AD-A155 144 MANUFACTURING METHODS AND TECHNOLOGY PROJECT EXECUTION REPORT(U) ARMY INDUSTRIAL BASE ENGINEERING ACTIVITY ROCK ISLAND IL D O'CONNOR APR 85 1/2

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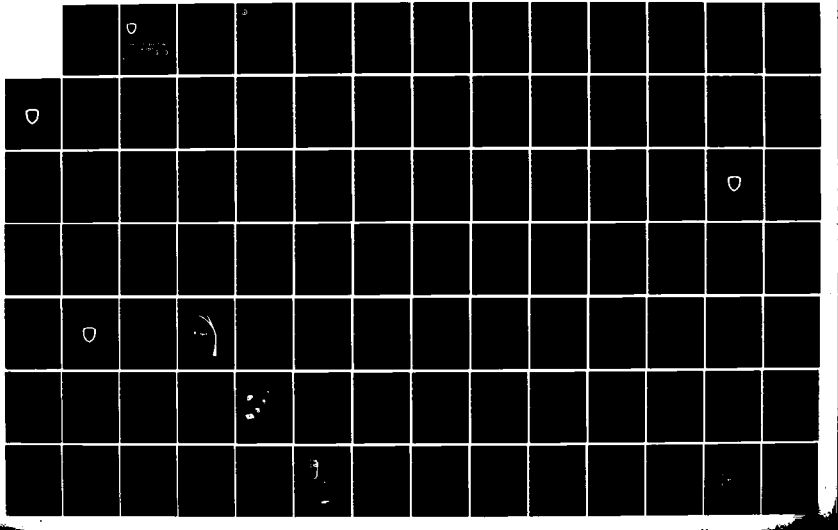

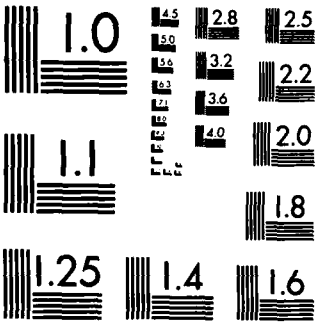

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U. S. ARMY MATERIEL COMMAND

MANUFACTURING METHODS & TECHNOLOGY

PROJECT EXECUTION REPORT

SECOND CY84

APRIL 1985

PREPARED BY
USA INDUSTRIAL BASE ENGINEERING ACTIVITY
MANUFACTURING TECHNOLOGY DIVISION
ROCK ISLAND, ILLINOIS 61299-7260

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Manufacturing Methods & Technology
MMT

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

This document is a summary compilation of the Manufacturing Methods and Technology Program Project Status Reports (RCS DRCMT-301) submitted to IBEA from AMC 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 AMC program.

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

DEPARTMENT OF THE ARMY
US ARMY INDUSTRIAL BASE ENGINEERING ACTIVITY
ROCK ISLAND, ILLINOIS 61299-7260

REPLY TO
ATTENTION OF:

22 APR 1985

AMXIB-MT

SUBJECT: Manufacturing Methods and Technology (MMT) Program Project Execution Report, Second Half CY84

SEE DISTRIBUTION

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

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

3. The submission of status reports is required by AR 700-90 to be made to IBEA within 2-1/2 months after the reporting period. For this document, that date was 15 March 1985.

4. Persons who are interested in the details of an individual project should contact the Manufacturing Technology representative at the SUBMACOM. A list of those representatives is included in Appendix IV to this report. The Project Officer for this task is Debbie O'Connor, AUTOVON 793-3682.

FOR THE DIRECTOR:

JAMES W. CARSTENS
Chief, Manufacturing Technology Division

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 516 active projects which have a total authorized cost of $265.2 million. Total MMT program statistics, as well as the summaries of the active projects are also included. The report is compiled, edited, and published for HQ, AMC by the Manufacturing Technology Division of the Army Industrial Base Engineering Activity (IBEA) in accordance with AR 700-90, paragraph 3-4j(1).

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

The report is composed of three major sections:

a. Projects Added 2nd Half, CY84 - A list divided by organization of all projects funded during the second half of CY84. Included is a narrative of the problem for each project.

b. Final Status Reports Received During 2nd Half, CY84 - A list divided by organization of all projects for which final status reports were received during the second half of CY84. Included is a narrative of the final status for each project.

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

Status Report Submissions

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

STATUS REPORT (RCS DRCMT 301) SUBMISSIONS

COMMAND	*301 REPORTS REQUIRED	*301 REPORTS SUBMITTED	NUMBER AND (%) OF DELINQUENT 301 REPORTS		NUMBER OF FINAL 301 REPORTS	NUMBER OF TECH RPTS SUBMITTED W/FINAL STATUS REPORTS	NUMBER AND (%) OF DELINQUENT TECHNICAL REPORTS	
AMETA	8	8	0	0%	1	N/A	N/A	
DESCOM	8	8	0	0%	2	0	2	100%
ERADCOM	34	31	3	9%	9	4	5	56%
TMDE	4	4	0	0%	1	N/A	N/A	
AMMRC	6	6	0	0%	0	0	0	0%
AVSCOM	49	36	13	27%	8	2	6	75%
CECOM	13	13	0	0%	2	2	0	0%
MICOM	19	18	1	5%	8	4	4	50%
TACOM	52	52	0	0%	11	9	2	18%
AMCCOM (AMMO)	143	135	8	6%	28	10	18	64%
AMCCOM (WPNS)	111	108	3	3%	16	1	15	94%
TROSCOM	3	3	0	0%	1	1	0	0%
TOTAL	450	422	28	6%	87	33	52	60%

Figure 1

* Does not include FY85 projects which were recently funded and which did not require a status report.

**Delinquency rate reflects a 1 week extension of the cutoff date. Actual delinquency as of the regular cutoff date was 203 reports or 45%.

According to this figure, there was a 6% delinquency in receipt of status reports, or 28 reports not submitted by the cutoff date.

Accuracy of MMT summary information for management depends on a complete submission of all the project status reports for each Command. Any delinquency creates a void in the information presented in the compiled report. Therefore, steps are taken to remind the Commands of the submission of these reports. In December 1984, a call letter was mailed out to each SUBMACOM. Enclosed with this letter was a computerized listing of the projects for which a status report was required for this reporting period. Also, phone calls were made on February 21st to those commands whose submission had not yet been received. Even with the reminders, the general trend has been that more and more of the reports are submitted later and later. This is evident by an actual delinquency rate of 45%, which was reduced to 6% by extending the cutoff date one week. This is a substantial improvement over the previous period's delinquency rate of 65% (or 49% with a one week extension), which was the largest delinquency rate ever experienced. Delinquency and timeliness are areas that must be improved in order to insure a useful review of the progression of the MMT Program.

Relative to the second area of concern, there has always been a requirement that a technical report be prepared for each project (i.e., each fiscal year of funding). The technical report is an accepted vehicle, and in some cases the only vehicle, for technology transfer. In May 1981, a letter from the Directorate of Manufacturing Technology reinforced the requirement for technical reports. Of the 43 final status reports submitted during the previous reporting period, 20 of them, or 47% did not have technical reports included. For this period, as noted in Figure 1, 87 final status reports were received with 54 of them, or 62% having a delinquent technical report. This increase in technical report delinquency, to a certain extent, is a reflection of the fact that 25% of the projects which were closed out were funded with R&D funds (FY83 and later). The significance of R&D is that each fiscal year of funding does not necessarily result in a deliverable for which a technical report is easily developed. In many cases, it is viewed and executed as a level of effort with technical report documentation developed at whatever point it is technically reasonable to do so, rather than automatically at the end of the expenditure of each FY of funding. Currently, attempts are being made to formulate a technical report policy which is sensitive to fiscal year level of effort, yet responsive to the need for tech transfer documentation prior to the overall completion of extended work efforts. In addition, future issues of this document which address delinquent technical reports will likewise use a different basis for calculation in order to reflect the change in the "normal" way of doing MMT business resulting from the R&D funding. The 87 projects for which final status reports were received during this period can be found in a separate section on page 37 where the final work status is given for each project.

Program Summary

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

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

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

For FY83 through FY85 the conversion from the Procurement Account to the R&D account will result in some administrative changes. An MMT "project" will, under R&D parlance, be considered a "task". Also, to accommodate the R&D obligational goals, these yearly funded tasks will likely become level of effort work rather than discrete, stand alone work units which result in end products whose technical transfer could be effected. Multi-year funding will probably become more prevalent in leading to the completion of an implementable work "effort".

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

The following three charts (Figures 2-4) summarize MMT project reporting and funding status for the 2nd Half of CY84. These summaries include data from the major Army subcommands (SUBMACOM) that have active projects and the AMMRC and AMETA sponsored projects. Cumulative figures pertaining to project distribution and expenditures of funds on contract and in-house are provided. Projects that were closed out during the

reporting period are not included in the data used for these summaries. On the following three charts, comparisons are made between parallel reporting periods (2nd half of CY83 and 2nd half of CY84) in order to observe the project number and funding changes that occur within each Command and within the total program.

A summary of the MMT Program (Figure 2) indicates that the number of active projects has increased by 35% and the funds have increased by 31% in comparison to the 2nd half of CY83 even though more projects were closed out this period (87) than in the 2nd half of CY83 (65). This significant increase is due to two reasons: 1) the bulk of the FY84 program was funded after January 1984 and therefore not included in the 2nd

MMT PROGRAM SUMMARY

Organization	Number of Projects			Funding Status		
	2nd Half CY83	2nd Half CY84	Percent Change	2nd Half CY83	2nd Half CY84	Percent Change
AMETA/DESCOM	16	16	0%	$ 5,818,000	$ 8,933,600	54%
ERADCOM	35	44	26%	21,653,000	25,861,800	19%
TMDE	3	4	33%	1,446,000	1,937,000	34%
AMMRC	4	8	100%	14,488,700	23,772,300	64%
TECOM	3	5	67%	1,934,000	3,546,000	83%
AVSCOM	33	61	85%	25,038,900	23,858,300	-5%
CECOM	11	19	73%	9,222,800	13,476,500	46%
MICOM	24	22	-8%	12,645,000	11,474,000	-9%
TACOM	53	53	0%	31,134,000	36,223,900	16%
AMCCOM (Ammo)	111	160	44%	65,513,000	98,163,500	50%
AMCCOM (Weapons)	86	121	41%	23,022,600	29,598,100	29%
TROSCOM	4	3	-25%	1,887,000	2,910,000	54%
TOTAL	383	516	35%	$213,803,000	$279.755,000	31%

Figure 2

half CY83 figure whereas the bulk of the FY85 program was funded before January 1985 and is included in the 2nd half CY84 figure, and 2) the 2nd half CY83 figure reflected an FY83 program which had a severe budget cut (from a normal $80 million down to $39 million) and this period has included in it two fiscal years (FY84 and FY85) of normally funded programs, thus reflecting the increase in the number of active projects.

