS SUCCESSFULLY FRIT SEALED TO CRT ENVELOPE. ONE ENG MODEL CRT IS IN EVALUATION. 8 INCH TERBIUM SPUTTERING TARGET ORDERED.	375.6	349.6	0.8	OCT 82	OCT 82
H 82 3505	HIGH CONTRAST CRT PHOSPHOR DEPOSITION AND SEALING - PHASE II AWARD OF PHASE 2 DEPENDENT ON ACCEPTANCE OF ACCOMPLISHMENTS MADE ON CONFIRMATORY CRT SAMPLES.	260.8	229.8			
H 80 3510	TRANSDUCER PROCESS TECHNOLOGY FOR MM DELAY LINES THE TWO MOST CRITICAL STEPS HAVE BEEN IDENTIFIED- 1,1,1 ORDERED GOLD SUBSTRATE PREPARATION AND HIGH PRESSURE SPUTTERING. MOTOROLA HAS PLACED AN ORDER FOR DEVICES FOR XM-749 PROGRAM. WESTINGHOUSE WILL FABRICATE A NEW GOLD EVAPORATION SYSTEM AT NO COST	509.0	272.0	237.0	AUG 82	DEC 82

MANUFALTURING 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 82 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
H 79 3516	CRYOGENIC COOLER HYBRID MOTOR CIRCUIT ***** DELINQUENT STATUS REPORT *****	175.9	140.8	25.0	JUN 81	DEC 82
H 79 5000	PRODUCTION HOT FORGING OF ALKALI HALIDE LENSES ***** DELINQUENT STATUS REPORT *****	591.0	541.0	50.0	SEP 81	DEC 82
H 82 5010	BONDED GRID ELECTRON GUN CONTRACT NOT YET AWARDED. A FIRM WILL CHEMICALLY VAPOR DEPOSIT BORON NITRIDE OF A QUALITY TO BE MADE INTO A FINE GRID STRUCTURE FOR A MILLIMETER WAVE TUBE. WILL BE PART OF A BONDED GRID ELECTRON GUN.	776.3		0.3		
H 82 5019	LASER-CUT SUBSTRATES FOR MICROWAVE TUBES PROPOSAL WAS RECEIVED + ANALYZED. IT REQUESTED MORE FUNDS THAN AVAILABLE. THE I/J BAND EFFORT WAS DELETED AND RESOLICITATION OF PROGRAM IS NOW UNDERWAY. LASER CUTTING OF CERAMIC MICROWAVE SUBSTRATES WILL REDUCE IBCFA ANODE CIRCUIT COST FM 2K TO 200.	441.0			MAR 83	MAR 83
H 81 5041	MILLIMETER WAVE MIXERS AND ARRAYS ONE ENG SAMPLE WAS TESTED AND FOUND TO BE OPTIMUM AT 90GHZ. DIMENSIONAL CHANGES WERE MADE AND ONE ENG SAMPLE OPTIMUM AT 94GHZ WAS SHIPPED MAY 82. SAMPLES AT 60 AND 140GHZ WILL BE SHIPPED 15 JULY. SILOXNITRIDE STRENGTHENING AND DELOACH FIXTURE FOR Q.	575.9	495.0	73.5	JUL 83	DEC 83
H 79 5042	LARGE DIAMETER ND ***** DELINQUENT STATUS REPORT *****	350.0	303.0	47.0	JUL 81	DEC 82
H 82 5109	PRECISION LO-COST SOKF ACOUSTIC WAVE DELAY LINES-UHF APPL WHEN AWARDED, SAW DELAY LINES COST WILL BE REDUCED BY A FACTOR OF 10 AND FREQUENCY STABILITY INCREASED BY FACTOR OF 5.	596.0			MAY 85	MAY 85
H 81 5110	COMMON MODULE DETECTOR ARRAYS ***** DELINQUENT STATUS REPORT *****	955.0	825.0	50.0	JUN 82	DEC 82
H 80 5147	HI RESISTIVITY POLYCRSTALIN SILICON HEMLOCK SEMICON CORP. PRODUCED 100KG OF 25MM + 65MM POLYCRYSTALINE SILICON RODS FOR PROCESSING AT HUGHES INTO SINGLE CRYSTAL BOULES. $90K CONTRACT EXTENSION IS SOUGHT FOR WORK ON 40MM + 75MM RODS + VAPOR PHASE PURIFICATION OF CHEMICAL FEED STOCK.	340.0	300.0	40.0	SEP 82	DEC 82
H 81 5178	PROGRAM FOR A GRAPHITE/EPOXY ANTENNA REFLECTOR ***** DELINQUENT STATUS REPORT *****	681.0	681.0		APR 82	DEC 82
H 82 5183	MMT FOR PRODUCTION OF LARGE DIAMETER SILICON F/LASER SEEKERS HUGHES WILL INSTALL NEW SPLIT RF HEATER COIL ON AUTOMATION READY ZONER TO PERMIT MULTIPLE PASSES OF 3IN. BOULE. SHOULD RESULT IN CLEANER SILICON. 2 ENGINEERS VISITED SIEMENS IN GERMANY TO STUDY ZONING OF 3+4 IN. BOULES OF SEMICONDUCTOR GRADE SILICON.	512.0	422.0	10.0	JAN 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
1ST SEMIANNUAL SUBMISSION CY 82 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
H 82 5193	PROCESS ADJUSTMENTS F/ENVIRON STRESS ON ELECT CIRCUIT METALS --- JUST FUNDED. NO 301 REQUIRED. ---	21.0				
H 80 9563	MINATURE HIGH VOLTAGE POWER SUPPLYS FOR NIGHT VISION GOGGLES ***** DELINQUENT STATUS REPORT *****	535.0	349.1	30.0	JUN 82	JAN 83
H 80 9588	THIRD GENERATION LOW COST IMAGE INTENSIFIER TUBES ***** DELINQUENT STATUS REPORT *****	900.0	638.7	78.7	APR 83	SEP 84
H 81 9588	THIRD GENERATION LOW COST IMAGE INTENSIFIER TUBES ***** DELINQUENT STATUS REPORT *****	714.0	695.0	19.0	JUN 84	DEC 83
2 76 9738	EPITAXIAL + METALLIZATION PROCESSES F/GAAS IMPATT DIODES ***** DELINQUENT STATUS REPORT *****	248.8	247.0	1.8	JUN 77	DEC 82
H 78 9738	PULSED GALLIUM ARSENIDE IMPATT DIODES MACOM DIFFUSED SEVERAL WAFERS THAT RESULTED IN GOOD DIODES THAT OPERATE AT 17 GHZ. A NEW DIFFUSION PROFILE SUGGESTED BY ERADCOM GAVE GOOD PERFORMANCE. 15 OF 20 DIODES GENERATED A PEAK OF 8 WATTS AT 17 GHZ. MACOM IS USING AUTO CAPABILITY OF 276 9738.	500.0	441.2	58.8	JUN 80	APR 83
2 77 9754	CONTIN CYCLE PROD OF SHOCK RESISTANT QUARTZ CRYSTAL UNITS PILOT RUN OF QUARTZ CRYSTALS IN CERAMIC FLATPACKS HAVE BEEN COMPLETED IN THE GEND FACILITY. DATA ANALYSIS IS NOT COMPLETE BUT APPEARS GOOD. PILOT LINE WILL BE ESTABLISHED IN INDUSTRY WITH PROJECT E 81 3057 TO MEET THE ARMYS PRODUCTION NEEDS.	2,156.8	2,093.8	63.0	DEC 79	SEP 82
2 76 9766	DEPOSITION OF A HIGHVOLTAGE INSULATING LAYER FOR THICK FILM ***** DELINQUENT STATUS REPORT *****	182.9	128.5	35.0	AUG 78	DEC 82
2 77 9805	AUTO MICROCIRCUIT BRIDGE PDN MEASURE OF QUARTZ CRYSTALS HUGHES AIRCRAFT CO COMPLETED A SINGLE CRYSTAL TEST STATION AND 12 MICROCIRCUIT BRIDGES. SOFTWARE FOR AUTOMATIC OPERATION IS 99 PCT COMPLETE + DOCUMENTATION 80 PCT COMPLETE. TEST TECH WAS ADDED TO MIL-SPEC-3098. IS BEING AUTOMATED ON PROJ 279 9805.	875.0	775.0	100.0	JAN 79	AUG 82
H 79 9805	QUARTZ CRYSTAL PARAMETER TESTING HUGHES AIRCRAFT CO DELIVERED A MULTICRYSTAL RACK TO ETDL LABS. WILL INCREASE CRYSTAL TESTING CAPACITY FROM 25 TO 200 CRYSTALS PER DAY. DOCUMENTATION IS COMPLETE. AGING OVEN HOLDS 200 CRYSTALS WHICH ARE MOVED TO THE TEST STATION ON A CHAIN BELT.	725.0	685.0	40.0	JUN 80	AUG 82
H 79 9807	PROCESSING HIGH STABILITY QUARTZ CRYSTAL UNIT GENERAL ELECTRIC NEUTRON DEVICES (GEND) DEPT. MODIFIED ITS FACILITY TO PROCESS 5 MHZ + 10 MHZ AT-CUT CRYSTALS FOR OVEN CONTROLLED OSCILLATORS. GEND WILL NO LONGER SATISFY ARMY NEEDS SO FREQUENCY ELECTRONICS INC WAS CONTRACTED TO SET UP A PILOT LINE.	801.2	743.2	58.0	MAR 81	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
1ST SEMIANNUAL SUBMISSION CY 82 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
2 77 9809	MEAS TECHNIQ FOR CHMICALS IN MFG PROC FOR SOLID ST MICROWV ***** DELINQUENT STATUS REPORT *****	632.0	625.0	7.0	NOV 78	DEC 82
2 77 9813	RUGGEDIZED LOW COST QUADRANT DETECTOR FOR CLGP. ***** DELINQUENT STATUS REPORT *****	199.0	159.0	40.0	JAN 80	DEC 82
H 79 9838	MINIATURE CATHODE RAY TUBES ***** DELINQUENT STATUS REPORT *****	369.2	278.7	90.5	AUG 81	DEC 82
H 79 9844	CMOS CIRCUITS USING SILICON ON SAPPHIRE -SOS-TECHNOLOGY ***** DELINQUENT STATUS REPORT *****	770.0	686.4	49.9	NOV 81	DEC 82
H 78 9860	PDN TECHQE-GALLIUM ARSENIDE MIMAV FIELD EFFECT TRANSISTORS ALL FETS HAVE BEEN DELIVERED. AWAITING FINAL TECHNICAL REPORT. PILOT LINE HAS BEEN ESTABLISHED TO PRODUCE UNPACKAGED FETS AT $15 EACH AND PACKAGED FETS AT $50 EACH. ALL IN SPEC FROM 4 TO 8 GHZ BUT NOT ALL IN SPEC FROM 12 TO 16 GHZ.	464.3	399.3	65.0	NOV 80	AUG 82
2 77 9873	ANTENNA PATTERN MEASUREMENTS USING NEARFIELD TECHNIQUES THIS CONTRACT HAS BEEN COMPLETED. THE FINAL REPORT -NEAR FIELD MEASUREMENT SYSTEM-, REPORT NO. DAA807-77-C-0587-F1, HAS BEEN APPROVED FOR PUBLIC RELEASE AND HAS BEEN DISTRIBUTED.	719.0	692.4	27.0	OCT 79	JUN 82
H 79 9877	LIGHT EMITTING DIODE ARRAY COMMON MODULE ***** DELINQUENT STATUS REPORT *****	739.5	689.5	50.0	APR 81	DEC 82
H 78 9889	THIRD GENERATION 0.9 MICRON WAFER INTENSIFIER TUBE ***** DELINQUENT STATUS REPORT *****	837.0	757.0	80.0	JUN 81	JUN 83
H 81 9889	18MM THRID GENERATION 0.9 MICRON WAFER INTENSIFIER TUBE ***** DELINQUENT STATUS REPORT *****	259.0	250.0	1.1	JUN 83	JUN 83
H 80 9897	SURFACE ACOUSTIC WAVE RESONATOR + REFLECTIVE ARRAY DEVICES REFLECTIVE ARRAY COMPRESSOR-SIX SAMPLES HAVE BEEN ION ETCHED AND ARE BEING PACKAGED. THE REMAINING 12 ARE BEING PREPARED FOR ETCHING. THE COMPLEMENTARY FILTER IS BEING CORRECTED. SAW RESONATOR- THESE DEVICES DO NOT MEET SPECS. EFFORT WAS TERMINATED.	626.3	599.3	26.6	AUG 82	JUN 83
H 82 99D5	LO-COST MONOLITHIC GALLIUM ARSENIDE MICROWAVE INTEG CIRCUITS A CONTRACT IS BEING NEGOTIATED. A FIRM WILL OPTIMIZE TECHNIQUES FOR MAKING MONOLITHIC MICROWAVE INTEGRATED CIRCUITS THAT WILL REQUIRE LITTLE OR NO TUNING. WILL WORK ON ACTIVE AREA GROWTH, AMPLIFIER FABRICATION, PACKAGING, AND TESTING AT 4-8 GHZ.	1,160.8	1,076.3	5.0	SEP 84	SEP 84

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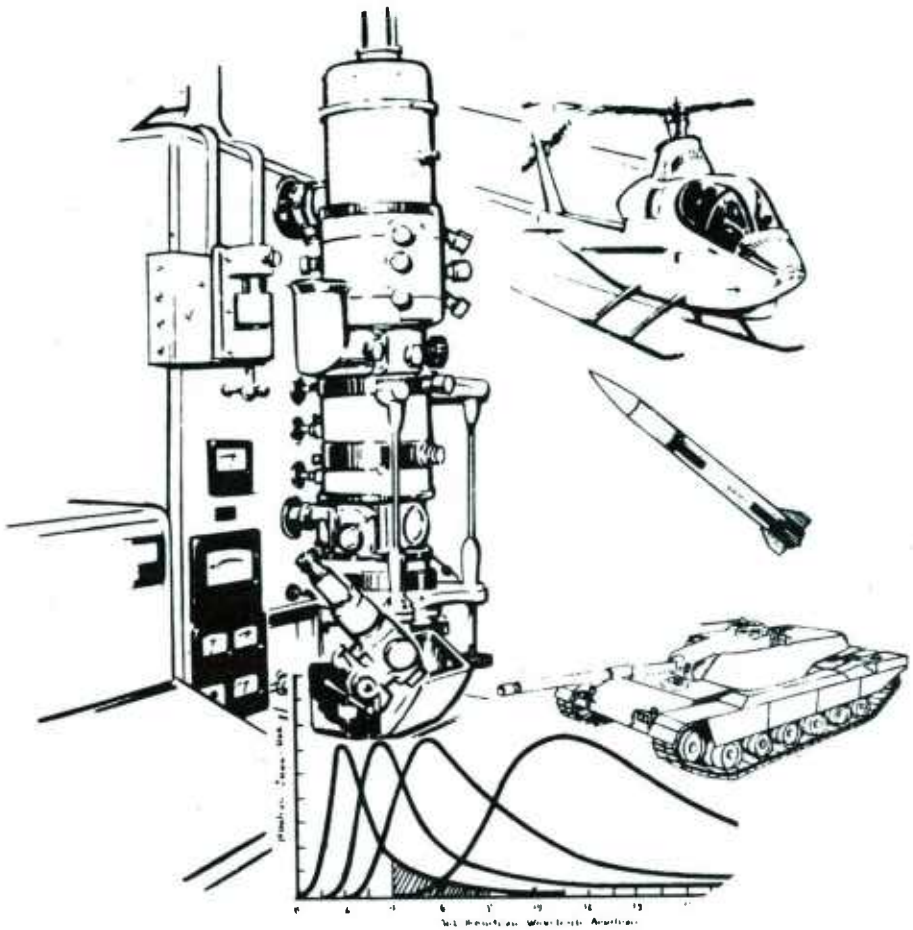
H 81 9909	PRODUCTION TECHNIQUES FOR SI MW PWR TRANSISTORS IMPLANTED ARSENIC EMITTER DOES NOT YET PERFORM AS WELL AS PHOSPHOROUS EMITTER. FULLY DISTRIBUTED TUNING INCREASED THE GAIN IBD AND EFF. 6 PERCENT. WIRE BONDER PROGRAMMING CHANGED SO BONDING PADS WILL NOT LIFT OFF.	803.2	713.2	17.3	SEP 83	SEP 83



US ARMY MATERIALS AND MECHANICS RESEARCH CENTER
(AMMRC)

ARMY MATERIALS AND MECHANICS RESEARCH CENTER

CURRENT FUNDING STATUS, 1ST CY82

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)	INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)
80	1	4,404,000	1,714,400	280,600 (16%)	2,689,600	2,524,500 (93%)
81	2	4,508,000	1,603,700	652,000 (40%)	2,904,300	1,140,800 (39%)
82	2	4,822,500	2,473,100	0 (0%)	2,349,400	95,700 (4%)
TOTAL	5	13,734,500	5,791,200	932,600 (16%)	7,943,300	3,761,000 (47%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 42% INHOUSE REMAINING 57%

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M BD 6350	MATERIALS TESTING TECHNOLOGY SEE SUBTASK BELOW FOR PROJECT STATUS.	4,404.0	1,714.4	2,524.5	APR 83	OCT 82
M BD 6350 2019	PORTABLE NEUTRON RADIOGRAPHY SYS-ENGRG MODEL THE SECOND FIELD TEST OF SYSTEM HAS BEEN COMPLETED. A MOVIE ILLUSTRATING THE USE OF THE N-RAY SYSTEM HAS BEEN COMPLETED. THE PROCESSING OF THE FILM IS PRESENTLY ON HOLD DUE TO DARCOMS ORDER RESTRAINING ALL ARMY FILM MAKING.	931.2	787.6	143.6	OCT 82	OCT 82
M 80 6350 2200	AUTO IDENT SIZING + COUNTING OF PARTICULATE CONTAMINATION THE ENTIRE AUTOMATED SYSTEM HAS BEEN PLAGUED WITH EQUIPMENT PROBLEMS. ONLY IN RECENT WEEKS HAVE THESE PROBLEMS BEEN SOLVED. CURRENTLY, PERSONNEL ARE BEING TRAINED IN BOTH SAMPLE PREPARATION AND OPERATION OF THE AUTOMATED SYSTEM.	113.5		93.8	SEP 82	SEP 82
M 80 6350 2205	HOLOGRAPHIC INSPECTION OF ROTARY FORGED PREFORMS THE BASIC ARCHITECTURE OF THE DESIGN IS COMPLETE. RACKS AND POWER SUPPLIES HAVE BEEN ACQUIRED AND PIN BLOCKS HAVE BEEN MOUNTED. MOST OF THE ELECTRONIC COMPONENTS HAVE BEEN ACQUIRED.	105.0	80.0			DEC 82
M BO 6350 2225	3D SHOCK/VIB TEST F/MISSILE + ART FUZE MTLS THE PROJECT HAS BEEN SUCCESSFULLY COMPLETED AND A FINAL REPORT WILL BE PREPARED. AN ADDITIONAL $12K WILL BE REQD TO COMPLETE THE FINAL REPORT.	69.5	50.0	19.5	DEC 82	DEC 82
M 80 635D 2227	SETBACK DRAG TESTER F/S+A DEVICES THE FINAL TECHNICAL REPORT HAS BEEN PUBLISHED AND DISTRIBUTED. ADDITIONAL FUNDS WERE RECEIVED FOR THE PREPARATION OF THE ENGR DRAWINGS. THE COMPLETION OF THE INSTRUMENTATION MANUAL IN JUNE 1982 WILL CONCLUDE THIS PROJECT.	99.0		99.0	JUN 82	JUN 82
M 80 6350 2235	WELD EVALUATION BY ACOUSTIC EMISSION TECHNIQUE THE FINAL REPORT FOR THE WORK COMPLETED UNDER PHASE II HAS BEEN RECEIVED FROM THE CONTRACTOR, REPRODUCED AND DISTRIBUTED. A PRELIMINARY COPY OF THE CONTRACT PACKAGE FOR PHASE III WORK HAS BEEN GENERATED.	117.5	97.5			SEP 81
M BD 6350 2238	USE OF TORSIONAL BRAID ANALYSIS TO MONITOR PREPREG AGING ***** DELINQUENT STATUS REPORT *****					
M 80 6350 2401	CANNON TUBE AUTOMATIC MAGNETIC BORESCOPE INSPECTION THE SIGNAL PROCESSING CAPABILITY HAS BEEN EXPANDED. THE INTERFACE CIRCUITRY TO CONNECT A SCAN-CONVERTER TO THE MRB HAS BEEN COMPLETED. THIS WILL ENABLE THE C-SCAN PRESENTATION OF THE MRB DATA. A PRELIMINARY HOOK-UP HAS BEEN SUCCESSFUL.	362.0	289.0	31.0		JUN 83

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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
M 80 6350 2402	INSP PROC-TEST INSTR F/MASS PROD SCATTERABLE MINES COMPUTER ***** DELINQUENT STATUS REPORT *****					
M 80 6350 2403	IMPROVED STANDARDIZED WPN CHAMBER PRESSURE MEAS THE PROJECT HAS BEEN COMPLETED. THIS PROJECT WAS SUCCESSFUL. THE TECOM TEST OPERATING PROCEDURE 3-2-810 IS BEING REVISED TO INCORPRATE THE RESULTS OF THIS EFFORT.	116.5		116.5	MAR 82	MAR 82
M 80 6350 2405	BURN TIME TEST FOR ZIRCONIUM POWDER IN THERMAL BATTERY ***** DELINQUENT STATUS REPORT *****	70.0	17.0			DEC 82
M 80 6350 2406	IMPROVED TEST METHODS FOR STRUCTURAL FOAM ***** DELINQUENT STATUS REPORT *****					
M 80 6350 2408	CHEMICAL ANALYSIS OF SILICON NITRIDE THE WORK ON THIS PROJECT WAS TERMINATED DUE TO THE EXTENDED ILLNESS AND RETIREMENT OF THE PRINCIPAL INVESTIGATORS.	50.0		29.2		SEP 82
M 80 6350 2409	EMISSION SPECTROGRAPH ANAL MARAGING STEEL PLASMA EXCITATION ***** DELINQUENT STATUS REPORT *****	55.0		50.6		DEC 82
M 80 6350 2417	COPPER HEAD CRITICAL FLAW DETECT OF COMPLEX COMPONENTS THE CONTRACT HAS BEEN COMPLETED AND THE CONTRACTOR HAS PUBLISHED A TECHNICAL REPORT ON THEIR EVALUATION, FINDINGS AND RECOMMENDATIONS. AN MMT PROPOSAL FOR DESIGN AND FAB OF AN AUTOMATIC EDDY CURRENT INSPECTION SYSTEM WAS PREPARED AND SUBMITTED.	182.3	133.1	43.0		JUL 82
M 80 6350 2420	OPTICAL AND DIG STANDARDS AND MEASURING SYSTEM NBS HAS CONTINUED THE DEVELOPMENT OF THE MEASURING EQUIPMENT FOR SCRATCH STANDARDS. THE EQUIPMENT IS CALIBRATED AT THE PRESENT TIME, AND A TEST PLAN IS BEING FORMULATED TO EVALUATE THE EXISTING SCRATCH STD.	252.0	200.0	21.0		MAR 83
M 80 6350 2422	INSPECT/MEAS METHOD FOR SPHERICAL SURFACED COMPONENTS ARRADCOM CHEMICAL SYSTEM LABORATORY WAS SELECTED TO FABRICATE THE TEST EQUIPMENT. THE EQUIPMENT DESIGN WAS COMPLETED BY ARRADCOMS DESIGN AND DRAFTING DIVISION.	50.0	8.8	0.6		DEC 82
M 80 6350 2423	INSP OF KNURL FOR 155MM, M549 RAP THIS TASK HAS TECHNICALLY BEEN COMPLETED. THE FEASIBILITY OF THE OPTICAL APPROACH HAS BEEN PROVEN. THE DELIVERY OF THE EQUIPMENT AND TECHNICAL REPORT IS FORTHCOMING.	44.7		43.0	JUL 82	JUL 82
M 80 6350 2424	AUTOMATIC GEAR TOOTH CONTOUR INSPECTION SYSTEM PHASE I BREADBOARD HAS BEEN ASSEMBLED AND ALIGNED. THE MACHINE HAS BEEN OPERATED AS X-Y COORDINATE MEASURING MACHINE USING CONTACT PROBE. ANTICIPATED ACCURACIES HAVE BEEN ACHIEVED. DRAFT FINAL REPORT HAS BEEN SUBMITTED LESS OPTIC-PROBE TEST DATA.	180.0		156.2	JUL 82	JUL 82

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M 80 6350 2425	OPTICAL TESTING OF FAR INFRARED MATERIALS DURING THIS LAST REPORTING PERIOD, WORK WAS AT A MINIMUM DUE TO LAB IMPOSED PRIORITIES.	85.0		77.0	SEP 82	SEP 82
M 80 6350 2430	ACCEPT TEST F/CANNON MODULE SCANNER PERF WORK HAS BEEN COMPLETED AND THE FINAL EVALUATION REPORT IS BEING PREPARED.	100.0	80.0		JAN 81	JAN 81
M 80 6350 2431	COMPUTERIZED COLOR MATCHING SYSTEM THE TWO UNIT SYSTEM WAS DELIVERED IN JAN 82. INSTALLATION AND CONTRACTOR-FURNISHED TRAINING BOTH NLABS AND DPSC WAS COMPLETED IN MARCH 82. SPECIMENS HAVE BEEN ASSEMBLED AND MEASURED AT NLABS FOR THE CORRELATION STUDY.	605.6	201.0	185.0	OCT 82	OCT 82
M 80 6350 2433	AUTO UNIVERSAL HI VOLTAGE POWER SUPPLY TEST CONSOLE FABRICATION OF THE ELECTRONICS CONSOLE WHICH BEGAN IN JUNE 1981 HAS NOT BEEN COMPLETED. THIS DELAY IS PRIMARILY DUE TO PERSONNEL CHANGES. THE SOFTWARE PROGRAM DEVELOPMENT IS ON-GOING.	198.0		14.5	MAY 83	MAY 83
M 80 6350 2444	ULTRASONIC TESTING OF ROADWHEELS THE SECOND PIGGY-BACK TEST OF 3265 MILES HAS BEEN COMPLETED FOR A TOTAL OF 5286 ROAD TEST MILES. OF THE 17 ROADWHEELS PLACED ON THE SECOND ROAD TEST, 6 FAILURES OCCURED. THE FAILURE DISTRIBUTION WAS NOT IN ACCORDANCE WITH EXPECTATIONS.	55.0	41.5			OCT 82
M 80 6350 2445	ULTRASONIC TIRE INSPECTION THE DRAFT MILITARY STANDARD FOR DEPOT ULTRASONIC TIRE INSPECTION WAS PREPARED BY THE CONTRACTOR AND REVIEWED BY THE GOVERNMENT. THE MIL-STD COMPLETION HAS BEEN DELAYED DUE TO THE UNVERIFIED TEMP/THICKNESS CORRECTION TABLES.	85.0	57.3			OCT 82
M 80 6350 2446	BLACKLIGHT VIDEO INSPECTION SYSTEM THE SCOPE OF WORK HAS BEEN PREPARED AND HAS BEEN SUBMITTED TO THE PROCUREMENT DIRECTORATE.	79.0		2.4	JUN 83	JUN 83
M 80 6350 2450	GUN STEEL ADHESION CHROMIUM COATING MEASUREMENT SPIN ROTOR SAMPLES MACHINED FROM CHROMIUM PLATED GUN STEEL RODS HAVE BEEN PREPARED FOR ADHESION TESTING. THE SAMPLES WERE PLATED FROM CHROMIUM SOLUTIONS OBTAINED FROM WATERVLIET.	60.0	10.4	28.8		MAR 83
M 80 6350 2453	THICKNESS MEAS OF NON-MAGNETIC COATINGS THE AUTOMATIC READ CYCLE, WHICH WAS ADDED AS PART OF THE MODIFICATION, PERFORMED AS INTENDED. DURING SHOP TESTING ON PRODUCTION TUBES, THE REPEATABILITY OF THE CHROME THICKNESS PROBES WAS ESTABLISHED AS .0001.	83.0	65.6			JUN 82

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M 80 6350 2455	DETERM OF QUENCH CRACKS AFTER HEAT TREATMENT CONTRACT TO CONSTRUCT THE QUENCH CRACK SYSTEM WAS AWARDED. THE SYSTEM CONSISTED OF A SELF PROPELLED INSPECTION SYSTEM CAPABLE OF INSPECTING BOTH THE 105MM AND 155MM GUN TUBE FORGINGS. THE SYSTEM IS READY TO BE TURNED OVER TO QC TO CHECK TUBE FORGINGS	125.0	68.0		AUG 82	AUG 82
M 80 6350 2603	PROVIDE AUTO SPHERICITY INTERFEROMETER F/TEST LENS SURFACES THE CALIBRATION OF THE DIGITAL RADIUS MEASURING EQUIPMENT AND THE INTERFEROMETER HAS BEEN COMPLETED. A PRELIMINARY TEST PROGRAM WAS CONDUCTED. THIS INITIAL EVALUATION INDICATED THE INTERFEROMETER TO BE AN EFFICIENT METHOD FOR MEASURING RADII.	181.0	96.3	84.7	APR 82	SEP 82
M 80 6350 2604	NEW COMPATIBILITY TEST METHOD FOR EXPLOSIVE SYSTEMS ***** DELINQUENT STATUS REPORT *****	58.0		50.0	SEP 81	DEC 82
M 80 6350 2612	AUTO PROCEDURE FOR THE EVALUATION OF CHARCOAL GAS-LIVES FABRICATION OF THE PROTOTYPE TEST EQUIPMENT HAS BEEN COMPLETED ALONG WITH PRELIMINARY TESTING AND EVALUATION. FINAL TDP HAS BEEN PREPARED AND IS AVAILABLE FOR ADDITIONAL REPLICATION FOR CONTRACTORS AND/OR TESTING LABORATORIES AS NECESSARY.	62.0	35.0	25.0		JUL 82
M 80 6350 2613	INFLOW AIR BLEED TEST, LTC-712 ENGINE DETAIL DRAWINGS OF THE COMBUSTOR HOUSING HAVE BEEN ACQUIRED AND MODIFIED IN SUFFICIENT DETAIL FOR HARDWARE MODIFICATIONS ON SITE AT CCAD. THE MODIFICATION IS CURRENTLY IN-PROCESS.	217.0	47.0	105.0		SEP 82
M 80 6350 2614	TEMP. COMPENSATED VOLTAGE CONT CRYSTAL OSCILLATOR TEST METH. THE CONTRACTOR HAS COMPLETED THE DEVELOPMENT OF THE TESTING METHODOLOGY AND PROCEDURES FOR EVALUATING FREQUENCY STABILITY OF TEMPERATURE-COMPENSATED VOLTAGE CONTROLLED CRYSTAL OSCILLATORS AS CRYSTAL CLOCKS.	75.0	73.0			SEP 82
M 80 6350 2616	AUTOMATED SOFTWARE AIDS FOR TESTING REQUIREMENTS THE CONTRACTUAL PHASE OF THE EFFORT HAS BEEN COMPLETED. INITIAL RESULTS INDICATE THE CONCEPT FOR AN AUTOMATED TOOL WHICH AIDS IN THE ANALYSIS OF SYSTEM/SOFTWARE REQ. HAS BEEN REALIZED TO THE POINT WHERE A FULLY OPERATIONAL SYS APPEARS WITHIN REACH.	150.0	121.1			DEC 82
M 80 6350 2621	THERMOELECTRIC MATERIALS TEST FINAL TESTING IS BEING COMPLETED AND ALL ITEMS HAVE BEEN DELIVERED INCLUDING THE FINAL REPORT. AN MMT CONTRACT IS PLANNED TO IMPLEMENT CONTRACTORS USE OF THIS WORK. IT WILL BE INITIATED WHEN OTHER COMPONENTS REACH THE READINESS STAGE.	95.0	93.5		JUL 81	JUN 82
M 80 6350 2623	NDT MEAS OF GOLD PLATING THICKNESS ON SMALL CYL COMP WIRES ***** DELINQUENT STATUS REPORT *****	117.0				DEC 82

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M 80 6350 2624	AUTO ANALYSIS OF PCB PLATING SOLUTION STRENGTH ***** DELINQUENT STATUS REPORT *****	75.0				DEC 82
M 80 6350 2625	HYBRID CIR CHIP SEMICONDUCTOR ELEC TEST + SCREEN PROCEDURE ***** DELINQUENT STATUS REPORT *****	61.0				DEC 82
M 80 6350 2627	INFRARED SPECTROSCOPY ANALYSIS OF NON-VOLATILE VEHICLES THE PROJECT STATUS DID NOT ACCOMPANY THE SEMI-ANNUAL MIT REPORT.	20.0		20.0	APR 81	APR 81
M 80 6350 2628	STANDARD CONTAMINANT FOR TEST FUELS THE SCOPE OF WORK WAS FINALIZED. THIS SCOPE INCLUDED THE REVIEW OF PRIOR ART, SELECTION OF MATL TO BE USED AND CONDUCT OF THESE TESTS.	30.0		10.4	AUG 81	JAN 83
M 80 6350 2629	GUN TUBE REMOTE VISUAL INSPECTION SPECIFICATIONS HAVE BEEN PREPARED AND FORWARDED TO PROCUREMENT. PROPOSALS WERE SENT TO 14 CONTRACTORS, SIX PROPOSALS HAVE BEEN RECEIVED AND ARE IN THE PROCESS OF BEING EVALUATED.	79.0		11.7		MAR 83
M 80 6350 2630	CRITICAL ULTRASONIC INSPECTION PROBLEMS WITHIN THE ARMY COMPLETED THE PREPARATION OF A DETAILED SPEC FOR A CUSTOM-BUILT IMMERSION TANK COMPLETE WITH AN ULTRASONIC FIELD DETECTOR HOLDERS, AN ULTRASENIC TRANSDUCER HOLDER, AND SUITABLY PRECISE POSITIONING EQUIPMENT.	92.0	20.9	18.3	JAN 81	MAR 83
M 80 6350 2631	CRITICAL ELECTROMAGNETIC INSP PROBLEMS WITHIN THE ARMY ***** DELINQUENT STATUS REPORT *****	100.0	25.0	50.0		DEC 82
M 80 6350 2632	DEVELOPMENT OF INFRARED AND OPTICAL TESTS ***** DELINQUENT STATUS REPORT *****	103.0			DEC 81	DEC 82
M 80 6350 2633	FOURIER TRANSFORM IR TECHNIQUES FOR QC OF PREPREG SYSTEM ***** DELINQUENT STATUS REPORT *****	30.0		10.0	FEB 81	DEC 82
M 80 6350 2639	ROADWHEEL SEAL TEST MACHINE THE DESIGN WORK HAS BEEN COMPLETED. PROCUREMENT OF REQUIRED PURCHASED ITEMS IS IN PROGRESS. IN-HOUSE FABRICATION OF THE EQUIPMENT IS IN-PROCESS.	135.0	1.8	54.3	JUN 82	DEC 83
M 80 6350 2642	ADVANCED PENETRATING RADIATION TECH F/PRODUCT EVALUATION FUNDING FOR THIS EFFORT ENDED DEC 81 AND WAS CONTINUED UNDER SUB TASK M 81 6350-2642. SEE THE ABOVE SUBTASK FOR STATUS.	142.2	5.7	136.5	SEP 80	JAN 82
M 80 6350 2643	IN-PROCESS DIM INSP ROTARY FORGED CANNON TUBES THIS PROJECT HAS BEEN CANCELLED AND THE UNEXPENDED FUNDS RETURNED TO AMMRC. THE CANCELLATION WAS DUE TO THE RESPONSE TO THE REQ. THESE RESPONSES WERE 2 TO 3 TIMES THE AMOUNT AUTHORIZED FOR THE PROJECT.	110.0		17.3		JUN 82