Most of the Commands' active program increased in numbers with AMCCOM (Ammo) showing the largest increase in both number of projects and dollar value. There were only two Commands that decreased, AVSCOM and MICOM, with each decreasing $1.2 million. It can be noted that AVSCOM's dollar decrease is coupled with a significant increase in the number of projects. This apparent dichotomy is as a result of the close-out one high dollar project valued at $3 million and the fact that the FY84 and FY85 programs at AVSCOM, while being substantially below their FY81 and FY82 values, still had roughly the same number of projects funded per year.

A breakout of the active projects by fiscal year is shown in Figure 3. Over the past few years there has been a continued emphasis on closing out older projects. Currently, data is provided to AMC every quarter listing the active projects funded in FY80 and prior to monitor for completion. The success of this AMC follow-up is shown by comparing the fiscal years 76-80 for the 2nd half CY83 with the current period. A year ago, there were 65 active projects for these fiscal years. There are only 35 projects for these years reported during the 2nd half CY84. This is a 46% reduction in older projects. In addition, the active FY81 and FY82 projects were reduced by 37% during the same period.

Figure 4 indicates at what rate the project funds are being expended and by whom. Over the past three years, the active MMT program has shown an increasing contractor participation. For the 2nd half of CY83, the contractor and in-house figures were $135 million vs. $78 million, or 63% contractor involvement. For the 2nd half of CY84, these same respective values are $149 million vs. $131 million, or 53% contractor involvement. This data might portray the contractor involvement as decreasing, however, much of the new FY84 program was not funded until after the 2nd CY83 period whereas most of the FY85 program was funded during the 2nd CY84 period. Therefore, the current period reflects many new projects for which there has not been enough time to let a contract; whereas the comparison period only had projects which had already been funded for six months or more, and thus had a greater chance that contracts were let. Figure 4 shows that compared to the same period last year, contractor expenditures have stayed approximately the same, and in-house expenditures have fallen (41% vs. 58%). This decrease can again be related to the fact that the current period includes many more newly funded projects for which time has not permitted expenditures of funds. The 28 delinquent projects also have an impact on this chart. There probably has been additional in-house and contract funds expended on these 28 projects, which because of the report delinquency, were not reported to IBEA.

ACTIVE PROJECTS BY FISCAL YEAR

ORGANIZATION	76	7T	77	78	79	80	81	82	83	84	85	TOTAL
AMETA/DESCOM		1		1	1	1	2	4		3	3	16
ERADCOM					2	2	4	4	3	10	19	44
TMDE								1	1	1	1	4
AMMRC						1	1	1	1	2	2	8
TECOM							1	1	1	1	1	5
AVSCOM							4	10	4	23	20	61
CECOM						1	4	2	2	2	8	19
MICOM							1	1	2	7	11	22
TACOM			1		1	2	6	12	13	6	12	53
AMCCOM (AMMO)	1		1	1	4	4	13	29	17	45	45	160
AMCCOM (WEAPONS)	1				2	7	13	28	15	29	26	121
TROSCOM							1			1	1	3
TOTAL	2	1	2	2	10	18	50	93	59	130	149	516

2ND CY83 TOTAL	2	1	5	6	18	33	79	150	89	0	0	383

Figure 3

PROGRAM FUNDING EXPENDITURES
(MILLIONS)

ZATION	NO. OF PROJECTS	AUTHORIZED FUNDING	ACTUAL CONTRACTORS* AMOUNT	EXPENDED		REMAINING* (IN-HOUSE + PLANNED CONTRACT) AMOUNT	EXPENDED	
'DESCOM	16	$ 8.9	$ 5.3	$ 2.7	(51%)	$ 3.6	$ 0.5	(14%)
)M	44	25.9	17.7	13.7	(77%)	8.2	1.5	(18%)
	4	1.9	0.7	0.6	(86%)	1.3	0.9	(69%)
	8	23.8	8.9	0.8	(9%)	14.9	9.9	(66%)
	5	3.5	0	0	(0%)	3.5	2.7	(77%)
M	61	23.9	13.3	8.2	(61%)	10.5	2.3	(21%)
	19	13.5	10.7	7.3	(68%)	2.7	0.5	(19%)
	22	11.5	5.7	4.3	(74%)	5.8	0.8	(14%)
	53	36.2	21.3	13.9	(65%)	14.9	10.2	(68%)
M (AMMO)	160	98.2	53.1	35.3	(66%)	45.1	17.1	(37%)
M (WEAPONS)	121	29.6	9.2	5.8	(63%)	20.4	7.2	(35%)
)M	3	2.9	2.7	1.1	(41%)	0.2	0.1	(50%)
	516	$ 279.8	$ 148.6	$ 93.7	(63%)	$ 131.1	$ 53.7	(41%)
Y83	383	$ 213.6	$ 135.3	$ 88.7	(65%)	$ 78.3	$ 45.8	(58%)

Figure 4

gures rounded to one decimal place.

PROJECTS ADDED IN 2ND HALF, CY84
(CONTINUED)

85 6057
ABRAMS M1 COMBAT VEHICLE

MATERIALS AND MANUFACTURING PROCESSES EMPLOYED IN THE MFG OF THE M1 CAN BE IMPROVED BY INCORPORATING NEW TECHNOLOGIES TO THE CURRENT SYSTEM. THIS WILL ENABLE THE M1 TO BE PRODUCED MORE ECONOMICALLY.

84 6059
M2 AND M3 FIGHTING VEHICLE SYSTEM

MATERIALS AND MANUFACTURING PROCESSES EMPLOYED IN THE MFG OF THE FVS CAN BE IMPROVED BY INCORPORATING NEW TECHNOLOGIES TO THE CURRENT SYSTEM. THIS WILL ENABLE THE FVS TO BE MANUFACTURED MORE ECONOMICALLY.

85 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.

85 6090
TEAD DEPOT ANALYSIS OF RESOURCES AND TECHNOLOGY (DART)

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

85 6095
ABRAMS TRANSMISSION PRODUCTIVITY IMPROVEMENTS PHASE III

A NUMBER OF TECHNOLOGICAL AREAS HAVE BEEN IDENTIFIED WHICH CAN BE APPLIED AS COST REDUCING MEASURES OR AS A MEANS OF IMPROVING THE MANUFACTURE COST OF THE M1 ABRAM TRANSMISSION.

85 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.

PROJECTS ADDED IN 2ND HALF, CY84
(CONTINUED)

TACOM

4 '85 4001
MFG FOR CORROSION PREVENTION IN TACTICAL VEHICLES

CURRENTLY THE ARMY HAS SEVERE CORROSION PROBLEMS WITH ITS TACTICAL TRUCK FLEET. ACHIEVING CORROSION RESISTANCE THROUGH THE APPLICATION OF RUSTPROOFING COMPOUNDS CONTRADICTS THE NBC REQUIREMENT FOR VEHICLES WITH CHEMICAL AGENT RESISTANT COATINGS.

4 '85 4008
COMPOSITE DRIVE SHAFTS

A LARGE TRUCK DRIVE SHAFT NEEDS A CENTER BEARING FOR SUPPORT. THE BEARING IS EXPENSIVE AND MUCH MACHINING ON THE SHAFT IS PERFORMED TO INSURE PROPER FIT AND FUNCTION. A COMPOSITE SHAFT WOULD END THESE PROBLEMS BUT NO RELIABLE MASS PDN PROCESS EXISTS.

4 84 4042
FLEXIBLE MANUFACTURING TECHNOLOGY INTEGRATION

FIXTURING OF PARTS IS A MAJOR PROBLEM IN MANUFACTURING. FIXTURE DESIGN IS MORE ART THAN SCIENCE AND IT IS OFTEN THE CASE THAT MULTIPLE FIXTURES ARE REQUIRED TO PRODUCE A PART. IN A FMS ENVIRONMENT PROBLEMS ARE COMPOUNDED.

4 '85 5053
ADIABATIC DIESEL ENGINE COMPONENTS (PHASE IV)

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.

4 '85 5091
HEAVY ALUMINUM PLATE FABRICATION

MANY COMBAT AND TACTICAL VEHICLE HULLS AND THEIR COMPONENTS ARE FABRICATED FROM HEAVY ALUMINUM PLATE. CUTTING THIS HEAVY ALUMINUM PLATE TO SPECIFIED CONTOURS AND WELDING THE PIECES TOGETHER REQUIRES A GREAT DEAL OF MANUAL LABOR.

PROJECTS ADDED IN 2ND HALF, CY84
(CONTINUED)

3 85 1131
MMT FOR INTEGRATED 94 GHZ SUBMUNITION TRANSCEIVER

THE TRANSCEIVER IS VERY EXPENSIVE DUE TO THE LABOR REQUIRED TO MATCH, ALIGN AND TEST COMPONENTS AND TO INTEGRATE THESE COMPONENTS INTO A TRANSCEIVER WHICH HAS THE REQUIRED PERFORMANCE.

3 85 1134
RF/LASER HARDENING OF DOMES FOR DUAL MODE SYSTEMS

CURRENT MISSILE DOMES ARE NOT HARDENED TO RFI AND LASER THREATS WHILE RETAINING THE ABILITY TO OPERATE IN SPECIFIC SPECTRAL BANDS.

3 85 1144
ELECTROFORMED ASPHERIC METAL MIRROR

A NEW R+D PROCESS IS AVAILABLE TO FABRICATE PRECISION METALLIC MIRRORS. THIS PROCESS INCORPORATES THE USE OF PARECISION MANDRELS WHICH ARE DIFFICULT TO MANUFACTURE. MANY MANDRELS ARE REQUIRED FOR HIGH RATE PRODUCTION.

3 85 1147
OPTICAL FIBER WIND

THE WINDING OF A FIBER ON A PAY-OUT BOBBIN IS A COSTLY, PRECISION TASK. THIS IS CURRENTLY NOT AVAILABLE AS A HIGH-SPEED PRODUCTION PROCESS FOR THE DELICATE FIBER OPTIC CABLE.

3 85 1148
MILLIMETER WAVE MONOLITHIC/INTEGRATION RECEIVER

NO PRODUCTION CAPABILITY CURRENTLY EXISTS FOR GAAS MILLIMETER WAVE MONOLITHIC/INTEGRATED RECEIVERS.