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M 80 6350 2646	PISTON ACTUATOR TEST PROTOTYPE ASSEMBLY OF THE SYSTEM HAS BEEN COMPLETED. ALL THE ELECTRONIC SIGNAL PROCESSING EQUIPMENT HAS BEEN CHECKED OUT. THE SYSTEM IS IN THE PROCESS OF BEING CALIBRATED.	85.0		84.0		SEP 82
M 80 6350 2955	QA F/XM30 SERIES C& PROTECTIVE GAS MASK LENS SPECIAL EQUIPMENT HAS BEEN ORDERED AND MATERIALS HAVE BEEN OBTAINED.	80.0	18.0		SEP 82	SEP 82
M B1 6350	MMT MATERIALS TESTING TECHNOLOGY SEE SUBTASK BELOW FOR PROJECT STATUS.	4,258.0	1,419.0	1,090.5	OCT 83	OCT 83
M B1 6350 1802	M732 FIELD ARTILLERY FUZE/S+A TRANSPORTATION VIBRATION TEST ALL WORK IS ON SCHEDULE. THE RESULTS ARE BEING REVIEWED PRIOR TO STARTING THE RANDOM VIBRATION TESTING.	85.2		48.2		OCT 82
M 81 6350 2206	OPTICAL GAP INSPECTION SYSTEM THE PROTOTYPE MEASUREMENT SYSTEM HAS BEEN SHIPPED TO MILAN AAP. EQUIPMENT IS PRESENTLY AWAITING REQUIRED MODIFICATIONS TO CORRECT PREVIOUSLY IDENTIFIED DEFICIENCIES. ADDITIONAL FUNDS HAVE BEEN APPROVED TO CORRECT THESE DEFICIENCIES.	45.0	25.0		MAR 82	SEP 82
M 81 6350 2224	AUTOMATED ANTENNA PATTERN MEASUREMENT ***** DELINQUENT STATUS REPORT *****	20.0		6.0		DEC 82
M B1 6350 2245	CERAMIC MATL NDT EVALUATION TECHNIQUES MICROFOCUS RADIOGRAPHY HIGH FREQUENCY ULTRASONIC AND RESONANT FREQUENCY TECH WERE USED TO EVALUATE HOT PRESSED SILICON NITRIDE. RESULTS OF PROOF TESTING ARE BEING CORRELATED WITH THE ULTRASONICS AND RADIOGRAPHY RESULTS.	120.0	2.4	75.6		APR 83
M B1 6350 2406	IMPROVED TEST METHODS FOR STRUCTURAL FOAM ***** DELINQUENT STATUS REPORT *****					
M B1 6350 2407	LIQUID CHROMATOGRAPHY FOR EPOXY RESIN FORMULATION THE MIL-HDBK-17 CHAPTER ON CHEMICAL CHARACTERIZATION AND THE RESULTS OF CASE STUDIES USING LC PROCEDURES FOR MONITORING THE COMPOSITE OF EPOXY RESIN PREPREGS WERE PRESENTED AT A MEETING OF MIL-HDBK-17 REPRESENTATIVES IN FEBRUARY.	40.0	6.0			DEC 82
M B1 6350 2409	EMISSION SPECTROGRAPH ANAL MARAGING STEEL PLASMA EXCITATION STANDARD SOLUTIONS OF MN, SI, NI, CR, MO, P, CO, AL, CU, AND TI COVERING THE RANGES NORMALLY FOUND IN HIGH STRENGTH STEELS WERE PREPARED. A MATRIX(SOFTWARE) FOR HIGH STRENGTH STEEL WAS COMPLETED FOR TEN ELEMENTS.	60.0		30.9		MAR 82

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M 81 6350 2418	HALF LIFE OF TRITIUM LAMPS SAMPLES OF TRITIUM LAMPS WERE SUBJECTED TO ACCELERATED AGING TESTS. THE BRIGHTNESS BEHAVIOR WAS MONITORED FOR 12 MONTH PERIOD. ANALYSIS REVEALED THAT A GOOD TRITIUM LAMP HAD BEEN SUBJECTED TO A SECOND BURN-IN 28 DAYS AFTER MANUFACTURE.	90.3	5.3	32.7		JAN 83
M 81 6350 2419	FIRE CONTROL COMPONENTS AUTOMATIC INSPECTION TESTING HAS COMMENCED ON THE TEN M19 BINOCULARS. INITIAL RESULTS INDICATED THAT A GOOD CORRELATION EXISTS BETWEEN RESOLUTION AND MODULATION. TRANSFER FUNCTION OF THE BINOCULARS MAY NOT EXIST.	80.0	32.0	5.0		MAR 83
M 81 6350 2447	AEROSOL TEST APPARATUS FOR BIOLOGICAL DETECTOR + WARNING SYS THE TECHNICAL PORTION OF THIS SUBTASK HAS BEEN COMPLETED. THE TECHNICAL REPORT IS SCHEDULED FOR PUBLICATION IN AUGUST 1982. THE PROTOTYPE EQUIP WAS DELIVERED AND CHECKED OUT. THE CONTRACTOR IS TRAINING GOVERNMENT PERSONNEL TO OPERATE THE EQUIPMENT.	50.0	45.0	5.0	JUL 82	JUL 82
M 81 6350 2448	IMPROVED G8 STIMULANT THE TECHNICAL WORK FOR THIS SUBTASK HAS BEEN COMPLETED. THE TECHNICAL REPORT IS IN THE PROCESS OF BEING PREPARED.	25.0		14.0		JUN 82
M 81 6350 2603	PROVIDE AUTO SPHERICITY INTERFEROMETER F/TEST LENS SURFACES AN EVALUATION OF CURVATURE HAS BEEN COMPLETED WITH PROMISING RESULTS. THIS WORK INDICATED THE INTERFEROMETERS REPEATABILITY AND EASE OF USE BY AN UNSKILLED OPERATOR. A FOLLOW UP EVALUATION UTILIZING THE MASTER RADII TEST GLASS HAS BEEN INITIATED.	110.0	37.7	40.0		SEP 82
M 81 6350 2604	NEW COMPATIBILITY TEST METHOD FOR EXPLOSIVE SYSTEMS ***** DELINQUENT STATUS REPORT *****					
M 81 6350 2630	CRITICAL ULTRASONIC INSPECTION PROBLEMS WITHIN THE ARMY A TRANSDUCER EVALUATION INSTRUMENT HAS BEEN COMPLETED. THE INSTR WAS RECENTLY MODIFIED TO INCLUDE AN INTEGRATOR WHICH REDUCED THE BACKGROUND NOISE LEVEL. CLEAN BEAM PROFILE MEAS OF BOTH CONTACT AND IMMERSION TYPE TRANSDUCERS ARE NOW POSSIBLE.	60.0		60.0		SEP 82
M 81 6350 2631	CRITICAL ELECTROMAGNETIC INSP PROBLEMS WITHIN THE ARMY THE EDDY CURRENT INSTRUMENTATION WAS DELIVERED. ALSO, THE MULTI-FREQUENCY EDDY CURRENT INSTRUMENTATION FOR TASK 2 WAS RECEIVED.	67.0		5.0		MAR 83
M 81 6350 2633	FOURIER TRANSFORM IR TECHNIQUES FOR QC OF PREPREG SYSTEM ***** DELINQUENT STATUS REPORT *****					
M 81 6350 2640	TRACK TEST MACHINE ALL COMPONENT PARTS FABRICATION ARE APPROXIMATELY 90 PCT COMPLETED. IN ORDER TO COMPLETE THIS EFFORT ON A TIMELY BASIS, $50K IS REQUIRED.	275.0		193.0		SEP 83

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
1ST SEMIANNUAL SUBMISSION CY 82 RCS DRCMT-3D1

PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 81 6350 2642	ADVANCED PENETRATING RADIATION TECH F/PRODUCT EVALUATION SEE PROJECT NO M 80 6350-2642.	142.5	5.7	136.5		JAN 82
M 81 6350 2800	THERMAL + DYNAMIC MECH CHAR-PREPREG AGING AND CURE BEHAVIOR ***** DELINQUENT STATUS REPORT *****					
M 81 6350 2801	NEW PROPELLANT SURVEILLANCE ***** DELINQUENT STATUS REPORT *****	65.0				JUN 83
M 81 6350 2802	PYROTECHNIC INGREDIENT ACCEPTANCE TESTING COMPARISONS OF NOMIAL 200/325 MG USING SIEVE TECHNIQUES AND SEDIGRAPH 5000D TEHNIQUE. USED SEDIGRAPH DATA TO MAKE FIRST REVISION OF MIL-SPEC M-382 C(AR) FOR MG. THIS REVISION WAS REQUIRED TO RESUME PRODUCTION OF M206 DECOY FLARES.	65.0		85.0	JUN 83	JUN 83
M 81 6350 2803	AUTO MEAS OF STRENGTH + OXIDE LIMITING FLAWS IN CERAM TURB A PROCUREMENT PACKAGE WAS PREPARED WITH DETAILED SPECIFICATIONS OUTLINING THE DESIRED FEATURES FOR THE PURCHASE OF A MERCURY INTRUSION POROIMETER. THE EQUIP IS SCHEDULED TO BE DELIVERED JULY 82.	75.0	35.0		AUG 83	AUG 83
M 81 6350 2804	BINARY MUNITIONS MECHANICAL RUPTURE PROPERTIES TEST FOUR PROPOSALS WERE EVALUATED AND A CONTRACTOR WAS SELECTED. A PNEUMATIC CONCEPT UTILIZING SPOOL-SHUTTLE TYPE VALVES TO ESTABLISH THE PRESSURE-TIME PROFILES WAS JUDGED TO DEMONSTRATE THE MOST VIABLE APPROACH.	249.0	224.0	19.3		JUN 83
M 81 6350 28D6	ELECTRONIC FUZE INTEGRATED CIRCUIT AUTOMATED INSPECTION THE TECHNICAL WORK HAS BEEN COMPLETED. A TECHNICAL REPORT IS BEING FINALIZED.	50.0	40.0	7.0	MAR 82	MAY 82
M 81 6350 28D8	ADVANCED NDT OF REINFORCED PLASTIC COMPOSITES-SPAR + BEAM ***** DELINQUENT STATUS REPORT *****	100.0		95.0		MAR 83
M 81 6350 2815	CANNON TUBE AUTOMATED CHROME PLATE THICKNESS MEASUREMENT THE CHROME PLATE THICKNESS MEASUREMENT SYSTEM HAS BEEN DELIVERED. PARTS OF THE MEASUREMENT CYCLE HAS ALREADY BEEN AUTOMATED. BY PRESSING A BUTTON, THE OPERATOR INITIATES THE CYCLE- THE PROBE EXTENDS, THE READINGS ARE RECORDED AND PRINTED.	69.6		20.7	OCT 82	APR 83
M 81 6350 2817	FIBER OPTIC CABLE ASSEMBLIES TEST CRITERIA DEVELOPMENT A REVISED PROCUREMENT DATA PACKAGE WAS SUBMITTED TO PROCUREMENT. TWO PROPOSALS WERE RECEIVED. ENGINEERING EVALUATION OF THESE PROPOSALS IS IN PROCESS.	75.0	69.0			AUG 83

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 82 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 6350 2820	INTEGRATED FOCAL PLANE MODULE TEST STATION A DETAIL ANALYSIS OF FOCAL PLANE ARRAY (FPA) MODULE TESTING WAS COMPLETED. THE ANALYSIS INCLUDED AN EVALUATION OF 2 IN-HOUSE TEST FACILITIES AND AN ASSESSMENT OF MODIFICATIONS REQUIRED TO ACCOMODATE FPA MODULE PRODUCTION TESTING.	100.0		3.0		OCT 83
M 81 6350 2821	SEMICONDUCTOR NDT ENDURANCE TEST METHODOLOGY TWO MNOS EAROMS WERE SUBJECTED TO DESTRUCTIVE ENDURANCE CYCLING. NONDESTRUCTIVE PARAMETERS OF THE SAME DEVICES WERE MEASURED + INCORPORATED IN A PREDICTIVE ENDURANCE MODEL. CORRELATION WAS ESTABLISHED BETWEEN THE DESTRUCTIVE ACTUAL + NONDESTRUCTIVE.	91.0	77.6	1.2		JUL 82
M 81 6350 2825	DRAGON PROPELLANT BALLISTIC MODIFIERS IMPROVED TEST METH IMPROVED GC, UV, AA, DTA, TGA AND X-RAY DIFFRACTION METHODS WERE DEVELOPED AND STATISTICALLY EVALUATED FOR THE SPECIFICATION TESTING OF DARGEN TYPE PROPELLANT BALLISTIC MODIFIERS.	70.0		62.0	AUG 82	AUG 82
M 81 6350 2826	LIQ CHROMATOGRAPHIC ANALYSIS-NITROCELLULOSE BASE PROPELLANTS THE COMPUTER SOFTWARE HAS BEEN IMPROVED TO ANALYZE 15 INGREDIENTS SIMULTANEOUSLY. THREE SUN POWDER PROPELLANTS WERE ACQUIRED AND ANALYZED USING THIS PROCEDURE. EXCELLENT AGREEMENT WITH THE CONTRACTOR ANALYSIS WAS OBTAINED.	90.0		89.2		OCT 82
M 81 6350 2827	N-HEXYLCARBORANE CAPILLARY GAS CHROMATOGRAPHIC ANALYSIS THE PROJECT RESULTED IN A SUBSTANTIALLY IMPROVED GAS CHROMATOGRAPHIC PROCEDURE FOR THE ASSAY OF N-HEXYLCARBORANE, AND THE SEPERATION OF IMPURTITIES. THE IMPROVED METHOD WILL BE INCORPORTED IN THE VIPER PROPELLANT SPECIFICATION UPON COMPLETION.	90.0		81.0	AUG 82	AUG 82
M 81 6350 2829	DETECTOR DEWAR MICROPHICS PROD TEST SET + PROCEDURES ***** DELINQUENT STATUS REPORT *****	210.0				DEC 82
M 81 6350 2834	IMPROVED TRACK PIN SHOT PEENING INSPECTION ***** DELINQUENT STATUS REPORT *****					
M 81 6350 2858	STRESS READING TRANSDUCER FOR LARGE COMPOSITE COMPONENTS THE CONTRACT FOR THE LIGHT TRANSMITTER HAS BEEN AWARDED. ALSO, THE CONTRACT FOR STRAIN SENSITIVE FIBER OPTIC CABLES HAVE BEEN AWARDED. THE TOOLING HAS BEEN IDENTIFIED THAT IMPROVED THE QUALITY AND CONSISTENCY OF FIBER OPTIC TERMINATIONS.	75.0		48.7	DEC 82	DEC 82
M 81 6350 2943	DEPLETED URANIUM KE PENETRATORS ULTRASONIC INSP PROCEDURES A CONTRACT HAS BEEN AWARDED TO PERFORM THE WORK. TYPICAL DU BLANKS HAVE BEEN IDENTIFIED FOR THE CONTRACTOR USE. ALSO DU CALIBRATION STANDARDS HAVE BEEN IDENTIFIED.	75.0		2.0	DEC 82	FEB 83

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 82 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 81 6350 2944	PROTECTIVE MASK CANISTER ELECTROMAGNETIC INSP PROCEDURES A REQUEST FOR CONTRACT HAS STAFFED THRU PROCUREMENT. SOLICITATIONS HAVE BEEN FORWARDED TO PROSPECTIVE SOURCES. MORE THAN SIXTY-FIVE TECHNICAL INQUIRIES HAVE BEEN RECEIVED FROM INTERESTED SOURCES.	75.0	45.0	10.0	DEC 82	MAR 83
M 81 6350 2945	QA OF COMPUTERIZED INSPECTION EQUIPMENT SOFTWARE GUIDANCE HAS BEEN PREPARED FOR DISTRIBUTION TO THE DIVISIONS RECOMMENDATION OF APPROPRIATE DATA ITEM DESCRIPTORS FOR AIE SOFTWARE. SOFTWARE ASSOCIATED WITH THE METRIC EYE INSPECTION DEVICE HAS BEEN OBTAINED AND WILL BE USED AS A TEST CASE.	125.0		100.0	NOV 82	OCT 82
M 81 6350 2947	MOBILITY MONITORING SYSTEM (MMS) A REVISED PROJECT REQUEST FOR REDIRECTING THE FUNDS TO APG HAS BEEN SUBMITTED. APG HAS AN IN-HOUSE CAPABILITY TO DEVELOP A PROTOTYPE MMS SYSTEM WITHIN 8 MO AND THE BUDGETARY CONSTRAINT OF 80K.	80.0			DEC 84	DEC 84
M 82 6350	MATERIALS TESTING TECHNOLOGY (MTT) SEE SUBTASK BELOW FOR PROJECT STATUS.	4,573.0	2,280.8	95.7	OCT 84	OCT 84
M 82 6350 2235	ACOUSTIC EMISSION WELD MONITOR ***** DELINQUENT STATUS REPORT *****					
M 82 6350 2245	EST OF NDE TECHNIQUES FOR CERAMIC MATERIALS PROCUREMENT ACTIONS HAVE BEEN INITIATED AND ARE EXPECTED TO BE COMPLETE BY 18 JUNE 82.	100.0	75.0		APR 83	APR 83
M 82 6350 2424	AUTOMATIC GEAR TOOTH CONTOUR INSPECTION SYSTEM PHASE II ***** DELINQUENT STATUS REPORT					
M 82 6350 2448	IMPROVED GB SIMULANT FOR LIFE TESTING OF CHARCOAL FILTERS NO WORK STATUS WAS REPORTED FOR THIS PERIOD.	144.0			JUN 83	JUN 83
M 82 6350 2611	SORPTION OF AGENT ON ASC WHETLERITE NO WORK STATUS WAS REPORTED FOR THIS PERIOD.	88.0			SEP 83	SEP 83
M 82 6350 2695	ACCEPTANCE TEST FOR 20MM DECLUTCHING FEEDERS ON PROD CONTR NO WORK STATUS WAS REPORTED FOR THIS PERIOD.	92.3			JUN 83	JUN 83
M 82 6350 2801	NEW PROPELLANT SURVEILLANCE TEST ***** DELINQUENT STATUS REPORT *****					
M 82 6350 2802	NEW ACCEPTANCE TEST FOR PYROTECHNIC INGREDIENTS SEE PROJECT NO M 81 6350-2802 FOR STATUS.	75.0			JUN 83	JUN 83

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 82 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHORIZED ($DDD)	CONTRACT VALUES ($DDD)	EXPENDED LABOR AND MATERIAL ($DDD)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 82 635D 28D4	MECH TEST FOR RUPTURE PROPERTIES OF BINARY MUNITIONS NO WORK STATIS WAS REPORTED FOR THIS PERIOD.	40.D			JUL 83	JUL 83
M 82 635D 2813	DEV FUNCTIONAL TEST CAPABILITY FOR ADAPTION KITS A SCOPE OF WORK HAS BEEN WRITTEN AND INCLUDED IN A LARGER ADVANCED PRODUCTION ENGINEERING CONTRACT THAT SUPPORTS THE SAFING, ARMING AND FUZING PRODUCTION FOR THE PII WEAPON SYSTEM.	611.D			APR 84	APR 84
M 82 635D 282D	INTEGRATED FOCAL PLANE MODULE TEST STATION ***** DELINQUENT STATUS REPORT *****					
M 82 635D 2826	LIQ CHROMATOGRAPHIC ANALYSIS OF NITROCELLULOSE-BASE PROP ***** DELINQUENT STATUS REPORT *****					
M 82 635D 2834	IMPROVED INSPECTION OF TRACK PIN SHOT PEENING AWARDED CONTRACT TO AMERICAN ANALYTICAL CORPORATION. MODIFIED FASTRESS ANALYZER TO PERMIT GO/NO-GO OPERATION. SAMPLE MANIPULATOR TO POSITION TRACK PIN FOR VARIOUS EXPOSURE POSITIONS HAS BEEN COMPLETED.	63.D		11.D	AUG 84	AUG 84
M 82 635D 2844	MEASURING PROJECTILE RESISTANCE TO FREE FALL IMPACT THE KINETIC ENERGY MACHINE DESIGN HAS BEEN COMPLETED. THE MATERIAL REQ TO FABRICATE THE MACHINE HAS BEEN ORDERED, ALSO, THE INSTRUMENTATION REQ HAS BEEN DETERMINED AND IS ON ORDER.	75.0	5.0	14.4	OCT 83	OCT 83
M 82 635D 2876	PROTOTYPE INFRARED SEEKER AND AUTO PILOT TESTING THE CONTRACT WAS AWARDED. AN INFRARED SCENE GENERATOR HAS BEEN DESIGNED TO MEET THE REQ PUT FURTH IN SCOPE OF WORK NO. RGN-23. FAB OF A 1 FOOT SQ. IR SCREEN FOR DEMONSTRATION PURPOSED HAS BEEN COMPLETED.	90.D	85.D	5.D		SEP 84
M 82 6350 2878	STRAIGHTENING OF GUN TUBE FORGINGS BY MEANS OF EMAT ***** DELINQUENT STATUS REPORT *****					
M 82 635D 288D	STRAIN TEMP DEPN + SCAT MEAS TECH + EQUIP FOR LASERROD EVAL THE DESIGN EFFORT FOR THE MODIFICATION OF THE ZYGO INTERFEROMETER IS UNDERWAY. THE MODIFICATION CONSISTS OF PLACING A PUMP CAVITY WITH FLASHLAMP AND LASER ROD HOLDER IN THE REFERENCE ARM OF THE INTERFEROMETER.	250.D			MAY 84	MAY 84
M 82 635D 2881	DYNAMIC LASER ROD EVALUATION AN INEXPENSIVE AND EFFICIENT LASER ROD TEST TRANSMITTER HAS BEEN DESIGNED WHICH CAN ACCEPT ANY SIZE LASER ROD UP TO .5X4 INCH.	150.D			MAY 84	MAY 84
M 82 635D 2882	NUCLEAR MAG RESONANCE TEST FOR DETM MOISTURE IN COMPOSITES SCOPE OF WORK FOR NUCLEAR MAGNETIC RESONANCE TEST MEASUREMENT SYSTEM HAS BEEN COMPLETED. THE CONTRACT TO DESIGN AND FABRICATE THE SYSTEM IS EXPECTED TO BE AWARDED DURING THE FOURTH QUARTER OF FY82.	80.D	60.D		JUN 83	JUN 83

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
1ST SEMIANNUAL SUBMISSION CY 82 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 6350 2883	AUTO REFORMATTING OF ATE LANG FOR TESTING SEMICONDUCTORS PWD HAS BEEN ISSUED AND BIDS ARE CURRENTLY BEING EVALUATED.	187.0	105.0	2.0	OCT 82	OCT 82
M 82 6350 2887	SIMULANT PERMEATION TESTING OF PROTECTIVE CLOTHING NO WORK STATUS WAS REPORTED FOR THIS PERIOD.	139.0			JUN 83	JUN 83
M 82 6350 2889	PROCEDURES FOR INSPECTING + MONITORING THERMOPLASTIC RESINS SPECIAL EQUIPMENT HAS BEEN ORDERED AND MATERIALS HAVE BEEN ACQUIRED.	80.0	20.0		JUN 85	JUN 85
M 82 6350 2891	HG CD TE MATERIAL SCREENING TEST THIS WORK WILL BE PERFORMED BY A CONTRACTOR. THE WORK IS IN THE PROCUREMENT STAGE.	155.0			DEC 84	DEC 84
M 82 6350 2892	REMOTE IMAGING OF PREFORM DEFECTS BY COMPUTER CONTROL ***** DELINQUENT STATUS REPORT *****					
M 82 6350 2894	RESIDUAL STRESS DETERMINATION BY ACOUSTIC WAVE VELOCITY A LITERATURE SEARCH HAS BEEN COMPLETED TO DETERMINE THE MOST APPROPRIATE TECHNIQUES FOR MAKING ULTRASONIC VELOCITY MEASUREMENTS. A SURVEY OF COMMERCIAL INSTRUMENTATION FOR HIGH RESOLUTION VELOCITY MEASUREMENT HAS BEEN MADE.	75.0	18.0		FEB 83	FEB 83
M 82 6350 2895	NDT OF ADVANCED COMPOSITE STRUCTURES FOR BRIDGING A PROTOTYPE MODEL ULTRASONIC IMAGING SYSTEM FOR FIELD APPLICATION OF LARGE COMPOSITE STRUCTURES HAS BEEN DESIGNED. REQUISITIONS HAVE BEEN SUBMITTED TO PROCUREMENT FOR INSTRUMENTATION AND COMPUTER HARDWARE REQUIRED TO CONSTRUCT SUCH A SYSTEM.	100.0	25.0		MAR 83	MAR 83
M 82 6350 2896	STANDARDIZED SOFTWARE TEST FACILITIES THE SCOPE OF WORK HAS BEEN COMPLETED. THE CONTRACT IS SCHEDULED TO BE AWARDED IN JUL 1982.	466.0			AUG 84	AUG 84
M 82 6350 2897	STANDARD MONITORS TO INCREASE SOFTWARE TESTABILITY THE SCOPE OF WORK WILL BE COMPLETED IN JULY 82 WITH THE CONTRACT AWARD SCHEDULED FOR AUGUST 82.	355.0			DEC 85	DEC 85
M 82 6350 2901	LASER AIMING DEVICE NO WORK STATUS WAS REPORTED FOR THIS PERIOD.	170.0			AUG 84	AUG 84
M 82 6350 2913	IMPROVED METHODOLOGY FOR GENERATION OF TOXIC CHEM AGENTS NO WORK STATUS WAS REPORTED FOR THIS PERIOD.	88.0			SEP 84	SEP 84
M 82 6350 2916	AUTOMATING DEPOT REBUILD COMPONENT DIMENSIONAL INSPECTION THE CONTRACT PACKAGE HAS BEEN PREPARED AND PROCESSED WITHIN TACOM PROCUREMENT DIRECTORATE.	200.0		6.2	JUL 85	JUL 85

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 82 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 635D 2919	AUTO RESIDUAL STRESS INSP OF GUN TUBES + OTHER RELATED COMP ***** DELINQUENT STATUS REPORT *****					
M 82 6350 293B	EDDY CURRENT CRACK INSPEC PROCEDURE F/BOKE EVACUATOR HOLES PROBE SELECTION HAS BEEN COMPLETED. REQUEST FOR PROBES FROM TWO DIFFERENT MANUFACTURERS HAVE BEEN SUBMITTED TO PROCUREMENT. THE MULTIFREQUENCY EDDY CURRENT UNIT PROCURED ON A SEPERATE CONTRACT HAS ARRIVED AND IS OPERATIONAL.	54.0	4.0		MAR 83	MAR 83
M 82 6350 2945	QA OF COMPUTERIZED INSPECTION EQUIPMENT SOFTWARE NO WORK STATUS HAS REPORTED FOR THIS PERIOD.	120.0			JUN 83	JUN 83
M 82 6350 295D	ELECTRICALLY CONDUCTIVE ADHESIVES FOR HIGH STABILITY Q R B A TEST PLAN TO DEVELOP TECHNOLOGY FOR TESTING UNCURED ADHESIVES, OUTGASSING AND MECHANICAL INTEGRITY AFTER THERMAL CYCLING HAS BEEN RECEIVED, EVALUATED + ACCEPTED.	77.0			JUN 83	JUN 83
M 82 635D 2951	AN/PRS-8 MINE DETECTOR PRODUCTION TEST SET A CONTRACT PACKAGE IS BEING PREPARED. THE CONTRACT WILL BE NEGOTIATED INTO THE PRESENT PRODUCTION CONTRACT.	115.0			MAR 83	MAR 83
M 81 639D	MMT PROGRAM IMPLEMENTATION AND INFORMATION TRANSFER PUBLICATION OF THE MANTECH JOURNAL. CONTRACT IN PROCESS WITH WORCESTER POLYTECHNIC INSTITUTE FOR TECHNOLOGY IMPLEMENTATION STUDY.	250.0	184.7	50.3	MAR 82	DEC 82
M 82 639D	PROGRAM IMPLEMENTATION AND INFORMATION TRANSFER PUBLICATION OF THE MANTECH JOURNAL AND MANTECH NOTES.	249.5	192.3		JUN 83	JUN 83

RUBBER HANDWARE

CLOTHING PATTERNS

HELMETS

NATICK R&D LABORATORIES
(NLABS)

NATICK RESEARCH AND DEVELOPMENT LABORATORIES

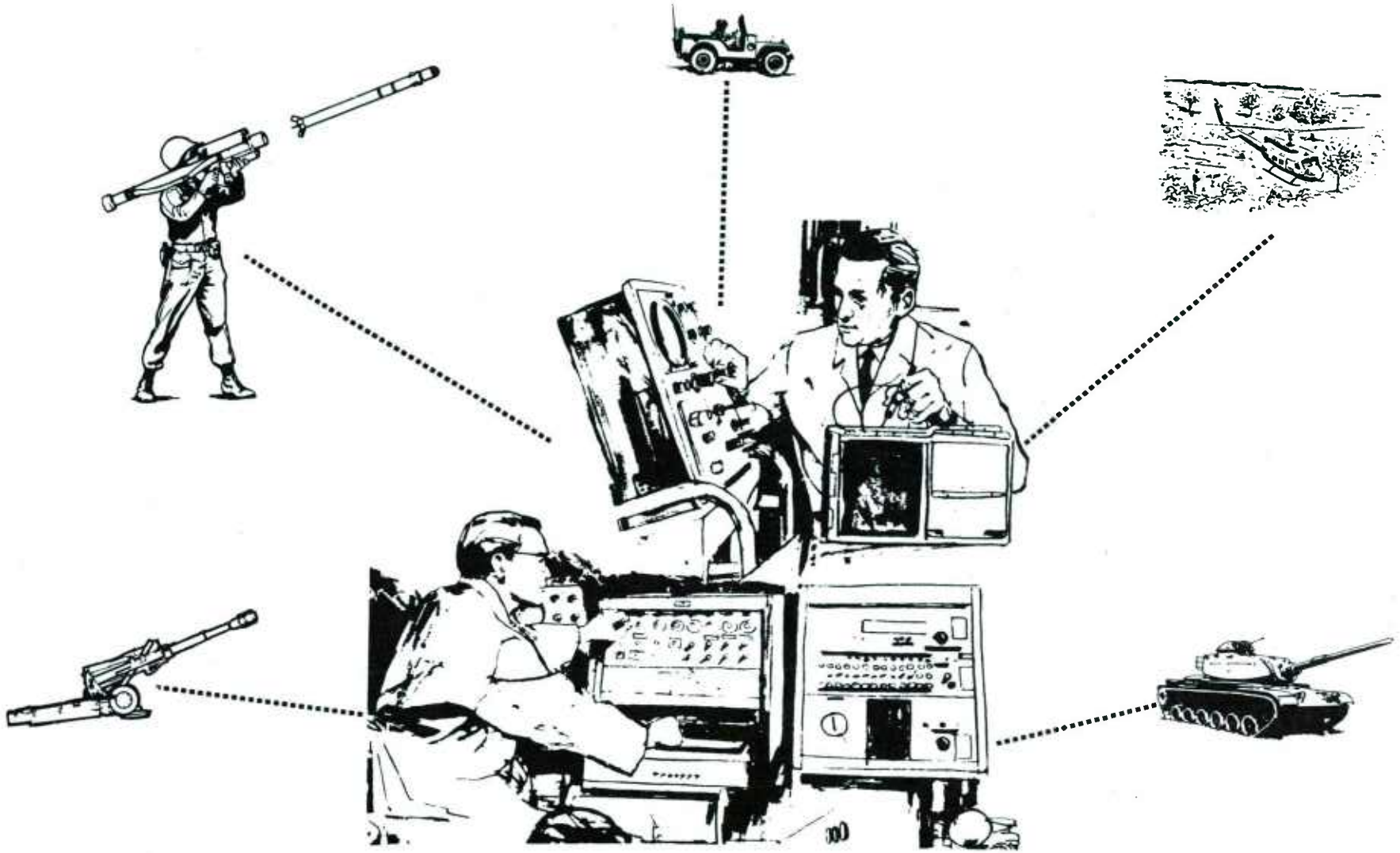
CURRENT FUNDING STATUS, 1ST CY82

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)	INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)
77	1	253,500	161,000	146,500 (90%)	92,500	57,000 (61%)
78	0	0	0	0 (0%)	0	0 (0%)
79	1	297,700	297,700	232,300 (78%)	0	0 (0%)
80	2	85,900	36,100	0 (0%)	49,800	49,800 (100%)
81	1	6,400	0	0 (0%)	6,400	6,400 (100%)
82	0	0	0	0 (0%)	0	0 (0%)
TOTAL	5	643,500	494,800	378,800 (76%)	148,700	113,200 (76%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 77% INHOUSE REMAINING 23%

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 82 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
Q 77 8D53	CADAM OF PARACHUTE HARDWARE ***** DELINQUENT STATUS REPORT *****	253.5	161.0	57.0	MAR 78	DEC 82
Q 80 8063	IMPROVED METHODS OF MFG OF BUTYL RUBBER HANDWEAR ***** DELINQUENT STATUS REPORT *****	47.5	30.0	17.5	JUN 82	DEC 82
Q 81 8D63	IMPROVED METHODS OF MFR OF BUTYL RUBBER HANDWEAR ***** DELINQUENT STATUS REPORT *****	6.4		6.4		
Q 79 8D66	CONTINUOUS FILAMENT HELMET PREFORM ***** DELINQUENT STATUS REPORT	297.7	297.7		MAR 81	DEC 82
Q 80 8066	CONTINUOUS FILAMENT HELMET PREFORM ***** DELINQUENT STATUS REPORT *****	38.4	6.1	32.3	JAN 82	DEC 82



TEST AND EVALUATION COMMAND
(TECOM)

T E S T A N D E V A L U A T I O N C O M M A N D

CURRENT FUNDING STATUS, 1ST CY82

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	*	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)	*	INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)	*
80	1	822,000		148,200	146,300 (98%)		673,800	603,000 (89%)	
81	1	750,000		104,700	104,700 (100%)		645,300	391,700 (60%)	
82	1	42,000		0	0 (0%)		42,000	0 (0%)	
TOTAL	3	1,614,000		252,900	251,000 (99%)		1,361,100	994,700 (73%)	

AUTHORIZED FUNDING CONTRACT ALLOCATED 16% INHOUSE REMAINING 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
1ST SEMIANNUAL SUBMISSION CY 82 RCS ORCMT-301

PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
0 80 5071	PRODUCTION TEST METHODOLOGY ***** DELINQUENT STATUS REPORT *****	822.0	148.2	603.0	DEC 82	DEC 82
0 81 5071	PRODUCTION TEST METHODOLOGY ENGINEERING MEASURES ***** DELINQUENT STATUS REPORT *****	750.0	104.7	391.7	DEC 83	DEC 82
0 82 5071	TECOM PRODUCTION TEST METHODOLOGY ENGINEERING MEASURES ***** DELINQUENT STATUS REPORT *****	42.0				

AVIATION R&D COMMAND
(AVRADCOM)

TROOP SUPPORT AND AVIATION MATERIEL READINESS COMMAND (TSARCOM)

AVIATION R+D COMMAND AND TROOP SUPPORT AND AVIATION MR COMMAND

CURRENT FUNDING STATUS, 1ST CY82

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)		INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)	
77	2	207,600	161,700	111,700	(69%)	45,900	45,700	(99%)
78	3	1,246,000	923,100	752,900	(81%)	322,900	322,300	(99%)
79	4	1,419,500	1,132,500	791,600	(69%)	287,000	235,800	(82%)
80	11	2,136,600	1,819,600	1,252,100	(68%)	317,000	271,100	(85%)
81	27	10,780,400	5,560,900	2,797,400	(50%)	5,219,500	1,123,000	(21%)
82	24	12,949,400	4,568,500	349,000	(7%)	8,380,900	499,300	(5%)
TOTAL	71	28,739,500	14,166,300	6,054,700	(42%)	14,573,200	2,497,200	(17%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 49%. INHOUSE REMAINING 50%

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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
1 78 7036	ISOTHERMAL ROLL-FORGING OF COMPRESSOR BLADES 78 BLADES WERE HEAT TREATED TO SPECIFICATION. HARDNESS MET DRAWING REQUIREMENTS. BLADES WERE THEN CLEANED AND SURFACE CONDITIONED IN VIBRA-BOWL.	425.0	375.0	50.0	JUN 79	DEC 82
I 81 7036	ISOTHERMAL ROLL-FORGING COMPRESSOR BLADES DIMENSIONAL CHECK OF BLADES SHOWED 40 PERCENT TO BE UNDER MINIMUM ON CHORD. THE AIRFOIL TENDED TO BE UNDER TWISTED, BUT WERE FOUND TO CONFORM VERY PRECISELY TO THE MODEL THAT WAS USED TO MAKE THE HOT TWIST DIES.	185.0	119.2	42.7	NOV 82	DEC 82
1 80 7052	ULTRASONICALLY-ASSISTED COLD FORMING OF TITANIUM NOSE CAPS THE MANUFACTURING EQUIPMENT HAS BEEN SUCCESSFULLY MODIFIED AND HAS BEEN SHIPPED TO CORPUS CHRISTI ARMY DEPOT.	17.5	7.7	7.1	APR 80	JUL 82
1 78 7055	ULTRASONIC WELDING OF HELICOPTER FUSELAGE STRUCTURES WELD BONDED SPECIMENS WERE UNSATISFACTORY. PROJECT IS BEING TERMINATED.	441.0	338.1	102.9	JAN 79	JUN 81
1 78 7091	PROCESSING AIRCRAFT COMPONENTS USING PULTRUDED MATERIALS ALL WORK BUT THE FINAL REPORT HAS BEEN COMPLETED. THE FINAL REPORT IS EXPECTED IN SEP 82.	380.0	210.0	169.4	SEP 80	SEP 82
I 77 7108	MANUFACTURING TECHNIQUES FOR TRANSMISSION SHAFT SEALS ***** DELINQUENT STATUS REPORT *****	135.0	111.7	23.5	AUG 79	DEC 82
1 81 7108	MANUFACTURING TECHNIQUES F/TRANSMISSION SHAFT SEALS ***** DELINQUENT STATUS REPORT *****	100.0	64.8	10.0	JUN 82	MAR 83
I 82 7113	COMPOSITE REAR FUSELAGE (CRF) MANUFACTURING TECHNOLOGY THE PROTOTYPE REAR FUSELAGE HAS BEEN INSTALLED IN THE GROUND TEST VEHICLE. INSTRUMENTATION OF THE FUSELAGE IS PRESENTLY UNDERWAY.	200.6	140.0	46.9	AUG 82	AUG 82
1 82 7119	NON-DESTRUCTIVE EVAL TECH FOR COMPOSITE STRUCTURES WORK FROM THE FY 81 PROJECT WAS CONTINUED. THIS INCLUDES FINISHING THE BIBLIOGRAPHY OF NDE TECHNIQUES, THE REVIEW OF AH-1 TESTS, THE FABRICATION AND CALIBRATION OF PIEZOELECTRIC SENSORS, AND THE PUBLISHING OF TECHNICAL REPORTS ON FINISHED WORK.	500.0	100.0	32.6	NOV 83	NOV 83
1 81 7143	CERAMIC GAS PATH SEAL-HIGH PRESSURE TURBINE ***** DELINQUENT STATUS REPORT *****	705.0				
1 82 7143	CERAMIC HIGH-PRESSURE GAS PATH SEAL ***** DELINQUENT STATUS REPORT *****	455.0				

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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
1 80 7155	COST EFFECTIVE MANUFACTURING METHODS FOR HELICOPTER GEARS THE PROTOTYPE AUSTELLING EQUIPMENT IS NOW OPERATIONAL AND READY TO BEGIN.	160.0	142.0	18.0	JUL 81	MAR 83
1 81 7155	COST EFFECTIVE MANUF METH F/IMPVD HIGH PERF HELICOPTER GEARS FUNDING HAS BEEN ACCOMPLISHED TO COMPLETE PHASE 1, INCREMENT 2 AND TO BEGIN PHASE 2.	320.0	220.0	70.0	MAR 84	DEC 83
1 80 7156	ULTRASONIC ASSISTED MACHINING FOR SUPERALLOYS ULTRASONIC EQUIPMENT HAS BEEN MODIFIED AND WILL BE INSTALLED AT CORPUS CHRISTI ARMY DEPOT AS SOON AS APPROPRIATE PRODUCTION EQUIPMENT IS AVAILABLE.	60.0	42.7	17.3	APR 81	DEC 82
1 81 7183	SEMI-AUTO COMP MANUF SYS F/HELI FUSELAGE SECONDARY STRUC ACTION TO TERMINATE THE CONTRACT IS CONTINUING.	141.0	110.6	19.7	DEC 81	SEP 82
1 81 7197	FABRICATION OF INTEGRAL ROTORS BY JOINING PILOT PRODUCTION DEMO AND FRACTURE MECHANICS VERIFICATION ARE COMPLETE.	190.0	142.2	47.8	OCT 81	DEC 81
1 82 7197	FABRICATION OF INTEGRAL ROTORS BY JOINING INSPECTION SPECIFICATION AND MATERIAL TESTING IN PROGRESS.	217.0	207.0	10.0	SEP 82	SEP 82
1 80 7199	SURFACE HARDENING OF GEARS, BEARINGS AND SEALS BY LASERS WORK WAS TERMINATED SINCE THE ESTIMATED COST FOR THE REVISED APPROACH FAR EXCEEDED THE FUNDS AVAILABLE. THE CONTRACT WILL BE TERMINATED FOLLOWING THE DELIVERY OF A FINAL REPORT BY THE CONTRACTOR.	142.1	51.2	70.0	SEP 81	MAY 83
1 81 7200	COMPOSITE ENGINE INLET PARTICLE SEPARATOR PROTOTYPE FABRICATION IS COMPLETE, AND TESTING IS NEARING COMPLETION. THE PHASE IV BRIEFING HAS BEEN CONDUCTED.	500.0	347.5	131.0	OCT 81	SEP 82
1 81 7202	APPLICATION OF THERMOPLASTICS TO HELICOPTER SECONDARY STRUC THE CONTRACTOR HAS REQUESTED ADDITIONAL FUNDS IN THE AMOUNT OF $100,000 TO FINISH THE PLANNED CONTRACT WORK. THE REQUEST IS BEING EVALUATED.	60.0	14.0	46.0	OCT 81	FEB 83
1 77 7238	PRECISION FORGED ALUMINIUM POWDER METALLURGY NO WORK ACCOMPLISHED REPORTED THIS PERIOD. FINAL TASK OF THIS PROJECT AWAITS DECISION ON PROGRAM REDIRECTION OR TERMINATION.	72.6	50.0	22.2	MAR 79	MAR 83
1 79 7238	PRECISION FORGED ALUMINIUM POWDER METALLURGY TWO TYPES OF P/M 7091 ALLOY WERE UPSET, EXTRUDED AND TESTED. COMPONENTS OF VACUM-DIE FORGED PREFORMS WERE EVALUATED AND FOUND UNACCEPTABLE. A REVISED TECHNICAL AND COST PROPOSAL WAS RECEIVED FROM ALCOA. A RECOMMENDATION TO TERMINATE HAS BEEN MADE.	399.0	350.0	49.0	APR 81	DEC 82

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1 82 7241	HOT ISOSTATIC PRESSED TITANIUM CASTINGS ANALYSIS OF TEST SPECIMENS SHOWED SOME VARIATIONS IN FATIGUE AND TENSILE STRENGTH. FRACTURE TOUGHNESS SPECIMENS HAVE BEEN PREPARED. A CAST HUB IS BEING PREPARED FOR BALLISTIC TESTING.	450.0	309.0	3.8	JAN 83	JAN 83
1 79 7204	SUPERPLASTIC FORMING/DIFFUSION BONDING OF TITANIUM FOUR FIREWALLS WERE FABRICATED, CHEM-MILLED, OUT-GASSED AND READY FOR A STATIS TEST. A DRAFT FINAL REPORT IS BEING PREPARED.	450.0	360.0	43.8	OCT 82	SEP 82
I 80 7285	CAST TITANIUM COMPRESSOR IMPELLERS CONTRACTS RENEGOTIATED. NEW COMPLETION DATE FOR DETROIT DIESEL ALLISON IS 9/83 AND SOLAR TURBINES IS 3/84.	353.0	312.0	41.0	SEP 81	MAR 84
I 81 7285	CAST TITANIUM COMPRESSOR IMPELLERS CONTRACTS RENEGOTIATED. NEW COMPLETION DATE FOR DETROIT DIESEL ALLISON IS 9/83 AND SOLAR TURBINES IS 3/84.	174.0	110.0	15.0	OCT 81	MAR 84
1 82 7285	CAST TITANIUM COMPRESSOR IMPELLERS CONTRACTS RENEGOTIATED. NEW COMPLETION DATE FOR DETROIT DIESEL ALLISON IS 9/83 AND SOLAR TURBINES IS 3/84.	350.0	305.0		MAR 84	MAR 84
1 79 7286	SUPERALLOY POWDER PRODUCTION FOR TURBINE COMPONENTS A SECOND MASTER POWDER BLEND WAS RUN WITH SEVERAL CHANGES OF THE ATOMIZATION PROCESS TO IMPROVE CLEANLINESS. TESTS SHOWED MARGINAL IMPROVEMENT. TESTS OF LOTS COMPACTED BY HIP SHOW DEFICIENCIES DUE TO OXIDES. SOURCE OF OXIDE FILM IS BEING SOUGHT.	358.0	210.0	143.0	FEB 81	SEP 82
1 80 7286	HIGH QUALITY SUPERALLOY POWDER PRODUCTION FOR TURB. COMP. THE FUNDS ARE BEING USED FOR IN-HOUSE ENGINEERING SUPPORT. PRIOR YEAR FUNDS WERE TRANSFERRED TO THE AIR FORCE. THIS IS A JOINT ARMY-AIR FORCE EFFORT.	20.0		15.0	MAR 81	SEP 82
1 82 7286	HIGH QUALITY SUPERALLOY POWDER PROD F/TURBINE COMPONENTS --- JUST FUNDED. NO 301 REQUIRED. ---	360.0				
1 81 7288	MMT DETERMINATION OF OPTIMAL CURING CONDITIONS ALL ORDERED EQUIPMENT HAS BEEN RECEIVED. WORK WAS CONTINUED USING AN AUTOCLAVE AND A COMPRESSION PRESS. RESULTS INDICATE A HIGHER HEATING RATE CAN BE USED IF THE CURE TEMPERATURE CAN BE HELD WITHIN 20 DEGREES FARENHEIT.	175.0		143.0	AUG 82	DEC 83
1 81 7291	TITANIUM POWDER METAL COMPRESSOR IMPELLER CONSOLIDATION TRIALS AND PROCESSING EVALUATION UNDER WAY. TECHNICAL PROBLEM HAS ARISEN AT VENDOR. VENDOR HAS REQUESTED DELAY OF SEVERAL MONTHS TO CORRECT PROBLEMS WITH CORPORATE FUNDS.	229.1	200.0	27.1	JAN 83	MAR 83

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I 82 7291	TITANIUM POWDER METAL COMPRESSOR IMPELLOR EXPECT DELAY IN OBLIGATING FUNDS TO FY83 DUE TO VENDOR PROBLEMS ON PRIOR YEAR PROJECT. VENDOR HAS ASKED FOR SEVERAL MONTHS DELAY TO SOLVE PROBLEMS WITH OWN FUNDS.	275.0		27.0	MAR 84	MAR 84
I 80 7298	HIGH TEMPERATURE VACUUM CARBURIZING A CONTRACT WAS AWARDED TO BOEING VERTOL. THE SERVICES OF PROFESSOR HRUSKA WERE OBTAINED TO DEVELOP THE VACUUM CARBURIZING CAPABILITY AT AMMRC.	139.0	121.0	8.0	SEP 80	AUG 82
I 81 7298	HIGH TEMPERATURE VACUUM CARBURIZING CONTRACT AWARDED TO BOEING VERTOL.	75.0	50.0	10.0	DEC 81	NOV 82
I 82 7298	HIGH TEMPERATURE VACUUM CARBURIZING CONTRACT AWARDED TO BOEING VERTOL.	250.5	180.5	24.5	APR 83	APR 83
1 81 7300	IMPROVED LOW CYCLE FATIGUE CAST ROTORS PROCUREMENT DELAYED BY ATL WORKLOAD. CONTRACT AWARD WILL BE BY 30 SEP 82.	128.2		50.0	DEC 82	JUN 85
I 82 7300	IMPROVED LOW CYCLE FATIGUE CAST ROTORS PROCUREMENT DELAYED BY ATL WORKLOAD. CONTRACT AWARD WILL BE BY 30 SEP 82.	480.0		25.0	JUN 85	JUN 85
1 81 7319	PROD METH F/DIGITAL ADDRESSABLE MULTI-LEGEND DISPLAY SWITCH ***** DELINQUENT STATUS REPORT *****	50.0		5.0	OCT 83	DEC 82
1 81 7322	LOW COST TRANSPIRATION-COOLED COMBUSTOR LINER CONTRACT WAS AWARDED TO DETROIT DIESEL ALLISON IN APRIL 1982.	125.0	85.0	40.0	SEP 81	MAR 85
1 82 7322	LOW-COST TRANSPIRATION-COOLED COMBUSTOR LINER CONTRACT AWARDED APR 82. WORK HAS BEGUN TO IDENTIFY HIGH COST DRIVERS.	530.0	460.0	43.0	MAR 85	MAR 85
I 80 7338	COMPOSITE TAIL SECTION THE DRAFT FINAL TECHNICAL REPORT HAS BEEN REVIEWED AND RETURNED TO THE CONTRACTOR FOR CORRECTIONS. NEGOTIATIONS ON PROJECT CLOSE-OUT ARE CONTINUING.	960.0	880.0	80.0	JUL 82	DEC 82
1 81 7338	COMPOSITE TAIL SECTION ***** DELINQUENT STATUS REPORT *****	1,090.0		80.0		
I 81 7339	FILAMENT WOUND COMPOSITE FLEXBEAM TAIL ROTOR TOOL MODIFICATION AND FABRICATION FOR THE TEST BLADES WAS COMPLETED. WORK ON PHASE 3 WILL CONTINUE UNTIL FUNDS ARE DEPLETED, HOWEVER, THE EFFORT WILL THEN BE TERMINATED IN LIEU OF FUNDING SUPPORT BY THE PM FOR THE QUALIFICATION TESTING.	1,130.0	890.7	82.6	FEB 83	DEC 82

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1 82 7339	FILAMENT WOUND COMPOSITE FLEXBEAM TAIL ROTOR THIS PROJECT WAS TERMINATED BECAUSE OF FUNDING RESTRAINTS. PROJECT FUNDS ARE IN THE PROCESS OF BEING WITHDRAWN AND REPROGRAMMED.	2,268.3		0.6	DEC 82	DEC 82
1 81 734D	COMPOSITE MAIN ROTOR BLADE THE WORK IS TECHNICALLY COMPLETE. ALL 11 MMT BLADES HAVE BEEN FABRICATED, AND WILL BE USED FOR ROOT END TESTING, FLIGHT TESTING, AND AIRWORTHINESS QUALIFICATION TESTING. A DRAFT FINAL TECHNICAL REPORT AND A MOTION PICTURE FILM HAVE BEEN RECEIVED.	1,D94.D	979.9	114.1	NOV 83	DEC 82
I 82 734D	COMPOSITE MAIN ROTOR BLADE CONTRACT NEGOTIATIONS ARE IN PROCESS. THE SCOPE OF WORK WILL CONSIST OF ONE ROOT END FATIGUE TEST, 15.5 HOURS OF FLIGHT TEST, A FINAL TECHNICAL REPORT UPDATE AND A GOVERNMENT/INDUSTRY BRIEFING. QUALIFICATION TESTING WILL BE DONE BY THE AAH-PMO.	1,20D.0		73.0	NOV 82	NOV 82
1 81 7341	STRUCTURAL COMPOSITES FABRICATION GUIDE DATA GATHERING FOR INPUT TO THE FABRICATION GUIDE WAS CONTINUED.	73.0	5D.D	22.2	JAN 82	DEC 82
I 8D 7342	PULTRUSION OF HONEYCOMB SANDWICH PANELS WORK HAS STOPPED. THE CONTRACTOR IS IN THE PROCESS OF SELLING THE PULTRUSION MACHINE WHICH WAS TO BE USED FOR THIS PROJECT. PHASE 1 WORK WILL BE COMPLETED WHEN ANOTHER PULTRUSION CONTRACTOR IS LOCATED. PHASES 2 AND 3 WILL BE CANCELLED.	85.D	73.D	12.0	SEP 82	FEB 83
1 81 7342	PULTRUSION OF HONEYCOMB SANDWICH STRUCTURES WORK HAS STOPPED AWAITING THE LOCATION OF CONTRACTOR WITH PULTRUSION CAPABILITIES.	18D.0	157.0	22.6	JUN 83	FEB 84
1 82 7342	PULTRUSION OF HONEYCOMB SANDWICH STRUCTURES WORK HAS STOPPED AWAITING THE LOCATION OF A CONTRACTOR HAVING PULTRUSION CAPABILITIES.	93.D	67.D	9.6	APR 84	APR 84
1 81 7351	COMPOSITE SHAFTING FOR TURBINE ENGINES SEVEN TITANIUM TUBES WERE FINISH MACHINED AND TESTED. SIXTEEN HYBRID TUBES WERE FABRICATED FROM B4C-B/TI AND STEEL. PROJECT DURATION HAS BEEN EXTENDED BY 11 MONTHS DUE TO UNANTICIPATED WORK REQUIRED IN THE MONOLAYER PREFORM EFFORT.	30D.D	25D.D	5D.0	OCT 81	NOV 82
I 82 7351	COMPOSITE SHAFTING FOR TURBINE ENGINES $25D,DDO WAS MIPRED TO AFWAL, WPAFB. WORK WILL BE INITIATED UPON THE SUCCESSFUL COMPLETION OF PHASE 1 (1 81 7351).	325.D	25D.D	5D.0	SEP 83	SEP 83
I 82 7366	SPIRAL SELF-ACTING SEALS PURCHASE REQUEST ISSUED 28 JUN 82.	37D.0		60.D	DEC 86	DEC 86

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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
1 79 7371	INTEGRATED BLADE INSPECTION SYSTEM (IBIS) NEARLY ALL THE WORK HAS BEEN COMPLETED. THE INSTALLATION OF THE VIM MODULE IS UNDERWAY AT AFLC. ONCE THE INSTALLATION IS COMPLETE, FINAL SOFTWARE DEBUGGING WILL BE DONE IN PREPARATION FOR A 5 OCT 1982 IBIS 1 END OF CONTRACT DEMONSTRATION.	212.5	212.5		MAR 82	OCT 82
1 80 7371	INTEGRATED BLADE INSPECTION SYSTEM (IBIS) IRIM CASCADE TESTING IS NEARING COMPLETION. WORK CONTINUES ON THE XIM MODULE. THE DESIGN OF THE X-RAY DETECTOR HAS BEEN COMPLETED AND IS PRESENTLY BEING ASSEMBLED. A DESIGN REVIEW OF THE ELECTRO-MECHANICAL MANIPULATOR WAS HELD.	100.0	100.0		DEC 84	SEP 84
1 81 7371	INTEGRATED BLADE INSPECTION SYSTEM (IBIS) SEE PROJECT NO 1 80 7371 FOR STATUS.	357.0	325.0	10.0	DEC 84	SEP 84
1 82 7371	INTEGRATED BLADE INSPECTION SYSTEM (IBIS) SEE PROJECT NO 1 80 7371 FOR STATUS.	500.0		2.0	SEP 84	SEP 84
1 81 7376	AUTO INSPECT AND PRECISION GRINDING OF SB GEARS ***** DELINQUENT STATUS REPORT *****	699.0		14.0	DEC 84	DEC 82
1 82 7376	AUTO INSPECT AND PRECISION GRINDING OF SB GEARS ***** DELINQUENT STATUS REPORT *****	499.0				
1 81 7382	LOW COST COMPOSITE MAIN ROTOR BLADE FOR THE UH-60A TASK 1 OF PHASE 1 HAS BEEN COMPLETED, AND A BLADE CONFIGURATION HAS BEEN SELECTED. THE CONTRACTOR HAS BEEN AUTHORIZED TO PROCEED WITH THE PROGRAM.	900.0	830.0	70.0	SEP 82	SEP 82
1 82 7382	LOW-COST COMPOSITE MAIN ROTOR BLADE FOR THE UH-60A WORK CONTINUED ON PHASE 1, TASK 2, SPECIAL TOOL DESIGN AND FABRICATION.	2,200.0	2,100.0	54.8	JUN 83	JUN 83
1 82 7389	PRODUCTION OF ALUMINUM AIRFRAME COMPONENTS THE RFQ WAS ISSUED ON 8 JUNE 1982.	280.0	210.0	36.5	MAR 85	MAR 85
1 80 7412	INFRARED DETECTOR FOR LASER WARNING RECEIVER ***** DELINQUENT STATUS REPORT *****	100.0	90.0	2.7	APR 83	APR 83
1 81 7412	INFRARED DETECTOR FOR LASER WARNING RECEIVER ***** DELINQUENT STATUS REPORT *****	650.1	615.0		APR 83	APR 83
1 82 7412	INFRARED DETECTOR FOR LASER WARNING RECEIVER ***** DELINQUENT STATUS REPORT *****	250.0				

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1 82 7415	MMT T70D BLISK REPAIR A PROPOSAL FROM GENERAL ELECTRIC IS BEING EVALUATED.	300.0	240.0		MAR 85	MAR 85
1 82 7426	MMT-IPI PROGRAM-MARTIN MARIETTA TADS/PNVS --- JUST FUNDED. NO SDI REQUIRED. ---	110.0				

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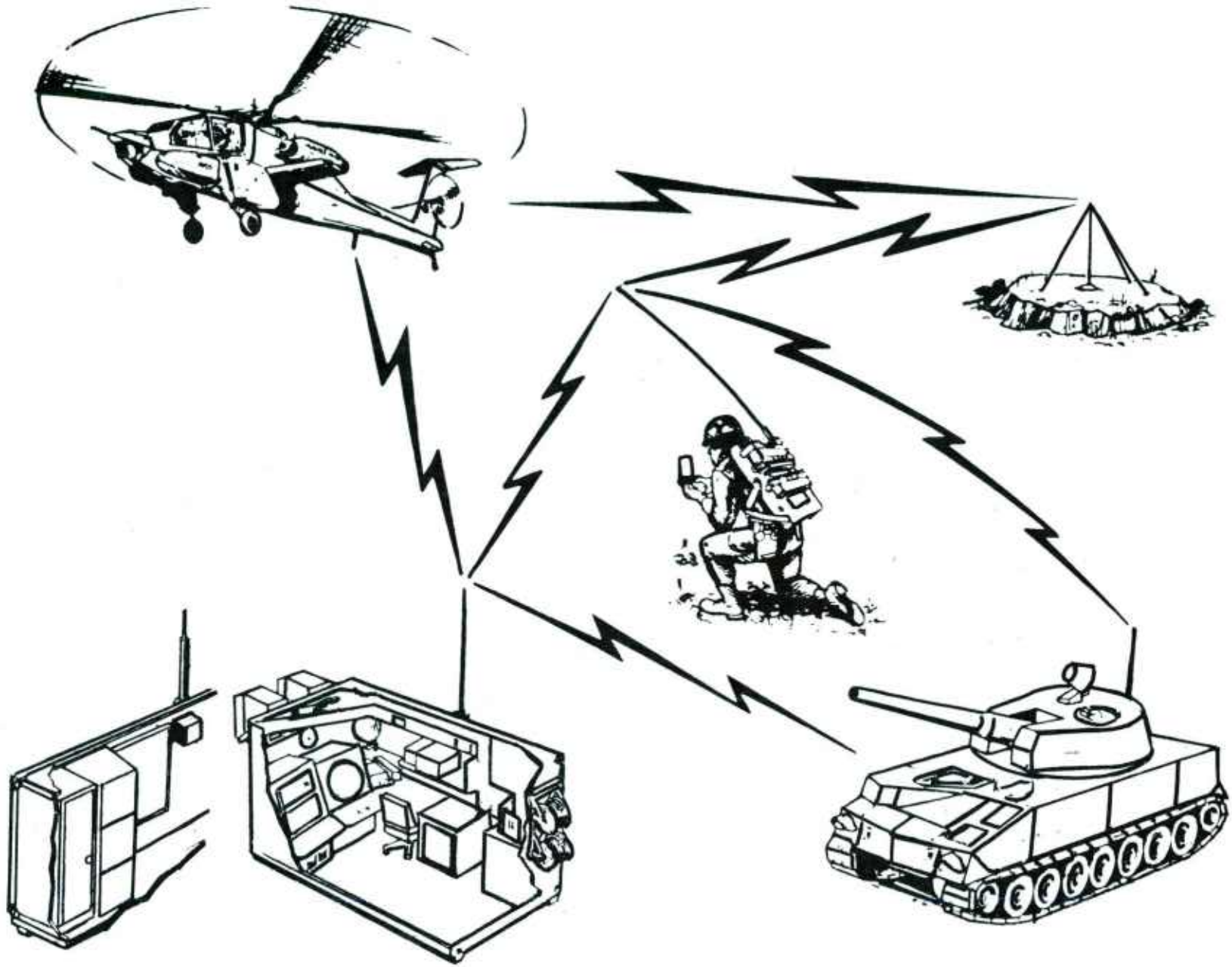
7 81 8190	MMT IMPROVED BLISK-IMPELLER CUTTER LIFE ***** DELINQUENT STATUS REPORT *****	225.0			SEP 82	DEC 82
7 82 8190	IMPRVD CUTTER LIFE, T-700 COMP BLISK/IMPELLER MILLING OPER ***** DELINQUENT STATUS REPORT *****	486.0				
7 81 8192	TURBINE ENGINE PRODUCTIVITY IMPROVEMENT ***** DELINQUENT STATUS REPORT *****	925.0			MAR 82	DEC 82



COMMUNICATIONS & ELECTRONICS COMMAND (CECOM)

COMMUNICATIONS + ELECTRONICS COMMAND

CURRENT FUNDING STATUS, 1ST CY82

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	158,700	(54%)	22,000	22,000	(100%)
79	2	1,553,800	1,440,800	1,350,000	(93%)	113,000	71,500	(63%)
80	2	825,000	683,100	200,000	(29%)	141,900	43,500	(30%)
81	4	3,359,600	1,180,600	211,000	(17%)	2,179,000	75,000	(3%)
82	2	2,170,000	0	0	(0%)	2,170,000	0	(0%)
TOTAL	11	8,222,900	3,597,000	1,919,700	(53%)	4,625,900	212,000	(4%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 44% INHOUSE REMAINING 56%

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F 80 3036	CAD/CAM OF SPECIAL ELECTRONIC CIRCUITS ***** DELINQUENT STATUS REPORT *****	20.0		13.5	AUG 81	DEC 82
F 81 3050	EPITAXY OF III-V SEMICONDUCTOR PHOTODETECTORS CONTRACT MAY BE AWARDED IN SEPTEMBER 1982. A FIRM WILL IMPROVE METHODS AND EQUIPMENT FOR MAKING PHOTODETECTORS AND MODULAR PACKAGES FOR FIBER OPTIC RECEIVERS. WILL USE LIQUID OR VAPOR PHASE EPITAXY.	670.0		8.0	DEC 83	OCT 84
F 80 3054	PRODUCTION METHODS FOR MULTI-LAYER FOLDED CIRCUITS HUGHES AIRCRAFT CO RECONFIGURED PLRS CIRCUIT BOARDS AND SELECTED POLYIMIDE RIGID AND FLEXIBLE MATERIALS AND LAMINATING PROCESSES. CECOM GAVE THEM PERMISSION TO START BUILDING SAMPLE PLRS BOARDS, CREATING MULTI-LAYER MULTI-FOLDING RIGID-FLEX BOARDS.	805.0	683.1	30.0	SEP 82	JAN 83
F 81 3056	ELECTROLUMINESCENT NUMERIC MODULES A CONTRACT IS BEING NEGOTIATED. 9 MONTHS HAVE TRANSPIRED SINCE SOLICITATION. THE FIRM WILL DEVELOP PROCESSES FOR VAPOR DEPOSITION OF ELECTROLUMINESCENT THIN FILM, IC CHIP BONDING AND INTERCONNECTION, AND HERMETIC SEALING OF 10,000 MODULES/MONTH.	770.0		44.0	DEC 82	MAR 84
F 81 3057	HIGH STABILITY VIBRATION RESISTANT QUARTZ CRYSTALS FREQUENCY ELECTRONICS INC ENGINEERS TOURED GEND AND OBSERVED CRYSTALS BEING PROCESSED IN THE LARGE GEND FACILITY. THEY ASKED THAT A SMALL FACILITY BUILT FOR ERADCOM LABS BE INSTALLED AT THEIR PLANT AS GFE. THE CONTRACT IS BEING MODIFIED TO PERMIT IT.	1,193.6	1,180.6	13.0	JUL 83	SEP 84
F 82 3073	TACTICAL GRAPHICS DISPLAY PANEL THIS PROJECT WILL DEVELOP MANUFACTURING METHODS FOR DRIVING EL DISPLAY PANELS. HIGH VOLTAGE HYBRIDS WILL BE INTEGRATED ALONG THE EDGE OF THE DISPLAY TO DRIVE THE GREAT NUMBER OF CONNECTIONS OF THE DISPLAY. WIRE OR BUMP BONDING WILL BE USED.	950.0			OCT 84	OCT 84
F 82 3083	MM WAVE COMMUNICATIONS FRONT END MODULE (CFEM) CONTRACT TO BE LET 30 SEP 82. A FIRM WILL ASSEMBLE HYBRID CIRCUIT PRODUCTION EQUIPMENT- SCREENERS, FURNACES, TRIMMERS, ETCHERS, PHOTOLITHOGRAPHIC APPARATUS. WILL USE ON-LINE TUNERS AND TESTERS TO BUILD AND TEST MILLIMETER WAVE FRONT END MODULES.	1,220.0			JUN 84	JUN 84
F 79 9835	INTEGRATED THIN FILM TRANSISTOR DISPLAY AEROJET HAS FOUND AFTER MANY MODIFICATIONS THAT AS MULTIPLE LAYERS ARE BUILT UP, THE RESULTING SURFACE BECOMES LESS SATISFACTORY FOR SUBSEQUENT DEVICE FABRICATION. YIELDS WERE HIGH FOR EACH LAYER BUT COMPLETE STACKS WERE NOT SUCCESSFULLY FABRICATED.	998.8	943.8	13.5	AUG 81	OCT 82

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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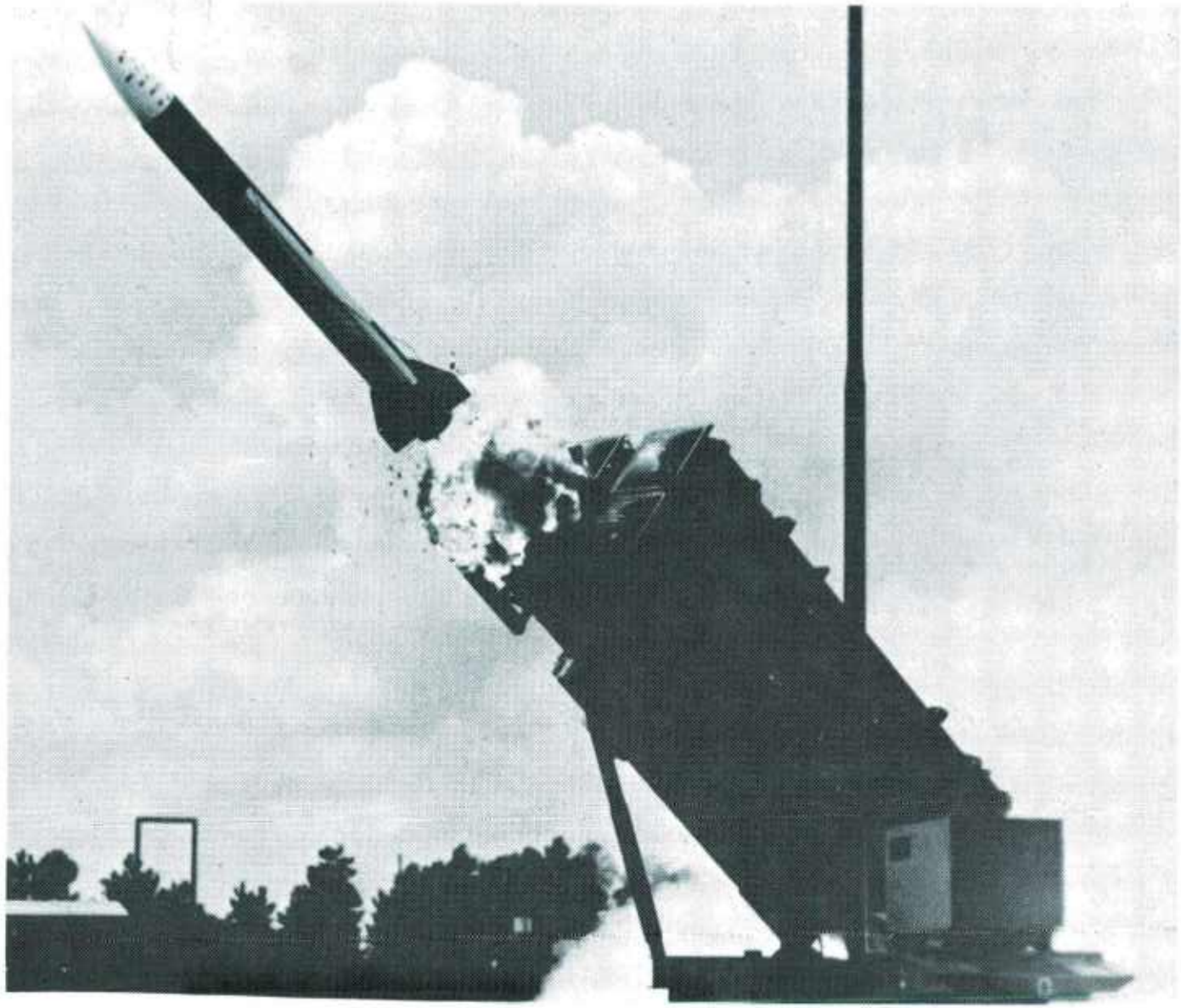
PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
F 81 9851	TACTICAL MINIATURE CRYSTAL OSCILLATORS RESOLICITATION WAS MADE WITH RELAXED REQUIREMENTS. LASER OR E-BEAM SEALING IS PERMITTED. PLANNED PRODUCTION RATE WAS CUT FROM 500 TO 200. PROPOSALS CAME IN FROM FREQUENCY ELECTRONICS AND BENDIX. MAY NEED ADDITIONAL FUNDING BUT IT IS NOT RECOMMENDED.	726.0		10.0	MAR 84	NOV 84
2 78 9898	RUGGEDIZED TACTICAL FIBER OPTIC CABLES TIGHT CABLE STRUCTURE CONTRACTION AT LOW TEMPERATURE CAUSED MICROBENDING INDUCED LOSSES. REMEDIED BY INCREASING NUMERICAL APETURE. ONE OPTICAL FIBER FABRICATION STATION IS USED TO INSURE QUALITY. SCHEDULE SLIPPAGE IS THE RESULT.	314.5	292.5	22.0	NOV 79	APR 83
F 79 9938	THREE COLOR LIGHT EMITTING DIODE DISPLAY UNIT NEW SUBSTRATES ARE BEING FABRICATED WITH CHANGES TO IMPROVE YIELD AND FACILITATE CHIP PLACEMENT. ALL FABRICATION AND TEST EQUIPMENT IS READY. AN INDUSTRY DEMONSTRATION WILL BE HELD UPON RECEIPT OF THE SUBSTRATES.	555.0	497.0	58.0	SEP 81	AUG 82



MISSILE COMMAND

(MICOM)

MISSILE COMMAND

CURRENT FUNDING STATUS, 1ST CY82

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)		INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)	
78	3	731,000	344,800	315,800	(91%)	386,200	301,700	(78%)
79	1	400,000	200,000	200,000	(100%)	200,000	200,000	(100%)
80	11	3,935,000	3,152,400	2,154,700	(68%)	782,600	498,200	(63%)
81	18	10,093,000	6,760,100	3,454,300	(51%)	3,332,900	874,600	(26%)
82	13	8,924,500	2,957,600	957,600	(32%)	5,966,900	15,000	(0%)
TOTAL	46	24,083,500	13,414,900	7,082,400	(52%)	10,668,600	1,889,500	(17%)

AUTHORIZED FUNDING

CONTRACT ALLOCATED 56%

INHOUSE REMAINING 44%

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
R 80 1018	IMPROVED MFG. PROCESSES FOR DRY TUNED ACCELEROMETERS (CAM) ***** DELINQUENT STATUS REPORT *****	228.0	218.0		MAR 81	DEC 82
3 81 1021	CPPP MACHINED CYLINDRICAL PARTS (CAM) TESTING OF THE SOFTWARE WAS COMPLETED AND DOCUMENTATION WAS FINALIZED. A COLOR SLIDE PRESENTATION AND A MOTION PICTURE ARE BEING DEVELOPED. IMPLEMENTATION OF OPTION I SOFTWARE BY UTC IS AHEAD OF SCHEDULE.	233.8	190.0		JUL 82	SEP 82
R 80 1023	DIGITAL FAULT ISOLATION F/HYBRID MICROELECTRONIC MODULES HUGHES SYSTEM UTILIZES ENHANCED HEWLETT PACKARD DTS-70 TEST STATION AND HUGHES AIRCRAFT HMS246D AUTOMATED WIRE BONDER FOR AUTOMATICALLY DETECTING A FAULT AND ISOLATING IT TO A CHIP COMPONENT LEVEL. SYSTEM IS TO BE IMPLEMENTED AT HUGHES TUCSON GOCO.	300.0	292.0	7.0	OCT 81	DEC 82
R 80 1024	MMT RADIO FREQUENCY STRIPLINE HYBRID COMPONENTS HUGHES DEVELOPED A MODEL OF VARACTOR DIODES USED IN A FREQUENCY DOUBLER. THE SUSPENDED SUBSTRATE WAS DESIGNED TO MATCH THE IMPEDENCES OF THE DIODES AND THE WAVEGUIDES. RUBYLITH CIRCUITS WERE CUT AND SUBSTRATES WERE ETCHED. DIODES WERE REFLOWED.	745.0	668.7	76.3	AUG 82	NOV 83
3 81 1026	PRODUCTION OF LOW COST MISSILE VANES THIS PROJCT IS 95 PERCENT COMPLETE. IT WAS DEMONSTRATED THAT A COMPOSITE VANE FOR THE PERSHING II CAN BE MANUFACTURED AND THAT PRODUCTION CAN BE AUTOMATED.	430.0	353.4	14.9	AUG 81	APR 82
3 81 1042	PRODUCTION OF COMPOSITE RADOME STRUCTURES TWO CONTRACTORS HAVE BOTH MADE 9 SUBSCALE PARTS WHICH WERE TESTED AT A RAIN EROSION SLED TEST TRACK. ADDITIONAL ABLATION TESTS ON 1/3 SCALE MODELS ARE SCHEDULED FOR AUG 82. REINFORCING FIBER IN ONE DESIGN IS CONTINUOUS. IN THE OTHER, IT IS WOVEN.	755.0	610.3	56.0	SEP 83	SEP 83
3 81 1050	LOW COST BRAIDED ROCKET MOTOR COMPONENTS THE LAST TWO WORK ITEMS (HEAD END CLOSURE ATTACHMENT OPTIMIZATION + APPLICATION OF REALISTIC NDT METHODS FOR SCREENING CRITICAL DEFECTS) WERE COMPLETED. THE INTERIM PROJECT REPORT IS BEING PREPARED. PHASE II IS BEING CONDUCTED UNDER PROJ NO 3821050.	430.0	386.9	43.1	MAR 82	JUN 82
3 82 1050	LOW COST BRAIDED ROCKET MOTOR COMPONENTS THE CONTRACT WAS AWARDED TO MCDONNEL DOUGLAS ASTRONAUTICS CO. DURING JUNE 1982.	475.0	337.2		APR 83	APR 83
3 81 1051	REPLACEMENT OF ASBESTOS IN ROCKET MOTOR INSULATIONS REQUESTS FOR PROPOSALS HAVE BEEN PREPARED, ISSUED, RETURNED, AND EVALUATED. SELECTION OF CONTRACTORS HAS BEEN MADE, AND THE FINAL STAGES OF CONTRACT NEGOTIATIONS ARE IN PROGRESS.	475.0				