3 85 1150
LITHIUM NIOBATE LASER Q-SWITCHES

LITHIUM NIOBATE CRYSTALS + CRYSTAL ANTIREFLECTIVE COATINGS CURRENTLY AVAILABLE ARE INADEQUATE FOR OPTICAL Q SWITCH APPLICATION IN ND/YAG LASER DESIGNATORS + RANGEFINDERS.

3 84 2001
TAB/GLASS ENCAPSULATED INTEGRATED CIRCUITS

TAPE MOUNTED, PASSIVATED IC CHIP POLYMER ENCAPSULATION CAN NOW BE PERFORMED ONLY BY TEDIOUS LABORATORY TYPE METHODS.

2 '85 9290
MMT AUTOMATIC MICROWAVE SEMICONDUCTOR DEVICE TESTING

PRESENT PRODUCTION TESTING METHODS FOR HIGH FREQUENCY DEVICES ARE INADEQUATE. DEVICE CHARACTERIZATION IS SLOW AND EXPENSIVE, AND IS MOSTLY DONE BY HAND. SMALL SIGNAL READINGS CAN BE TAKEN BUT NOT LARGE SIGNAL READINGS.

MICOM

3 '85 1066
SEMIADDITIVE SINGLE AND MULTILAYER CIRCUITRY

THICK FILM CIRCUITRY USES THE SCREEN AND FIRE PROCESS ON CERAMIC SUBSTRATES. A SEMIADDITIVE FINE-LINE PROCESS, ELECTROLESS COPPER PLATING, USED ON FIBERGLASS AND CERAMIC SUBSTRATES WILL PROVIDE BETTER FINE-LINE AND A COST REDUCTION.

3 85 1089
INTEGRAL ROCKET MOTOR COMPOSITE ATTACHMENTS

CURRENT FILAMENT WOUND COMPOSITE ROCKET MOTOR CASES REQUIRE FORGED METAL POLE PIECES, NOZZLE CLOSURE ATTACHMENT RINGS, AND OTHER ATTACHMENT RINGS. THESE COMPONENTS ARE EXPENSIVE, AND REQUIRE LONG LEAD TIME PROCUREMENT.

3 '85 1095
AUTOMATIC SEALING OF HYBRID PACKAGES (CAM)

HYBRID CIRCUIT ASSEMBLIES FOR MILITARY USE REQUIRE HERMATIC SEALING WHICH IS ACCOMPLISHED BY SOLDERING OR WELDING. BOTH TECHNIQUES REQUIRE AN OPERATOR, INVOLVING LABOR INTENSIVE HANDLING AND SET UP ERRORS.

3 '85 1120
DETECTOR GRADE CADMIUM SULFIDE (CDS)

CURRENTLY AVAILABLE PROCESSES FOR PRODUCING CADMIUM SULFIDE CRYSTALS OFTEN RESULT IN SMALL BOULE SIZES THAT LOSE CRYSTALLINITY, LARGE RESISTIVITY VARIATIONS, AND HIGH DENSITY OF CRYSTALINE FLAWS.

3 '85 1124
IMPROVED MFG PROCESSES FOR SCANNING FOCAL PLANE SENSOR ASSY

THERE IS NO PRODUCTION METHOD FOR MAKING A SCANNING FOCAL PLANE ARRAY FOR SEEKERS THAT INCLUDES THE SIGNAL PROCESSING AND DEWAR ASSEMBLY. PRESENTLY, UNITS ARE HAND-MADE WITH ATTENDANT HIGH COSTS. LONGER LIFE DEWARS ARE NEEDED.

PROJECTS ADDED IN 2ND HALF, CY84
(CONTINUED)

2 85 3090
GAINASP LIGHT EMITTING DIODE PACKAGING

THE PRESENT METHOD OF FABRICATION IS LOW VOLUME AND LABOR INTENSIVE. LEDS ADAPTABLE TO MILITARY SYSTEMS ARE AVAILABLE BUT INDUSTRY WILL NOT DEVELOP WITH ITS OWN FUNDS BECAUSE OF LIMITED PRODUCTION PROCUREMENT.

2 85 3094
COMMUNICATIONS TECHNOLOGY TECHMOD FOR JTIDS

COMMUNICATIONS EQUIPMENT IS MANUFACTURED USING LABOR INTENSIVE, LOW VOLUME PROCESSES. MACHINES ARE OLD AND UNAUTOMATED. NEW METHODS, PROCESSES AND EQUIPMENT ARE NEEDED.

2 85 3108
CONTROL OF GAAS BOULE DIAMETER

THE MANUAL CONTROL OF LEC GAAS SINGLE CRYSTAL BOULE GROWTH RESULTS IN WIDE BOULE DIAMETER VARIATIONS, WASTED MATERIAL, WASTED UNIFORMITY GRINDING LABOR AND IS A SOURCE OF DEFECTS.

2 85 3111
MMT AUTOMATIC MATCHING OF IMPEDANCE

PRESENT METHODS FOR IMPEDANCE MATCHING ARE LABOR INTENSIVE. TECHNIQUES FOR AUTOMATIC ADJUSTMENT AND MATCHING INTERFACE CIRCUIT IMPEDANCES WILL BE ESTABLISHED.

2 85 3139
AUTOMATED INTEROVEN TRANSFER OF GLASS PREFORMS

DEWAR FABRICATION REQUIRES MUCH HAND LABOR AND MOVING MATERIALS FROM PROCESS TO PROCESS CAN INTRODUCE CONTAMINATION AND PRODUCT NONUNIFORMITIES.

2 85 9289
AUTOTEST OF MICROWAVE DEVICE WAFERS (CAM)

THE NEED TO WAIT UNTIL PACKAGING IS COMPLETE BEFORE TESTING MICROWAVE DEVICES (DIODES, TRANSISTORS) RUNS UP THE COST BECAUSE PACKAGING COST IS APPRECIABLE. BUT TESTING OF DEVVICE CHIPS CANNOT NOW BE DONE.

PROJECTS ADDED IN 2ND HALF, CY84
(CONTINUED)

1 '85 7473
FIBER REINFURCED THERMOPLASTIC STRUCTURES

CURRENT AIRFRAME SECONDARY STRUCTURES ARE CONSTRUCTED FROM SHEET METAL OR THERMOSETTING COMPOSITES. SHEET METAL CONSTRUCTION REQUIRES MANY DETAIL PARTS AND LABOR, AND THERMOSETTING COMPOSITES REQUIRES EXPENSIVE STORAGE, FORMING AND CURING STEPS.

1 85 7474
SINGLE CURE TAIL ROTOR

THE CURRENT METHOD OF CURING COMPOSITE TAIL ROTOR BLADES IS TO PRECURE EACH MAJOR DETAIL SEPARATELY AND THEN BOND THEM TOGETHER AS A FINAL ASSEMBLY. THIS APPROACH IS NECESSARY IN ORDER TO PROVIDE A STABLE ELEMENT FOR FORMING AND HOLDING NOMEX CORE.

1 '85 7535
AUTOMATED PRECISION GRINDING OF SPUR GEARS BY CNC

THE CURRENT MFG METHOD FOR AIRCRAFT SPUR/HELICAL GEARS IS LABOR INTENSIVE IN FINAL GRINDING THE GEAR TEETH, REQUIRING SEVERAL GRINDING CYCLES INTERSPERSED WITH IN PROCESS INSPECTION FOLLOWED BY 100 PERCENT FINAL INSPECTION.

1 '85 7549
ECM OF T700 COMPRESSOR BLISKS

BLISK AIRFOILS ARE CURRENTLY ROUGH + FINISHED MACHINED WITH CONSIDERABLE PRODUCTION TIME SPENT IN ADDITION FOLLOWED BY HAND-BENCHING.

7 84 8198
T-700 TURBINE ENGINE MFG PRODUCTIVITY IMPROVEMENT

INITIAL INVESTIGATION GE PLANTS INDICATE ADVANCED TECHNOLOGY AND COST IMPROVEMENT CONCEPTS CAN BE APPLIED TO THE MANUFACTURING PROCESSES, EQUIPMENT AND SUPPORT SYSTEMS TO REDUCE COST AND IMPROVE PRODUCTIVITY.

CECOM

2 85 3008
INCREASE PRODUCIBILITY OF VARACTORS + PIN DIODES (CAM)

PRESENTLY AVAILABLE VARACTORS AND PIN DIODES MADE BY SILICON DIODE TECHNOLOGY ARE EXPENSIVE. THE IR PRODUCTION TECHNIQUES ARE VERY LABOR INTENSIVE, YIELDS ARE LOW, AND UNIFORMITY IS POOR. MATCHING REQUIRES EXTENSIVE TESTING.

PROJECTS ADDED IN 2ND HALF, CY84
(CONTINUED)

1 '35 7453
CERAMIC-FREE ATOMIZATION OF SUPERALLOY POWDER

CERAMIC CONTENT IN SUPERALLOY POWDERS USED FOR TURBINE COMPONENTS LIMITS THE BENEFITS OF POWDER METALLURGY. GAS ATOMIZATION REPRESENTS A HIGH VOLUME, LOW COST APPROACH BUT IT HAS NOT PREVENTED CERAMIC ADDITIONS TO THE POWDER.

1 84 7456
ADVANCED FUSELAGE TOOLING

HIGH COST METAL TOOLING CONCEPTS OR EXPENSIVE AUTOCLAVE CURING APPROCHES HAVE BEEN USED WHICH RESULT IN EXTENDED CURE CYCLES AND POOR ENERGY CONSERVATION.

1 '85 7456
LOW COST TOOLING FOR AIRFRAME COMPONENTS

HIGH COST METAL TOOLING CONCEPTS OR EXPENSIVE AUTOCLAVE CURING APPROCHES HAVE BEEN USED WHICH RESULT IN EXTENDED CURE CYCLES AND POOR ENERGY CONSERVATION.

1 85 7465
FABRICATION TECHNIQUES FOR ADVANCED COMPOSITE SENSOR

THE CURRENT PROTOTYPE SENSOR SUPPORT STRUCTURE IS COMPOSED OF BERYLLIUM WHICH IS TOXIC, EXPENSIVE AND SOLE SOURCE SUPPLIED.

1 '85 7471
PROCESS CONTROL SYSTEM FOR N/C AND CNC MACHINES

PRESENT PROCESS CONTROL SYSTEMS FOR NC AND CNC MACHINES DO NOT INCLUDE REAL-TIME MONITORING AND FEEDBACK COMPENSATION.