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
3 82 1D60	ELECTRICAL TEST AND SCREENING OF CHIPS NO SIGNIFICANT ACCLMPLISHMENT DURING THIS REPORTING PERIOD.	750.0			OCT 83	OCT 83
3 81 1072	MULTIPLE HIGH RELIABILITY/LOW VOLUME LSI MFG MICROELECTRONICS CORP SURVEYED INDUSTRY TO DETERMINE WHAT PROCESSES THEY USED IN SEMICONDUCTOR MFG. PROCESS STEPS WERE PLANNED. PHOTORESIST AND MASKING AND ETCHING STEPS WERE SELECTED. LIQUID PHOSPHORUS AND BORON DOPING SYSTEMS + CVD WERE BOUGHT.	1,540.0	925.5	474.4	MAR 83	SEP 82
3 82 1073	REAL TIME ULTRASONIC IMAGING NO EFFORT HAS BEEN EXPENDED ON THIS PROJECT DURING THIS REPORTING PERIOD BY THE CONTRACTOR.	960.0	839.0			
3 81 1D75	ELECTRONICS COMPUTER AIDED MANUFACTURING (ECAM) BATTELLE COMPLETED AS IS AND TO BE ARCHITECTURES FOR ELECTRONIC FACTORIES. FINISHED PRODUCTIVITY SURVEY AND NEW PROJECT LISTING. FIVE FIRMS WERE ADDED TO ADVISORY GROUP- HAZELTINE, MARTIN, RAYTHEON, SOFTECH + WESTINGHOUSE. TASK II REPORTS SENT.	700.0	541.7	137.3	SEP 81	DEC 82
3 82 1076	AUTOMATIC RECOGNITION OF CHIPS RULICKE AND SOFFA WON THE CONTRACT FOR PHASE III. CONCEPTUALIZATION AND DESIGN EFFORTS OF MMT PROJECTS R 79 3219 AND R 80 3219 WILL BE INCORPORATED INTO THE BUILDING OF A SYSTEM FOR AUTOMATIC RECOGNITION OF CHIPS ORIENTATION FOR DIE ATTACHMENT.	700.0	495.8		FEB 84	FEB 84
3 81 1D86	COBALT REPLACEMENT IN MARAGING STEEL F/ROCKET MOTOR COMP THE TECHNICAL EFFORT IS COMPLETE. THE TECHNICAL REPORT IS BEING PUBLISHED.	300.0	274.4	25.6	APR 82	APR 82
3 82 1D86	COBALT REPLACEMENT IN MARAGING STEEL F/ROCKET MOTOR COMPONTS THE TECHNICAL EFFORT HAS BEEN INITIATED.	655.0	605.1	10.0	MAY 83	MAY 83
3 81 1088	OPTIMIZED MANDREL FAB AND UTILIZATION F/COMP MOTOR CASES STRUCTURAL REQMTS FOR THE MET (NET) AND INFLATABLE REUSABLE CASE MANDRELS HAVE BEEN DETERMINED FROM SUBSCALE TESTING AND THE FULL SCALE MET MANDREL HAS BEEN DESIGNED AND OPTIMIZED. EFFORTS TO DEMONSTRATE INFLATABLE MANDREL DISCONTINUED. MATLS OLVD.	700.0	558.7	17.8	DEC 82	DEC 82
3 82 1088	OPTIMIZED MANDREL FAB + UTILIZATION F/COMPOSITE MOTOR CASES THE LONG LEAD TIME MATERIALS HAVE BEEN ORDERED. SCHEDULING AND PLANNING FOR THE FIRST CASE TO BE MANUFACTURED UNDER THIS PROGRAM HAS BEEN COMPLETED.	400.0	305.2		MAY 83	MAY 83
3 82 1108	RF AND LASER HARDENING OF MISSILE DOMES ***** DELINQUENT STATUS REPORT *****	350.0				

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT 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
3 82 1109	ROBOTIZED WIRE HARNESS ASSEMBLY SYSTEM PROPOSALS HAVE BEEN RECD FROM PROPOSED CONTRACTORS + HAVE BEEN REVIEWED + EVALUATED. CONTRACTORS BEST + FINALS (PROPOSALS) HAVE BEEN REVIEWED + PROCESS IN THE PROCUREMENT + PRODUCTION DIRECTORATE AWAITING FINAL RECOMMENDATION.	1,005.0				
3 81 1121	MISSILE MFG PRODUCTIVITY IMPROVEMENT ***** DELINQUENT STATUS REPORT *****	1,000.0	1,000.0		JUN 82	DEC 82
3 82 1121	MISSILE MANUFACTURING PRODUCTIVITY IMPROVED PROGRAM ROCKWELL AND MARTIN MARIETTA WILL ANLAYZE THEIR MANUFACTURING PLANNING FOR THE HELLFIRE LASER SEEKER. THEY WILL MODEL THE PLANNED MANUFACTURING PLAN AND DEFINE A PRODUCTIVITY IMPROVEMENT PLAN. WILL LOOK AT MORE PRODUCTIVE METHODS.	1,800.0		5.0	JUN 83	JUN 83
3 82 1126	WOUND ELASTOMER INSULATOR PROCESS --- JUST FUNDED. NO 301 REQUIRED. ---	650.0				
3 80 3115	ENGINEERING FOR METROLOGY AND CALIBRATION ***** DELINQUENT STATUS REPORT *****	747.0	420.0	207.0	DEC 81	DEC 82
3 81 3115	ENGINEERING FOR METROLOGY AND CALIBRATION ***** DELINQUENT STATUS REPORT *****	661.0				
3 82 3115	ENGINEERING FOR METROLOGY AND CALIBRATION ***** DELINQUENT STATUS REPORT *****	150.0				
3 81 3139	MILLIMETER SEEKERS FOR TERMINAL HOMING (TH) ***** DELINQUENT STATUS REPORT *****	968.2	849.2	18.0	SEP 82	DEC 82
R 80 3142	PRODUCTION METHODS F/LOW COST PAPER MOTOR COMPONENTS TECH EFFORT FOR OPTION PROGRAM COMPLETE. DELIVERY MADE OF PRODUCTION COMPONENTS FOR TEST FIRING. THE FINAL PROJECT REPORT IS BEING PREPARED AND ALL MOTOR HARDWARE IS READY FOR SHIPMENT.	200.0	179.8	20.2	JUN 82	AUG 82
R 78 3165	PRODN PROCESS + TECHNIQUES FOR SEALING HYBRID MIC-CIR PACK ***** DELINQUENT STATUS REPORT *****	220.0	211.0	9.0	NOV 79	DEC 82
R 78 3218	REDUCE THE FINISHING COST OF FUSED-SILICA RADOMES ***** DELINQUENT STATUS REPORT *****	300.0	12.6	281.7	OCT 79	DEC 82
R 80 3263	PRINTED WIRE BOARDS UTILIZING LEADLESS COMPONENTS ***** DELINQUENT STATUS REPORT *****	250.0	127.0	9.5	JAN 81	DEC 82
3 81 3263	PWB?S UTILIZING LEADLESS COMPONENTS HUGHES AIRCRAFT WON THE CONTRACT TO DEVELOP PROCESS OF ATTACHING LEADLESS COMPONENTS TO PWB SO AS TO MAINTAIN PERFORMANCE IN MISSILE ENVIRONMENTS. PLAN OF ACTION HAS BEEN SUBMITTED AND BACKGROUND INFORMATION IS BEING DEVELOPED.	400.0	320.8	19.0	OCT 83	OCT 83

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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
R 80 3294	PRODUCTION PROCESSES FOR ROTARY ROLL FORMING THE TECHNICAL EFFORT FOR THIS PROGRAM HAS BEEN COMPLETED. THE INTERIM PROJECT REPORT IS IN PUBLICATION.	300.0	227.5	72.5	DEC 81	JUN 82
3 81 3294	PRODUCTION PROCESS FOR ROTARY ROLL FORMING THE SELECTION OF THE OPTIMUM PROCESS AND A SHORT PRODUCITON RUN CONCEPT DEMONSTRATION HAS BEEN COMPLETED. DELIVERY OF COMPONENTS FOR TEST FIRING AND THE PREPARATION OF MANUFACTURING PROCEDURES HAS BEEN INITIATED.	175.0	132.4	38.0	JUN 82	SEP 82
R 80 3376	TESTING OF ELECTRO-OPTICAL COMPONENTS AND SUBSYSTEMS ***** DELINQUENT STATUS REPORT *****	475.0	475.0		JUN 81	DEC 82
R 80 3396	INJECTION MOLDING OF LOW COST-ONE PIECE NOZZLES THE TECHNICAL WORK IS COMPLETE. THE FINAL PROJECT REPORT IS BEING PUBLISHED AND WILL BE DISTRIBUTED IN AUGUST 1982.	180.0	158.5	21.5	JUN 81	DEC 82
R 80 3411	MFG OF NON PLANAR PRINTED CIRCUIT BOARDS ***** DELINQUENT STATUS REPORT *****	220.0	198.0		FEB 81	JUN 83
3 82 3411	NON-PLANAR PRINTED CIRCUIT BOARDS ***** DELINQUENT STATUS REPORT *****	550.0				
3 81 3423	LOW COST/HIGH PERFORMANCE CARBON-CARBON NOZZLES COMPLETED CARBON-CARBON PREFORM DESIGN AND FABRICATION, BILLET DENSIFICATION, PRELIMINARY TESTING AND NDT, AND MATERIALS OPTIMIZATION. AN INTERIM TECH REPORT IS BEING PREPARED COVERING THE PHASE I EFFORT. PROGRAM IS ON SCHEDULE.	300.0	281.6	15.5	JUN 82	JUN 82
3 82 3423	LOW COST/HIGH PERFORMANCE CARBON-CARBON NOZZLES CONTRACT AWARDED TO FIBER MATERIALS INC. ON 23 JULY 1982.	479.5	375.3		JUL 83	JUL 83
R 80 3435	SIMPLIFICATION OF HIGH-POWER THICK FILM HYBRIDS ***** DELINQUENT STATUS REPORT *****	290.0	187.9	84.2	SEP 83	DEC 82
R 79 3441	APPLICATION OF HIGH ENERGY LASER MANUFACTURING PROCESSES ***** DELINQUENT STATUS REPORT *****	400.0	200.0	200.0	SEP 79	DEC 82
3 81 3445	PRECISION MACHINING OF OPTICAL COMPONENTS ***** DELINQUENT STATUS REPORT *****	400.0	335.2	15.0	JUN 82	DEC 82
3 81 3447	RECOVERY OF CARBORANES FROM WASTE PROPELLANT THIS PROJECT WAS CANCELLED.	375.0			JUN 84	SEP 83
3 81 3449	ALTERNATE PROCESS FOR IPDI ***** DELINQUENT STATUS REPORT *****	250.0				

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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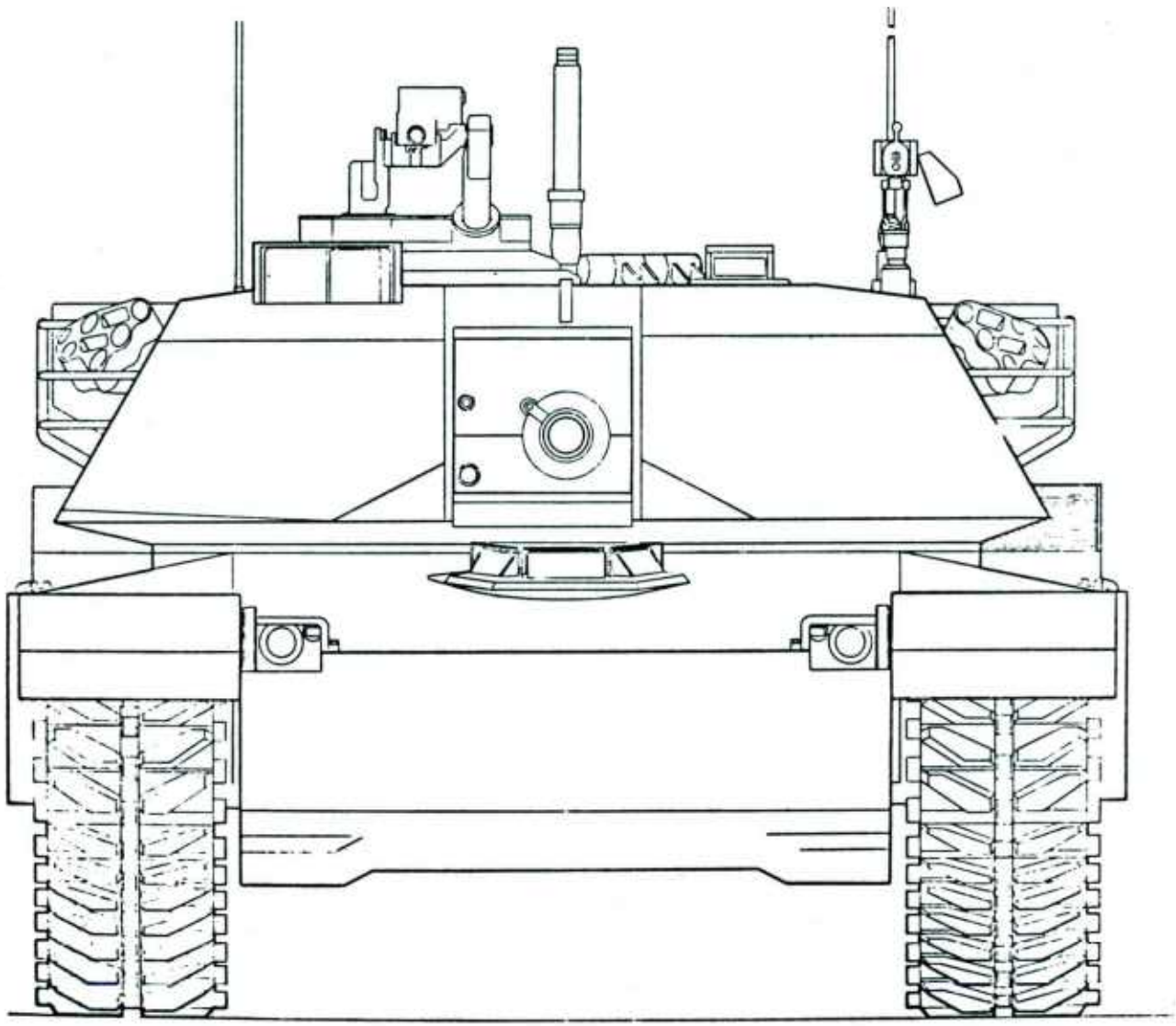
PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
R 78 3453	GROUND LASER LOCATOR DESIGNATOR PRODUCTION IMPROVEMENTS CRYSTAL TECHNOLOGY HAS COMPLETED WORK BY COMPLETING FABRICATION OF 103 Q-SWITCHES FROM 2 INCH DIA, (13 SECTIONS) + 3 INCH DIA.(4 SECTIONS) LITHIUM NIOBATE CRYSTALS. THE HIGH DAMAGE THRESHOLD Q-SWITCH MANUFACTURING METHODS ARE PROVING SUCCESSFUL.	211.0	121.2	11.0	DEC 80	AUG 82



TANK-AUTOMOTIVE COMMAND
(TACOM)

TANK-AUTOMOTIVE COMMAND

CURRENT FUNDING STATUS, 1ST CY82

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)		INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)	
77	1	500,000	356,600	302,400	(84%)	143,400	26,600	(18%)
77	1	750,000	742,200	742,200	(100%)	7,800	0	(0%)
78	5	4,156,500	3,331,900	2,648,300	(79%)	824,600	777,700	(94%)
79	6	2,948,000	2,170,600	1,097,400	(50%)	777,400	654,800	(84%)
80	8	3,136,400	2,966,400	1,864,900	(62%)	170,000	157,200	(92%)
81	21	7,781,000	2,574,400	1,442,200	(56%)	5,206,600	1,592,100	(30%)
82	26	11,751,000	1,996,900	38,000	(1%)	9,754,100	205,000	(2%)
TOTAL	68	31,022,900	14,139,000	8,135,400	(57%)	16,883,900	3,413,400	(20%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 46% INHOUSE REMAINING 54%

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT 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
E 77 3749	HYDRAULIC ROTOR ACTUATORS TRANSFER OF CONTRACT EFFORT FROM MERADCOM TO TACOM WAS EFFECTED 2 JUL 82	750.0	742.2		MAY 79	DEC 82
E 80 3749	HYDRAULIC ROTARY ACTUATORS TRANSFER OF CONTRACT EFFORT FROM MERADCOM TO TACOM WAS EFFECTED 2 JUL 82	145.0	133.9		DEC 81	DEC 82
E 81 3749	HYDRAULIC ROTARY ACTUATORS FOR M9 TRANSFER OF CONTRACT EFFORT FROM MERADCOM TO TACOM WAS EFFECTED 2 JUL 82	157.0	150.0		JUL 81	DEC 82
T 78 4264	TRACK INSERTS AND FILLERS FOR TRACK RUBBER PADS A TORSION TEST MACHINE IS NOW COMPLETED AND QUALIFICATION IS UNDERWAY. PROJECT DELAYED DUE TO INSTALLATION DIFFICULTIES AND LATE START OF TESTING ON TORSION TEST MACHINE. RESULTS WILL BE INCLUDED IN REWRITE OF TRACK RUBBER SPEC MIL-T-11891.	520.0	233.8	239.2	JAN 81	DEC 82
4 7T 4568	TECH DATA/CONFIGURATION MANAGEMENT SYSTEM (TO/CMS) ***** DELINQUENT STATUS REPORT *****	500.0	356.6	26.6	JUN 79	DEC 82
T 79 4575	LASER WELDING TECHNIQUES FOR MILITARY VEHICLES FUNDS FOR THIS PROJECT WILL BE EXPENDED BY SEP 30, 1982. PHASE III HAS RECENTLY BEEN FUNDED FOR $275K TO CONTINUE THIS EFFORT TO EVALUATE BALLISTIC TESTING, REDUCE POROSITY, ELIMINATE CENTERLINE CRACKING AND INCREASE DEPOSITION RATES.	450.0	280.0	165.0	JUL 81	SEP 82
T 82 4575	LASER WELDING TECHNIQUES FOR MILITARY VEHICLES --- JUST FUNDED. NO 301 REQUIRED. ---	275.0				
T 79 5002	FABRICATING TORSION SPRINGS FROM HIGH STRENGTH STEELS THE TACOM IN-HOUSE TEST PLAN HAS BEEN ESTABLISHED.	150.0	89.2	60.8	FEB 81	DEC 83
T 82 5002	MMT FABRICATION OF TORSION BARS FROM HIGH STRENGTH STEEL THE IN-HOUSE TEST PLAN HAS BEEN ESTABLISHED.	95.0		5.0	DEC 83	DEC 83
T 82 5005	COMPUTER AIDED DESIGN FOR COLD FORGED GEARS (PHASE I) THE PROCUREMENT REQUEST HAS BEEN WRITTEN + THE CONTRACT IS SCHEDULED TO BE AWARDED IN SEPTEMBER 1982.	200.0		8.0		
T 78 5014	IMPROVED FOUNDRY CASTINGS UTILIZING CAM CASTING TRIALS WERE PERFORMED TO VERIFY MODELING CAPABILITY FOR TORSION BAR HOUSING. TORSION BAR HOUSING CASTINGS WERE POURED TO FOUR PREDICTED DESIGNS. SOLIDIFICATION PATTERNS ARE BEING EVALUATED. BLAW KNOX FOUNDRY PERFORMED TRIALS.	415.0	195.5	219.5	JAN 81	JAN 83

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	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
T 81 5014	IMPROVED FOUNDRY CASTINGS UTILIZING CAM WORK INITIATED TO INVOLVE LEBANON STEEL FOUNDRY AND EXTEND THE PRIOR RESULTS TO A PRODUCTION ENVIRONMENT. PRIOR WORK WAS DONE WITH NO-BAKE SAND MOLDS. WORK INITIATED TO EXTEND PRIOR RESULTS TO GREEN SAND MOLDS.	50.0	25.0	20.0	NOV 81	MAR 83
T 82 5014	FOUNDRY CASTING PROCESSES USING FLUID FLOW + THERM ANALYS WORK WAS INITIATED TO EXPAND PRIOR RESULTS AND EXTEND THE GEOMETRIC CAPABILITIES OF THE SYSTEM.	100.0	80.0	2.0	MAR 84	MAR 84
T 81 5019	STORAGE BATTERY-LOW MAINTENANCE VARIOUS PLASTICS EVALUATED FOR PROTOTYPE CONTAINERS AND TO BE MADE FROM CONTAINER TOOLING. LOW MAINTENANCE BATTERY PLATES AND COMPONENTS ARE UNDER IN-HOUSE CONTRACTOR TESTS TO DETERMINE PERFORMANCE TO MEET SPECIFICATION REQUIREMENTS.	130.0	70.0	56.0	JAN 84	SEP 82
T 82 5019	STORAGE BATTERY LOW MAINTENANCE THIS PROJECT IS A CONTINUATION OF THE 4815019 LOW MAINTENANCE BATTERY PHASE III PROJECT.	90.0			JAN 84	JAN 84
T 79 5024	GEAR DESIGN MFG UTILIZING COMPUTER TECHNOLOGY, CAM-PH2 TWENTY SPIRAL BEVEL GEARS WERE PROCESSED TO VARIOUS STAGES OF COMP. DURING THIS PHASE. THE DIMENSION OF THE FINISHED PARTS WERE WITHIN SPEC. ALSO, THIS PROJECT WAS SUCCESSFUL IN DEVELOPING THE METHODOLOGY OF CADCAM PROCEDURES F/MFG OF FORGING DIES.	345.0	274.4	70.0	JUN 80	APR 82
T 82 5024	GEAR DIE DESIGN AND MFG UTILIZING COMPUTER TECHNOLOGY "CAM? A SUPPLEMENTAL PROCUREMENT HAS BEEN PREPARED + THE PHASE III OPTION WILL BE EXERCISED IN AUGUST AFTER REVIEW OF PHASE II FINAL REPORT.	200.0		10.0	OCT 83	OCT 83
T 80 5045	SPALL SUPPRESSIVE ARMOR FOR COMBAT VEHICLES (PHASE II) TO DATE, 4000 MILES OF OPERATIONAL TESTING HAVE BEEN ACCUMULATED AT YUMA. THE COST ESTIMATE FOR THE PRODUCTION PORTION OF THE CONTRACT HAS BEEN COMPLETED.	86.0	56.0	30.0	NOV 81	SEP 82
T 82 5053	FABRICATION TECHNIQUES FOR HIGH STRENGTH STRUC CERAMICS WORK IS PROCEEDING ON PLACING THE SOLE SOURCE CONTRACT WITH CUMMINS DIESEL. PLACEMENT IS EXPECTED ON 15 NOVEMBER	500.0		7.0	JUN 83	JUN 83
T 81 5054	LASER SURFACE HARDENED COMBAT VEHICLE COMPONENTS OPTICAL TOOLING TO OBTAIN VARIOUS SIZES OF LASER BEAM WAS FABRICATED. HEAT TREATED SPECIMEN PLATES WERE METALLOGRAPHICALLY EXAMINED. SURFACE HARDNESS AND CASE DEPTH WERE MEASURED PERPENDICULAR TO THE HEAT TREATED STRIPE.	175.0		37.0	SEP 83	SEP 83

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T 82 5D54	LASER SURFACE HARDENED COMBAT VEHICLE COMPONENTS A PROCUREMENT REQUEST FOR PHASE III AWARD WAS PREPARED AND SUBMITTED.	170.0			JAN 84	JAN 84
T 79 5D64	LIGHT WEIGHT SADDLE TANK-PHASE 2 FUEL TANKS FOR 5-TON VEHICLE UNDERWENT TESTING AT YPG, COLD REGION AND TROPIC TEST SITES WITHOUT FAILURES. HOWEVER, DISTORTION PROGRESSION NOTED. PLANS INITIATED TO ALLEVIATE DEFICIENCIES. RIBS (FILLETS) AND CORNER RADII INSTALLED IN NEW TANKS.	197.0	80.0	117.0	FEB 81	DEC 82
T 82 5064	LIGHT WEIGHT SADDLE TANK, PHASE III FUEL TANKS SHIPPED TO YPG AND COLD REGION FOR TESTING IN FEB 82. NOT YET SENT TO TROPIC TEST SITE BECAUSE OF UNAVAILABILITY OF TEST VEHICLE UNTIL LATE IN PERIOD. VEHICLE NOW AVAILABLE AND WILL BE SHIPPED FOR TESTING UNDER TROPIC CONDITIONS SOON.	85.0	20.0	19.0	SEP 83	SEP 83
T 80 5067	PLASTIC BATTERY BOX (PHASE II) FIELD TESTING AT APG, CRTC AND YPG WAS STARTED WITH THESE FUNDS. THE REMAINING TESTING IS BEING CARRIED OUT WITH FY82 FUNDS. THE FINAL REPORT FOR THIS PROJECT WILL BE INCLUDED WITH FY82 PROJECT.	15.0		15.0	DEC 80	SEP 82
T 82 5067	PLASTIC BATTERY BOX FIELD TESTING AT APG, CRTC AND YPG IS COMPLETED. ONLY KEWEENAW RESEARCH CENTER FINDINGS AWAITED. PRELIMINARY TEST RESULTS ARE SATISFACTORY FOR BOTH BOXES FROM ALL TEST SITES. POLYETHYLENE IS ADEQUATELY RESISTANT TO ACIDS AND CASES ENCOUNTERED IN TEST	30.0		9.0	DEC 82	DEC 82
T 81 5068	NEW ANTI-CORROSIVE MATERIALS AND TECHNIQUES (PHASE II) DESIGN, MANUFACTURING PROCESSESS, AND MATERIALS HAVE BEEN FINALIZED. A UNITIZED 1/4 TON TRUCK BODY IS BEING FABRICATED USING GALVANIZED STEEL, ELECTROCOATED EPOXY PRIMER AND HIGH SOLID, BAKED CHEMICAL AGENT RESISTANT COATING.	450.0	404.0	28.0	SEP 82	APR 83
T 81 5D75	MILITARY ELASTOMERS FOR TRACK VEHICLES (PHASE II) T-142 TRACK PADS HAVE BEEN MANUFACTURED AND TESTED. T-152 TRACK PADS ARE BEING TESTED. PROCUREMENT ACTIONS AND TESTING ARRANGEMENTS ARE BEING MADE FOR T-156 (ABRAMS M-1) TRACK PADS. SPIN-OFFS FOR OTHER ELASTOMER ITEMS COULD BE DERIVED.	200.0	55.3	75.0	SEP 82	SEP 82
T 82 5075	MILITARY ELASTOMERS FOR TRACK VEHICLES (PHASE II) T-142 TRACK PADS CONTAINING KEVLAR FIBERS ARE BEING MANUFACTURED. PROCUREMENT ACTIONS AND TESTING ARRANGEMENTS ARE BEING MADE FOR THE T-156 (ABRAMS M-1) TRACK PADS. SPIN-OFFS FOR OTHER ELASTOMER ITEMS WILL BE REALIZED.	200.0			SEP 83	SEP 83

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T 80 5082	FLEXIBLE MACHINING SYSTEM, PILOT LINE FOR TCV COMPONENTS THIS PHASE IS COMPLETE. A BRIEFING IS PLANNED FOR NOV 1982. SEE FOLLOW ON PROJECT T 81 5082.	902.4	863.4	39.0	JAN 81	OCT 82
T 81 5082	FLEXIBLE MACHINING SYS (FMS) PILOT LINE F/TCV COMPONENTS GUIDANCE AND SOFTWARE SUPPORT TO ASSIST IN SELECTING AND OPERATING FLEXIBLE MACHINING SYSTEMS ARE BEING DEVELOPED. THE FINAL REPORT IS SCHEDULED FOR DISTRIBUTION IN NOVEMBER 1982. SEE FOLLOW ON PROJECT T 82 5082.	779.0	712.9	40.0	MAR 82	OCT 82
T 82 5082	FLEXIBLE MACHINING SYS (FMS) PILOT LINE F/TCV COMPONENTS THE CONTRACTOR IS CONTINUING WORK WITH OUO CONTRACTORS WHO ARE, OR WILL BE ACQUIRING FLEXIBLE MACHINING SYSTEMS.	750.0	607.9	10.0	MAR 83	MAR 83
T 79 5083	UPSCALING OF ADVANCED POWDERED METALLURGY PROCESSES-PH 3 80 POWDER METAL TEST GEARS HAVE BEEN PRODUCED AND DELIVERED TO NASA-LEWIS FOR TESTING. DIES FOR THE AGT 1500 ACESSORY GEARS ARE CURRENTLY BEING DESIGNED.	328.0	204.0	124.0	MAR 81	OCT 83
T 82 5083	UPSCALING OF ADVANCED PM PROCESSES PHASE 4 --- JUST FUNDED. NO 301 REQUIRED. ---	30.0				
T 78 5085	PRODUCTION TECHNIQUES FOR FABRICATION OF TURBINE RECUPERATOR LASER WELDING SYSTEM HAS BEEN SHIPPED TO AVCO AND SHOULD BE IN OPERATION BY 1 DEC 82.	1,047.5	1,005.6	42.0	JAN 80	DEC 82
T 80 5085	TURBINE RECUPERATOR LASER WELDING SYSTEM HAS BEEN SHIPPED TO AVCO AND SHOULD BE IN OPERATION BY 1 DEC 82.	133.0	102.1	29.2	OCT 81	DEC 82
T 81 5085	PRODUCTION TECH F/FAB TURBINE RECUPERATOR LASER WELDING SYSTEM HAS BEEN SHIPPED TO AVCO AND SHOULD BE IN OPERATION BY 1 DEC 82. TECHNICAL REPORT SHOULD BE READY BY 31 DEC 82.	250.0	215.2	21.0	SEP 82	DEC 82
T 80 5090	IMPROVED AND COST EFFECTIVE MACHINING TECHNOLOGY (PHASE 2) CUTTING TESTS CONDUCTED ON A NUMBER OF DIFFERENT MATERIALS UNDER VARYING MACHINING CONDITIONS. CHIP SAMPLES HAVE BEEN COLLECTED + CUTTING FORCES RECORDED FOR AXIAL, RADIAL, + TANGENTIAL DIRECTIONS. FEED RATE, SPEED, CUT DEPTH WERE VARIED SIGNIFICANTL	229.0	229.0		NOV 81	DEC 83
T 81 5090	IMPROVED AND COST EFFECTIVE MACHINING TECHNOLOGY (PHASE III) METCUT CONTINUES TO ASSIST MANUFACTURING PLANTS IN RELIEVING MACHINING PROBLEMS WHICH CONTRIBUTE TO LOW PRODUCTIVITY.	30.0		12.0	DEC 82	JUN 83

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T 82 5090	IMPROVED AND COST EFFECTIVE MACHINING TECHNOLOGY "PHASE IV? DRILLING TESTS USING HSS AND CARBIDE DRILLS HAVE BEEN PERFORMED ON L635, AN ALLOY USED FOR HOT STAGE TURBINE BLADES IN THE AGT-1500 ENGINE.	250.0	213.0		JAN 84	JAN 84
T 81 5091	HEAVY ALUMINUM PLATE FABRICATION (PHASE 1) ALUMINUM ARMOR PLATE AND WELDING ELECTRODES RECEIVED. HOLDING FIXTURES AND WELD JOINTS DESIGNED.	30.0		12.0	MAR 84	MAR 84
T 78 5097	INTEGRALLY CAST LOW COST COMPRESSOR (PHASE II) WORK ON THIS PROJECT (PHASE II) IS COMPLETE. TECHNICAL REPORT DRAFT IS BEING REVIEWED AND WILL BE PUBLISHED BY DEC 82. CASTING PROCESS FOR STAGES 1 + 2 HAVE BEEN VERIFIED. CAST QUALITY OF FIFTH STAGE DOES NOT MEET REQUIREMENTS.	342.0	267.0	75.0	JUN 80	DEC 82
T 81 5097	INTEGRALLY CAST LOW COST COMPRESSOR (PHASE III) AVCO IS REVIEWING CHANGES TO FINAL TECHNICAL REPORT FOR PHASE II. REMAINDER OF PHASE III (T81 5097) HAS BEEN DEFERRED INDEFINITELY. IMPLEMENTATION IS IN QUESTION SINCE 5TH STAGE BLADES CANNOT BE CAST WITH CURRENT STATE OF ART.	50.0		46.0	DEC 81	DEC 82
T 81 6011	SPRINGS FROM FIBER/PLASTIC COMPOSITES THE MATERIAL SELECTED FOR USE IS S-2 FIBERGLASS AND EPOXY RESIN. MANUFACTURING METHOD HAS BEEN ESTABLISHED AND TOOLING PRODUCED. MATERIAL PROPERTY TESTS HAVE BEEN COMPLETED.	115.0	100.0	15.0	JAN 83	JAN 83
T 82 6011	SPRINGS FROM FIBER/PLASTIC COMPOSITES CONTRACT AWARDED TO CIBA-GEIGY. THE FRONT LEAF SPRING ASSY FOR THE 5-TON TRUCK HAS BEEN REDESIGNED FOR COMPOSITE MATERIALS. THE MANUFACTURING PROCESS AND MATERIALS HAVE BEEN SELECTED.	185.0		40.0	JUN 83	JUN 83
T 82 6025	LASER MANUFACTURING PROJECT WILL ESTABLISH OFF-LINE MULTI-PURPOSE LASER. PHASE I HAS BEEN REPROGRAMED AND FEASIBILITY STUDY WILL BEGIN 4QFY82 BY ARMY RESEARCH OFFICE, DURHAM, NC.	180.0		2.0		
T 81 6028	PRODUCTION QUALITY CONTROL BY AUTOMATED INSPECT EQUIPMENT A NEW CONTRACT PACKAGE FOR THE ON-LINE EVALUATION OF THE AIOS HAS BEEN PREPARED + THE RFQ WILL BE RELEASED IN AUG 82. CONTRACT AWARD IS SCHEDULED FOR 30 SEP 82. THE NEW CONTRACT PKG WILL FACILITATE EVALUATION OF AIOS FOR INSP APPLICATION AT RRAD.	60.0			JUL 82	OCT 83
T 78 6035	ESTABLISH ON-LINE NDT FOR TRACKED COMBAT VEHICLES(PHASE 1) ***** DELINQUENT STATUS REPORT *****	1,832.0	1,630.0	202.0	APR 81	DEC 82

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T 79 6038	HIGH DEPOSITION WELDING FLUXED CORED WELDED TEST PLATES MET BALLISTIC REQUIREMENTS. SUBMERGED ARC WELDING WITH FLUX CORE WIRE EQUIPMENT IS BEING SET UP AND PARAMETERS ARE BEING DETERMINED. SAME STATUS FOR HIGH CURRENT DENSITY GMAW.	1,478.0	I,243.D	118.0	JUL 80	JUL 83
T 82 6038	HIGH DEPOSITION WELDING --- JUST FUNDED. NO 301 REQUIRED. ---	112.0				
T 82 6053	WELDING SYSTEMS INTEGRATION PROCUREMENT EFFORT IS IN PROGRESS. AWARD SCHEDULED FOR 4QFY82.	500.0		6.0	SEP 82	SEP 82
T 81 6054	ADVANCED METROLOGY SYSTEMS INTEGRATION SEE PROJECT T 82 6054 FOR STATUS.	50.0		43.0	MAR 84	JUN 82
T 82 6054	ADVANCED METROLOGY SYSTEMS INTEGRATION AN RFP WAS MAILED TO 60 COMPANIES. THE CONTRACT AWARD IS SCHEDULED FOR SEPTEMBER 1982.	500.0		2.D	FEB 85	FEB 85
T 80 6057	XM1 COMBAT VEHICLE PROCUREMENT REQUEST WRITTEN TO OBTAIN FINAL REPORT. 900K DOLLARS DEOBLIGATED. THE PROJECT WILL BE OFFICIALLY CLOSED AFTER REPORT HAS BEEN RECEIVED.	1,088.0	1,058.0	30.0	OCT 82	DEC 82
T 80 6057 06	METROLOGY METHODS THE TASK HAS BEEN TERMINATED. A FINAL REPORT IS FORTHCOMING. THE FUNDS, 900K, ARE PLANNED TO BE REPROGRAMMED TO T 80 6059, M2 + M3 FIGHTING VEHICLE SYSTEM.	1,088.0	I,058.0	30.0		DEC 82
T 81 6057	XM1 COMBAT VEHICLE PROJECT IS BEING DEFERRED DUE TO SALE OF CHRYSLER DEFENSE TO GENERAL DYNAMICS AND REPORGRAMMING OF FUNDS FOR FY82 CONTRACT AWARD TO FMC UNDER MMT PROJECT T 80 6059.	67.0		53.0	MAY 82	SEP 83
T 81 6057 03	AUTOMATED METALLIZING CONTRACT AWARD TO GENERAL DYNAMICS HAS BEEN APPROVED.	22.3		17.7		SEP 83
T 81 6057 05	MACHINE DIAGNOSTICS CONTRACT AWARD APPROVED.	22.3		17.0		SEP 83
T 81 6057 13	LASER CUTTING CONTRACT AWARD APPROVED.	22.3		I7.0		MAY 83
T 82 6057	XM1 COMBAT VEHICLE CONTRACTUAL AWARD IS BEING POINTED TOWARD EARLY FY83. 60DK DOLLARS IS BEING DECOMMITTED FROM FY82 CONTRACT FOR RELEASE TO SAEP IPI PROGRAM 7828192.	1,450.0	10.0	63.0	SEP 83	SEP 83