1 '84 7472
SURFACE HARDENING GEARS BY LASER

HELICOPTER TYPE GEARS HAVE BEEN SUCCESSFULLY SURFACE HARDENED BY LASER. THE PROCESS NEEDS TO BE PRODUCTIONIZED AND EXPANDED FOR USE ON GEARS SUSCEPTIBLE TO HEAVY LOADS IN ORDER TO OBTAIN HIGHEST COST BENEFITS.

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PROJECTS ADDED IN 2ND HALF, CY84
(CONTINUED)

1 85 7377
SPF/DB STATIC STRUCTURE F/TURBINE ENGINES

TITANIUM STATIC COMPONENTS OF TURBINE ENGINES USE FORGINGS OR CASTINGS WELDED TO SHEET STOCK AND MACHINED ALL OVER. THIS PROCESS IS TOO COSTLY AND HAS POOR UTILIZATION OF CRITICAL MATERIAL.

1 85 7378
STAINLESS STEEL GEARBOX HOUSING

HELICOPTER TRANSMISSION HOUSINGS ARE MADE FROM MAGNESIUM CASTINGS. THEY ARE COSTLY AND HAVE HIGH REPLACEMENT RATES AT OVERHAUL DUE TO CRACKS AND CORROSION.

1 85 7383
MOLDED HARDWARE FOR TWO AXIS DRY GYROS

THE PRIMARY COST DRIVER IN THE MANUFACTURE OF CURRENT INERTIAL GYROSCOPES IS THE MACHINING OF SMALL PRECISION COMPLEX METAL PARTS. THE MACHINED PARTS ARE HIGH COST AND ALSO REPRESENT PRODUCTION LEAD TIME PROBLEMS.

1 85 7384
COMPOSITE ENGINE GEARBOX HOUSING

CONVENTIONAL GEAR HOUSINGS CONSISTING OF MAGNESIUM EXHIBIT LOW MODULUS, LOW FATIGUE STRENGTH, AND SUSCEPTABILITY TO CORROSION.

1 85 7389
PROD OF ALUMINUM AIRFRAME COMPONENTS (SUPERPLASTIC FORMING)

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

1 85 7416
ADVANCED TURBINE AIRFOIL CASTINGS FOR LONG LIFE

TURBINE AIRFOLS ARE DESIGNED TO A STRESS RUPTURE LIMIT WHETHER COOLED OR UNCOOLED. THIS LIMIT IS LOW DUE TO EQUIAXED CAST SUPERALLOY MATERIALS CURRENTLY USED AND THEIR INHERENT GRAIN BOUNDARY LIMITATIONS.

1 85 7417
LOW COST DISKS BY CONSOLIDATED ATMOSPHERIC PRESSURE

POWDER METAL DISKS FORM A SIGNIFICANT PART OF THE ENGINE COST DUE TO EXPENSIVE TOOLING/DIE REQUIREMENTS AND HIGH PRESSURE CONSOLIDATION EXPENSE.

PROJECTS ADDED IN 2ND HALF, CY84
(CONTINUED)

M 85 6390
PROGRAM IMPLEMENTATION + 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.

TECOM

C 85 5071
TECOM PRODUCTION TEST METHODOLOGY ENGRS METHODS

ARTILLERY, VEHICLE AND ELECTRONIC CONVENTIONAL TEST CAPABILITIES NEED TO BE UPGRADED TO PROVIDE MORE TIMELY ACCURATE TEST DATA FOR THE TEST AND EVALUATION PROCESS.

AVSCOM

1 85 7187
POWDER METALLURGY GEARS FOR HELICOPTER APPLICATION

PRODUCE GEARS FOR TURBINE ENGINES AT A LOWER COST.

1 85 7300
IMPROVED LOW CYCLE FATIGUE CAST ROTORS

INTEGRALLY CAST TURBINE ENGINE ROTORS HAVE BEEN SHOWN TO BE COST EFFECTIVE. HOWEVER, INVESTMENT CASTING RESULTS IN LARGE GRAIN SIZES IN THE DISK REGION AND THIS REDUCES FATIGUE LIFE COMPARED TO WROUGHT MATERIAL.

1 85 7302
PROD OF BORIDE COATED LONG LIFE TOOLS

AIRFRAME COMPOSITE COMPONENTS REQUIRE EXTENSIVE MACHINING WHICH IS EXPENSIVE IN TERMS OF LABOR HOURS REQUIRED AND TOOL COSTS.

1 85 7344
RIM MOLDING OF HELICOPTER COMPONENTS

PRESENT METHODS OF FABRICATING AIRCRAFT SECONDARY STRUCTURES (ESPECIALLY ACCESS DOORS) INVOLVE EXCESSIVE LABOR AND EXPENSIVE MATERIALS. STRUCTURES MADE FROM FIBER REINFORCED SANDWICH PANELS AND/OR FORMED SHEET METAL OFTEN REQUIRE COMPLEX ASSEMBLY.

F '85 5273
FIRST LEVEL PACKAGING AND INTERCONNECTIONS (VHSIC)

NEITHER THE GRID ARRAY CHIP CARRIER NOR THE PERIMETER CHIP CARRIER IS CURRENTLY VHSIC COMPATIBLE. THERE IS NO ADVANCED TECHNIQUES FOR THEIR MANUFACTURE.

F '85 5274
MULTICHIP PACKAGES (VHSIC)

MANUFACTURING FACILITIES ARE EXTREMELY LIMITED FOR THE PRODUCTION OF VHSIC COMPATIBLE MULTICHIP CERAMIC PACKAGES.

F '84 7000
LASER POLARIZERS

US SOURCES HAVE NOT BEEN ABLE TO CONTROL IMPORTANT PARAMETERS IN MANUFACTURING HIGH POWER DENSITY LASER POLARIZERS. THESE POLARIZERS MAKE THE SMITTED ENERGY FROM A LASER TARGET DESIGNATOR UNIDIRECTIONAL.

F 85 7000
LASER POLARIZERS

US SOURCES HAVE NOT BEEN ABLE TO CONTROL IMPORTANT PARAMETERS IN MANUFACTURING HIGH POWER DENSITY LASER POLARIZERS. THESE POLARIZERS MAKE THE SMITTED ENERGY FROM A LASER TARGET DESIGNATOR UNIDIRECTIONAL.

TMDE

K 85 3115
ENGINEERING FOR METROLOGY AND CALIBRATION

MEASUREMENT SCIENCES OR METROLOGY MUST BE CONTINUALLY ADVANCED IN RELEVANT TECHNOLOGY AREAS TO KEEP PACE WITH MANY ARMY PROGRAMS.

AMMRC

M 85 6350
MATERIALS TESTING TECHNOLOGY (MTT)

DESTRUCTIVE AND CERTAIN CONVENTIONAL NON-DESTRUCTIVE TESTING TECHNIQUES ARE RESPECTIVELY UNSUITED AND INADEQUATE OR HARD TO BE ADAPTED TO ON-LINE PRODUCTION TESTING USAGE.

PROJECTS ADDED IN 2ND HALF, CY84
(CONTINUED)

H 85 5180
LOW COST DEWAR + INTERCONNECT ASSEMBLY - PHASE II

THE GOLD WIRE BONDED CONNECTIONS ARE MADE BY HAND WHICH IS A TEDIOUS AND EXPENSIVE PROCESS. THE GLASS STEM IS HAND FASHIONED AND IS PRONE TO DAMAGE.

H 85 5187
TUNABLE MILLIMETER WAVE INP GUNN SOURCES

TUNABLE MILLIMETER WAVE INP GUNN SOURCES ARE CURRENTLY HAND MADE IN THE LABORATORY BECAUSE THERE ARE NO PROCESSES FOR FABRICATION AND TESTING IN VOLUME.

H 85 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 85 5209
HIGH SPEED DIGITAL TO ANALOG CONVERTER

THE RANGE OF RADARS AND THE SPEED OF DIRECT WRITE ELECTRON BEAM LITHOGRAPH ARE LIMITED BY THE AVAILABILITY OF HIGH SPEED, HIGH RESOLUTION DIGITAL TO ANALOG CIRCUITS.

H 85 5248
ADVANCED WAFER IMAGING SYSTEM (AWIS)

VHSIC REQUIREMENTS FOR RESOLUTION AND INTER-LEVEL ALIGNMENT ACCURACY CANNOT BE MET WITH CURRENT WAFER PATTERNING SYSTEMS. RESOLUTION OF 1.0 MICROMETERS AND OVERLAY ALIGNMENT OF 0.1 MICROMETER ARE NEEDED.

H 85 5251
AUTOMATIC SEM WAFER INSPECTION AND METROLOGY SYSTEM

HUMAN INTERPRETATION OF SCANNING ELECTRON MICROSCOPE IMAGES OF INTEGRATED CIRCUIT PATTERNS IS LABORIOUS AND PRONE TO ERROR.

H 85 5272
TAPE AUTOMATED BONDING (TAB)

PRESENT TAB PROCESSES ARE NOT COMPATIBLE WITH VHSIC CHIP I/O COUNTS, SMALL PAD SIZES AND COMPLEXITY.

PROJECTS ADDED IN 2ND HALF, CY84
(CONTINUED)

H 85 5107
EHF SOLID STATE AMPLIFIER

TUNING AND FABRICATION OF THE AMPLIFIER MODULE, ALONG WITH SELECTION OF PROPER DIODES, PRESENTLY TAKES WEEKS, RESULTING IN LOW VOLUME CAPABILITY AND EXTREMELY HIGH COSTS.

H 85 5109
PRECISION LO-COST SURF ACOUSTIC WAVE DELAY LINES F/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 85 5111
VAPOR GROWTH FOR THIRD GENERATION PHOTOCATHODE

LIQUID EPITAXIAL GROWTH PROCESS REQUIRES- A)LARGE AND COSTLY HIGH TEMP REACTORS, B)LARGE QUANTITIES OF SATURATION MELT MATERIALS, C) COSTLY QUALITY GALLIUM ARSENIDE SUBSTRATES, D)LENGTHY OPERATION PROCESS PER SINGLE GROWTH.

H 85 5162
EXJAM BATTERY MANUFACTURING TECHNOLOGY - PHASE III

PRESENT R AND D MODELS OF UNATTENDED EXPENDABLE JAMMER RESERVE POWER SUPPLY (UEJPS) ARE HAND MADE 1 OR 2 AT A TIME. UNLESS FABRICATION/ASSEMBLY ARE PRODUCTION ENGINEERED, LABOR COSTS WILL MAKE THE BATTERY PROHIBITIVELY EXPENSIVE.