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T 82 6057 03	AUTOMATED METALLIZING CONTRACT AWARD TO GENERAL DYNAMICS HAS BEEN APPROVED.	483.3		21.0	JUN 83	JUN 83
T 82 6057 05	MACHINE DIAGNOSTICS CONTRACT AWARD APPROVED.	483.3	3.3	21.0	SEP 83	SEP 83
T 82 6057 13	LASER CUTTING CONTRACT AWARD APPROVED.	483.3	3.3	21.0	MAY 83	MAY 83
T 80 6059	LARGE CAST ALUMINUM COMPONENTS SEE SUBTASK 01.	538.0	524.0	14.0	JUL 81	SEP 82
T 80 6059 D1	M2 AND M3 CAST ALUMINUM COMPONENTS CONTRACT FOR ADDITIONAL BALLISTIC TESTING WAS ISSUED 5 MAY 82. A REVISED CONTRACT MOD WAS APPROVED 28 MAY 82 TO CONTINUE WITH PHASE II. PROPOSAL FROM FMC IS REQUIRED. NO FUNDS HAVE BEEN AWARDED.	538.0	524.0	14.0		SEP 82
T 81 6059	M2 AND M3 FIGHTING VEHICLE SYSTEM FABRICATION OF PROTOTYPE TRIM VANES HAS BEGUN.	291.0	289.0	2.0	NOV 84	JAN 83
T 81 6059 D4	RESIN MOLDED COMPOSITE MATERIALS TOOLING HAS BEEN FABRICATED. FABRICATION OF PROTOTYPE TRIM VANES HAS BEEN INITIATED.	291.0	289.0	2.0		JAN 83
T 82 6059	M2 AND M3 FIGHTING VEHICLE SYSTEM CONTRACT IS BEING NEGOTIATED, AND CONTRACT IS TO BE AWARDED IN SEPTEMBER 1982. 900K DOLLARS ARE BEING REPROGRAMMED FROM T806D57. THIS ACTION WILL PERMIT THE RELEASE OF 900K DOLLARS IN FY82 FUNDS FOR USE ON THE AVCO LYCOMING IPI PROGRAM, 7828192.	2,622.0			DEC 84	DEC 84
T 82 6059 01	M2 AND M3 CAST ALUMINUM COMPONENTS CONTRACT FOR ADDITIONAL BALLISTIC TESTING WAS ISSUED TO FMC 5 MAY 82. REVISED CONTRACT MOD WAS APPROVED TO CONTINUE WITH PHASE II OF CAST TURRET PROJECT 28 MAY 82.	572.0		11.0	DEC 83	DEC 83
T 82 6059 D2	SELF-THREADING FASTENERS FUNDS JUST APPROVED. CONTRACT NOT YET AWARDED.				FEB 83	FEB 83
T 82 6059 D3	ADHESIVE BONDING FUNDS JUST APPROVED. CONTRACT NOT YET AWARDED.					
T 82 6059 D6	LASER HEAT TREATING CONTRACT NEGOTIATIONS WITH FMC ARE IN PROCESS.	524.4			SEP 84	SEP 84

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T 82 6059 08	PRODUCTION METHODS FOR COMPOSITE TURRET BASKET CONTRACT NEGOTIATIONS WITH FMC ARE IN PROCESS.	2,050.0			JUN 83	JUN 83
T 82 6059 20	CARC APPLICATION PROCESSING TECH CONTRACT NEGOTIATIONS WITH FMC ARE IN PROCESS.	524.4			DEC 84	DEC 84
T 82 6067	FRAME WELDING FIXTURES THE PROCUREMENT PACKAGE WAS PREPARED FOR THE CONTRACTUAL EFFORT.	77.0		1.0	FEB 84	FEB 84
T 81 6076	AUTOMATED DEPOT INSPECTION OF ROADWHEELS THE ULTRASONIC INSPECTION SYSTEM WAS DELIVERED TO RED RIVER ARMY DEPOT FOR ACCEPTANCE TESTING. THE DEPOT PERSONNEL WERE TRAINED TO OPERATE THE EQUIPMENT SO THAT THE NDE DATA COLLECTION MAY BEGIN. DATA HAS BEEN COLLECTED FOR OVER 50 ROAD WHEELS SO FAR	247.0	225.0	15.1	SEP 83	SEP 83
T 82 6078	AUTO DYNAMOMETER CONTROL F/STANDARDIZATION INSP TESTING ***** DELINQUENT STATUS REPORT *****	65.0				
T 82 6079	AGT-1500 ENGINE SEE SUBTASKS FOR WORK STATUS.	1,360.0	1,066.0	21.0	MAR 85	MAR 85
T 82 6079 01	MONOCRYSTAL ALLOY FOR HIGH PRESSURE TURBINE BLADES AIR FORCE IS HANDLING THE CONTRACT AND IS CURRENTLY REVIEWING AVCOS PROPOSAL.	398.0	300.0	9.0	SEP 83	SEP 83
T 82 6079 02	RAPIDLY SOLIDIFIED TECHNOLOGY -RST- NICKLE-BASE SUPERALLOY FUNDS PROVIDED TO AIR FORCE MATERIALS LAB-JOINT EFFORT.	448.0	350.0	8.0	SEP 83	SEP 83
T 82 6079 03	BI-CAST HIGH PRESSURE TURBINE NOZZLE CONTRACT HAS BEEN AWARDED TO AVCO LYCOMING.	510.0	416.0	4.0	OCT 83	OCT 83
T 81 6089	ABRAMS TANK PLANT - TECH MOD PROGRAM PRELIMINARY SCOPE OF WORK HAS BEEN DEVELOPED.	100.0		40.0	SEP 83	SEP 83
T 82 6090	TOOELE ARMY DEPOT PRODUCTIVITY IMPROVEMENT PROGRAM ***** DELINQUENT STATUS REPORT *****	100.0				
T 81 6098	PRODUCTION OF SPECIAL ARMOR STEEL CONTRACT WITH US STEEL HAS BEEN NEGOTIATED TO PROVIDE PLATES OF VARIOUS THICKNESS. SHIPMENT EXPECTED IN AUG OR SEP. TEST PLANS ARE BEING DEVELOPED.	900.0	328.0	100.0		
T 81 6099	MANUFACTURING METHODS FOR SPECIALIZED ARMOR MATERIALS AMMRC, ARRADCOM AND PBM ARE ESTABLISHING MANUFACTURING METHODS.	3,550.0		907.0	JUL 84	JUL 84

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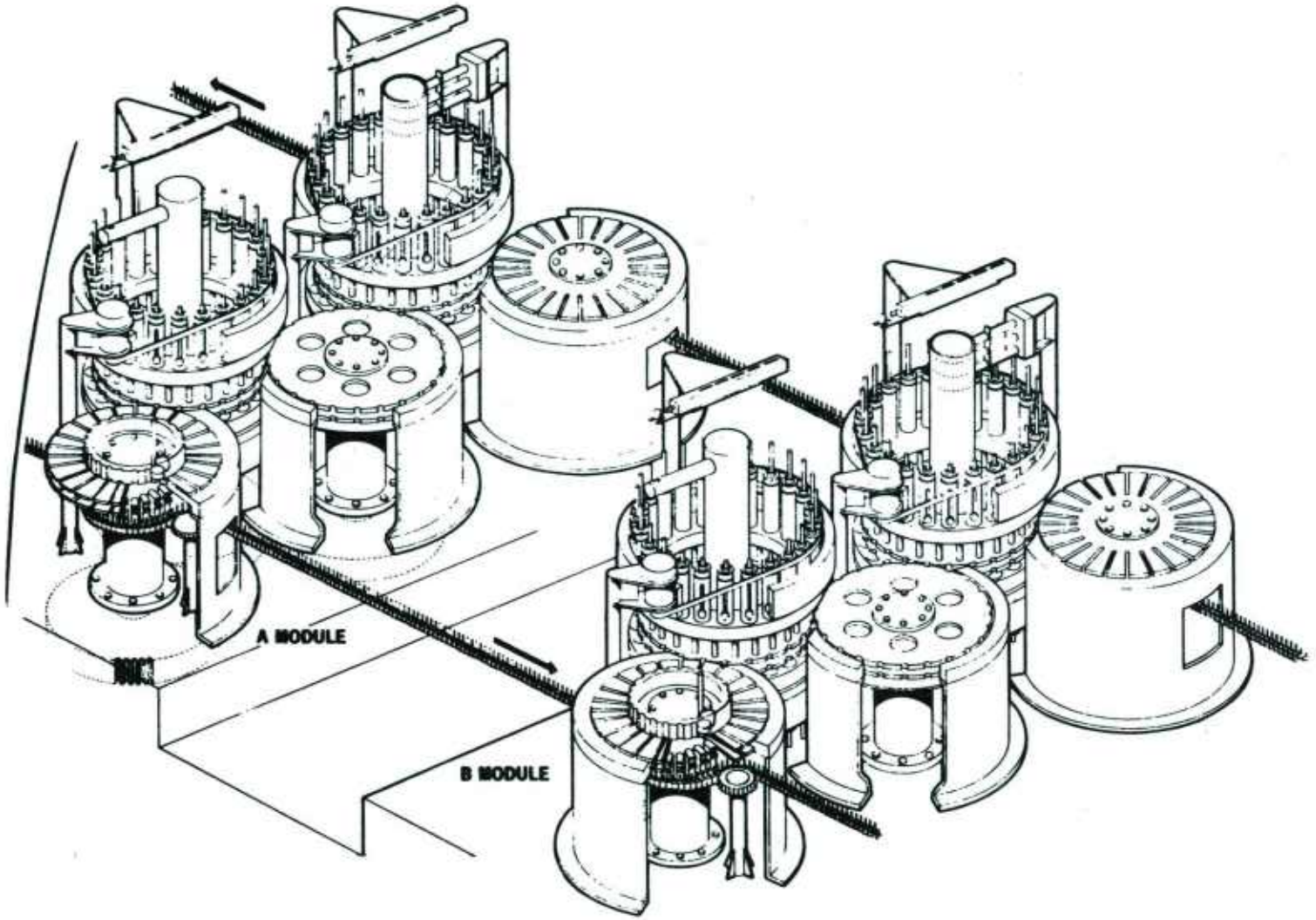
T 81 6100	ENGINEERING SUPPORT DIRECTORATE TECH MOD PROGRAM INVESTIGATION TEAM WAS ESTABLISHED TO EXPLORE PRODUCTIVITY AND TECHNOLOGY IMPROVEMENTS. INITIAL DRAFT OF THE SCOPE OF WORK FOR PHASE II OF THE PROGRAM WAS DEVELOPED.	100.0		70.0	SEP 82	SEP 82
T 82 6107	IMPROVED MBT TRACK PROCUREMENT FOR CONTRACTOR WORK IS IN PROCESS. CONTRACT AWARDS ARE PROJECTED FOR SEPTEMBER.	1,625.0			SEP 83	SEP 83



ARMAMENT R&D COMMAND
ARMAMENT MATERIEL READINESS COMMAND
(ARRADCOM, ARRCOM)
(AMMUNITION)

A R R C O M - A R R A O C O M (AMMUNITION)

CURRENT FUNDING STATUS, 1ST CY82

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)		INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)	
75	1	3,760,000	2,256,000	2,169,000	(96%)	1,504,000	1,504,000	(100%)
76	1	1,196,000	819,000	719,000	(87%)	377,000	377,000	(100%)
77	1	1,079,000	963,000	935,000	(97%)	116,000	116,000	(100%)
77	2	2,025,900	1,234,300	1,193,200	(96%)	791,600	787,400	(99%)
78	8	4,556,400	2,879,800	2,857,800	(99%)	1,676,600	1,534,400	(91%)
79	26	17,368,000	9,877,700	8,726,000	(88%)	7,490,300	5,894,000	(78%)
80	33	20,610,400	13,084,100	10,243,100	(78%)	7,526,300	4,914,000	(65%)
81	36	30,211,400	13,107,600	7,447,900	(56%)	17,103,800	4,221,900	(24%)
82	48	36,127,200	17,778,700	7,286,900	(40%)	18,348,500	1,537,500	(8%)
TOTAL	156	116,934,300	62,000,200	41,577,900	(67%)	54,934,100	20,886,200	(38%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 53% INHOUSE REMAINING 46%

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5 80 0900	AUTOMATED MULTIPLE FILTER LIFE TESTER PROJECT WORK DELAYED DUE TO LEGAL PROBLEMS WITH CONTRACTOR. CONTRACTOR WORK INITIATED AGAIN IN JULY 1982.	350.0	115.0	78.0	NOV 81	FEB 84
5 82 0904	CHEMICAL REMOTE SENSING SYSTEMS FUNDS CONTRACTED TO COMPUTER SCIENCES CORPORATION FOR ENGINEERING SUPPORT.	300.0	180.0	28.3	DEC 82	DEC 82
5 82 0905	MANUFACTURE OF IMPREGNATED CHARCOAL-WHETLERITE SCOPE OF WORK PREPARED FOR THE CONTRACT EFFORT.	256.0			DEC 84	DEC 84
5 82 0909	AUTOMATED AGENT PERMEATION TESTER SCOPE OF WORK PREPARED FOR THE CONTRACT EFFORT.	224.0		3.0	JUN 83	JUN 83
5 82 0913	SPIN COATING OF DEACON AGENT CONTAINERS THE CONTRACT FOR PHASE 1 EFFORT HAS BEEN FORWARDED TO PROCUREMENT. AWARD OF CONTRACT IS PLANNED FOR FOURTH QUARTER OF FY82.	255.0		17.9	FEB 83	FEB 83
8 80 0915	GROUP TECH REQUIREMENTS DEFINITION ELECTRONICS THIS IS A TRI SERVICE PROJECT. TOTAL FUNDING IS $60K. REQUIREMENTS FOR AN ECAS HAVE BEEN DEVELOPED. A FINAL TECHNICAL REPORT HAS BEEN PREPARED.	30.0	27.0		DEC 81	MAR 83
5 80 1001	PILOT LINE FOR FUZE FLUIDIC POWER SUPPLIES PHASE 1 ENGINEERING STUDY HAS BEEN COMPLETED. FABRICATION OF TEST EQUIPMENT IS COMPLETE AND AWAITS DEMONSTRATION AND PROVE-OUT. THE WORK ON THE COIL-MAGNET ASSEMBLY MACHINE IS ABOUT 70 PERCENT COMPLETE.	719.0	584.0	48.0	OCT 81	OCT 83
5 81 1001	PILOT LINE FOR FUZE FLUIDIC POWER SUPPLIES ***** DELINQUENT STATUS REPORT *****	315.0				
5 80 1003	LOW COST MOLDED PACKAGING FOR HYBRID ELECTRONICS SPRINGBORN LABS MODIFIED THE MOLD FOR FUZE AMPLIFIER HOUSINGS AND USED IT TO MOLD 150 M734 UNITS. TRANSFER MOLDING WITH GE PTX-2000 EPOXY WAS SUCCESSFUL. A PAPER DESCRIBING THE PROCESS WAS GIVEN AT THE PLASTIC ENGINEERS TECHNICAL CONFERENCE.	243.0	191.4	50.0	MAY 81	SEP 82
5 80 1005	CERAMIC-METAL SUBSTRATES FOR HYBRID ELECTRONICS WESTINGHOUSE COPPER PLATED COPPER-INVAR-COPPER SUBSTRATES BEFORE COATING THEM WITH PORCELAIN. BUT 2-AXIS EXPANSION IS STILL A PROBLEM. A HANDBOOK AND FINAL REPORT IS BEING PREPARED. DEMO WAS 30 SEP 82 PAPER WILL BE GIVEN, IEPS, S.DIEGO 11/82	319.0	217.0	111.0	OCT 81	DEC 82

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5 82 1019	MMT PENTABORANE PROCESS ENGINEERING ***** DELINQUENT STATUS REPORT *****	340.0				
5 79 1295	MODERNIZATION OF CHARCOAL FILTER TEST EQUIPMENT WORK IS CONTINUING ON FINAL DRAWING PACKAGE AND OPERATION MANUAL FOR THE FILTER TEST FACILITY.	360.0	249.0	70.0	DEC 80	MAR 83
5 79 1296	MT FOR CB FILTERS 5P2 SIDE FILLING MACHINE WAS FABRICATED AND MODIFIED TO USE VIBRATION AND COMPRESSION AS AIDS IN FILLING. DRAFT TECH REPORT PREPARED. 5P3 FILTER PULSE TESTING PROVED TO BE NONVIABLE PROCESS CONTROL TEST.	400.0	75.0	325.0	MAY 80	JUN 82
5 80 1296	MANUFACTURING TECHNOLOGY FOR CB FILTERS 5P3 VELOCITY TRAVERSE TESTER FABRICATED BY AAI AND DELIVERED TO CSL. DRAFT TECH REPORT PREPARED ON SIDE FILLING STUDIES.	404.0	157.5	244.0	MAR 81	JUN 82
5 79 1318	CHEMICAL PRODUCTION FILL, CLOSE AND LAP FOR 8 IN XM736 PROJ ***** DELINQUENT STATUS REPORT *****	398.0		398.0	MAR 81	DEC 82
5 80 1318	EST CHEMICAL PROD + FILL CLOSE + LAPT TECH F/PROJ 811 VX-2 ***** DELINQUENT STATUS REPORT *****	484.0	31.0	346.0	JUN 81	DEC 82
5 81 1318	EST CHEM PROD + FILL CLOSE + LAP TECH F/XVX2 XM736 *****DELINQUENT STATUS REPORT *****	216.0		60.0	JUL 82	DEC 82
8 78 1335	MFG TECH FOR NEW PROTECTIVE MASK MANUFACTURING PLAN, PLANT LAYOUT, AND OIPEC SEARCH WERE COMPLETED. CONTRACT AWARDED TO MINE SAFETY APPLIANCE FOR PROCUREMENT AND SET-UP OF PRESSES, MOLDS, AND CONTROLS FOR THE PILOT PLANT.	764.0	400.0	324.0	JUN 79	OCT 82
5 79 1335	MAN TECH FOR NEW PROTECTIVE MASK PREPARATION AND PLANNING FOR PRODUCTION AND PROCESS STUDIES WERE INITIATED. SCHEDULE WAS PREPARED TO INCORPORATE THE PROGRAM FOR ACQUISITION OF AUTOMATED TEST EQUIPMENT.	1,173.0	500.0	671.0	OCT 82	NOV 82
5 80 1335	MANUFACTURING TECHNIQUES FOR NEW PROTECTIVE MASK FUNDS UTILIZED TO FUND COMPLETELY THE MOLD AND PRESS EFFORT.	1,504.0	1,092.0	409.0	DEC 82	NOV 82
5 81 1335	TECH FOR NEW PROTECTIVE MASK PILOT PRODUCTION LINE INSTALLED AND PRODUCTION OF INDIVIDUAL COMPONENTS UNDERWAY. SOME FACEBLANK/LENS ASSEMBLIES FAILED. NEW ASSEMBLIES BEING PREPARED FOR RETEST. ALTERNATE FACEBLANK MATERIAL BEING FABRICATED. TDP WAS UPDATED.	2,046.0	1,839.0	187.0	OCT 82	DEC 82

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5 82 1335	MFG TECH FOR NEW PROTECTIVE MASK FUNDS PLACED ON CONTRACT TO CONTINUE PILOT PRODUCTION OF MASK COMPONENTS.	1,000.0	1,000.0		DEC 82	DEC 82
5 79 1345	BIOLOGICAL WARNING SYSTEM PROJECT COMPLETED.	525.0	229.0	296.0	DEC 80	AUG 82
5 80 1345	BIOLOGICAL WARNING SYSTEM TECHNICAL REPORT IS BEING PREPARED. ALL TASKS HAVE BEEN COMPLETED.	463.0	173.0	284.0	SEP 82	DEC 82
5 80 1348	SUPER TROPICAL BLEACH STUDY OF PROCESSES AND PRE-PILOT EVALUATIONS WERE COMPLETED. A LIQUID REACTOR DOUBLE SALT PROCESS WAS SELECTED FOR ENGINEERING DESIGN.	202.0	170.7	29.3	MAR 81	AUG 82
5 81 1348	SUPER TROPICAL BLEACH WORK IS CONTINUING ON ENGINEERING DESIGN OF PILOT PLANT	822.0	537.3	82.4	APR 84	OCT 83
5 78 1353	SMOKE MIX PROCESS (GLATT) ***** DELINQUENT STATUS REPORT *****	417.0	18.0	399.0	OCT 80	DEC 82
5 79 1354	SLUDGE VOLUME REDUCTION AND DISPOSAL PROCESS STUDY ***** DELINQUENT STATUS REPORT *****	122.0		122.0	SEP 80	DEC 82
5 80 1354	SLUDGE VOLUME REDUCTION AND DISPOSAL PROCESS STUDY ***** DELINQUENT STATUS REPORT *****	156.0		113.9	DEC 80	DEC 82
5 81 1354	SLUDGE VOLUME REDUCTION AND DISPOSAL PROCESS ***** DELINQUENT STATUS REPORT *****	110.0			SEP 83	SEP 83
5 79 1355	MANUFACTURING PLANT TOXIC EFFLUENT/EMISSION PRETREATMENT ***** DELINQUENT STATUS REPORT *****	104.0	52.2	51.8	JAN 81	DEC 82
5 80 1355	MANUFACTURING PLANTS TOXIC EFFLUENT/EMISSION PRETREATMENT ***** DELINQUENT STATUS REPORT *****	222.0		55.6	DEC 81	DEC 82
5 81 1500	EVAL INDUST CAPABILITY F/LOAD COMMERCIAL EXPL-HIGH USE MUNIT ONE CONTRACTOR HAS SHIPPED TO THE GOVT EXPLOSIVE SAMPLES FOR PHASE 1 TESTING. SECOND CONTRACTOR DID LIKEWISE, BUT HAD TO REDO THE SAMPLES BECAUSE THE DIAMETER WAS TOO SMALL. THE NAVY SHIPPED BOMB METAL PARTS TO EACH CONTRACTOR FOR PHASE II.	473.0	238.0	102.0	SEP 82	DEC 82
5 82 1500	EVAL INDUST CAPABILITY F/LOAD COMMERCIAL EXPL-HIGH USE MUNIT REFER TO 5 81 1500 FOR STATUS.	450.0			OCT 83	OCT 83

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5 82 1701	BULK TRANSFER OF CHEMICAL MATERIALS ***** DELINQUENT STATUS REPORT *****	221.0				
5 82 1709	IMPROVED PROCESSING OF PYROTECHNIC MIXTURES ***** DELINQUENT STATUS REPORT *****	500.0				
5 82 1711	RED PHOSPHORUS POLLUTION ABATEMENT EVALUATIONS ***** DELINQUENT STATUS REPORT *****	125.0				
5 79 1903	DIE CAST TAILCONE + DESIGN MACHINE FOR BLU-96/B ***** DELINQUENT STATUS REPORT *****	450.0	426.0	24.0	APR 80	DEC 82
5 80 1903	DIE CAST TAIL CONE + DESIGN MACHINE FOR BLU-96/B ***** DELINQUENT STATUS REPORT *****	1,176.0	1,140.0	10.6	MAR 81	DEC 82
5 81 1907	AUTOMATED GAGING FOR MED. CAL. PROJ. BODIES (CAM) THE WORK EFFORT WAS CENTERED AROUND THE COMPLETION OF THE PROTOTYPE GAGING SYS. ALL HARDWARE HAS BEEN DELIVERED + PRELIMINARY PROOFING HAS BEGUN ON THE VARIOUS SUBSYSTEMS.	543.0	29.1	159.1	SEP 83	SEP 83
5 79 3961	IMPROVED 3-D VIBRATION ACCEPTANCE TEST FOR ART FUZES ***** DELINQUENT STATUS REPORT *****	282.0	192.0	69.0	SEP 81	DEC 82
5 80 3961	IMPR (3-D) VIB ACCEPT TSTNG F ART FUZES AND S/A MECHANISMS TWO LING B335 SHAKER SYSTEMS SUCCESSFULLY COMPLETED ACCEPTANCE TESTS AND WERE DELIVERED TO HDL. PROCUREMENT SPECIFICATIONS FOR THE DIGITAL CONTROL SYSTEM WERE COMPLETED 30 MARCH 1982.	502.0	432.0	70.0	SEP 82	DEC 83
5 81 3961	IMPRVD VIBR ACCEPTANCE TESTING F/M732,XM587/724 FUZES ? S?A A CONTRACT SHOULD BE AWARDED IN SEPTEMBER 1982.	650.0			DEC 83	DEC 83
5 79 4000	AUTOMATED M55 DETONATOR PRODUCTION EQUIPMENT TEST DATA SUBMITTED BY LONE STAR AAP ON M55 DETONATOR WAS POSITIVE. FINAL REPORT ON HAZARDS ANALYSIS DONE BY ILL. INST. OF TECH. RESEARCH INST. WAS SENT TO ARRADCOM WHERE IT WAS REVIEWED AND RETURNED FOR CORRECTIONS.	1,762.5	430.8	882.2	MAR 81	SEP 82
5 81 4000	AUTOMATED M55 DETONATOR PRODUCTION EQUIPMENT MONITORING CONTRACTS IS CONTINUING. PROPOSALS TO CONTINUE THE INSP MODULE DEVELOPMENT EVALUATED. PBM ADVISED TO FUND IN-HOUSE CONTINUATION.	403.5		315.7	SEP 81	SEP 82
5 79 4024	DSN DEV BLD PROT CEMP AND AUTO ASSY MACH M223 FZ NO WORK DONE BECAUSE OF LACK OF FUNDS. STATUS REMAINS THE SAME AS LAST REPORT.	1,132.0	945.1	186.9	SEP 81	OCT 81

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5 8D 4037	PROCESS IMPROVEMENT FOR PLASTIC-BONDED EXPLOSIVES THREE BATCHES OF COMP C4 WERE SUCCESSFULLY PROCESSED ON THE EIMCO FILTER. THE PURCHASE OF A NAUTA BLENDER/DRYER HAS BEEN INITIATED. EVALUATION OF THE BLENDER/DRYER WILL BE ACCOMPLISHED UNDER MMT 58X4449.	255.8	204.8	48.0	DEC 81	MAR 83
5 79 4D46	QUANTITATIVE ANAL. OF BLENDED EXPLOS. SAMPLES LATEST POLAROGRAPH TESTS AT LONE STAR HAVE PRODUCED ERRATIC RESULTS. PLANS HAVE BEEN DRAWN UP TO INVESTIGATE ALL VARIABLES. THIS PROGRAM WILL BE ACCOMPLISHED AT LONE STAR PENDING RETURN OF FUNDS.	307.0	70.0	232.5	NOV 80	DEC 82
5 79 4D59	OPTIMIZATION - NITROGUANADINE IN M30 PROPELLANT DATA WERE ANALYZED AND A DRAFT OF THE FINAL REPORT WAS WRITTEN. IT CONCLUDED THAT THE MICROTRAC PARTICLE SIZE MONITOR CAN BE OPERATED ON-LINE IN CONJUNCTION WITH THE PURE NQ CRYSTALLIZER. A FINAL REPORT IS BEING PREPARED.	271.0	241.0	28.5	MAR 81	SEP 82
5 81 4D59	CONTROL OF NQ CRYSTALLIZATION AN INVESTIGATION OF THE AGGLOMERATION OF NQ WAS CONTINUED, INCLUDING THE EFFECTS OF TIME AND HUMIDITY ON SPECIFIC SURFACE, THE EFFECTS OF SOLVENT AND ADDITIVES ON CRYSTAL HABIT, AND SURFACE CHARACTERISTICS.	190.0	1.5	165.3	SEP 82	DEC 82
5 81 4D61	NITROGUANIDINE PROCESS OPTIMIZATION THE GN PORTION OF THE NSE WAS OPERATED TO OBTAIN DATA FOR PROCESS OPTIMIZATION AND TO PRODUCE GN FEED FOR OPTIMIZATION OF THE NQ PORTION OF THE PLANT. SIGNIFICANT IMPROVEMENTS IN PROCESS PARAMETER SET POINTS WERE ESTABLISHED.	1,140.0	1,058.0	44.0	DEC 82	SEP 82
5 82 4D61	NITROGUANIDINE PROCESS OPTIMIZATION THE NQ OPTIMIZATION EFFORTS CONCENTRATED ON THE PROCESS PARAMETERS IN THE NITRATION SYSTEM. CONVERSION OF GN TO NQ WAS INCREASED BEYOND THE DESIGN LEVEL OF 92 PERCENT TO 96 PERCENT.	1,150.0	1,059.0	25.0	MAR 83	MAR 83
5 81 4D62	AUTO MANUFACTURE SYS F/MORTAR INCREMENT CONTAINERS FABRICATION + ASSY OF THE SLURRY MFG SYS HAVE BEEN COMPLETED + FABRICATION + ASSY OF THE ASSEMBLY SYS ARE 70 PCT COMPL. THE TRANSLUCENCY TEST UNSP STATION CONTRACT MOD WAS AWARDED. 60MM M204 PAPER MOLDED INCREMENT CONTAINERS HAVE BEEN PRODUCED.	2,418.0	2,259.5	100.0	JUL 83	SEP 84
5 81 4D62 01	SLURRY VACUUM FORMING MFG SYS FAB + ASSY OF THE SLURRY VACUUM FORMING BASED MANUFACTURING SYS WITH 81MM M705 TOOLING HAS BEEN COMPLETED. THE EFFORT HAS ENTERED THE TEST + MODIFY PHASE WHICH IS REPORTED UNDER 582 4D62 ACCOMPLISHMENTS.	2,418.0	1,400.8			SEP 83

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5 81 4062 03	ASSEMBLY SYSTEM THE FAB + ASSY EFFERT IS APPROX 70 PCT COMPLETE + THE TESTING OF THE WT., SORT + MATCH + WATER PROOFING SUBSYS HAS BEEN CONTRACTED. CONTRACT MOD FOR THE TRANSLUCENCY TEST WAS PLACED IN JUN. THE STD. CIRCUIT 1024 LINE CAMERA WAS OBTAINED.	2,418.0	636.7			MAY 83
5 81 4062 04	SLURRY VACUUM FORMING OPTIMIZATION DATA GENERATED BY THE OPTIMIZATION PROGRAM HAS BEEN COMPILED + A ROUGH DRAFT OF THE FINAL REPORT HAS BEEN PREPARED AND IS UNDER REVIEW.	2,418.0	66.1			MAY 83
5 81 4062 05	PAPER MOLDING OPTIMIZATION SIGNIFICANT PROGRESS WAS MADE IN PAPER MOLDING THE 60MM M204 INCREMENT CONTAINER USING A TWO-STEP HOT FORGING PROCESS. WORK IS PROGRESSING SATISFACTORILY ON THE MOLDED PAPER OF THE 81MM M205 CONTAINER.	2,418.0	154.9			SEP 82
5 82 4062	AUTO MANUFACTURE SYS F/MORTAR INCREMENT CONTAINERS THE FOLLOWING CONTRACT MODS TO COMPLETE AND FAB + ASSY OF THE SYS ARE 70 PERCENT COMPLETE. THE TRANSLUCENCY TEST INSPECTION STATION CONTRACT WAS AWARDED. 60MM M204 PAPER MOLDED INCREMENT CONTAINERS HAVE BEEN SUCCESSFULLY PRODUCED BY INNOVA, INC.	2,901.7	2,791.6	110.1	SEP 84	SEP 84
5 82 4062 01	SLURRY VACUUM FORMING MFG SYS THE PHASE 3 MOD FOR TEST + MODIFY, SYSTEM INSTALLATION AND FINAL ACCEPTANCE TESTING WAS AWARDED. THE SYSTEM IS UNDERGOING PRELIM. TESTING AT THE CONTRACTORS FACILITY. DIE SETS HAVE BEEN RECD FROM WESTERN TOOL FOR TESTING.	2,812.0	675.5		SEP 83	SEP 83
5 82 4062 02	PAPER MOLDING MANUFACTURING SYSTEM PHASE 2 + 3 MODS TO COMPLETE THE DEVELOPMENT WAS AWARDED. IT IS PLANNED TO CONSOLIDATE SEVERAL SYSTEMS INTO A SINGLE 16 POSITION INDEXING TABLE AS A RESULT OF ELIMINATING THE WETTING SOLUTION APPL. WORK IS CONTINUING ON THE INTERFACING OF THE PROCESS	2,812.0	1,404.0		JUL 84	JUL 84
5 82 4062 03	ASSEMBLY SYSTEM THE FAB + ASSY EFFORT IS APPROXIMATELY 70 PERCENT FINISHED. THE TESTING OF THE WEIGH, SORT + MATCH + WATER PROOFING SUBSYS HAS BEEN INITIATED BY THE CONTRACTOR. WORK IS DELAYED ON THE OPTICAL DIMENSIONAL INSP STATION. ALSO, OBTAINED A 1024 CAMERA.	2,812.0	410.3		SEP 83	SEP 83
5 79 4064	AUTO LAP OPERATIONS FOR 105MM TANK CARTRIDGES A PRACTICAL PRODUCTION SYSTEM FOR THE AUTOMATED LOAD AND ASSEMBLY OF A FAMILY OF 105MM TANK CARTRIDGES HAS BEEN DESIGNED. THAT PORTION OF THE EQUIPMENT DOCUMENTATION PERTINENT TO THE LINER-TO-CASE ASSEMBLY IS COMPLETED, SUBSTANTIATED AND AVAILABLE.	1,319.8	1,054.7	265.1	SEP 80	SEP 82

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5 82 4078	UPGRADE SAFETY, READINESS, + PROD OF EXISTING MELT POUR LNES TEST PLAN SUBMITTED. BUILDING B10 SOP REVISED AND APPROVED BY SAFETY. STATEMENT OF WORK FOR THE DESIGN EFFORT AT IOWA AAP WAS WRITTEN AND STAFFED.	3DD.D	5D.D	41.7	DEC 86	DEC 86
5 79 4124	FABRICATION OF CONTROL ACTUATION SYSTEM HOUSINGS THIS PROJECT HAS BEEN TERMINATED. THE COPPERHEAD PDN. SCHEDULE PRECLUDED ANY USE OF THE MACHINE NEEDED FOR THIS MMT.	930.0	786.0	123.0	JUN 80	MAR 82
5 78 4139	APPLICATION OF RADAR TO BALLISTIC ACCEPTANCE TEST OF AMMO THIS PHASE OF ARBAT IS DIRECTED TOWARD UPDATING AND IMPROVING THE ORIGINAL SYSTEM. THE VALIDATION TEST WAS COMPLETED IN APRIL 82 ESTABLISHING A BASELINE FOR THE RETROFIT PROGRAM. THE ENTIRE ARBAT SYSTEM WILL BE MODERNIZED.	1,565.D	1,293.7	271.3	FEB 79	DEC 82
5 79 4139	APPL OF RADAR TO BALLIST ACC TESTG OF AMMO-ARBAT SEE PROJECT 5 78 4139.	764.4	735.6	28.2	SEP 79	DEC 82
5 82 4145	CONTROL DRYING AUTO SB + BALL PROPELLANT MANUFACTURING SEE INDIVIDUAL SUBTASKS.	55D.D	3D3.D	8.6	SEP 83	SEP 83
5 82 4145 D1	CONTROL DRYING AUTO SB PROP MFG PRELIMINARY HAZARDS ANALYSIS COMPLETED AND WILL BE COMPLIED WITH. RAPID OFF-LINE AIR DRYING INSTRUMENTATION IS BEING SOUGHT. MILESTONES REVISIONS WERE DUE TO THE DELAY IN THE CASBL PROVEOUT WITH WHICH THIS PROGRAM IS LINKED.	3D3.D	3D3.D		SEP 83	SEP 83
5 82 4145 D2	CONTROL DRYING AUTO BALL PROP MFG OLIN CORP WILL ONLY ACCEPT K FOR PHASE I EFFORT. RECOMMENDING AWARD OF PHASE I AND RETURN OF PHASE II FUNDS. LATER TO SUBMIT LATE START FY84 P-16 FOR PHASE II PRODUCTION LINE TEST. PHASE I IS PILOT PLANT TEST.	247.0		8.6	SEP 83	SEP 83
5 78 4149	LOADING OF 30MM ADEN/DEFA HEDP AMMUNITION EXTRUSION PROCESS FOR PROJECTILE IS DEFINED. HOT FORGED FLUTED LINER COMPLETED. HEDP PROJECTILE CHARGING PROCESS COMPLETED. ALL OF THE ABOVE ARE READY FOR PROTOTYPE. PARAMETERS FOR AUTOMATED PRODUCTION AUTOMATED EQUIPMENT HAVE BEEN ESTABLISHED.	5DD.D	4D6.D	93.D	MAY 79	SEP 82
5 78 415D	NEW MANUFACTURING PROCESSES FOR SAWS AMMUNITION NO STATUS GIVEN. THE WORK IS COMPLETE AND THIS FY OF THE EFFORT SHOULD PROBABLY BE CLOSED OUT.	61.4	19.3	32.9	SEP 80	MAR 83
5 79 415D	NEW MANUFACTURING PROCESSES FOR SMALL CALIBER PENETRATORS ALL WORK ON EVALUATION AND SELECTION OF PROTOTYPE DESIGNS FOR ASSEMBLY OF THE PENETRATOR TYPE SAWS XM855E1 BULLET HAS BEEN COMPLETED. THE CONTRACTOR FOR LAKE CITY AAP IS PREPARING A FINAL REPORT.	376.0	22D.0	138.5	MAR 81	MAR 83