H 85 5168
AUTOMATIC RETICLE INSPECTION SYSTEM, PHASE III

THERE IS NO WAY TO CHECK TAPE-GENERATED RETICLE PATTERNS AGAINST THE COMPUTER-GENERATED MASTER TAPE. VISUAL INSPECTION OF RETICLES FOR PINHOLES OR DUST PARTICLES IS VERY DIFFICULT.

H 85 5174
AUTO SPUTTERING PROCESS CONTROL F/PRODUCING ZNO - PHASE II

GAS MIXTURE, ZNO PURITY + SPUTTERING PARAMETERS ARE MANUALLY MONITORED USING A MASS ANALYZER. CORRECTIONS IN FLOW + DEPOSITION PROCESSES ARE SLOW AND PERFORMED AFTER OCCURRENCE.

PROJECTS ADDED IN 2ND HALF, CY84

AMETA

D 85 5052
ARMY ENGRG DESIGN HANDBOOKS F/PRODUCTION SUPPORT

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

DESCOM

G 85 2002
LETTERKENNY EVAL ANALYSIS + PLANNING (LEAP) 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.

G 85 3001
POWER AND INERTIA SIMULATOR (PAISI) COMBAT VEHICLE TESTING

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

ERADCOM

F 85 3010
HYBRID MODULATOR F/PULSED IMPATT MILLIMETER WAVES SOURCE

TO ESTABLISH A MANUFACTURING CAPABILITY FOR PRODUCTION OF IMPATT DIODES WHICH ARE UNIFORM ENOUGH TO BE FIELD REPLACEABLE IN ARMY SYSTEMS.

F 85 5059
LINEAR RESONANCE COOLERS

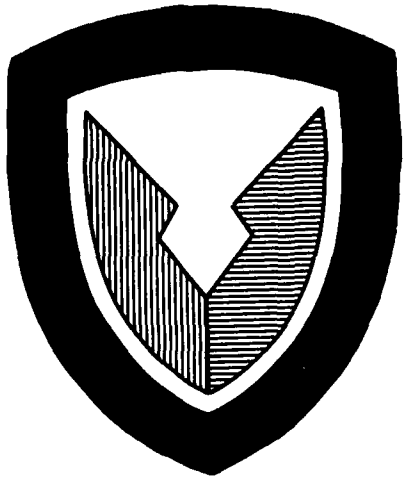
SECOND GENERATION FLIR'S WILL EMPLOY MAGNETIC SUSPENSIONS IN THE CRYOGENIC COOLERS. MAINTAINING CRITICAL SUSPENSION TOLERANCES IN PRODUCTION WILL REQUIRE DEVELOPING EXTENSIVE QUALITY CONTROL PROCEDURES.

F 85 5006
EYESAFE RANGEFINDER RECEIVER

MANUF. COSTS, VOLUME PROD. TECHNIQUES AND RELIABILITY HAVE TO BE ADDRESSED.

MMT PROGRAM

PROJECTS ADDED 2nd HALF, CY84



PROJECTS ADDED IN 2ND HALF, CY84
(CONTINUED)

4 '85 6121
CAD/CAM FOR THE BRADLEY FIGHTING VEHICLE

MANUFACTURING TECHNIQUES FOR THE BFV ARE IN NEED OF IMPROVEMENT IN THE AREA MATERIAL SELECTION, MANUFACTURING PRINCIPALS, AND QUALITY CONTROL. IN ADDITION CURRENT TECHNIQUES ARE EXTREMELY LABOR INTENSIVE.

4 '85 6123
CERAMIC TURBOCHARGER ROTOR

SMALL SILICON CARBIDE TURBOCHARGER ROTORS HAVE BEEN FABRICATED WITH A PROPRIETARY PROCESS IN INDUSTRY AND WERE SUCCESSFUL; HOWEVER, THE PROCESS CAN NOT BE APPLIED DIRECTLY TO ARMY COMPONENTS BECAUSE OF THE PROPIETARY LIMITATION AND SCALE PROBLEMS.

4 85 6125
WELD PROCESSING PLANNING AND CONTROL

PLANNING, MONITORING, AND INSPECTION OF THE WELDING PROCESS ARE EXPENSIVE, TIME CONSUMING, AND CAUSE PRODUCTION DELAYS WHEN A QUALITY PROBLEM IS SUSPECTED.

AMCCOM (AMMC)

5 '85 0904
MFG TECH FOR 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 84 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 THRUGH COMPETITION.

5 '85 0905
MANUFACTURE OF IMPREGNATED CHARCOAL

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 THRUGH COMPETITION.

PROJECTS ADDED IN 2ND HALF, CY84
(CONTINUED)

5 85 0918
MODERNIZATION OF FILTER PENETRATION EQUIPMENT

CURRENTLY, ALL PROTECTIVE PARTICULATE FILTERS ARE TESTED WITH THREE TYPES OF EQUIPMENT. THIS EQUIPMENT IS OBSOLETE, INEFFICIENT, AND UNRELIABLE.

5 85 0923
VELOCITY TRAVERSE MAPPER F/CHARCOAL FILTERS

GAS FILTERS MUST BE MONITORED DURING THE MANUFACTURING PROCESS TO ASSURE THE INTEGRITY OF THE CHARCOAL BED BEFORE ASSEMBLY.

5 85 0924
MANUFACTURING PROCESS FOR GAS MASK CANISTERS

THE CANADIAN GAS MASK CANISTER IS BEING ADAPTED TO THE US STANDARDS UNDER A MACI PROGRAM. THE CANADIANS ARE HAVING DIFFICULTY PRODUCING THE CANISTERS RESULTING IN HIGH REJECT RATE.

5 85 0925
PROTECTIVE MASK LEAKAGE TESTING

CURRENT GAS MASK TESTER DOES NOT SIMULATE THE ACTUAL FIELD USE AND IS NOT SENSITIVE ENOUGH TO DETECT SMALL LEAKS

5 85 0926
MFG TECH F/CHEMICAL AGENT ALARM, XM22

A CHEMICAL AGENT ALARM SYSTEM, XM22 IS CURRENTLY UNDER DEVELOPMENT TO PROVIDE CAPABILITY OF CHEMICAL DEFENSE. COMPLEX COMPONENTS IN THE ALARM ARE DIFFICULT TO PRODUCE AND LACK AVAILABLE HIGH PRODUCTION TECHNIQUES.

5 85 0927
COMPUTER AIDED PROCESS PLANNING FOR CB FILTERS (CAM)

ALTHOUGH AN EXTENSIVE AMOUNT OF INFORMATION ON CHEMICAL AND BIOLOGICAL GAS FILTERS (FILTER PERFORMANCE DATA, PROCESS DESIGN INTEGRITY, PRODUCIBILITY, ETC.) EXISTS, A STRUCTURED DATA BASE IS NOT AVAILABLE.

5 85 1295
MODERNIZATION OF CHARCOAL FILTER TEST EQUIPMENT

CHARCOAL FILTER TESTING EQUIPMENT NEEDED TO PROVIDE TESTING CAPABILITY FOR VARIOUS CHEMICAL AGENTS DOES NOT EXIST.

PROJECTS ADDED IN 2ND HALF, CY84
(CONTINUED)

5 85 1802
AUTOMATED OPTICAL MICROELECTRONICS INSPECTION

HYBRID FABRICATION INVOLVES CHIP PLACEMENT + CHIP + WIRE BONDING. INSPECTION IS NOT UNIFORM AMONG INSPECTORS + IS TIME CONSUMING. NEW AUTOMATIC INSPECTION PROCESS ARE NEEDED WHICH INSURE DEVICE UNIFORMITY + GUARANTEE RELIABILITY.

5 85 1805
IMPROVED PRODUCTION VIBRATION TESTS-M732 (PIP) FUZE

PROJECT WILL EXPAND THE CAPABILITY OF A 3-D VIBRATION SYSTEM BUILT UNDER MMT PROJECTS 5 79, 80, 81 3961. TEST DEFICIENCIES WILL BE ELIMINATED BY EXACT DUPLICATION OF FUZE TRI-AXIAL WAVEFORMS.

5 85 4200
TNT CRYSTALLIZER F/LARGE CALIBER MUNITIONS

TNT MELT LOADING REQUIRES AN OPTIMUM RATIO OF MOLTEN AND SOLID TNT IN THE EXPLOSIVE MIX AT THE TIME OF POUR. THE RATIO IS OBTAINED BY THE ADDITION OF FLAKE TNT TO A QUANTITY OF MOLTEN TNT BASED ON OPERATOR JUDGEMENT.

5 85 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 85 4281
CONSERVATION OF ENERGY AT ARMY AMMUNITION PLANTS

ENERGY MAY NOT BE AVAILABLE IN THE FUTURE TO MEET PRODUCTION REQUIREMENTS.

5 85 4358
AUTO LINE PROCESS INSPECT OF NEW EED (ALPINE)

INSPECTION OF BRIDGE WIRE ON ELECTRIC DETONATORS.

5 85 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.

PROJECTS ADDED IN 2ND HALF, CY84
(CONTINUED)

5 85 4449
PROCESS IMPROVEMENT FOR COMP C-4 + PBX EXPLOSIVES

THE EXISTING FACILITIES WHICH ARE COMMON TO THE MANUFACTURE OR COMP C-4 AND THE OTHER RDX COMPOSITION WOULD LIMIT THE AVAILABILITY OF THESE ITEMS BELOW THEIR MOB REQUIREMENTS.

5 85 4473
AUTOMATED LEAK DETECTION OF WP MUNITIONS

THE CURRENT METHOD OF HEATING THE WHITE PHOSPHOROUS MUNITIONS TO CHECK FOR LEAKS IS LABOR INTENSIVE AND IS NOT UNIFORM FOR ALL ROUNDS.

5 85 4510
AUTO ASSEMBLY OF ADDITIVE LINER TO TANK CARTRIDGE CASE

APPLYING ADHESIVE TO, CURLING, AND INSERTING AND POSITIONING THE LINER INSIDE THE CASE IS LABOR INTENSIVE AND SUBJECT TO POOR QUALITY AND EXCESSIVE SCRAP GENERATION.

5 85 4511
DISPOSAL OF FINAL SLUDGE FROM ACID RECOVERY OPERATIONS

SODIUM HYDROXIDE IS PRESENTLY USED TO NEUTRALIZE NITRIC ACID IN WEAK ACETIC ACID PRIOR TO ITS PRIMARY DISTILLATION AND IN THE FINAL SLUDGE TO KILL THE WASTE RDX. A BY PRODUCT OF THIS REACTION IS A LOW GRADE SODIUM NITRATE.

5 85 4531
AUTO PROD OF MULTI-BASE STICK PROPELLANT ON CABML

VARIOUS HIGH ENERGY AND LOVA GRANULAR AND STICK MULTI-BASE PROPELLANTS ARE BEING DEVELOPED. BATCH FACILITIES FOR MULTI-BASE HAVE A CONSTRAINED CAPACITY. A NEW CAMBL IS BEING BUILT BUT HAS NOT PROVEN CAPABLE OF MANUFACTURING STICK PROPELLANTS.

5 85 4534
M855 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.

PROJECTS ADDED IN 2ND HALF, CY84
(CONTINUED)

5 85 4539
AUTOMATED CARTRIDGE CASE HARDNESS MEAS + CONTROL

MANUAL MEASUREMENTS BY SAMPLING METHODS ARE INADEQUATE AND COSTLY.

5 85 4544
THIRD GENERATION DYNAGUN (GAMMA) TO SIMULATE TANK

STANDARD BALLISTIC EVALUATION TESTS ARE THE ONLY MEANS AVAILABLE FOR ASSESSING PROPELLANTS FOR HIGH PRESSURE/HIGH VELOCITY SYSTEMS SUCH AS THE 105MM AND 120MM TANK GUNS. THESE PROCEDURES ARE VERY EXPENSIVE AND TIME CONSUMING.

5 85 4545
DIGITAL IMAGE AMPLIFICATION X-RAY SYSTEM (DIAX)

EXISTING IMAGE AMPLIFICATION X-RAY DOES NOT MEET THE IMAGE QUALITY CRITERIA TO BE USED AS AN INSPECTION TOOL FOR HE MORTAR ROUNDS. FILM RADIOGRAPHY, AS CURRENTLY USED, IS LABOR INTENSIVE, TIME CONSUMING, AND SUBJECT TO HUMAN INTERPRETIVE JUDGEMENT.

5 85 4548
PYRO SAFETY ENHANCEMENT

PYROTECHNIC MIXING REQUIRES INCREASED PERSONNEL SAFETY FEATURES.

5 85 4570
IMPROVE MFG PROCESSES + TEST PROC F/ARTIL ELECT TIME FUZES

CRYSTAL DEFECTS CAN CAUSE CRYSTAL OSCILLATORS TO FAIL AT HIGH SETBACK FORCES. ALSO, VARIATIONS IN MAGNETIC PROPERTIES OF PARTS IN THE SETBACK GENERATOR CAN CAUSE LOW OUTPUT, AND EACH FUZE MODULE SHOULD BE TESTED AS IT IS BEING ASSEMBLED.

5 85 4574
IMPROVED PROCESS FOR RDX/HMX FINES MANUFACTURE

CURRENTLY THE HMX PRODUCED AT HOLSTON AAP IS MECHANICALLY GROUND TO THE REQUIRED SIZE FOR USE AS ROCKET PROPELLANT. THIS PROCESS IS INEFFICIENT AND RESULTS IN HIGHER COSTS.

5 85 4578
MOD + IMP OF THE DMSO PILOT PROCESS FOR RDX/HMX

PILOT SCALE PROCESS FOR RECRYSTALLIZATION OF RDX/HMX FROM DMSO WAS DESIGNED, PROCURED AND INSTALLED AT HAAP, INSUFFICIENT DATA OBTAINED TO YIELD OPTIMIZED OPERATING CONDITIONS.

PROJECTS ADDED IN 2ND HALF, CY84
(CONTINUED)

5 85 4584
LOADING EQUIPMENT FOR CAL .50 AMMUNITION

THE INCREASED REQUIREMENTS FOR .50 CAL AMMUNITION IS IN EXCESS OF THE CAPACITIES OF CURRENT PRODUCTION EQUIPMENT.

5 85 4612
NITRAMINE (LOVA) PROPELLANT WASTEWATERS ABATEMENT

THE INGREDIENTS (RDX-TAGN) IN NITRAMINE PROPELLANTS WERE NOT CONSIDERED IN DEVELOPING CRITERIA FOR POLLUTION ABATEMENT AT GOCO FACILITIES. NOW NITRAMINE PROPELLANTS ARE SCHEDULED FOR PRODUCTION. EFFECT OF NITRAMINE ON POLLUTION ABATEMENT UNKNOWN.

5 85 4613
METHOD F/PROCESS ANALYSIS OF RDX/HMX SLURRY

THERE IS CURRENTLY NO DIRECT METHOD FOR MEASURING RDX/HMX PROCESS STREAMS. CURRENT WET CHEMICAL METHODS ARE TIME CONSUMING AND LABOR INTENSIVE.

5 85 4615
IMPROVED SOLVENTLESS PASTE BLENDING

PASTE BLENDING AND FINAL BLENDING OF STICK PROPELLANT IS NOW REQUIRED. A MORE INTENSIVE PASTE BLEND MAY ALLOW ELIMINATION OR REDUCTION OF THE FINAL BLENDING STEP.

5 85 4623
CALCIUM CYANAMIDE PROCESS CONTROL

IN THE MFG OF NQ THE INTERMEDIATE CHEMICAL CALCIUM CYANAMIDE IS PROD CONTINUOUSLY BY REACTING RAW MATERIALS. WIDELY VARING IMPURITIES IN THE FEED HAVE NEGATIVE EFFECT ON THE KILN OPNS, SUCH AS SINTERING AND OVERPRESSURES WHICH CREATE DUST HAZARDS.

5 85 4624
AUTOMATED MFG OF MILLIMETER WAVE DIODES (CAM)

CURRENT MANUFACTURE OF GUNN, VARACTOR + MIXER DIODES IS SLOW HAND LABOR OF HIGH PAID SCIENTISTS. THESE GAAS DEVICES OPERATE AT 35 GHZ. THE FABRICATION YIELD IS VERY LOW.

5 85 4625
AUTO MFG OF SILICON IF AMPLIFIER IC (CAM)

COMMERCIAL MONOLITHIC IF AMPLIFIER ICS ARE DEFICIENT IN BAND PASS (1-50 MHZ), NOISE FIGURE (1.5 DB) AND POWER GAIN (60 DB). R+D DEVELOPED A SILICON MONOLITHIC IF AMPLIFIER BUT VOLUME MFG PROCESSES WERE NOT ESTABLISHED.

PROJECTS ADDED IN 2ND HALF, CY84
(CONTINUED)

5 '85 4626
AUTO ASSEMBLY OF MILLIMETER WAVE TRANSDUCER

PLACEMENT AND BONDING OF SMALL SEMICONDUCTOR CHIPS ONTO MICROSTRIP REQUIRES ACCURACY NOT FOUND IN TODAY?S PICK-AND-PLACE EQUIPMENT.

5 '85 4627
AUTO TESTING OF MILLIMETER WAVE TRANSDUCER

THE HAND LABOR INVOLVED IN TUNING MILLIMETER WAVE TRANSDUCERS IS EXTREMELY COSTLY.

5 '85 4633
AUTO SENSOR SYSTEMS TEST F/MMW + IR SNESOR

AT PRESENT THE MILLIMETER/IR SENSOR SYSTEM IS MANUALLY SYNCHRONIZE. THIS METHOD IS SLOW AND NOT CAPABLE OF MEETING COST REQUIREMENTS, THROUGHPUT, AND SCHEDULE GOALS.

5 85 4637
AUTO MFG OF SFF WARHEAD LINERS

CONVENTIONAL SFF LINER MACHINING AND INSPECTION TECHNIQUES REQUIRED TO ACHIEVE DESIGN TOLERANCES ARE COSTLY AND TIME CONSUMING.

5 '85 4642
CAL .50 CARTRIDGE FEEDING

CALIBER .50 CARTRIDGES HAVE TO BE FED INTO THE INSPECTION AND LINKING MACHINES BY HAND. THE OPERATION IS EXPENSIVE AND WILL NOT BE FAST ENOUGH TO MEET THE FYDP RATES AS CURRENTLY PLANNED.

5 '85 4656
NITRAMINE PROPELLANT PROCESSING

NITRAMINE CONTAINING GUN PROPELLANTS SUCH AS LOVA AND GAU-8 PROP ARE PRESENTLY PRODUCED BY A DISCONTINUOUS, MANPOWER INTENSIVE, INEFFICIENT BATCH PROCESS. PRODUCT UNIFORMITY IS DIFFICULT TO OBTAIN DUE TO IMPRECISE CONTROLS.

5 '85 4660
AUTOMATED BLENDING OF STICK PROPELLANT

MANUAL BLENDING OF STICK PROPELLANT IS LABOR AND SPACE INTENSIVE AND CANNOT SUPPORT PRODUCTION OF LARGE QUANTITIES OF STICK PROPELLANT.

5 85 4698
MULTI-FELTING + PRESSING OF COMBUSTIBLE CART CASE COMPONENTS

CURRENTLY, ALL PULP MOLDED 155MM COMBUSTIBLE CASE COMPONENTS ARE MADE ON A 'ONE PART TO ONE PRESS' BASIS. HENCE, THIS IS NOT SUITABLE FOR HIGH VOLUME PRODUCTION APPLICATIONS. THIS IS IMPORTANT BECAUSE A FACILITY PROJECT FOR THE CASE IS PLANNED SOON.

5 85 4763
MANUFACTURING PROCESS FOR AMMO

THIS PROJECT IS CLASSIFIED AS SECRET. NO FURTHER INFORMATION IS AVAILABLE.

5 84 4773
120MM COMBUSTIBLE CASE BODY REMOVAL SYSTEM

A POTENTIAL SAFETY PROBLEM CURRENTLY EXISTS IN THE COMBUSTIBLE CASE MOLDING AREA ON THE 120MM LINE. THE REMOVAL OF THE CASE BODY FROM THE MALE PRESSING MANDREL IN THIS AREA IS A HAZARDOUS STEP IN THE PRODUCTION OF THE 120MM CASE BODIES.

ARCCOM (WPNS)

6 85 7985
SMALL ARMS WPNS 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 85 8249
SHORT-CYCLE HEAT TREATMENT OF WEAPON COMPONENTS

HEAT TREATING SOAK TIMES ARE DETERMINED WITHOUT CONSIDERATION OF THE RELATIONSHIPS BETWEEN COMPOSITION, CONFIGURATION, THICKNESS, AND DETRIMENTAL EFFECTS OF AUSTENITIC GRAIN GROWTH. CONSEQUENTLY, CONSIDERABLE ENERGY IS WASTED.