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5 80 4150	NEW MANUFACTURING PROCESSES FOR SAWS AMMUNITION THE FOUR HOUR DEMONSTRATION OF A DUPLEXED BULLET ASSEMBLY MACHINE PROTOTYPE WAS COMPLETED. THE FINAL 250,000 PART PROTOTYPE DEMONSTRATION WILL BE COMPLETED AFTER INCORPORATION OF MACHINE IMPROVEMENTS.	489.0	332.7	155.9	JUN 82	MAR 83
5 81 4150	NEW MANUFACTURING PROCESSES FOR SMALL CALIBER PENETRATORS A REVISED SCOPE OF WORK WAS NEGOTIATED FOR THE INSTALLATION OF SKEWED AXIS ROLL FORMING PROTOTYPE EQUIPMENT FOR MANUFACTURE OF PENETRATORS AT THE LAKE CITY AAP. CONTRACT AWARD IS EXPECTED BY MID AUGUST 1982.	211.0	63.2	98.8	JUL 82	JUN 83
5 82 4161	PRODUCTION TECH FOR IMPROVED SMOKE MUNITION (81 MM) STOKES M526 PRESSES WERE OBTAINED FROM DIPEC. EVAL OF R+D BLENDING AND PRESSING PROCEDURES WERE INITIATED. SEVERAL BATCHES OF RP WEDGES WERE BLENDED AND PRESSED. COMPRESSION AND CHAMBER BURN TESTS WERE CONDUCTED ON EACH BATCH.	476.0		10.0	JUL 83	FEB 84
5 80 4189	HIGH FRAGMENTATION STEEL PRODUCTION PROCESS FUNDING PROBLEMS RESOLVED. OPTIMIZATION EFFORTS RESUMED. ECONOMIC EVALUATION IN PROCESS. 600 FORGINGS MADE TO STUDY NEED TO SPHEROIDIZE BEFORE ROUGH MACHINING.	1,048.0	550.7	442.0	JAN 81	SEP 83
5 82 4189	HIGH FRAGMENTATION STEEL PRODUCTION PROCESS CONTRACTOR HAS GIVEN COST ESTIMATE. CONTRACT NEGOTIATIONS PROCEEDING.	1,697.0		5.0	SEP 85	JUN 85
5 82 4200	TNT CRYSTALLIZER FOR LARGE CALIBER MUNITIONS A CONTRACT FOR A HAZARD ANALYSIS AND DESIGN OF A NEW CRYSTALLIZER SYSTEM WAS AWARDED TO AUTOMATED SYSTEMS.	366.0	217.2	48.1	DEC 84	DEC 84
5 80 4210	DRY CUTTING OF ENERGETIC MATERIALS BUILDING MODIFICATIONS WERE COMPLETED AND ALL EQUIPMENT IS ON SITE AT RADFORD AAP. REQUEST FOR FUNDS SENT TO PBMA FOR CONTINUATION OF THE PROJECT. UPON RECEIPT MILESTONE SCHEDULE WILL BE REVISED.	448.7	336.7	93.1	MAY 82	JUN 83
5 81 4225	RED WATER POLLUTION ABATEMENT SYSTEM THE 30 PERCENT MCA CONCEPT DESIGN FOR THE FACILITY WAS COMPLETED. SOLIDS SEPARATION TESTS WERE SUCCESSFULLY COMPLETED WITH THE SOLID BOWL CENTRIFUGE. FURNACE ASH OXIDATION AND COOLER PILOT TESTS WERE COMPLETED FOR DESIGN CRITERIA.	157.7	57.3	84.0	MAR 83	JUN 83
5 81 4226	ON-LINE MONITORS FOR WATER POLLUTANTS FOUR CONTINUOUS MONITORS ARE BEING MODIFIED AT RAAP FOR ON-LINE FIELD MONITORING OF WATER POLLUTANTS. DESIGN OF THE SAR CONTROL SYSTEM IS BEING COMPLETED. THREE SITES HAVE BEEN CHOSEN AT HAAP FOR ON-LINE MONITORING.	432.6	318.6	98.3	SEP 82	JUN 84

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5 80 4231	IN-PLANT REUSE OF POLLUTION ABATED WATERS UV-OZONE TREATMENT OF A-5 WASTEWATER MORE COST EFFECTIVE THAN CARBON COLUMN AT KANSAS AAP PILOT PLANT. STUDY INDICATES NOT ECONOMICAL TO TREAT POLLUTION ABATED WATERS NOW AT LOUISIANA AAP. PREPARATION OF TECH REPORTS AT BOTH PLANTS INITIATED.	239.5	153.0	86.5	JUL 81	SEP 82
5 81 4231	IN-PLANT REUSE OF POLLUTION ABATED WATERS WORK AT BOTH LONE STAR AAP AND MILAN AAP IS CONTINUING. THIS IS TO EVALUATE THE PRACTICABILITY, ECONOMICS, AND ENERGY REQUIREMENTS FOR RECYCLE AND REUSE. ACTION IS NOW BEING TAKEN TO WITHDRAWN FY81 FUNDING FROM LOUISIANA AAP + REISSUE TO MILAN AAP.	464.0	303.1	131.0	JUN 83	JUN 83
5 82 4231	IN-PLANT REUSE OF POLLUTION ABATED WATERS THE FY82 SCOPE OF WORK HAS BEEN APPROVED AND A CONTRACT AWARDED TO PINE BLUFF ARSENAL. WORK ON THE CHEMICAL TREATMENT UTILIZATION SURVEY HAS BEEN INITIATED.	313.0		9.0	JUN 84	JUN 84
5 81 4266	MANUF, INSPECT + TEST EQUIP F/MAGNETIC POWER SUPPLY SEE PROJECT NO. 5 80 4266 FOR STATUS.	7,559.0	483.0	211.0	SEP 83	MAR 83
5 81 4267	CONTINUOUS PROCESS FOR GRANULAR COMP B CONTRACT AWARDED TO SCIENCE APPLICATION INC TO DERIVE AND EVALUATE PROCESS PARAMETERS OF A ROTATING CUP ATOMIZATION SYSTEM AT VALIMET INC. FUNDS TRANSFERRED TO SHARPE AD FOR MONITORING WORK AT VALIMET. PROJECT DELAYED AT VALIMET DUE TO WEATHER.	160.0	158.8		SEP 82	SEP 82
5 82 4267	CONTINUOUS PROCESS FOR GRANULAR COMP B A SCOPE HAS BEEN PREPARED FOR DESIGN OF THE TEST RIG FOR PRODUCTION OF GRANULAR COMP B. PRESENT SCHEDULE INDICATES A 30 SEP 82 CONTRACT AWARD.	208.0		16.0	MAR 84	MAR 84
5 82 4273	AUTOMATED PRODUCTION OF STICK PROPELLANT EFFORT HAS BEEN RESTRUCTURED FROM 2 TO 3 YEARS. REVISED SOW SUBMITTED TO RADFORD AAP FOR FY82 FUNDS. THE SOW FOR FY83 IS BEING PREPARED.	838.0		17.6	DEC 83	DEC 83
5 79 4281	CONSERVATION OF ENERGY AT ARMY AMMUNITION PLANTS SEE THE FOLLOWING INDIVIDUAL TASKS FOR WORK STATUS.	1,225.0	635.3	507.1	JUL 80	SEP 82
5 79 4281 A02	OPTIMIZED INSULATION A COMPOUND INSULATION SCHEME HAS BEEN SUCCESSFULLY APPLIED TO THE SIDEWALL OF AN NC BOILING TUB. FINAL EVALUATION OF STEAM USAGE HAS BEEN COMPLETED AND THE FINAL TECHNICAL REPORT HAS BEEN PUBLISHED.	193.0	103.0	90.0	OCT 79	MAR 82

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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 79 4281 A03	SYNTHETIC NATURAL GAS FOR PROCESS OPERATIONS A COMPREHENSIVE SURVEY OF FUEL REQUIREMENTS FOR PROCESS OPERATIONS AT RADFORD AAP AND AN ENGINEERING EVALUATION OF COAL GASIFICATION PROCESSES AND RELATED TECHNOLOGY WERE COMPLETED. A FINAL REPORT IS BEING PREPARED.	147.9	128.9	19.0	SEP 79	SEP 82
5 80 4281	CONSERVATION OF ENERGY AT ARMY AMMUNITION PLANTS SEE THE FOLLOWING INDIVIDUAL TASKS FOR WORK STATUS.	1,230.4	919.0	311.4	JUN 82	DEC 84
5 80 4281 A01	PROCESS ENERGY INVENTORY IOWA AAP HAS COMPLETED DATA ACQUISITION AND ANALYSIS FOR DRAGON AND HAWK. PROCESS DESCRIPTIONS AND FLOW CHARTS HAVE BEEN COMPLETED AND AUDIT DATA ARE BEING ANALYZED TO DEVELOP CONSERVATION MEASURES.	490.9	359.5	131.4	DEC 81	MAR 83
5 80 4281 A04	ENERGY RECOVERY FROM WASTE HEAT EQUIPMENT EVALUATION OF A KETENE/AIR HEAT EXCHANGER AT HOLSTON AAP WAS COMPLETED. PERFORMANCE DATA INDICATES THAT FURNACE YIELD AND PRODUCT QUALITY ARE NOT ADVERSELY AFFECTED BY PREHEATING THE COMBUSTION AIR.	447.1	369.1	78.0	JUL 81	MAR 83
5 80 4281 A06	UNCOOLED PRODUCER GAS FOR KETENE MANUFACTURE USING HOT, CRUDE PRODUCER GAS AS A FUEL FOR KETENE FURNACE OPNS WAS INVESTIGATED. A SYSTEM DESIGN WAS COMPLETED. INSTRUMENTATION AND EQUIPMENT WERE RECEIVED, AND INSTALLATION OF SYSTEMS COMPONENTS IS IN PROGRESS.	292.4	190.4	102.0	JUN 82	DEC 84
5 81 4281	CONSERVATION OF ENERGY AT ARMY AMMUNITION PLANTS SEE THE FOLLOWING INDIVIDUAL TASKS FOR WORK STATUS.	1,142.0	539.1	305.4	SEP 84	DEC 84
5 81 4281 A04	ENERGY RECOVERY FROM WASTE HEAT ENGINEERING ANALYSES INDICATE THAT INSTALLATION OF VAPOR RECOMPRESSION EQUIPMENT IS NOT TECHNICALLY FEASIBLE. THE SOW WILL BE REVISED TO INCLUDE ANALYSIS OF ALL RADFORD AAP SOLVENT RECOVERY OPERATIONS.	361.9	194.1	149.0		DEC 84
5 81 4281 A06	UNCOOLED PRODUCER GAS FOR KETENE MANUFACTURE FUNDS WILL BE EXPENDED ON BENCH SCALE TESTING, EVALUATION, AND FINAL REPORT.	129.6	76.6	42.6	MAR 84	DEC 83
5 81 4281 A08	CAVITATIONAL REMOVAL OF EXPLOSIVES TESTING OF THE REMOVAL OF EXPLOSIVES FROM 175MM + 155MM SHELLS IS IN PROGRESS. INITIAL RESULTS SHOW THAT THE WASH WATER FILTRATION SYSTEM IS WORKING WELL AND NO EXPLOSIVES HAVE BEEN DETECTED IN THE HIGH PRESSURE PUMP.	231.0	174.6	44.4	JUN 83	MAR 83

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5 81 4281 A10	USE OF BIOMASS AS ENERGY SOURCES AT ARMY AMMUNITION PLANTS BIOMASS STUDIES ARE BEING CONDUCTED WITHIN THE CORPS OF ENGINEERS ENERGY ENGINEERING ANALYSIS PROGRAM FOR THE FOLLOWING AAP-LONGHORN, INDIANA, TWIN CITIES, AND HOLSTON.	271.9	227.0	25.0	SEP 83	JUN 83
5 81 4281 A12	POWER PRODUCTION FROM WASTE HEAT POTENTIAL WASTE HEAT PRODUCING PROCESS STREAMS AT RADFORD AAP HAVE BEEN IDENTIFIED. THE NAC/SAC HAS BEEN SELECTED FOR INSTALLATION OF AN ORGANIC RANKINE CYCLE ENGINE TO GENERATE ELECTRICITY. THE RECOVERY SYSTEM MAY DELIVER 300 KW OF ELECTRICITY.	147.8	93.8	48.3	SEP 84	JUN 84
5 82 4281	CONSERVATION OF ENERGY AT ARMY AMMUNITION PLANTS SEE THE FOLLOWING INDIVIDUAL TASKS FOR WORK STATUS.	1,370.0	921.1	58.5	SEP 84	SEP 84
5 82 4281 A01	PROCESS ENERGY INVENTORY LONE STAR AAP IS NOW PERFORMING AN ENGINEERING EVALUATION OF ALL THE ELECTRIC MOTORS BEING USED AT THE PLANT, TO DETERMINE IF THE ENERGY CONSUMPTION CAN BE REDUCED BY THE USE OF PROPERLY SIZED ENERGY EFFICIENT ELECTRIC MOTORS.	133.6	76.6	47.0	JUN 84	JUN 84
5 82 4281 A04	ENERGY RECOVERY FROM WASTE HEAT THE SOW, TO INCLUDE THE COMPLETION OF EQUIPMENT INSTALLATION, EQUIPMENT EVALUATION AND PREPARATION OF THE FINAL TECHNICAL REPORT, WAS PREPARED, STAFFED AND FORWARDED TO THE PCO.	419.8	192.6	4.5	SEP 84	SEP 84
5 82 4281 A12	POWER PRODUCTION FROM WASTE HEAT SEE STATUS FOR PROJECT 5 81 4281-12.	426.9	354.9	5.7	JUN 84	JUN 84
5 81 4285	TNT EQUIVALENCY TESTING FOR SAFETY ENGINEERING FINAL REPORT PUBLISHED ON HAZARDS TESTING OF AMMONIUM PERCHLORATE. TEST PLANS FOR XM37 AND 120MM EXPLOSIVE FILL DEVELOPED. PRELIMINARY REPORTS ON OCTOL 75/25, M6, AND TNT EQUIVALENCY COMPILATION IN PREPARATION.	441.0		190.6	SEP 83	SEP 83
5 82 4285	TNT EQUIVALENCY TESTING FOR SAFETY ENGINEERING JUST FUNDED.	251.0		1.5	JUN 84	JUN 84
5 81 4288	EXPLOSIVE SAFE SEPARATION AND SENSITIVITY CRITERIA TESTING WAS COMPLETED FOR THE M785 HLDP PROJECTILE, M792 HEI-T CARTRIDGE AND M74AP M75 MINES. DEFLAGRATIONS OCCURRED WITH 155MM AND 8 INCH PROP CHARGES THEREFORE REQMT FOR NONPROPAGATION TESTS DELETED. TEST PLAN PREPARED FOR HEAT CARTRIDGES.	620.0		454.7	JUN 83	JUN 83
5 81 4298	EVALUATION OF DIMETHYLNITROSAMINE DISPOSAL ON RAAP B-LINE ANALYTICAL PROCEDURES FOR DETECTING DNM AND NITRITES IN RDX/HMX MANUFACTURING STREAMS DEVELOPED. SIX TEST RUNS ON SEMI-CONTINUOUS ACTIVATED SLUDGE TREATMENT SYSTEM COMPLETED. ROUGH DRAFT OF FINAL TECH REPORT SUBMITTED FOR APPROVAL.	471.5	249.5	217.0	DEC 82	DEC 82

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5 82 4298	EVALUATION OF DIMETHYLNITROSAMINE DISPOSAL ON HAAP 8-LINE SOW APPROVED AND CONTRACTS AWARDED TO HOLSTON AAP AND USAMBRDL.	391.0	124.0	13.0	DEC 83	DEC 83
5 80 4309	PROPELLANT PROCESS DEVELOPMENT FOR 120MM TANK AMMUNITION PROPELLANT PROCESS DEVELOPMENT FOR 120MM TANK AMMO SEE SUBTASKS FOR WORK STATUS.	4,127.6	3,725.6	402.0	JUN 82	JUN 83
5 80 4309 01	DEVELOP MFG METHODS FOR STICK AND JA-2 PROPELLANT INSTALLATION OF 15 INCH PRESS SYSTEM COMPLETED AND EVALUATED. PILOT LOTS FOR BALLISTIC EVALUATION WERE SHIPPED TO HONEYWELL, MN FOR LOADING AND BALLISTIC TESTING TERA, NM. FINAL TECH REPORT IS UNDER PREPARATION BY RADFORD.	1,746.0	1,592.0	154.0	DEC 82	JUN 83
5 80 4309 02	EXPLOSIVE LOADING OF 120MM HEAT-MP HONEYWELL COMPLETED DEVELOPING PRESS LOADING PARAMETERS FOR PROJECTILE. THESE FORWARDED TO IOWA AAP. MATL. HANDLING + PRESS TOOLING DESIGNS ARE IN PROCESS OF COMPLETION. EXPLOSIVE USED IS BASICALLY ROX WITH GRAPHITE AND WAX.	273.0	186.0	87.0	DEC 82	JUN 83
5 80 4309 03	ASSEMBLY PROCESS DEVELOPMENT BONDING ALIGNMENT CARTS BUILT AND ACCEPTED. PROPELLANT LOADING STATION BUILT. DRAWINGS FOR CARTRIDGE CASE ASSEMBLY APPROVED.	685.0	597.0	88.0	JUN 82	JUN 83
5 80 4309 06	PROCESS FOR MOLDING REAR SEAL,120MM APDS ALL BALLISTIC TESTING FOR THIS TASK HAS BEEN COMPLETED WITH ACCEPTABLE RESULTS. TASK SHOWS FEASIBILITY OF USING SEPARATELY MOLDED REAR SEALS IN PROJECTILES.	919.0	874.0	45.0	JUN 82	JUN 83
5 80 4309 09	INVESTIGATE FORMING + HEAT TREAT METHODS FOR CURE,APDS THE PROJECT WAS CANCELLED BECAUSE NMI WOULD NOT FORMALIZE ON MMT CONTRACT DUE TO EXCESSIVE WORK IN THE PRODUCTION AREAS.	103.0	75.0	28.0	JUN 82	JUN 82
5 81 4309	AMMUNITION FOR THE 120MM TANK MAIN ARMAMENT AMMUNITION FOR THE 120MM TANK MAIN ARMAMENT. SEE SUBTASKS FOR WORK STATUS.	3,522.0	2,630.1	405.0	JUN 83	JUN 83
5 81 4309 01	MFG METHODS FOR STICK + JA-2 PROPELLANT INSTALLATION CONSTRUCTION AND DEBUGGING OF THE DEGDN SPENT ACID SYSTEM COMPLETED.	984.0	837.0	116.3	JUN 83	JUN 83
5 81 4309 02	EXPLOSIVE LOADING OF 120MM HEAT-MP-T THE MATERIAL HANDLING AND PRESS TOOLING DESIGNS WERE COMPLETED AND PROCUREMENT ACTION INITIATED. TEST LOADING PROGRAMS WERE DEFINED.	516.0	438.0	76.7	JUN 83	JUN 83

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5 81 4309 03	ASSEMBLY PROCESS DEVELOPMENT CONCEPT DESIGNS + SOME DETAIL DRAWINGS FOR THE PRIMER TORQUING STAKING DEPTH GAGING AND RESISTANCE TEST STATIONS WERE APPROVED BY ARRADCOM. SOME LONG LEAD TIME ITEMS WERE PUT OUT FOR PROCUREMENT BY IOWA AAP.	920.0	810.0	81.0	JUN 83	JUN 83
5 81 4309 04	COMBUSTIBLE CARTRIDGE CASE PROCESS - 120MM WORK WAS INITIATED ON THE CONTINUOUS PROCESS DESIGN, SAFETY, HAZARDS AND POLLUTION ABATEMENT ANALYSES, AND DEVELOPING MATERIAL HANDLING SPECIFICATIONS.	215.0	185.0	22.0	JUN 83	SEP 83
5 81 4309 05	FORMING OF SABOT SEGMENTS TO NET SHAPE ON APFSDS AMMO FORGING DIE IS BEING MODIFIED TO NEW SABOT DESIGN AND FORGINGS ARE EXPECTED IN LATE AUGUST.	466.0	413.0	23.4	JUN 83	SEP 83
5 81 4309 09	INVESTIGATE FORMING + HEAT TREAT METHODS F/CORES-APDS THE MACHINING AND TOOLING STUDY FOR MACHINING HIGH L/D DU PENETRATOR IS UNDERWAY BY THE CONTRACTOR. THE MATERIAL FOR FACET I HAS BEEN IDENTIFIED. THE COMPUTER PROGRAM FOR ROUGH MACHINING THE M774 CORE HAS BEEN COMPLETED.	313.0	263.0	45.0	JUN 83	DEC 83
5 81 4309 12	INJECTION MOLDING OF XM829 OBTURATOR NEW DRAWINGS FOR OBTURATOR GIVEN TO SUBCONTRACTOR FOR DESIGN OF A MOLD. DESIGN ALLOWS FOR MOLD REWORK AND NEAR NET SHAPE. MATERIAL FOR MOLDING IS MC961 RIM 6 NYLON BLOCK. TARGET DATE FOR MOLD COMPLETION IS AUGUST 30, 1982.	111.0	91.0	14.8	JUN 83	JUN 83
5 82 4309	AMMUNITION FOR THE 120MM TANK MAIN ARMAMENT CONTRACTOR PROPOSAL WAS EVALUATED. NEGOTIATIONS FOR CONTRACT SET UP. CONTRACT EXPECTED IN SEPTEMVER 1982. INFORMATION NEEDED FOR SUB-TASKS.	2,960.0		14.0	SEP 84	SEP 84
5 80 4310	DMSO RECRYSTALLIZATION OF RDX/HMX TECHNICAL REPORT ON DMSO RECRYSTALLIZED EXPLOSIVES WAS COMPLETED. TOXICITY TESTS OF SELECTED IN-PROCESS EXPLOSIVE FROM THE PILOT PLANT OPERATIONS WERE INITIATED BY USAMBRDL.	354.0		280.0	JUN 81	MAR 83
5 77 4311	DEVELOP AUTOMATED PRODUCTION EQUIPMENT FOR XM 692 LOUISIANA AAP PERSONNEL OBSERVED ACCEPTANCE TEST OF OVERLAY KILL MECHANISM AND DETONATOR CORD WRAP MACH. ALSO REVIEWED WERE THE OPERATING PROCEDURES AND INSTALLATION INSTRUCTIONS TO BE USED AT LOUISIANA AAP.	1,452.9	1,188.3	260.4	AUG 78	MAR 83
5 81 4311	DEVELOP AUTOMATED PRODUCTION EQUIPMENT FOR M692 TECHNICAL PROBLEMS HAVE BEEN RESOLVED AND TWO MACHINES WERE COMPLETED AS A RESULT OF THE TEST REWORK OF THE OVER/KILL MECHANISM. MACHINE WAS RECOMMENDED TO IMPROVE MACHINE PERFORMANCE AT SEVERAL STATIONS. REWORK IS UNDERWAY.	460.0	424.0	31.3	SEP 82	MAR 83

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5 82 4312	ANTI-ARMOR CLUSTER MUNITION PRODUCTION EXPLOSIVE INVECTION A SCOPE OF WORK WAS PREPARED FOR WORK TO BE PERFORMED AT KANSAS AAP. SOW WAS ACCEPTED AND PLACED ON CONTRACT 30 JUNE 1982.	577.0	517.0	20.0	JUN 83	JUN 83
5 80 4341	IMPROVED NITROCELLULOSE PURIFICATION PROCESS THE FUNDING AUTHORIZATION WAS INCREASED BY $179,000. EXCEPT FOR THE INCLUSURE OF THE ATTRITION MILLS, ALL BUILDING AND EQUIPMENT INSTALLATIONS HAVE BEEN COMPLETED.	757.0	587.0	166.2	DEC 81	DEC 81
5 81 4341	IMPROVED NITROCELLULOSE PURIFICATION PROCESS HAZARD ANALYSIS AND TESTING IDENTIFIED ESSENTIAL SAFETY MODIFICATIONS FOR THE EQUIPMENT. THE MODIFICATIONS HAVE BEEN COMPLETED AND ARE BEING CHECKED OUT.	617.0	215.0	168.7	MAR 83	SEP 83
5 82 4341	IMPROVED NITROCELLULOSE PURIFICATION PROCESS AN FY82 CONTRACT SOW TO RADFORD AAP WAS PREPARED AND SUBMITTED TO THE PCO AND IS PRESENTLY BEING REVIEWED BY ALL INTERESTED PARTIES PRIOR TO NEGOTIATION.	370.0			SEP 83	SEP 83
5 81 4344	ESTAB OF WASTE DISPOSAL TECH FOR M687 BINARY PROJECT COMPLETED OF EQUILIBRIUM CURVE EFFORTS, INITIAL INVESTIGATION OF WASTE PRODUCT HCL USE, EVAL OF DISTILLATION COLUMN RESPONSES, AND PILOT SCALE TESTS.	200.0		116.0	DEC 82	DEC 82
5 82 4344	ESTAB OF WASTE DISPOSAL TECH FOR M687 BINARY PROJECT PROJECT JUST FUNDED.	380.0	180.0		NOV 83	NOV 83
5 78 4349	MODERNIZATION OF PRESS LOADING FOR HEP PROJECTILES ***** DELINQUENT STATUS REPORT *****	323.0		250.0	JUN 80	DEC 82
5 80 4357	NONDESTRUCTIVE TEST EQUIP F/LARGE CALIBER MUNITIONS F/M483A1 THE CONTRACTOR HAS SLIPPED THE SCHEDULE, DEBUGGING THE SYSTEM HAS TAKEN MORE TIME THAN WAS ANTICIPATED. IF THE APPLICATION STUDY CAN BE PERFORMED AS EXPEDITIOUS AS POSSIBLE, MUCH OF THE SCHEDULE CAN BE MADE UP AND PROBABLY MEET THE PLANNED SCHEDULE.	554.0	450.0	77.0	JUN 83	OCT 83
5 82 4357	NONDESTRUCTIVE TEST EQUIP F/LARGE CALIBER MUNITIONS F/M483A1 SEE PROJECT 5 80 4357 FOR STATUS.	124.0		1.0	OCT 83	OCT 83
5 82 4359	IMPROVED PROCESS TECHNOLOGY FOR INSPECTION OF CLOTH SCOPES OF WORK FOR THE INSPECTION SYSTEM AND THE GOCO CONTRACTOR WORK WERE PREPARED.	215.0		2.2	SEP 83	SEP 83
5 81 4364	ON-LINE BIO SENSORS TO MONITOR MIXED WASTE STREAMS BIOASSAYS, VENTILATORY MONITORING AND CHEMICAL ANALYSIS WERE INITIATED AT BOTH THE CENTRAL WASTE WATER TREATMENT FACILITY AND THE COMBINED WASTE WATER SYSTEM.	258.0	211.0	47.0	JUN 83	JUN 83

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5 82 4364	ON-LINE BIO SENSORS TO MONITOR MIXED WASTE STREAMS SEE STATUS REPORT FOR 581 4364.	290.0	227.0	31.0	SEP 83	SEP 83
5 82 4406	IMPROVING THE YIELD OF HMX DURING RDX NITROLYSIS EQUIPMENT, MATERIAL REQUIREMENTS AND OVERALL WORK PLAN WAS REVIEWED. PURCHASE REQUISITIONS WERE PREPARED FOR SUPPLEMENTAL HEXAMINE PUMPS. CANDIDATE SOLVENTS FOR SEPARATION OF RDX/HMX COPRODUCT MIXTURE WERE IDENTIFIED.	633.0	507.0	5.0	DEC 83	DEC 83
5 80 4411	SMALL CALIBER AMMUNITION PROCESS IMPROVEMENT PROGRAM BEARING ANALYSIS EQUIPMENT HAS BEEN INSTALLED ON CASE SUBMODULE NO. 2. LCAAP FINAL EVALUATION WILL BE SUBMITTED BY AUG 82. FUNDS WERE RELEASED TO BATTELE ON 20 MAY 82 FOR THEIR EFFORT TO DEMONSTRATE THE FEASIBILITY OF DETECTING WORN TOOLS.	453.0	125.0	83.0	DEC 83	DEC 83
5 80 4417	PROCESS TECHNOLOGY FOR BLENDING RP SMOKE COMPOSITIONS PROJECT COMPLETED.	115.0		115.0	MAY 81	SEP 81
5 81 4417	PROCESS TECHNOLOGY FOR BLENDING RP SMOKE COMPOSITIONS PILOT BLENDING AND MATERIAL HANDLING STUDIES CONTINUED. SAFETY TESTS IN FULL SCALE BLENDER SIMULATOR COMPLETED.	165.0	80.0	34.0	SEP 82	NOV 82
5 82 4417	PROCESS TECHNOLOGY FOR BLENDING RP SMOKE COMPOSITIONS PREPARE SMOKE MIX FOR FIRE DETECTION AND SUPPRESSION STUDIES.	458.0	433.0	3.0	SEP 83	SEP 83
5 78 4444	BODY FOR M42/M46 GRENADE SPENDING ON THIS PROJECT IS COMPLETE. CONTRACT WORK WITH DAYRON CORP AND MB ASSOCIATES IS CONTINUING UNDER PROJECT 5794444. FINAL STATUS REPORT WILL BE ISSUED IN DEC 82.	626.0	512.8	113.2	JUN 79	MAR 82
5 79 4444	BODY FOR M42/M46 GRENADE CONTRACT QUANTITIES HAVE BEEN REDUCED TO OFFSET COST GROWTH. DAYRON SAMPLE PARTS WERE REJECTED. NEW PARTS HAVE BEEN FABRICATED. NOW DELAYED BY BREAKDOWN IN HEAT TREAT FURNACE. M8A CONTRACT WORK DELAYED BY DELIVERY OF SAMPLE PARTS AND CONTRACT CHANGE.	563.0	397.7	126.8	SEP 80	MAR 83
5 81 4449	PROCESS IMPROVEMENT FOR COMPOSITION C-4 A QUOTATION WAS RECEIVED FOR GRINDING 900 POUNDS OF ESTANE. PRODUCTION OF PBX 0280 BY DIRECT COATING PROCESS WAS NOT PURSUED. DIRECT COATING FOR THE LX-14 BATCHES PROVED TO BE ECONOMICAL.	290.1	191.1	57.0	JUN 83	MAR 83
5 79 4454	AUTO INSPECTION DEVICE FOR EXPLOSIVE CHARGE IN SHELL-CAM SEE PROJECT 5 82 4454 FOR PROJECT AND FUNDING STATUS.	878.0			DEC 81	JUL 83

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5 80 4454	AUTO INSP DEVICE EXPLOS CHARGE SHELL (AIDECS) SEE PROJECT 5 82 4454 FOR PROJECT AND FUNDING STATUS.	1,298.0			APR 82	JUL 83
5 80 4454 01	AUTOMATIC INSPECTION DEVICE FOR EXPLOSIVE CHARGE IN SHELL (A SEE PROJECT SUBTASK 5 82 4454-1 FOR FUNDING AND PROJECT STATUS.				APR 82	JUL 83
5 80 4454 02	AUTOMATIC X-RAY INSPECTION SYSTEM (AXIS) SEE PROJECT SUBTASK 5 82 4454-1 FOR FUNDING AND PROJECT STATUS				AUG 80	JUL 83
5 81 4454	AUTO INSP DEVICE EXPLOS CHARGE SHELL (AIDECS) SEE PROJECT 5 82 4454 FOR PROJECT AND FUNDING STATUS.	1,885.0			OCT 82	JUL 83
5 81 4454 01	AUTOMATIC INSPECTION DEVICE FOR EXPLOSIVE CHARGE IN SHELL SEE PROJECT SUBTASK 5 82 4454-1 FOR FUNDING AND PROJECT STATUS.				MAY 82	JUL 83
5 81 4454 02	AUTOMATIC X-RAY INSPECTION SYSTEM (AXIS) SEE PROJECT SUBTASK 5 82 4454-2 FOR FUNDING AND PROJECT STATUS.				OCT 82	JUL 83
5 82 4454	AUTO INSP DEVICE EXPLOS CHARGE SHELL (AIDECS) SEE SUBTASKS BELOW FOR STATUS.	6,931.0	5,396.3	764.3	JUL 83	JUL 83
5 82 4454 01	AUTO INSP DEVICE FOR EXPLOSIVE CHARGE IN SHELL (AIDECS) FAB AND ASSEMBLY OF ALL SUBSYSTEMS FOR 155MM SYSTEM WERE COMPLETED. INTEGRATION OF THE ENTIRE SYSTEM WAS INITIATED AND COMPLETED DURING THIS PERIOD. IRT CORP COMPLETED THE DEBUGGING AIDECS AND A DEMONSTRATION OF THE SYSTEM IS SCHEDULED FOR JULY 82.				JUL 83	JUL 83
5 82 4454 02	AUTO X-RAY INSPECTION SYSTEM (AXIS) CONTRACTOR WAS INACTIVE WHILE AWAITING FOR ADDITIONAL FUNDS. UPON RESUMPTION OF ACTIVITY, THE BREADBOARD REDESIGN OF THE ANALOG-TO-DIGITAL CONVERTER FOR THE IMAGE MEMORY WAS COMPLETED AND IS OPERATIONAL. THE PROTOTYPE DESIGN IS BEING IMPLEMENTED.				JUL 83	JUL 83
5 80 4462	FORCED AIR DRY FOR MULTI-BASED PROPELLANTS SAMPLES OF M30 AND M31A1 WERE TAKEN FROM THE MOD BAY AND A CONVENTIONAL BAY FOR BALLISTIC TESTS. PRELIMINARY RESULTS SHOW NO DIFFERENCE IN BALLISTIC PROPERTIES BETWEEN PROPELLANT DRIED IN THE MOD BAY FROM THAT DRIED IN THE CONVENTIONAL BAY.	908.6	507.6	273.0	SEP 80	SEP 82
5 79 4466	EVAL TNT, CYCLOTOL, OCTOL IN MELT-POUR FACILITY PROJECT IS IN THE FINAL STAGES OF COMPLETION. AN INDEPENDENT DESIGN REVIEW IS PLANNED FOR AUG 82. PROJECT FINAL REPORTS ARE BEING COMPLETED. THE FIRST DRAFT OF THE FINAL TECH REPORT HAS BEEN COMPLETED.	698.8	151.5	543.9	APR 81	SEP 82