6 85 8250
IMPROVED FABRICATION OF RECOIL WEAR SURFACES

PRESENTLY GRINDING AND HONING OPERATIONS ON WEAR SURFACES RESULT IN PARTICLE INCLUSIONS WHICH COME IN CONTACT HYDRAULIC FLUID AND PRODUCE HIGH RATES OF WEAR.

PROJECTS ADDED IN 2ND HALF, CY84
(CONTINUED)

6 85 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.

6 85 8305
INTEGRATED MANUFACTURING SYSTEM - IMS

MI SYSTEMS ARE APPLIED LOCALLY BUT THERE IS NO DATA MANAGEMENT SYSTEM FOR THE ENTIRE MFG ACTIVITY. THIS INCREASES COST DUE TO LONG LEAD TIMES, SCHEDULE INTERRUPTIONS AND SHORTAGES OF MACHINE AVAILABILITY, LABOR AND MATERIAL.

6 85 8323
SPRAY-AND-FUZE PROCESSING OF ARMAMENT COMPONENTS

MISMATCHED AND WORN WEAPON COMPONENTS ARE NOT ONLY COSTLY TO REPLACE BUT SHORTAGE OF STRATEGIC MATERIALS IMPACT ON THE SUPPLY AND FABRICATION OF NEW COMPONENTS.

6 85 8324
PROCESS CONTROLS FOR PIM WEAPON COMPONENTS

PRESENT METHODS OF PRODUCING WEAPON COMPONENTS IS MAINLY BY MACHINING FROM WROUGHT STOCK. THIS IS A HIGH COST METHOD WHICH PRODUCES MUCH ALLOY STEEL SCRAP.

6 85 8329
IPI - FIRE CONTROL OPTICAL DEVICES NEW PROCESS PROD TECH

PRODUCTION DELAYS AND COST OF REWORKS HAVE BEEN A GREAT LOGISTICS PROBLEM. THERE HAS BEEN A SIGNIFICANT SHORTFALL IN PRODUCTION CAPABILITY.

6 85 8370
AUTL INSP + PROCESS CONTROL OF WPNS PARTS MFG (CAM)

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.

6 85 8402
WARM FORGING FOR WEAPON COMPONENTS

EXCESSIVE ENERGY IS CONSUMED IN CONVENTIONAL FORGING. ALSO DIE LIFE IS SHORTENED BY HIGH FORGING TEMPERATURES AND BY OXIDATION.

PROJECTS ADDED IN 2ND HALF, CY84
(CONTINUED)

6 85 8416
FLEXIBLE MFG SYSTEM W/SPECIAL TOOLING - RIA

FLEXIBLE MACHINING SYSTEM (FMS) TECHNOLOGY OFFERS MANY ADVANTAGES TO PLANTS THAT MANUFACTURE PARTS ON LOW TO MID VOLUME QUANTITIES. HOWEVER, ESTABLISHING FEASIBILITY, PURCHASING, AND IMPLEMENTING FMS IS WIDE IN SCOPE AND VERY COMPLEX.

6 85 8436
QUENCH CYCLE PROFILE MEASUREMENT SYSTEM

THE QUENCH CYCLE DURING HEAT TREAT PLAYS AN IMPORTANT PART IN THE QUALITY OF GUN TUBE FORGINGS. QUENCH CRACKS HAVE BEEN OCCURING IN THE MUZZLE END OF 105 MM ROTARY FORGED GUN TUBES. THE CURRENT QUENCH CYCLE HAS LITTLE OR NO CONTROL.

6 85 8449
OPTIMAL RIFLING CONFIGURATION FOR CR PLATING

EARLY FAILURE OF CHROMIUM COATINGS IN GUN TUBES OCCURS AT THE SHARP CORNERS OF THE LAND RUN-UP. PRESENTLY NO EFFECTIVE METHOD OR TOOL IS AVAILABLE TO ELIMINATE THIS CONDITION.

6 85 8473
APPL FUSED SALT PROCESS

PRESENTLY NO FULL SCALE PRODUCTION CAPABILITY EXISTS AT WATERVLIET ARSENAL TO APPLY TANTALUM TO THE I. D. OF LARGE LINERS. THESE COATINGS MUST BE DEPOSITED FROM A FUSED SALT BATH.

6 85 8474
APPL OF REFRACTORY LINERS TO CANNON TUBES

FUTURE CANNON TUBES WILL BE SUBJECTED TO HIGHER TEMPERATURE, PRESSURE AND VELOCITY. TUBES AS NOW DESIGNED WILL WEAR OUT MUCH FASTER. PROTOTYPE EQUIPMENT TO INSTALL ADVANCED TECHNOLOGY LINERS IN TUBES NOW EXISTS.

6 85 8511
CASTING OF ANTIFRICTION METAL COMPONENTS

ANTIFRICTION METAL FOR PACKING GLANDS IN RECOIL MECHANISMS IS PRESENTLY HAND CAST. OVER 70-80 PERCENT OF THE METAL IS EXCESS + HAS TO BE MACHINED OFF AT ADDED COST.

PROJECTS ADDED IN 2ND HALF, CY84
(CONTINUED)

6 85 8544
WIRE E.D.M. MACHINING OF RIFLING BROACHES

BROACH CUTTER TEETH ARE FORMED BY ROUGH PLUNGE GRINDING USING BORAZON CBN WHEELS. FINISHING IS DONE BY FORMING STANDARD ALUMINUM OXIDE WHEELS AND GRINDING THE BROACH TEETH ON THESE WHEELS, WHICH BREAK DOWN FREQUENTLY AND REQUIRE MUCH REDRESS.

6 85 8546
MACHINERY CONDITIONS SURVEILLANCE SYSTEM

PROVISION DOES NOT PRESENTLY EXIST FOR CONTINUOUS LARGE-SCALE MONITORING OF MACHINE TOOL DYNAMICS IN ORDER TO DETECT CONDITIONS WHICH ARE LIKELY TO RESULT IN MECHANICAL MALFUNCTION.

6 85 8552
ELECTROPOLISHING TO IMPROVE TUBE FATIGUE LIFE

STRESS CONCENTRATION AREAS SUFFER FROM AMPLIFIED FATIGUE CRACKING AND ARE THE CAUSE OF EARLY TUBE CONDEMNATION. THE 155MMM M185 KEYWAY SLOT AND THE 105MM M68 BREECH THREAD FEATURES ARE EXAMPLES OF EARLY FATIGUE CRACKING.

6 85 8559
CIM FOR CANNON CAD/CAM/COMM

THE EXCHANGE OF MANUFACTURING DATA AT WATERVLIET ARSENAL IS LARGELY MANUAL, ERROR PRONE AND TIME CONSUMING. CURRENT PROCESS PLANNING, SCHEDULING, AND PRODUCTION CONTROL SYSTEMS EXCHANGE DATA MANUALLY.

6 85 8560
APPLICATION OF COUNTER HOLDER EQUIPMENT TO ROTARY FORGING

THE PLANNED INSTALLATION OF AN ADDITIONAL COUNTERHOLDER ON THE ROTARY FORGE WILL HAVE AN IMPACT ON THE NC PROGRAMS AND PREFORM DESIGNS.

6 85 8573
GENERIC GUN GYNMASTICATOR

LIVE FIRINGS ARE CURRENTLY USED TO RESOLVE ACCEPTANCE TESTS AND MALFUNCTION PROBLEMS ASSOCIATED WITH AUTOMATIC CANNONS (20-40MM). CYCLING THESE WEAPONS USING LIVE AMMUNITION IS EXCESSIVELY COSTLY AND TIME CONSUMING.

PROJECTS ADDED IN 2ND HALF, CY84
(CONTINUED)

6 85 8603
ROBOTIC WELDING - RIA

PRODUCTIVITY IN THE WELD SHOP IS LIMITED BECAUSE THE MAJORITY OF THE WELDING IS DONE MANUALLY.

6 85 8606
APPLICATION OF FLUIDIZED BED HEAT TREATMENT

SOME WEAPON COMPONENTS ARE CARBURIZED AND NITRIDED USING A SALT BATH THAT CONTAINS CYANIDE FUMES THAT ARE HEALTH HAZARDS. THE HOMO-CARB FURNACE IS INEFFICIENT SINCE IT HAS TO BE KEPT ON CONTINUOUSLY, EVEN WHEN EMPTY. CASE DEPTH IS HARD TO CONTROL.

6 85 8625
MANUFACTURE OF MULTI-LUG BREECH MECHANISMS

THE MANUFACTURE OF MULTI-LUG COMPONENTS INVOLVES THE USE OF FORM CUTTERS WHICH ARE USED TO MILL THE REQUIRED CONFIGURATION. ALTHOUGH THIS METHOD HAS BEEN SUCCESSFUL ON A PROTOTYPE BASIS, IT DOES NOT APPEAR TO BE FEASIBLE FOR PRODUCTION QUANTITIES.

6 85 8633
A THREE DIMENSIONAL NON-CONTACT MEASURING SYSTEM

THE MFG + PURCHASE PARTS REQUIRES THAT THE DIMENSIONS BE CHECKED TO INSURE THE SPECIFIED TOLERANCES. IN THE PAST THIS HAS BEEN DONE MANUALLY OR WITH COORDINATE MEASURING MACHINES. BOTH OF THESE METHODS ARE TIME CONSUMING.

TROSCOM

E 85 3796
COMBAT VEHICLE DEPERMING PRODUCTION FACILITY

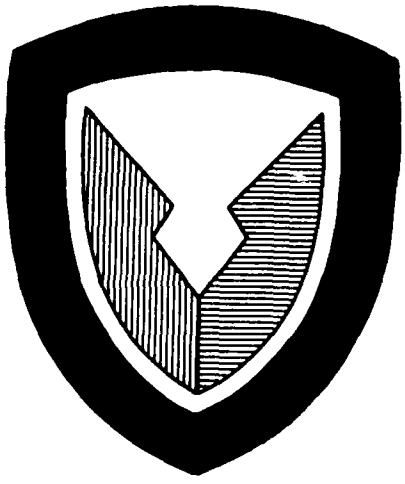
PRESENT DESIGN AND FABRICATION TECHNIQUES FOR VEHICLES RESULT IN A SIGNIFICANT MAGNETIC SIGNATURE. THIS MAGNETIC SIGNATURE CAN BE USED TO FUZE LAND MINES TO ATTACK THE VEHICLE UNDERCARRIAGE.