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5 79 4469	AUTOMATIC INSERTION OF GRENADE LAYERS THE CONTRACTOR COMPLETED THE MODIFICATION TO THE GRENADE INSERTION SYSTEM WHICH HAD BEEN RECOMMENDED DURING THE ACCEPTANCE TEST. TDP AND PRELIMINARY FINAL REPORT DELIVERED TO ARRADCOM.	1,146.5	933.5	199.9	JAN 80	DEC 83
5 80 4469	AUTOMATIC INSERTION OF GRENADE LAYERS FINAL MODIFICATIONS WERE MADE TO THE GRENADE INSERTION SYSTEM WERE TESTED AT THE CONTRACTORS FACILITY. PERSONNEL FOR KANSAS AAP VISITED THE CONTRACTORS FACILITY AND WERE BRIEFED ON THE EQUIPMENT DESIGN, INSTALLATION, AND OPERATION.	350.0	177.3	47.7	JAN 81	DEC 82
5 80 4480	HIGH SPEED HEAD TURN TOOL MOD F/SC AMMO PROD ON LINE EVALUATIONS OF RETROFITS HAVE BEEN COMPLETED. TOOL LIFE BETWEEN ADJUSTMENTS HAS BEEN INCREASED TO A RANGE OF 38K-45K PIECES. FINAL REPORT IS BEING PREPARED.	184.0	157.3	21.0	SEP 82	DEC 82
5 80 4484	IMPR HI-SPEED WATERPROOFING APPL F/SC AMMO THE PROTOTYPE APPLICATOR (STAINLESS STEEL TIP) HAS PERFORMED SATISFACTORILY ON THE PRODUCTION LINE FOR OVER 2 MONTHS. PHASE II FUNDS AWARDED TO LCAAP ON 29 JUN 82 TO MANUFACTURE/PROCURE NEW TOOL MODULES FOR ALL 24 STATIONS.	126.0	93.0	30.0	MAR 82	DEC 82
5 82 4489	ADVANCED POLLUTION ABATEMENT TECHNOLOGY F/DARCOM FACILITIES THIS PROJECT IS AN ORDERLY TRANSITION OF PROJECTS 5XX4114 POLLUTION ABATEMENT METHODS FOR P+E AND PROJECTS 57X4214 POLLUTION ENGINEERING FOR 1983-85 REQUIREMENTS AND IS DIRECTED TO MEETING FUTURE STANDARDS. REFER TO INDIVIDUAL TASKS FOR MORE INFO.	1,359.0	380.8	3.1	DEC 84	DEC 84
5 82 4489 01	DISPOSAL OF WASTEWATER TREATMENT SLUDGES CONTRACT AWARDED TO LONE STAR AAP AND EFFORTS STARTED ON FIXATION/STABILIZATION TECHNOLOGY. PRELIMINARY HAZARDS ANALYSIS BEING PREPARED. AT RADFORD AAP SOW FOR PILOT SLUDGES OF CASO4 REGEN AGREED UPON. ANTICIPATE CONTRACT AWARD THERE DURING 4Q82.	429.0	75.0	1.1	DEC 84	DEC 84
5 82 4489 02	ADVANCED PINK WATER TREATMENT (TNT/RDX/HMX IN WATER) BASELINE MILESTONE SCHEDULE CHANGED TO REFLECT REDUCTION FROM 3-YR TO 2-YR EFFORT. HAZARDS ANALYSIS AND SAFETY/OPERATIONAL CHECKOUT INCLUDED. FY82 CONTRACT AWARDED TO KANSAS AAP. PROGRAM BEGAN JULY, 1982.	371.0		0.7	DEC 84	DEC 84
5 82 4489 03	TERTIARY TREATMENT OF HOLSTON WASTEWATER REVISIONS TO THE MILESTONE SCHEDULE WERE REQUIRED IN ORDER TO PROVIDE FOR INCLUSION OF HAZARDS ANALYSIS AND SAFETY/OPERATIONAL CHECKOUT. FY82 CONTRACT AWARDED TO HOLSTON AAP IN MAY FOR THIS PROGRAM.	149.0	110.8	0.4	DEC 84	DEC 84

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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
5 82 4489 05	ADVANCED AIR EMISSIONS ABATEMENT A FY82 CONTRACT WAS AWARDED TO BADGER AAP IN 3Q82. A SPECIFICATION PACKAGE HAS BEEN PREPARED AT BADGER AAP FOR PURCHASE AND CONSTRUCTION OF THE PILOT PLANT. AVAILABILITY OF SOME EQUIPMENT EXPEDITED THE START OF THE INSTALLATION PHASE.	410.0	268.0	1.0	DEC 82	DEC 82
5 79 4498	CONSOLIDATION + AUTOMATIC ASSEMBLY OF SMALL MINES SOLDERING MACHINE PROCUREMENT COMPLETED. EQUIPMENT INSTALLED AT IOWA AAP. EQUIPMENT PROVE OUT IS PENDING THE RESOLUTION OF MANUFACTURING PROBLEM OF CONTINOUS FLOW OF SOLDER AND FLUX.	572.0	480.0	92.0	SEP 80	MAR 83
5 80 4498	DEV METH FOR CONSOL AND AUTO ASSY OF SMALL MINES MECHANIZED LOAD, ASSEMBLE AND PACK EQUIPMENT HAS BEEN DELIVERED TO IOWA AAP. PROVE-OUT OF EQUIPMENT DEPENDS ON AVAILABILITY OF END ITEM COMPONENTS.	392.0	100.0	283.0	DEC 81	JUN 83
5 81 4503	NEW PROCESS FOR SAWS TRACER AMMUNITION DEVELOPMENT OF THE PROTOTYPE CONVENTIONAL PROCESS EQUIPMENT HAS PROCEDED THROUGH THE ASSEMBLY AND DEBUG PHASE. FINAL BULLET GEOMETRY AND PERFORMANCE ASSESSMENTS ARE BEING CONDUCTED PRIOR TO PROTOTYPE PROCESS DEMONSTRATION.	500.0	402.4	97.6	AUG 82	SEP 83
5 82 4503	NEW PROCESS FOR SAWS TRACER AMMUNITION NO PROGRESS REPORTED.	129.0		22.6	SEP 83	SEP 83
5 81 4506	5.56 MM CARTRIDGE LINKING SYSTEM THE STATEMENT OF WORK WAS COMPLETED AND A CONTRACT AWARDED TO RAC, LCAAP. RAC WAS AWARDED A SUBCONTRACT TO BRUGDON TOOL AND DIE CO. THE DESIGN PHASE IS COMPLETE.	558.0	383.0	147.0	JAN 83	JAN 84
5 82 4506	5.56MM CARTRIDGE LINKING SYSTEM NO SEPARATE BREAKDOWN OF THE WORK IS MADE BY FISCAL YEAR.	557.0	123.0	7.0	JAN 84	JAN 84
5 8D 4508	PROCESS IMPROVEMENT OF PRESSABLE RDX COMPOSITIONS EIMCO FILTER EVALUATIONS WITH COMPOSITIONS A-3, A-4, AND A-5 WERE COMPLETED. DELIVERY OF WYSSMONT DRYER SCHEDULED FOR MAY 1983.	505.8	333.8	149.8	APR 82	JUN 83
5 82 4508	PROCESS IMPROVEMENT OF PRESSABLE RDX COMPOSITIONS CONTRACT AWARDED TO HOLSTON AAP IN APRIL 1982.	359.0	233.0	3.4	SEP 84	SEP 84
5 82 4511	DISPOSAL OF FINAL SLUDGE FROM ACID RECOVERY OPERATIONS CONTRACT AWARDED HOLSTON AAP 23 APR 82. MATERIAL AND EQUIPMENT LIST BEING PREPARED FOR START OF PROGRAM. THIS PORTION WILL BE A BENCH SCALE STUDY OF THE CATALYTIC HYDROGENATION OF AMMONIUM NITRATE SLUDGE.	304.0	216.9	5.0	DEC 83	DEC 83

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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 82 4529	MANUFACTURE OF PREAISION CONES FOR HEAT PROJECTILES TWO CANDIDATE PROCESSES TO FABRICATE THE CONE HAVE BEEN IDENTIFIED. THESE ARE THE COLD FORGING AND SHEAR FORMING PROCESSES. A SCOPE OF WORK HAS BEEN PREPARED AND PROCUREMENT ACTION HAS BEEN INITIATED.	525.0		16.0	SEP 82	SEP 82
5 82 4534	XM855 BULLET CONVERSION OF SCAMP EQUIPMENT A SCOPE OF WORK HAS BEEN PREPARED AND THE SOLICITATIONS WERE DISTRIBUTED. CONTRACT AWARD IS EXPECTED BY 30 AUG 82. THIS PROJECT IS TO PROVIDE TIP IDENTIFICATION FOR THE M855 AND LACQUER SEALANT FOR THE M200.	264.0		1.5	SEP 83	SEP 83
5 82 4548	PYRO SAFETY ENHANCEMENT SEE THE FOLLOWING TASKS FOR WORK STATUS.	493.0	185.0	77.0	JUL 83	JUL 83
5 82 4548 01	SAFETY ENHANCEMENT OF BATCH MIX MULLERS CURRENT METHODS FOR BATCH MIX MULLER SCRAPE-DOWN PROCEDURES WERE OBSERVED AT LONGHORN AAP, LONE STAR AAP AND CRANE AAP. ARRADCOM LAB DEVELOPED SIMULANT COMPOSITIONS TO BLEND INERT MATERIALS.	172.0		38.0	FEB 83	FEB 83
5 82 4548 02	SAFETY ENHANCEMENT TRANSPORT + CONVEYING PLANS BEING MADE TO AWARD CONTRACT TO SWRI ON DEVELOPING CONCEPTS AND PROCEDURES FOR IMPROVING SAFETY OF CURRENT TRANSPORT AND CONVEYING OPERATIONS.	123.0	63.0	15.0	JUL 83	JUL 83
5 82 4548 03	IMPROVEMENT OF FIRE SUPPRESSION SYSTEMS PLANS BEING MADE TO AWARD CONTRACT TO SWRI FOR EVALUATION OF FIRE SUPPRESSION SYSTEMS.	119.0	77.0	12.0	JUN 83	JUN 83
5 82 4548 04	BAY DESIGN SAFETY ENHANCEMENT PLANS BEING MADE TO AWARD CONTRACT TO AMMANN AND WHITNEY FOR SURVEYING CURRENT PYROTECHNIC FACILITIES TO IMPROVE THE STRUCTURES, LAYOUTS, DUCTWORK, AND VENTS.	79.0	45.0	12.0	MAY 83	MAY 83
5 82 4551	MFG PROCESS PARAMETER FOR XM855/856 AMMO A STATEMENT OF WORK WAS PREPARED FOR THE LCAAP CONTRACT. A SOLICITATION WAS SENT AND CONTRACT PRICING INFORMATION WAS RECEIVED IN RESPONSE. QUALITY EVALUATION PLANS FOR THE XM855E1 (BALL) AND XM856E1 (TRACER) WERE PREPARED AND SENT TO THE CONTRACTOR.	513.0		55.0	MAR 83	MAR 83
5 81 4553	PROCESS PARAMETERS FOR COLD DRAWING ALLOY STEELS STEEL TO BE USED HAS BEEN SELECTED AND ORDERED. DESIGN AND FABRICATION OF TOOLS IS UNDERWAY.	216.0	195.0	21.0	DEC 82	DEC 82

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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 82 4553	PROCESS PARAMETERS FOR COLD DRAWING ALLOY STEELS CONTRACT WAS PLACED 15 JULY 82, WITH WORK TO START AUGUST 82.	284.0	150.0	11.0	JUN 83	JUN 83
5 81 4555	INFRARED MONITORING OF PYROTECHNIC BLENDING COMPUTER ENHANCED THERMOGRAPHY SELECTED TO MONITOR BLENDING. EQUIPMENT SPECIFICATION WAS PREPARED AND PURCHASE ORDER INITIATED.	250.0		46.0	JUN 82	JUN 83
5 82 4557	ARBAT THIS EFFORT STARTED IN JULY 1982. LONG LEAD TIME COMPONENTS AND SOFTWARE RESTRUCTURING HAS STARTED. THE CONTRACT FOR THIS EFFORT WAS AWARDED IN JUNE 1982.	2,500.0	2,247.0		JUN 84	JUN 84
5 81 4558	THERMAL DEHYDRATION PROCESS SAFETY AND OPERATIONAL REDESIGN THE PROTOTYPE THERMAL DEHY WAS RELOCATED INTO ANOTHER BUILDING. ALL PIPING AND CONTROLS WERE INSTALLED. PROVISION WAS MADE FOR SAMPLING AND REMOTE CONTROL. PROVISION FOR STATIC ACCUMULATION MEASUREMENT WAS MADE. THERMOCOUPLES WERE INSTALLED.	148.0	110.0	22.0	SEP 82	SEP 82
5 82 4558	THERMAL DEHYDRATION PROCESS SAFETY AND OPERATIONAL REDESIGN ALCOHOL DISTRIBUTION RUNS WERE MADE TO ESTABLISH OPTIMUM OPERATING CONDITIONS AND HAZARD STUDIES ON THE TAKEAWAY CONVEYOR WERE INITIATED. NO HAZARDOUS STATIC BUILD-UP HAS BEEN DETECTED TO DATE.	434.0	336.8	5.7	SEP 83	SEP 82
5 82 4560	MOD TAPE-STIFFENER ASSEMBLY PROCESS - M42/M46 GRENADES GOCO PLANT SCOPE OF WORK COMPLETED AND SUBMITTED FOR AWARD.	142.0		0.3	JUN 83	JUN 83
5 82 4563	XM803 METAL PARTS PRODUCTIVITY SOWS FOR FACETS 1, 2, 3, AND 5 ARE COMPLETE AND IN PROCUREMENT. FACET 4 EFFORTS HAVE BEGUN.	768.5		9.5	JUN 84	JUN 84
5 82 4563 01	IMPROVED STRAIGHTNESS OF DU PENETRATOR BLANKS SOW IS COMPLETE AND IN PROCUREMENT FOR AWARD OF CONTRACT.	225.0			JUN 84	JUN 84
5 82 4563 02	SALT BATH SOLUTION HEAT TREAT FOR DU PENETRATORS THE SCOPE OF WORK HAS BEEN FINALIZED AND SENT TO PROCUREMENT FOR AWARD OF THE CONTRACT.	150.0			MAR 84	MAR 84
5 82 4563 03	OPTIMIZATION OF AGE HARDENING IN DU PENETRATORS THE SCOPE OF WORK HAS BEEN FINALIZED AND SENT TO PROCUREMENT FOR CONTRACT AWARD.	140.0			MAR 84	MAR 84
5 82 4563 04	HEAT TRANSFER AND RESIDUAL STRESS PROBLEM AREAS ARE BEING FORMULATED AND CLARIFIED. THE MARC COMPUTER PROGRAM IS BEING EXERCISED BY SOME PRELIMINARY MATHEMATICAL MODELS DESCRIBING THE THERMAL STRESS DISTRIBUTION IN A PENETRATOR.	110.5		9.5	MAR 84	MAR 84

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5 82 4963 D5	REDUCTION OF CHIPS OXIDATION SOW COMPLETED AND TO PROCUREMENT IN JUNE 1982 WITH SOLE SOURCE JUSTIFICATION.	143.0			MAR 84	MAR 84
5 7T 6494	NEW CONCEPTS FOR MFR AND INSPECT OF 20MM 25MM 30MM AMMO THIS PROJECT IS COMPLETE AND WILL BE CLOSED OUT AT THE NEXT SEMI-ANNUAL PERIOD.	1,079.0	963.0	116.0	AUG 79	MAR 83
5 75 6494	MANUFACTURE AND INSPECTION OF CAL.50, 20MM, AND 30MM AMMO THIS EFFORT IS COMPLETE AND WILL BE CLOSED OUT AT THE NEXT SEMI-ANNUAL PERIOD.	3,760.0	2,256.0	1,504.0	DEC 76	MAR 83
5 76 6494	MANUFACTURE AND INSPECTION OF CAL.50, 20MM, AND 30MM AMMO THIS EFFORT IS COMPLETE AND WILL BE CLOSED OUT AT THE NEXT SEMI-ANNUAL PERIOD.	1,196.0	819.0	377.0	DEC 77	MAR 83
5 77 6494	NEW CONCEPTS FOR MFR AND INSPECT OF 20MM 25MM 30MM AMMO THE FUZE TO PROJECTILE ASSEMBLY EQUIPMENT WAS SHIPPED TO OLIN CORP. FOR USE ON A FACILITY CONTRACT. AN APPROVED FINAL REPORT HAS BEEN RECEIVED FROM AAI CORPORATION.	573.0	46.0	527.0	JUN 79	MAR 83
5 82 6599	ELECTRO OPTICAL INSP OF ARTY PROJ OPT CAVITY SEE PROJECT 5 80 6599 FOR STATUS.	75.0		66.6	SEP 83	SEP 83
5 79 6634	MFG DU ALLOYS FOR LARGE CALIBER ARMOR DEFEATING PROJECTILE THREAD ROLLING PORTION COMPLETE. CHIP RECYLING EFFORT SHOWS TWO PROMISING APPROACHES, VACUUM REMELTING AND ELECTRON BEAM MELTING. NE APPROACH WILL BE SELECTED DURING NEXT REPORTING PERIOD.	542.0	334.0	200.0	AUG 80	JUN 83
5 79 6693	BALL PROPELLANT DETERRENT COATING-CAM RELATED FIRST DRAFT OF FINAL REPORT STARTED DURING PERIOD. PROJECT DELAYED DUE TO TEMPORARY REASSIGNMENT OF KEY PERSONNEL. REVISED SCHEDULE NOW SHOWS FINAL REPORT WILL BE PREPARED, REVIEWED AND EDITED BY THE END OF THE NEXT REPORTING PERIOD.	171.0	27.5	132.4	NOV 80	APR 83
5 81 6716	DEV COMP-AID MODEL OF FORMING OPERATIONS FOR ARTILLERY MPTS A CONTRACT TO CONSOLIDATE THE FOUR INDIVIDUAL MODELS PREVIOUSLY DEVELOPED WAS AWARDED. AN OUTLINE FOR THIS COMPREHENSIVE SYSTEM HAS BEEN COMPLETED. SOFTWARE DEVELOPMENT IS UNDERWAY.	157.0	131.0	23.0	DEC 82	MAR 82
5 78 6774	MANUFACTURING METHODS FOR APDS PROJECTILE CONDUCTED A PROGRAM OF TESTING TO ADJUST ALL 4 OF THE MOLD CAVITIES TO MORE SIMILAR PROCESS CHARACTERISTICS AND OBTAIN IMPROVED AMMUNITION DISPERSION RESULTS. EFFORT COMPLETE EXCEPT FOR PUBLISHING THE FINAL REPORT.	300.0	230.0	51.0	NOV 79	MAR 83

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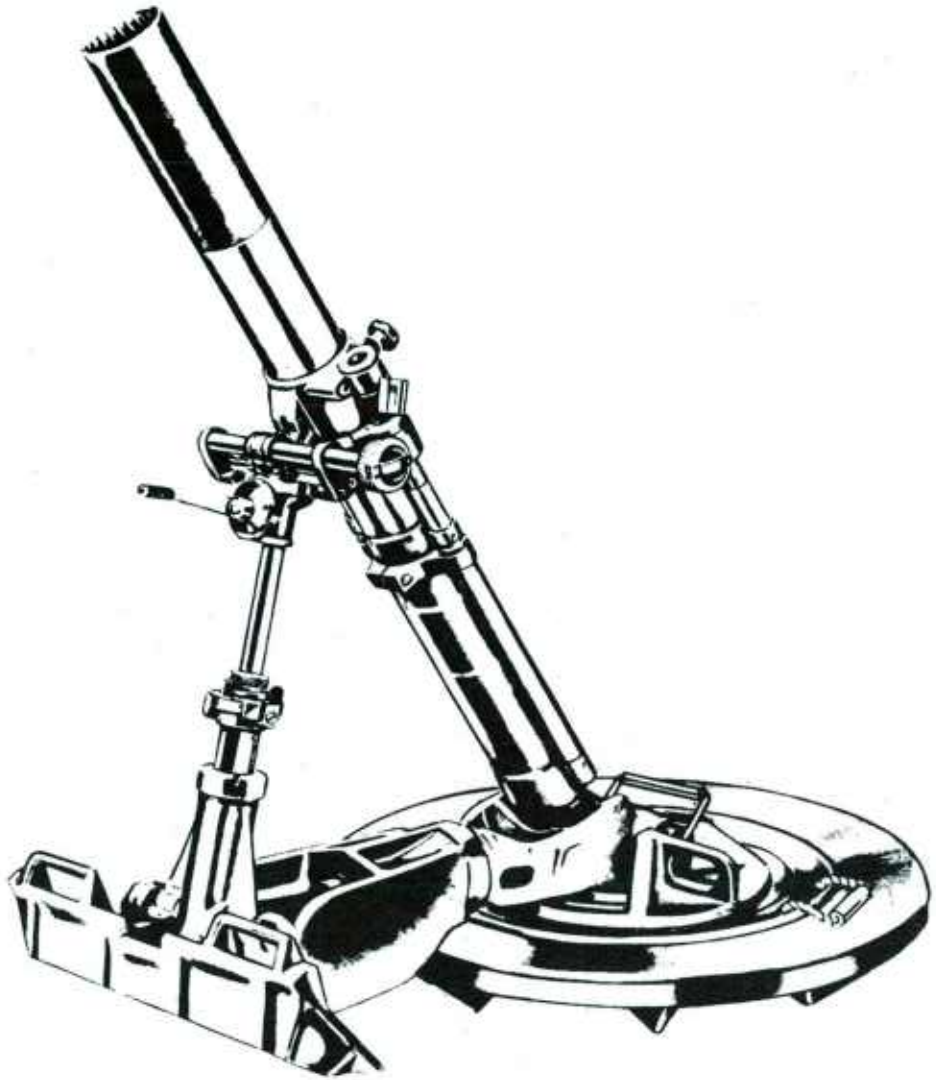
5 79 6774	MANUFACTURING METHDS FOR APOS PROJECTILE THE PROCESS, SUPPORT EQUIPMENT AND TOOLING AND FACILITIES TO PRODUCE 75,000 PROJECTILES/MO HAS BEEN ESTABLISHED IN THE D OF M REPORT. THE MMT EQUIPMENT HAS BEEN TRANSFERED TO THE PRODUCTION CONTRACT AND IS CURRENTLY OPERATIONAL.	895.0	711.8	180.2	NOV 79	MAR 83



ARMAMENT R&D COMMAND

ARMAMENT MATERIEL READINESS COMMAND

(ARRADCOM, ARRCOM)

(WEAPONS)

A R R C O M - A R R A O C O M (WEAPONS)

CURRENT FUNDING STATUS, 1ST CY82

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)		INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)	
76	1	350,000	285,100	285,100	(100%)	64,900	45,900	(70%)
77T	0	0	0	0	(0%)	0	0	(0%)
77	3	1,565,000	1,292,000	1,241,800	(96%)	273,000	253,700	(92%)
78	1	77,000	0	0	(0%)	77,000	77,000	(100%)
79	9	1,265,600	662,100	518,400	(78%)	603,500	453,100	(75%)
80	24	5,603,300	2,438,200	818,200	(33%)	3,165,100	2,095,500	(66%)
81	30	6,075,600	1,921,200	453,900	(23%)	4,154,400	1,152,600	(27%)
82	37	8,865,900	93,000	28,000	(30%)	8,772,900	210,500	(2%)
TOTAL	105	23,802,400	6,691,600	3,345,400	(49%)	17,110,800	4,288,300	(25%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 28% INHOUSE REMAINING 71%

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6 77 7201	ARTILLERY WEAPON FIRING TEST SIMULATOR INSTALLATION OF THE EQUIPMENT IS COMPLETE. UPON ACCEPTANCE OF THE FINAL REPORT THE PROJECT WILL BE CLOSED OUT.	820.0	699.6	115.9	OCT 78	SEP 82
6 79 7317	OPTIMIZATION OF STEP THREAD TOOLING PWO WAS INITIATED FOR CONTRACTOR SERVICES TO CORRECT ELECTRICAL PROBLEMS ON BREECH RING STEP THREAD MACHINE.	75.0	21.1	43.9	NOV 80	SEP 82
6 79 7482	MODIFIED RIBBON RIFLING GENERATING MACHINE AN RFP IS BEING DEVELOPED FOR A FEASIBILITY STUDY DESIGNED TO YIELD A COMPLETE ENGINEERING EVALUATION OF THE TECHNOLOGIES APPLICABLE TO CNC RIFLING AND TO ESTABLISH THEIR FEASIBILITY IN RIFLING APPLICATIONS.	76.0		33.9	APR 81	SEP 83
6 79 7555	DYNAMIC PRESSURIZATION STAND, SLIDE BLOCK BREECH MECH THE SLIDE BLOCK BREECH MECHANISMS, GYMNASTICATOR WAS INCORPORATED INTO THE PRODUCTION JAN 1982. THE DYNAMIC PRESSURIZED STAND MAJOR COMPONENTS HAVE BEEN MFG. THE ELECTRICAL SYSTEM IS COMPLETE. THE HYD SYSTEM IS 90 PCT COMPLETE.	121.0	49.2	41.7	SEP 81	SEP 82
6 76 7580	PILOT AUTO SHOP LOADING AND CONTROL SYSTEM- CAM ALL MODULES ARE OPERATIONAL + BEING USED. AT PRESENT, ORDERS ARE BEING CONVERTED TO PLANNED DESCRIPTIONS FOR THE NEW SYSTEM. TOTAL IMPLEMENTATION WILL OCCUR GRADUALLY AS NEW ORDERS ARE RECEIVED.	350.0	285.1	45.9	SEP 78	MAR 82
6 79 7605	CHEMICALLY BONDED SAND FOR CLOSE TOLERANCE CASTING CHANGES MADE IN WIRING TO CORRECT MALFUNCTIONING CORE MACHINE. TESTING CONTINUES. CONTRACT FOR LARGE MOLDING MACHINE AWARDED TO ANOTHER MANUFACTURER. TECHNICAL REPORT REVISIONS IN PROGRESS.	127.0	22.0	105.0	MAR 80	SEP 82
6 80 7605	CHEMICALLY BONDED SAND FOR CLOSE TOLERANCE CASTING TESTS WERE RUN TO ESTABLISH RESIN-SAND AND CATALYST-RESIN RATIOS. LARGE MOLDING MACHINE ORDERED AND WILL BE USED IN LATTER PART OF THIS PROJECT.	252.8		157.5	FEB 82	JUN 83
6 82 7707	AUTOMATED PROCESS CONTROL FOR MACHINING A MEETING WAS HELD WITH THE USER COMMUNITY AT ROCK ISLAND ARSENAL. SYSTEM REQUIREMENTS WERE DEFINED. NEEDS FOR DECISION MAKING, RECORD KEEPING, AND USER INTERACTION WERE IDENTIFIED. SYSTEM WILL BE DEMONSTRATED FOR TURNING, MILLING AND DRILLING.	135.0		5.3	SEP 83	SEP 83
6 78 7710	INJECTION MOLDING OF RUBBER OBTURATOR PADS TWO INJECTION MOLDED PADS WERE TESTED AT WATERVLIET ARSENAL AGAINST PAD REQUIREMENTS AND IN FIRING TESTS. THEY MET ALL REQUIREMENTS AND EQUALLED THE PERFORMANCE OF CURRENT PRESS CURED PADS. AN ECP WAS INITIATED TO FACILITATE IMPLEMENTATION.	77.0		77.0	JUL 79	DEC 82

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6 77 7714	MULTI-MODE WEAPON + MOUNT IMPEDANCE SIMULATOR (CAM) THE MULTI-MODE WEAPON MOUNT IMPEDANCE SIMULATOR WAS DELIVERED TO THE WARE SIMULATION CENTER IN MARCH 82. ACCEPTANCE TESTING AND CHECKOUT IS UNDERWAY. A PROBLEM WITH THE HYDRAULICS SURFACED AND IS BEING RESOLVED. **A POTENTIAL COST GROWTH EXISTS.**	36D.0	257.5	89.5	OCT 79	JAN 83
6 81 7724	GROUP TECHNOLOGY OF WEAPON SYSTEMS (CAM) THE MICLASS SOFTWARE WAS MODIFIED FOR USE AT WATERVLIET. A PROCESS PLANNING SYSTEM (MIPLAN) WAS ACQUIRED AND IS BEING MODIFIED. A SOLID MODELING PACKAGE WAS IDENTIFIED FOR POSSIBLE PURCHASE.	180.D	17.3	8.9	JUN 83	JUN 83
6 79 7726	APPLICATION OF COLD AND WARM ROTARY FORGING ***** DELINQUENT STATUS REPORT *****	108.D	33.6	15.3	SEP 8D	DEC 82
6 80 773D	MANUFACTURE OF SPLIT RING BREECH SEALS MODIFICATIONS TO KINKING UNIT ARE CONTINUING. SPEC FOR AUTOMATED ABRASIVE SLITTING SAW COMPLETED. DESIGN FOR MOD OF BELT SANDERS AND FIXTURE FOR POLISHING SPLIT SURFACES WERE UNSATISFACTORY AND A NEW DESIGN IS BEING STUDIED.	363.D	20D.7	123.7	DEC 82	SEP 83
6 82 7730	MANUFACTURE OF SPLIT RING BREECH SEALS PREVIOUS YEAR WORK IS ONGOING AND MUST BE SUCCESSFULLY COMPLETED BEFORE WORK ON THIS PROJECT YEAR CAN BEGIN.	1D8.D			SEP 84	SEP 84
6 77 7753	NOISE SUPPRESSOR FOR POWDER TYPE RECOIL MECHANISM TESTING MA THE NOISE ATTENUATER DID NOT MEET NOISE REDUCTION REQUIREMENTS SET FORTH IN THE SCOPE OF WORK. AN ATTEMPT BY THE CONTRACTOR TO CORRECT THE SITUATION FAILED. THE CONTRACT IS BEING TERMINATED AND OPTIONS TO COMPLETE THE PROJECT ARE BEING DISCUSSED.	385.0	334.9	48.3	FEB 8D	JUN 85
6 79 7802	ESTABLISH MACHINE TOOL PERFORMANCE SPECIFICATIONS ACCEPTANCE TEST PROCEDURES AND DATA BOOKS HAVE BEEN REVIEWED AND RETURNED TO THE CONTRACTOR FOR CORRECTION.	287.6	267.6	11.8	JUN 81	OCT 82
6 79 78D7	PROGRAMMED OPTICAL SURFACING EQUIPMENT AND METHODOLOGY (CAM) SPECIAL SOFTWARE MODIFIED + OPERATED. CNC MACHINE FABRICATED LENS SURFACES IN AUTOMATIC MODE.	138.0	118.D	2D.D	NOV 8D	JUL 82
6 81 7807	PROGRAMMED OPTICAL SURFACING EQUIPMENT/METHODOLOGY RFP WAS PROCESSED + THE CONTRACTORS RESPONSE EVALUATED. CONTRACT AWARD IS PLANNED FOR AUGUST 1982.	126.0		6.8	JUL 83	JUL 83
6 81 7916	APPLICATION OF LOW COST MANDREL MATERIALS VASCO 350 MARAGING STEEL FOR 105MM MANDRELS IS BEING MACHINED. SUB-SIZE 35D MANDRELS AND AISI 4340 TUBES ARE BEING PREPARED FOR EXPERIMENTATION WITH VARIOUS COATINGS UNDER SIMULATED AUTOFRETTAGE CONDITIONS.	168.D	36.9	68.0	SEP 83	SEP 83

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6 80 7920	CONSERVATION OF CRITICAL MATERIALS FOR GUN TUBES EIGHT M68 PREFORMS WERE RECEIVED FROM NATIONAL FORGE. THESE WERE FORGED AND ONE WAS HEAT TREATED. THE MECHANICAL PROPERTIES WERE SAMPLED AT FOUR LOCATIONS. METALLOGRAPHY AND HEAT TREATMENT OF SMALL COUPONS ARE BEING CONDUCTED.	236.0	143.6	89.1	SEP 81	SEP 82
6 80 7925	BORE EVACUATOR BORING TECHNICAL PROPOSAL COMPLETED IN JANUARY 1982. CONTRACT AWARD COMPLETED WITH FY81 PROJECT FUNDS.	111.0		87.0	MAR 82	SEP 82
6 81 7925	BORE EVACUATOR BORING CONTRACT HAS BEEN AWARDED.	248.0	205.0	12.1	SEP 83	SEP 83
6 80 7926	HOT ISOSTATIC PRESSING OF LARGE ORDNANCE COMPONENTS CONSIDERABLE EFFORT INVOLVED WITH DEVELOPING A PROCUREMENT CONTRACT AND SUBSEQUENT NEGOTIATION FOR OBTAINING A FULL SIZED 8 INCH BREECH BLOCK.	216.0	58.4	112.3	JAN 82	SEP 82
6 82 7926	HOT ISOSTATIC PRESSING (HIP) OF LARGE COMPONENTS NO ACTION. FUNDS RECENTLY RECEIVED.	295.0			SEP 84	SEP 84
6 80 7927	GENERATION OF BASE MACHINING SURFACES THE FIRST + SECOND TECH PROPOSALS WERE RECD + EVALUATED. THE LOW BIDDER ON THE SOLICITATION WAS COMPUTER TECHNOLOGY CORP. HAS SURVVEY + HAS FOUND TECHNICALLY + ADMINISTRATIVE CAPABLE OF PERFORMING THE CONTRACT REQMTS.	35.0		34.7	MAR 81	SEP 82
6 81 7927	GENERATION OF BASE MACHINING SURFACES DURING THIS REPORTING PERIOD EFFORT HAS BEEN MADE TO AWARD A CONTRACT TO COMPUTER TECHNOLOGY CORP. OF MILFORD, OHIO. EFFORTS WERE HALTED BECAUSE NOT ENOUGH MONEY WAS AVAILABLE IN THIS PROGRAM TO COVER THE CONTRACT COST.	137.0	113.0	10.2	SEP 84	SEP 84
6 80 7928	ROBOTIZED BENCHING OPERATIONS THE ACQUISITION OF AN INDUSTRIAL ROBOT IS CURRENTLY IN THE PROCUREMENT CYCLE.	113.0		107.0	AUG 81	SEP 82
6 81 7928	ROBOTIZED BENCHING OPERATIONS (CAM) CONSIDERING THAT TWO BIDS HAVE BEEN RECD, SITE DETERMINATION + COMPONENT FIXTURING ARE CURRENTLY UNDERWAY.	287.0	205.0	20.9	SEP 83	SEP 83
6 81 7940	SYNERGISTIC PLATINGS WITH INFUSED LUBRICANTS ANALYSIS OF PLATING SOLUTIONS AND DEPOSITS WAS CONDUCTED. BATH COMPOSITIONS WERE EVALUATED WITH THE OBJECTIVE OF INCREASING THE CATHODE EFFICIENCY AND LOWERING THE REQUIRED CURRENT DENSITY. THE PROCESS HAS BEEN OPTIMIZED BASED ON EVALUATIONS.	121.0	55.0	62.6	SEP 82	SEP 82

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 82 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
6 82 7940	SYNERGISTIC PLATINGS WITH INFUSED LUBRICANTS A SCOPE OF WORK HAS BEEN PREPARED AND PROCUREMENT ACTION HAS BEEN INITIATED TO AWARD A CONTRACT. THE WORK WILL INCLUDE DEVELOPING BATH PROCESS CONTROLS, PROVIDING COATINGS ON AN ARMAMENT COMPONENT AND PROVIDING THE PROTOTYPE PLATING SYSTEM.	175.0		9.0	NOV 83	NOV 83
6 80 7948	ESTABLISH CUTTING FLUID CONTROL SYSTEM FINAL REPORT IS BEING READIED FOR PUBLICATION.	158.0	122.0	36.0	SEP 81	SEP 82
6 81 7948	ESTABLISH CUTTING FLUID CONTROL SYSTEM A VENDOR SURVEY OF CUTTING FLUID RECYCLING EQUIPMENT WAS CONDUCTED, THE CUTTING FLUID EVALUATION ALGORITHM WAS FINALIZED, AND CUTTING FLUID DEMONSTRATIONS IN RIA PRODUCTION AREAS WERE INITIATED.	164.0	83.6	45.7	JUL 82	SEP 82
6 80 7949	APPLICATION OF GROUP TECHNOLOGY TO RIA MFG (CAM) A CONTRACT TO DEVELOP AND ANALYZE PART FAMILIES WAS AWARDED. PROGRAMS WERE DEVELOPED TO TRANSFER DATA FROM RIA TO DIR. A GROUP SCHEDULING SYSTEM DEVELOPMENT CONTRACT WAS AWARDED IN JUN 82.	155.0	98.6	41.8	MAY 82	SEP 83
6 79 7963	GROUP TECH CELLULAR MFG FOR FC COMPONENTS ASSEMBLIES THE MINI-COMPUTER VERSION OF MIPLAN WAS CONVERTED TO RUN ON CDC MAINFRAME EQUIPMENT. A CODE NUMBER ANALYSIS WAS MADE IDENTIFYING 25 PART GROUPS.	188.0	74.6	112.8	JUL 80	SEP 82
6 80 7963	GROUP TECHNOLOGY FOR FIRE CONTROL PARTS AND ASSEMBLIES THE MICLASS SYSTEM CURRENTLY INSTALLED IS BEING UPGRADED. THE MULTICLASS SYSTEM WILL BE INSTALLED.	303.0	17.5	209.0	DEC 81	SEP 82
6 81 7966	MANUFACTURE OF TRITIUM POWERED RADIOLUMINOUS LAMPS AWARDED FOUR CONTRACTS. INITIATED TESTING OF THE TRITIUM LAMP INTERNAL ENVIRONMENT TO ASSESS QUALITY OF MANUFACTURE. EVALUATED CONTRACTORS MANUFACTURING PROCESSES TO ASSESS PRODUCTION DIFFERENCES ON THE QUALITY OF THE LAMPS.	125.0	29.9	31.5	MAR 82	SEP 82
6 82 7966	MANUFACTURE OF TRITIUM POWERED RADIOLUMINOUS LAMPS JUST FUNDED. NO STATUS TO REPORT.	253.0			JUN 83	JUN 83
6 80 7985	SMALL ARMS WEAPONS NEW PROCESSES PRODUCTION TECHNOLOGY THE DRAFT FINAL REPORT FOR FY80 PROJECT IS COMPLETE.	381.5	282.5	99.0	MAY 81	JUN 82
6 81 7985	SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY MACHINE MODIFICATIONS AND RECEIPT AND REVIEW OF PROPOSALS IS PROCEEDING AS PLANNED.	436.0	205.0	98.0	OCT 82	OCT 82

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
1ST SEMIANNUAL SUBMISSION CY 82 RCS DRCMT-3D1

PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 82 7985	SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY CONTRACT AWARD FOR THE FY82 PROJECT IS EXPECTED IN AUGUST 1982. IZED AND WILL BE PRODUCED IN THE FORM OF A MACHINABILITY HANDBOOK AT THE CONCLUSION OF PHASE III. AN INTERIM REPORT SUMMARIZING PH	620.0		8.0	OCT 83	OCT 82
6 81 7990	IMPROVED FABRICATION AND REPAIR OF ANODES THE FACILITY HAS BEEN COMPLETED AND UNDERGONE A FUNCTIONAL TEST USING WATER. REQUIRED CHANGES IN THE WATER FEED SYSTEM IN ALL PLATING FACILITIES AT THE ARSENAL HAS CAUSED A DELAY IN THE FINAL CHECK USING THE LEAD PLATING SOLUTION.	100.0		94.0	JUN 82	JUN 82
6 81 8001	RAPID FLOW PLATING OF SMALL CALIBER GUN TUBES ELECTROPLATING OF CHROMIUM HAS BEEN SUCCESSFULLY CARRIED OUT ONTO ROTATING CYLINDRICAL SPECIMENS, USING A VARIETY OF CURRENT DENSITIES AND TEMPERATURES. A PLATING APPARATUS HAS BEEN DESIGNED AND WILL SOON BE ASSEMBLED FOR PLATING GUN TUBES.	132.0	96.3	30.5	SEP 82	SEP 82
6 80 8004	CO-DEPOSITION OF SOLID LUBRICANTS DURING ANODIZING EQUIPMENT WAS DESIGNED, PROCEDURES DEVELOPED AND PROCESS PARAMETERS OPTIMIZED FOR OPERATING A LOW TEMPERATURE HARDCOAT ANODIZING PROCESS. THE TECHNICAL REPORT IS IN FINAL DRAFT FORM. FINAL PUBLICATION IS FORECASTED FOR FEBRUARY 1983.	121.0		121.0	JAN 81	FEB 83
6 80 8017	POLLUTION ABATEMENT PROGRAM ALL WORK HAS BEEN COMPLETED, THE FINAL TECHNICAL WORK IS NEARLY READY FOR PUBLICATION.	86.0		85.1	JAN 81	DEC 82
6 80 8024	HIGH SPEED ABRASIVE BELT GRINDING ARRANGEMENTS HAVE BEEN COMPLETED FOR THE SHIPMENT OF AN 8INCH M201 GUN TUBE FOR TESTING TO BE CONDUCTED AT THE CONTRACTORS PLANT. A TWO MONTH DELAY HAS BEEN GRANTED TO THE CONTRACTOR FOR THE DELIVERY SCHEDULE.	324.0	297.6	20.6	SEP 82	DEC 82
6 82 8024	HIGH SPEED ABRASIVE BELT GRINDING NO WORK ACCOMPLISHED DUE TO LATE RECEIPT OF FUNDING.	142.0			SEP 84	SEP 84
6 79 8025	ELECTRONIC PROFILE READOUT GAGE FOR POWDER CHAMBER CONTROLS THE ELECTRONIC GAGING SYSTEM, BUILT BY APPLIED OPTOMECHANICAL KINETICS, WAS DELIVERED TO WATERVLIET. SEVERAL SERIOUS DEFECTS WERE REVEALED DURING INSPECTION AND THE SYSTEM WAS RETURNED TO THE VENDOR FOR REPAIR.	145.0	76.0	68.7	JUL 80	SEP 82
6 82 8030	MANUFACTURING GUIDE FOR ELASTOMERIC SEALS WORK WAS INITIATED WITH A SURVEY OF PROBLEMS ASSOCIATED WITH PROCUREMENT OF ELASTOMERIC SEALS. SEAL REQUIREMENTS FOR SPECIFIC APPLICATIONS WERE ALSO DETERMINED.	123.0		2.7	MAY 83	MAY 83

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
6 80 8035	COATING TUBE SUPPORT SLEEVES WITH BEARING MATERIALS PISTONS CLAD USING THE GMAW HAVE BEEN EXTENSIVELY TESTED IN SIMULATION FIRING AND LIVE FIRING. THE PISTONS HAVE PERFORMED WELL, AND THE USED PISTONS HAVE PASSED METALLURGICAL EXAMINATION.	180.0		159.0	MAR 81	NOV 82
6 81 8D35	COATING TUBE SUPPORT SLEEVES WITH BEARING MATERIALS ALUMINUM BRONZE OVERLAY WAS CLAD TO STEEL PISTONS USING EXPLOSIVE BONDING. THIS TECHNIQUE RESULTED IN GOOD FUSION AT THE INTERFACES. THE CONTRACTOR HAS HAD A PROBLEM WITH ROLLING THE ALUMINUM BRONZE STRIP TO THE DESIGNATED TOLERANCES.	200.0	10.8	67.8	JUN 82	APR 83
6 80 8036	WEAPON AIMING SYSTEM FOR THE 6-DOF SIMULATOR DESIGN OF THE REMOUNT SIGHT CONTROLLER IS COMPLETED AND COMPONENT PARTS HAVE BEEN RECEIVED. ASSEMBLY AND INSTALLATION IS DELAYED UNTIL THE UTS TURRET SYSTEM CAN BE INSTALLED ON THE AH-1G HELICOPTER ON THE 6-DOF SIMULATOR	126.0	18.8	64.5	SEP 81	DEC 82
6 8D 8D47	PASS THRU STEADY RESTS FOR TUBE TURNING PRIMARY BASE SUPPORT WELDMENTS HAVE BEEN COMPLETED. MACHINING HAS BEEN COMPLETED ON GUN TUBE TO BE USED IN TEST PHASE.	369.0	262.1	67.3	JUL 83	SEP 83
6 82 805D	RECYCLING SPENT GUN TUBES BY ESR MELTING FUNDS RECEIVED IN MAY 1982. CONTRACT SCHEDULED FOR AWARD IN JANUARY OF 1983.	204.0			MAY 84	MAY 84
6 80 8D51	APPLICATION AND CONTROL OF MACHINE TOOLS (CAM) A COMPUTERIZED INFORMATION SYSTEM WAS DESIGNED. IT CONTAINS PROCEDURES TO DETERMINE MACHINE TOOL UTILIZATION, MACHINE TOOL PERFORMANCE AND MACHINE TOOL RELIABILITY. THE REQUIRED DATA BASES WERE ALSO ESTABLISHED.	165.0	150.6	34.4	AUG 81	MAY 83
6 80 8054	OPTICAL SCRATCH AND DIG STANDARDS FOR FIRE CONTROL SYSTEMS THE SINGLE RESPONSE TO THE RFQ EXCEEDED THE AVAILABLE FY80 FUNDS SO PROCUREMENT WAS CANCELLED. RESULTS OF A STUDY INDICATE PHOTOLITHOGRAPHIC AND CHEMICAL ETCHING SHOULD BE PURSUED FOR SCRATCH FABRICATION.	185.0	70.0	101.9	AUG 84	SEP 80
6 81 8054	IMPROVED MFR OF OPTICAL SCRATCH AND DIG STANDARDS DECILOG MADE STANDARD SCRATCHES USING PHOTORESIST AND ETCHING OF GLASS BLOCKS. TESTS SHOWED THE ETCHED SCRATCHES WERE COMPATIBLE WITH NBS STANDARDS. MIL SPEC MIL-3-1383D WILL BE REVISED TO INCLUDE ETCHING ALONG WITH DIAMOND SCRIBING.	266.0	146.1	5.5	AUG 84	AUG 84
6 80 8D57	DUAL RIFLING BROACH REMOVAL SYSTEM THE MAJORITY OF THE FABRICATION AND SUB-ASSEMBLIES FOR THE BROACH REMOVAL DEVICE HAVE BEEN COMPLETED. MALFUNCTIONING OF THE DUAL RIFLER HAS PREVENTED THEIR INSTALLATION AND TESTING.	215.0	9.7	141.1	SEP 82	SEP 83

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
6 80 8060	IMPROVED MFG PROCESSES FOR FINAL INSPECTION OF CANNON TUBES THE CONTRACTOR FORWARDED A PROOF COPY OF THE SPECIFICATION TO WATERVLIET. INITIAL REVIEW HAS TAKEN PLACE AND COMMENTS RETURNED TO THE CONTRACTOR. FINAL APPROVAL OF SPEC ARE PENDING PLANT LAYOUT APPROVAL.	363.0	42.7	14.6	DEC 81	OCT 84
6 82 8062	RAPID INTERNAL THREADING FEASIBILITY STUDY IS UNDERWAY.	366.0			JUL 84	JUL 84
6 81 8080	HIGH SPEED FABRICATION OF ASPHERIC OPTICAL SURFACES WORK WAS BEGUN ON A SCOPE OF WORK DEFINING THE REQUIREMENTS FOR A HIGH SPEED PROCESS TO GENERATE ASPHERIC SURFACES (TUBULAR TOOL GRINDING AND POLISHING). VALIDATION OF THIS PROCESS THROUGH SYSTEM REDESIGN USING OPTICAL ELEMENTS FROM MMT PROJ IS HOPED	204.0		20.0	JUL 82	DEC 83
6 82 8080	HIGH SPEED FABRICATION OF ASPHERIC OPTICAL SURFACES THE SOW WAS COMPLETED AND A RFP HAS BEEN ISSUED. THE M36 PERISCOPE AND THE M19 BINOCULARS ARE THE END ITEMS SPECIFICALLY TARGETED FOR THIS TECHNOLOGY ALTHOUGH ITS APPLICATION COULD BE WIDE SPREAD. PROF DUNCAN MOORE AT UNIV OF ROCH. IS TECH COGNIZANT.	170.0		15.0	JUL 83	JUL 83
6 82 8102	POWDER METALLURGY FORGINGS WEAPONS COMPONENTS NO ACTION. FUNDS RECENTLY RECEIVED.	110.0			SEP 84	SEP 84
6 82 8103	HIGH VELOCITY MACHINING LITERATURE SEARCH HAS BEEN INITIATED.	97.0			SEP 83	SEP 83
6 81 8105	ESTABLISH ROUGH THREAD BLANKS, 8 ? M201 BUSHING A CONTRACTOR HAS BEEN SELECTED AS A RESULT OF TWO STEP PROCUREMENT ACTION. NEGOTIATIONS ARE UNDERWAY.	292.0		7.2	SEP 83	DEC 83
6 81 8106	LARGE CALIBER POWDER CHAMBER BORING BORING BAR SYSTEM HAS BEEN DELIVERED. INSTALLATION IS 50 PCT COMPLETE. THE PRECISION POSITIONING SYSTEM SPECIFICATION WAS REVISED DUE TO EXCESSIVE COST.	159.0	17.5	35.0	JUN 83	SEP 83
6 82 8106	LARGE CALIBER POWDER CHAMBER BORING PROJECT MILESTONES DEVELOPED.	72.0			SEP 84	SEP 84
6 80 8107	CREEP FEED CRUSH FORM GRINDING MANUF EQUIPMENT COMPONENTS HAVE BEEN COMPLETED. DESIGN REVIEW FOR FIXTURING, SUPPORT HARDWARE, AND MAJOR CAPITAL EQUIPMENT IS 50 PCT COMPLETE.	580.0	553.4	27.3	MAY 83	JUN 83

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	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 81 8107	CREEP FEED CRUSH FORM GRINDING SEQUENCE ROUTING 90 PCT COMPLETE. 5 TEST SPECIMENS MANUFACTURED.	73.0		13.4	JUL 84	JUL 84
6 82 8108	PRODUCTION/IN-PROCESS INSPECTION OF OPTICAL BONDS THE REFURBISHED INTERFEROMETER WILL BE USED BY ARRADCOM TO MEASURE OPTICAL PRECISION ASSEMBLY AND ADHESIVE CREEP. BOND INTEGRITY WILL BE DETERMINED USING AN INFRARED CAMERA TO OBTAIN THE THERMAL ENERGY DISTRIBUTION. CONTRACT LET TO BLOCK ENG. SOON.	283.0		8.6	DEC 83	DEC 83
6 81 8113	ESTABLISHMENT OF ION PLATING PROCESS FOR ARMAMENT PARTS SELECT ARMAMENT COMPONENTS WERE COATED BY THE ION VAPOR DEPOSITION PROCESS. PROCESS PARAMETERS ARE BEING ESTABLISHED TO USE IVD ALUMINUM CLATING. COATED ITEMS HAVE BEEN RETURNED BY THE CONTRACTOR FOR EVALUATION WHICH IS NOW IN PROGRESS.	141.6	50.0	91.6	SEP 82	SEP 82
6 82 8113	ESTABLISHMENT OF ION PLATING PROCESS FOR ARMAMENT PARTS PROJECT 6818113 INVOLVED EVALUATION OF THE IVD PROCESS ON VARIOUS SHAPED ARMAMENT HARDWARE. THE EVALUATION IS CONTINUING UNDER THIS PROJECT IN TERMS OF PRODUCT QUALITY AND PROCESS RELIABILITY. AN EXTENSIVE COST ANALYSIS WILL ALSO BE CONDUCTED.	142.0		1.7	SEP 83	SEP 83
6 81 8120	ADAPTIVE CONTROL TECHNOLOGY (CAM) A CONTRACT WAS AWARDED TO ENERGY ADAPTIVE GRINDING, INC. FOR PROCESSING A NUMBER OF PARTS. THESE PARTS WILL BE GROUND UTILIZING THE MOST ADVANCED ADAPTIVE CONTROL TECHNOLOGY.	60.0	0.3	40.1	AUG 82	DEC 82
6 81 8135	IN-PROCESS CONTROL OF MACHINING AN ACCEPTABLE PROPOSAL WAS NOT RECEIVED IN RESPONSE TO THE INITIAL REQUEST FOR QUOTATION. A SECOND REQUEST WAS ISSUED AND A CONTRACT IS CURRENTLY BEING NEGOTIATED.	613.0		24.6	OCT 82	OCT 82
6 82 8135	IN-PROCESS CONTROL OF MACHINING THIS PROJECT JUST GOT UNDERWAY. AN ADAPTIVE CONTROL UNIT FOR MILLING, BEING DEVELOPED UNDER 6 81 8135, WILL BE MODIFIED FOR TURNING AND BORING OPERATIONS.	556.9			FEB 84	FEB 84
6 81 8136	IMPROVED IMPULSE PROGRAMMERS FOR HYDRAULIC SIMULATORS PRELIMINARY CONCEPTS HAVE BEEN REVIEWED. REQUIREMENTS FOR A COMPUTER MODEL ARE BEING GENERATED TO AID IN CHOOSING THE BEST OPTION.	80.0			SEP 83	JUN 84
6 81 8151	PORTABLE ENGRAVING SYSTEM DISCUSSIONS WITH POTENTIAL VENDORS ARE ONGOING WITH THE EXCHANGE OF IDEAS BEING FRUITFUL. BASED UPON THESE DISCUSSIONS, THE SPECIFICATIONS HAVE BEEN WRITTEN + ARE CURRENTLY IN THE PROCUREMENT CYCLE.	84.0		25.7	DEC 82	DEC 82

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 ($D00)	CONTRACT VALUES ($D00)	EXPENDED LABOR AND MATERIAL ($D00)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 82 8151	PORTABLE ENGRAVING SYSTEM A COMPLETED INVESTIGATION OF AUTOMATIC ENGRAVING PROCEDURES WILL BE REVIEWED TO DETERMINE THE MOST APPLICABLE PROCESS TO ACCOMODATE THE VARIETY OF COMPONENTS PRODUCED AT WATERVLIET ARSENAL.	171.0			JAN 84	JAN 84
6 81 8152	IMPROVED ANODE STRAIGHTNESS FOR CHROMIUM PLATING A CONTRACT WAS AWARDED TO FIBER MATERIALS, INC. FOR THE FABRICATION OF A FULL SCALE COMPOSITE ANODE FOR THE 120 MM SYSTEM. THE MODEL IS SCHEDULED TO BE DELIVERED BY 1 MAR 1983.	280.0	99.5	127.0	AUG 73	SEP 84
6 81 8153	INCREASING GUN TUBE HEAT TREATMENT CAPACITY A QUENCH TANK HAS BEEN FABRICATED AND INSTALLED AND PRELIMINARY TESTING HAS BEEN STARTED FOR THE RETAINED HEAT EFFORT. A SCRAP 105MM M68 GUN TUBE HAS BEEN PREPARED WITH THERMOCOUPLES. TEMPERATURE UNIFORMITY TESTS WILL BE CONDUCTED ON HEAT INDUCTION.	325.0	202.0	70.1	MAY 83	SEP 83
6 81 8154	COMPUTER INTEGRATION MFG (CIM),DDNC THE OBJECTIVE OF THIS PROJECT IS TO ESTABLISH AN INTEGRATED PILOT DNC SYSTEM. THE ENGINEERING DESIGN WAS COMPLETED IN MAY 1982.	442.0		7.4	DEC 83	DEC 83
6 81 8165	STANDARDS FOR DIAMOND TURNED OPTICAL PARTS GOVERNMENT INDUSTRY SURVEY WAS COMPLETED IN SEP 81. FABRICATION OF OPTICAL ROUGHNESS STANDARDS WAS STARTED. THE COPPERHEAD ROTOR ASSEMBLY MAGNETIC MIRROR WAS SELECTED AS A COMPONENT TO BE DIAMOND-TURNED AND EVALUATED.	189.0	84.0	90.0	DEC 82	OCT 82
6 82 8165	STANDARDS FOR DIAMOND TURNED OPTICAL PARTS THERE WAS NO SIGNIFICANT ACCOMPLISHMENT DURING THIS REPORTING PERIOD.	258.0			OCT 83	OCT 83
6 80 8209	PILOT PRODUCTION OF GRADIENT INDEX OPTICS UNIV OF ROCH HAS RECEIVED EQUIPMENT FOR PILOT LINE. DESIGN OF M1 GUNNERS PRIMARY SIGHT EYEPIECE HAS CHANGED FROM 6 TO 3 ELEMENTS USING GRADIENT INDEX OPTICS. COOKIE CUTTING A LARGE GLASS SLAB AND SPHERICAL SURFACE GRINDING ARE THE TECHNIQUES.	213.0	110.0	103.0	DEC 83	AUG 82
6 81 8209	PILOT PRODUCTION OF GRADIENT INDEX OPTICS INSTALLATION OF THE EQUIPMENT FOR THE PILOT LINE IS IN PROGRESS AT THE UNIV OF ROCHESTER. R+D WORK CONCERNING ELECTRIC FIELD DRIVE IN OF IONS MAY BE IMPLEMENTED IN THIS EFFORT.	274.0	264.0	10.0	MAY 83	JAN 84
6 82 8231	IMPROVED CASTING TECHNOLOGY NO SIGNIFICANT ACCOMPLISHMENT DURING REPORTING PERIOD.	250.0		5.9	MAR 84	MAR 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
1ST SEMIANNUAL SUBMISSION CY 82 RCS ORCMT-301

PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 82 8238	BORING BREECH RING LUGS ENGINEERING CONCEPTS PHASE HAS BEGUN.	203.0			AUG 84	AUG 84
6 82 8241	COMPUTER DIAGNOSTICS + CONTROL FOR BORE GUIDANCE THIS PROJECT WAS JUST FUNDED.	308.0			JUN 85	SEP 85
6 82 8242	DUAL PRESS STRAIGHTENING GUN TUBES NO PROGRESS REPORTED.	120.0			NOV 83	NOV 83
6 82 8243	COMPUTER CONTROL FOR ELECTRODEPOSITION SYSTEMS A REVIEW OF REQUIREMENTS AND PHYSICAL FACILITIES WAS CONDUCTED. SPECIFICATIONS FOR PURCHASE OF HARDWARE HAVE BEEN SENT TO INDUSTRIAL READINESS FOR PROCESSING.	301.0		46.7	MAY 84	MAY 84
6 82 8244	OPTIMIZE THE HEAT TREATMENT OF ROTARY FORGE TUBES LIMITED WORK HAS BEEN ACCOMPLISHED SINCE RECEIPT OF FUNDS IN LATE APRIL 1982. AN EXISTING COMPUTER PROGRAM IS BEING UPDATED TO PROVIDE THE HISTORICAL DATA OF TUBES HEAT TREATED TO DATE.	290.0			MAR 84	MAR 84
6 82 8245	APPLICATION OF EROSION RESISTANT LC CHROMIUM PLATE A FULLY CLOSED HI-FLOW SYSTEM WILL BE CONSTRUCTED AND A LARGE CAPACITY RECTIFIER WILL BE PURCHASED. SPECIFICATIONS AND INFORMATION FOR THE PURCHASE OF A 30,000 AMP RECTIFIER HAVE BEEN SENT TO INDUSTRIAL READINESS FOR PROCESSING.	241.0		32.4	JUN 84	JUN 84
6 82 8246	GAS CHECK SEAT FINISHING INITIATED FINAL DESIGN PHASE FOR DETAILED DRAWINGS ON EQUIPMENT FOR IMPROVED PROCESS.	153.0			JUN 84	JUN 84
6 82 8248	APPLICATION OF HIGH-RATE CUTTING TOOLS THE FOLLOWING NEW CUTTING TOOLS WERE SELECTED FOR EVALUATION-CERAMICS IN FINE TURNING, HARD COATED DRILLS IN HOLE MAKING, AND EJECTOR-TYPE TREPANNING TO ELIMINATE MULTIPLE STEP BORING OF LARGE HOLES.	102.0		3.9	JUN 83	JUN 83
6 82 8251	IMPROVED MELTING PRACTICES SURVEY OF FURNACE LININGS IS BEING COMPLETED.	193.0		8.3	JUN 83	JUN 83
6 82 8252	INDUCTION HEATING OF A VARYING DIAMETER PREFORM MILESTONES HAVE BEEN CHANGED TO REFLECT LATE RECEIPT OF FUNDS.	241.0			MAR 84	MAR 84
6 82 8253	MACHINE TOOL DYNAMIC MEASUREMENTS AND DIAGNOSTICS MILESTONES REVISED DUE TO LATE RECEIPT OF FUNDS. DISCUSSIONS HAVE BEGUN WITH NAVY RELATIVE TO ITS WORK ON VIBRATION ANALYSIS AS WELL AS WVA MAINT PERSONNEL RELATIVE TO PROBLEMS RELATED TO VIBRATION.	190.0			APR 84	APR 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	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 82 8259	IMP MFG PROCESS FOR FIRE CONTROL REGISTERS DUE TO THE DATE THAT FUNDS WERE RECD ON THIS PROGRAM, WORK HAS JUST STARTED ON THE ENGINEERING EVALUATION PHASE OF THE PROGRAM. THIS PHASE WILL DETERMINE THE TYPE OF SENSOR EQUIP. THAT WILL BE UTILIZED + DEVELOP A WORKING SPEC FOR THE DESIGN PHASE.	261.0			SEP 84	SEP 84
6 82 8262	PRODUCTION METHODS FOR OPTICAL WAVEGUIDES ION IMPLANTATION WILL PROVIDE AN ECONOMICAL AND HIGH QUALITY INTEGRATED OPTICAL WAVEGUIDE CIRCUIT REQUIRED BY FIRE CONTROL SYSTEMS FOR PROCESSING VAST QUANTITIES OF INFORMATION. SPECIFICATIONS FOR PROCUREMENT HAVE BEEN COMPLETED + CONTRACT LET SOON.	480.0		5.0	JAN 83	JAN 83
6 82 8263	PRODUCTION/IN-PROCESS INSPECTION OF LRF THE SCOPE OF WORK AND EVALUATION PLAN WERE SUBMITTED TO PROCUREMENT. THE CONTRACT IS SCHEDULED FOR AWARD 15 SEPT 1982.	355.0		25.0	AUG 83	AUG 83
6 82 8267	STRESS PEENING OF HELICAL COMPRESSION SPRINGS WORK ON THIS PROJECT HAS NOT BEEN INITIATED.	109.0			AUG 83	AUG 83
6 81 8305	INTEGRATED MANUFACTURING SYSTEM (IMS) SCOPE OF WORK IS BEING PREPARED. TEAM APPROACH TO REQUIREMENTS DEFINITION IS IN PROGRESS.	85.0		22.4	JUL 82	NOV 82
6 81 8341	HOLLOW CYLINDER CUT OFF MACHINE MACHINING TESTS CONFIRMED THAT ROTARY ABRASIVE SAWING IS AN ACCEPTABLE METHOD FOR CUTTING GUN TUBES. A SPEL FOR A DUAL HEAD ROTARY ABRASIVE SAW IS BEING PREPARED.	84.0		5.6	JUN 82	SEP 83
6 82 8341	HOLLOW CYLINDER CUT OFF MACHINE ENGINEERING STUDY WAS INITIATED.	655.0			SEP 84	SEP 84
6 80 8342	KEYWAY MILLING MACHINE DURING THE FIRST STEP OF A TWO STEP PROCUREMENT IT WAS DISCOVERED THAT THE DESIRED EQUIPMENT WAS NOT ECONOMICALLY JUSTIFIED. $260K IS BEING DELETED FROM THE PROJECT AND A FINAL 301 AND TECH REPORT WILL BE ISSUED	332.0		58.6	JAN 82	SEP 82
6 82 8370	AUTOMATIC INSP AND PROC CONTROL OF WPNS PARTS MFG TWO COMPETING EFFORTS FOR AN AUTOMATED GUN BARREL STRIGHTENING METHOD HAVE BEEN AWARDED. MAREMOUNT CONTRACT, RECENTLY AWARDED WILL ALLOW MAREMOUNT TO PARTICIPATE IN THE COMPARATIVE EVALUATION OF THE BARREL STRAIGHTENING EFFORT.	193.0	93.0	33.0	SEP 83	SEP 83

APPENDICES

APPENDIX I: COMMAND IDENTIFICATION

APPENDIX: ARMY ACTION COMMAND/ACTIVITY IDENTIFICATION

Action Command Identifier	Acronym	Command
Materiel Development & Readiness Command (Management Engineering Training Activity)	DARCOM (AMETA)	D
Mobility Equipment R&D Command	MERADCOM	E
Depot Systems Command	DESCOM	G
Electronics R&D Command	ERADCOM	H
Army Materials and Mechanics Research Center	AMMRC	M
Natick R&D Laboratories	NLABS	Q
Test & Evaluation Command	TECOM	0
Aviation R&D Command	AVRADCOM	1
Communications & Electronics Command	CECOM	2
Missile Command	MICOM	3
Tank-Automotive Command	TACOM	4
Armament Materiel Readiness Command (Munitions)	ARRCOM (Ammo)	5
Armament R&D Command (Munitions)	ARRADCOM (Ammo)	8
Armament Materiel Readiness Command (Weapons)	ARRCOM (Wpns)	6
Armament R&D Command (Weapons)	ARRADCOM (Wpns)	9
Troop Support & Aviation Materiel Readiness Command	TSARCOM	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 "No Data" column and "0 Mo" column fluctuated depending on the timing of the funding of the new fiscal year program. A combination of these two figures has remained fairly consistent from period to period. The other five columns have also consistently remained within a ± 4 percentage point range from reporting period to reporting period. However, this period there is an 8 point decrease in the "7-12 Month" slippage column with most of the offsetting increase occurring in the "No Data - 0 Month" slippage combination. This net result does reflect the best slippage profile since the inclusion of this indicator.

There are two problems that affect accurate project slippage reporting. One problem is delinquent status reports. If a status report is not submitted for a project, then the slippage will be that which was calculated from the last status report received. During the current reporting period, there were 107 delinquent status reports. 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. A continued decrease in delinquency of project status reports will help improve the accuracy of the project slippage profile.

Another problem that affects accurate project slippage reporting is the basis on which final status rports 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	PROJECT SLIPPAGE DISTRIBUTION (PERCENT)						
		NO DATA	0 MO	1-6 MO	7-12 MO	13-18 MO	19-24 MO	25+ MO
DARCOM	6		33	33				33
MERADCOM	18	11	11	6	17	22		33
DESCOM	9	56	11	11		11	11	
ERADCOM	44	7	20	14	9	16	11	23
AMMRC	5		80		20			
NLABS	5	20		20	20		20	20
TECOM	3	33	67					
AVRADCOM	68	10	43	7	10	6	10	13
CECOM	11		18	9	27	36		9
MICOM	46	20	33	17	4	11	7	9
TACOM	68	12	44	4	7	10	10	12
ARRADCOM-ARRCOM (AMMD)	157	4	41	10	6	12	9	19
ARRADCOM-ARRCOM (WPNS)	111	5	47	13	9	10	5	12
TSARCOM	4	50		25	25			
SUMMARY (DARCOM WIDE)	555	9	38	10	8	11	6	15
1ST CY81 SUMMARY	548	7	34	11	16	9	8	15

*FIGURES REFLECT DATA ON THE ACTIVE PROGRAM AS OF 20 OCT 82.

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 82 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 6350 2919	AUTO RESIDUAL STRESS INSP OF GUN TUBES + OTHER RELATED COMP ***** DELINQUENT STATUS REPORT *****					
M 82 6350 2938	EDDY CURRENT CRACK INSPEC PROCEDURE F/BORE EVACUATOR HOLES PROBE SELECTION HAS BEEN COMPLETED. REQUEST FOR PROBES FROM TWO DIFFERENT MANUFACTURERS HAVE BEEN SUBMITTED TO PROCUREMENT. THE MULTIFREQUENCY EDDY CURRENT UNIT PROCURED ON A SEPERATE CONTRACT HAS ARRIVED AND IS OPERATIONAL.	54.0	4.0		MAR 83	MAR 83
M 82 6350 2945	QA OF COMPUTERIZED INSPECTION EQUIPMENT SOFTWARE NO WORK STATUS WAS REPORTED FOR THIS PERIOD.	120.0			JUN 83	JUN 83
M 82 6350 2950	ELECTRICALLY CONDUCTIVE ADHESIVES FOR HIGH STABILITY Q R B A TEST PLAN TO DEVELOP TECHNOLOGY FOR TESTING UNCURED ADHESIVES, OUTGASSING AND MECHANICAL INTEGRITY AFTER THERMAL CYCLING HAS BEEN RECEIVED, EVALUATED + ACCEPTED.	77.0			JUN 83	JUN 83
M 82 6350 2951	AN/PRS-8 MINE DETECTOR PRODUCTION TEST SET A CONTRACT PACKAGE IS BEING PREPARED. THE CONTRACT WILL BE NEGOTIATED INTO THE PRESENT PRODUCTION CONTRACT.	115.0			MAR 83	MAR 83
M 81 6390	MMT PROGRAM IMPLEMENTATION AND INFORMATION TRANSFER PUBLICATION OF THE MANTECH JOURNAL. CONTRACT IN PROCESS WITH WORCESTER POLYTECHNIC INSTITUTE FOR TECHNOLOGY IMPLEMENTATION STUDY.	250.0	184.7	50.3	MAR 82	DEC 82
M 82 6390	PROGRAM IMPLEMENTATION AND INFORMATION TRANSFER PUBLICATION OF THE MANTECH JOURNAL AND MANTECH NOTES.	249.5	192.3		JUN 83	JUN 83
(1) (2) (3)	(4)	(5)	(6)	(7)	(8)	(9)

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:

3 75 6241

- 6241 — Project identifying number, which corresponds to the project title and is designated by action command.
- 75 — Fiscal year of funding - the only two digits that may vary according to funding frequency (7T for FY transition).
- 3 — Action command (see list in Appendix I).

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 reporting period were summarized.

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.

APPENDIX IV: ARMY MMT PROGRAM REPRESENTATIVES

ARMY MMT PROGRAM REPRESENTATIVES

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

AVRADCOM
US Army Aviation R&D Command
ATTN: DRDAV-EGX, Mr. Dan Haugan
4300 Goodfellow Blvd. — C: 314 263-1625
St. Louis, MO 63120 — AV: 693-1625

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

ATTN: DRSEL-PC-I-IP-1, Mr. Leon Field — C: 201 532-4035
Fort Monmouth, NJ 07703 — AV: 992-4035

ERADCOM
US Army Electronics R&D Command
ATTN: DELET-R, Mr. Joseph Key — C: 201 544-4258
Fort Monmouth, NJ 07703 — AV: 995-4258

MICOM
US Army Missile Command
ATTN: DRSMI-RST, Mr. Richard Kotler — C: 205 876-2065
Redstone Arsenal, AL 35898 — AV: 746-2065

TACOM
US Army Tank-Automotive Command — C: 313 573-6065/5814
ATTN: DRSTA-RCK, Dr. Jim Chevalier — 6467
Warren, MI 48090 — AV: 786-6065/5814/6467

ARRCOM
US Army Armament Materiel Readiness Command
ATTN: DRSAR-IRI-A, Mr. Dennis Dunlap
Rock Island Arsenal — C: 309 794-3666/4398
Rock Island, IL 61299 — AV: 793-3666/4398

ARRADCOM
US Army Armament R&D Command
ATTN: DRDAR-PMP-P, Mr. Donald J. Fischer — C: 201 328-2708
Dover, NJ 07801 — AV: 880-2708

TSARCOM
US Army Troop Support and Aviation Materiel Readiness Command
ATTN: DRSTS-PLE, Mr. Don G. Doll
4300 Goodfellow Blvd.
St. Louis, MO 63120
C: 314 263-2218
AV: 693-2218

MERADCOM
US Army Mobility Equipment R&D Command
ATTN: DRDME-UE, Mr. R. Goehner
Fort Belvoir, VA 22060
C: 703 664-4221
AV: 354-4221

NLABS
US Army Natick R&D Laboratories
ATTN: DRDNA-EML, Mr. Frank Civilikas
Natick, MA 01760
C: 617 653-1000, X2793
AV: 955-2349/2351

TECOM
US Army Test & Evaluation Command
ATTN: DRSTE-AD-M, Mr. John Gehrig
Aberdeen Proving Ground, MD 21005
C: 301 278-3677
AV: 283-3677

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

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

RIA
Rock Island Arsenal
ATTN: SARRI-ENM, Mr. J. W. McGarvey
Rock Island, IL 61299
C: 309 794-4627/4584
AV: 793-4627/4584

WVA
Watervliet Arsenal
ATTN: SARWV-PPI, Mr. T. Wright
Watervliet, NY 12189
C: 518 266-5319
AV: 974-5319

MPBMA
US Army Munitions Production Base Modernization Agency
ATTN: SARPM-PBM-DP, Mr. Joseph Taglairino
Dover, NJ 07801
C: 201 328-6708
AV: 880-6708

AMRDL
US Army Applied Technology Laboratory
US Army Research Technology Lab (AVRADCOM)
ATTN: DAVDL-ATL-ATS, J. Waller
Fort Eustis, VA 23604
C: 804 878-2771/3073
AV: 927-2771/3073

DESCOM
US Army Depot System Command
ATTN: DRSDS-PE, Mr. Jim Shindle
Chambersburg, PA 17201
C: 717 263-6321
AV: 242-6321

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

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Room 3B454, The Pentagon — C: 202 695-1362
Washington, DC 20310 — AV: 225-1362

DCSRDA (PA 2597, Missiles)
ATTN: DAMA-WSM-A, Mr. John Doyle
Room 3B485, The Pentagon — C: 202 695-8740
Washington, DC 20310 — AV: 224-8740

DCSRDA (PA 3297, Weapons; PA 3197, Tracked Combat Vehicles)
ATTN: DAMA-WSW, LTC Raymond Roskowski
Room 3D455, The Pentagon — C: 202 697-0106
Washington, DC 20310 — AV: 227-0106

DCSRDA (PA 5297, Communications/Electronics)
ATTN: DAMA-CSC-BU, MAJ Paul Harvey
Room 3D440, The Pentagon — C: 202 695-1881
Washington, DC 20310 — AV: 225-1881

DCSRDA (Other Procurement Activities:
PA 5197, Tactical and Support Vehicles)
ATTN: DAMA-CSS-P, LTC L. R. Hawkins
Room 3D416, The Pentagon — C: 202 694-8720
Washington, DC 20310 — AV: 224-8720

DCSRDA (Other Procurement Activities:
PA 5397, Other Support)
ATTN: DAMA-CSS-P, LTC P. K. Linscott
Room 3D418, The Pentagon — C: 202 694-8720
Washington, DC 20310 — AV: 224-8720

DCSRDA (PA 4250, Ammunition)
ATTN: DAMA-CSM-DA, COL Jack King
Room 3C444, The Pentagon — C: 202 694-4330
Washington, DC 20310 — AV: 224-4330

DCSRDA (PA 4250, Ammunition)
ATTN: DAMA-CSM-P, Mr. John Mytryshyn
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Cdr, Naval Weapons Ctr, Attn: Code 36404
Dir, NMCIRD, Bldg 75-2, Naval Base
Cdr, Naval Oceans Systems Ctr, Attn: Code 9203, Dr. Wil Watson

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Cdr, AFWAL/MLTE, /MLTN, WPAFB (1 cy ea)
Cdr, AFWAL/MLS, WPAFB
Cdr, AFLC/MAX, WPAFB
Cdr, San Antonio Air Logistics Ctr, Kelly AFB, Attn: B. Boisvert, MMEI
Cdr, Hanscom AFB, Attn: AFGL-SULL, R. Bergmann