TOTAL PROJECTS ADDED IN 2ND HALF, CY84 15

MMT PROGRAM

FINAL STATUS REPORTS RECEIVED

DURING 2nd HALF, CY84



FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY84

IETA

'83 5052
ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT

IN AN EFFORT TO PROVIDE THE LATEST TECHNICAL, SCIENTIFIC AND ENGINEERING DATA FOR THE SUPPORT MANUFACTURING CONTINUOUS REVISION OF ENGINEERING HANDBOOK IS NEEDED. FOR FY83 THE FINAL DRAFT OF 706-122 HAS STARTED, HOWEVER FY82 FUNDS NEEDED TO FINISH.

ESCOM

'82 3001
POWER AND INERTIA SIMULATOR-COMBAT VEHICLE TESTING

THE PAIST FEASIBILITY IS FINISHED. SEE MMT PROJECT 6 65 3001.

'82 4005
WATER JET MATERIAL REMOVAL SYSTEM PHASE II

THIS PROJECT HAS SHOWN THAT ROADWHEELS CAN BE DENUDED BY WATERJET, HOWEVER, EQUIPMENT RELIABILITY HAS BEEN A PROBLEM. A DECISION HAS BEEN MADE TO DISCONTINUE FURTHER WORK ON WATERJET DENUDING OF ROADWHEELS. ALTERNATIVES MAY BE INVESTIGATED LATER.

RADCOM

'80 3026
HIGH PRESSURE OXIDE IC PROCESS

AUTOCLAVE ENGRS + ETD LABS STOPPED WORK ON THE HORIZONTAL AUTOCLAVE BECAUSE THE CONVECTION PROBLEM PERSISTED AFTER FUNDING EXPIRED. AUTOCLAVE CONCLUDED A VERTICAL PRESSURE VESSEL WOULD BEAT THE CONVECTION PROBLEMS. MANY PARTS OF THE SYS PROVED OK.

'82 3109
PRECISION LO-COST SURF ACOUSTIC WAVE DELAY LINES-UHF APPL

TRW COMPLETED ENVIRONMENTAL TEST OF UHF SAW DELAY LINES. ALL TEST EQUIPMENT WAS INTERFACED WITH HP 9836 COMPUTER. SIXTY TO-18 PACKAGES CONTAINING 100 DELAY LINES WERE DELIVERED TO GOVT. DEVICES RETESTED IN-HOUSE MEET ALL SPECS EXCEPT PHASE DEVIATION.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY84
(CONTINUED)

82 8002
RAPID INTERNAL THREADING

BIDS RECEIVED IN RESPONSE TO THE RFP ASSOCIATED WITH THIS PROJECT WERE CONSIDERED TO BE EXCESSIVE WHEN COMPARED TO COMPARABLE NEW EQUIPMENT. AS A RESULT, THIS PROJECT HAS BEEN TERMINATED.

82 8103
HIGH VELOCITY MACHINING

THIS PROJECT WAS USED TO INVESTIGATE RESEARCH AND APPLICATIONS WORK IN THE AREA OF HIGH SPEED MACHINING. TESTING RELATIVE TO 'GUN STEEL' IS BEING PERFORMED UNDER A FOLLOW-ON PROJECT.

82 8106
LARGE CALIBER POWDER CHAMBER BORING

ALL WORK HAS BEEN COMPLETED AND A FINAL TECHNICAL RPT HAS BEEN ISSUED. BORING BAR STABILITY COULD NOT BE MAINTAINED BEYOND 25 INCHES BORING DEPTH. SINCE A 42 INCH BORING DEPTH IS REQUIRED, THIS MMT EFFORT WAS UNSUCCESSFUL. USEFUL DATA IS AVAILABLE.

82 8107
CREEP FEED CRUSH FORM GRINDING

EQUIPMENT WAS PLACED ON LOCATION.

82 8108
PRODUCTION/IN-PROCESS INSPECTION OF OPTICAL BONDS

THIS EFFORT ESTABLISHED THE ACCURACY OF THE TWO BOND INSPECTION TECHNIQUES. WHEN APPLIED TO THE CURRENT PROBLEM OF OPTICAL PARALLAX OF M60 TANK, BOND GEOMETRY EFFECTS WERE VERIFIED AND ADHESIVE AGING WAS FOUND TO NOT BE A PROBLEM.

82 8242
DUAL PRESS STRAIGHTENING OF GUN TUBES

A FINAL REPORT HAS BEEN PREPARED. A Z-POINT LOADING DEVICE WAS MANUFACTURED & INSTALLED ON STRAIGHTENING PRESS. CRITERIA FOR STRAIGHTENING GUN TUBES WAS DEVELOPED. TESTS WERE CONDUCTED TO DETERMINE AFFECT OF STRAIN. A THEORETICAL EQUATION WAS DEVELOP

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY84
(CONTINUED)

5 84 4607
CONTINUOUS RECOVERY AND PURIFICATION OF MDU SCRAP

PROJECT HAS BEEN TERMINATED AND THE REMAINING FUNDS ARE WITHDRAWN.

AMCCOM (WPNS)

6 81 7925
BORE EVACUATOR BORING

THIS PROJECT IS COMPLETE. THE CONTRACTOR HAS TRAINED ARSENAL PERSONNEL IN MACHINE OPERATION AND MAINTENANCE. PROCEDURES ARE BEING TAKEN TO IMPLEMENT THE MACHINE TOOL INTO PRODUCITON.

6 80 6024
HIGH SPEED ABRASIVE BELT GRINDING

THE MACHINE HAS BEEN MOVED ON SPOT AND INSTALLATION IS PROGRESSING. OPERATIONAL AND PRELIMINARY ACCEPTANCE TEST WAS SUCCESSFUL BUT ACTUAL PRODUCTION PARAMETERS HAVE YET TO BE ESTABLISHED.

6 80 6047
PASS THRU STEADY RESTS FOR TUBE TURNING

CONTRACTOR WENT INTO BANKRUPTCY LEAVING THE FABRICATIONS PARTIALLY COMPLETED. COMPLETION OF THE WORK IN-HOUSE WOULD REQUIRE AN EXTENSIVE LEVEL OF EFFORT. THEREFORE IT WOULD NOT BE IN THE GOVT BEST INTEREST TO INVEST THE FUNDS TO FINISH THE WORK.

6 82 6050
RECYCLING SPENT GUN TUBES BY ESR MELTING

THIS PROJECT PROVES THE ESR METHOD OF REMELTING SCRAPPED GUN TUBES WILL PRODUCE NEW TUBES OF EQUAL QUALITY TO THE ORIGINAL TUBE. THIS METHOD PROVIDES A SAVING OF CRITICAL ALLOY ELEMENTS. NO ADDITIONS OF THESE ELEMENTS IS REQUIRED IN THIS PROCESS.

6 82 [illegible]4
CRITICAL SCRATCH AND DIG STANDARDS FOR FIRE CONTROL SYSTEMS

AN IMPROVED GEOMETRY FOR THE STANDARDS SHOWS GOOD RESEMBLANCE TO THE CURRENT STANDARDS AND CORRELATES WITH THE VISUAL APPEARANCES FOR SCRATCH STANDARDS S20-S80, A RELATIONSHIP WAS ESTABLISHED BETWEEN THE SCRATCH # AND THE NBS SCATTERING MEASUREMENTS.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY84
(CONTINUED)

5 79 4444
BODY FOR M42/M46 GRENADE

A QUANITY OF M42/M46 BODIES WERE MADE BY THE WARM BACK EXTRUSION PROCESS. TEST WERE PERFORMED ON THE BODIES AND 48 PROJECTILES WERE ASSEMBLED AND SHIPPED TO YUMA PROVING GROUND.

5 83 4453
DETERMINE SPACING OF MUNITION ITEMS TO PREVENT PROPAGATION

ALL TESTS WERE COMPLETED FOR DETERMINING SPACING FOR XM130 SURFACE ROCKET AND BLU-97/B SUBMUNITION. A FINAL TECHNICAL REPORT ARLCD-TR-83056 WAS PUBLISHED.

5 80 4469
AUTOMATIC INSERTION OF GRENADE LAYERS

THE GRENADE INSERTION SYSTEM IS INSTALLED AT KANSAS AAP ON THE M483 PRODUCTION LINE. MODIFICATIONS TO THE SYSTEM ARE NECESSARY PRIOR TO FULL IMPLEMENTATION INTO PRODUCTION. THE TDP IS AVAILABLE AT ARDC.

5 84 4520
PRESS LOADING PROJECTILE 105MM HEAT-MP-T, XM815

PROJECT WAS TERMINATED DUE TO INABILITY OF ITEM SUPPORTED TO MEET BALLISTIC REQUIREMENTS. EQUIPMENT WAS RETAINED AT MILAN AAP. EXCESS FUNDS WERE RETURNED.

5 82 4540
CACO3 COATING OF 7.62MM BALL PROPELLANT

THIS PROJECT HAS BEEN COMPLETED AND AN INTERIM TECHNICAL REPORT DRAFTED. A DETAILED TEST PLAN HAS ALSO BEEN PREPARED. THE LATTER WILL BE CARRIED OUT UNDER 5844540.

5 81 4555
INFRARED MONITORING OF PYROTECHNIC BLENDING

A METHOD OF DETERMINING RELATIVE HOMOGENEITY OF A PYROTECHNIC MIX BY USE OF THERMOGRAPHY WAS DEVELOPED. THE PROGRAM ALSO PROVIDED STATE-OF-THE-ART VAPOR DETECTION FOR PYROTECHNIC BLENDING DAYS.

5 83 4563
MANUFACTURE OF STEEL FOLDING FINS

PROJECT HAS BEEN TERMINATED AND THE REMAINING FUNDS WITHDRAWN.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY84
(CONTINUED)

5 81 4309 02
EXPLOSIVE LOADING OF 120MM HEAT-MP-T

PROJECT SUCCESSFULLY COMPLETED. RESULTS OF THIS EFFORT PROVIDES A LOADING PROCESS FOR THE 120MM HEAT AMMUNITION.

5 81 4309 03
ASSEMBLY PROCESS DEVELOPMENT

PROJECT HAS BEEN SUCCESSFULLY COMPLETED. THE EQUIPMENT DEVELOPED UNDER THIS TASK IS CURRENTLY INSTALLED AND IN USE AT IOWA AAP.

5 81 4309 04
COMBUSTIBLE CARTRIDGE CASE PROCESS - 120MM

THE PROJECT IS COMPLETED SUCCESSFULLY THE BATCH METHOD HAS BEEN REPLACED WITH A CONTINUOUS AUTOMATIC IMPREGNATION AND CURE SYSTEM.

5 81 4309 05
FORMING OF SABOT SEGMENTS TO NET SHAPE ON APFSDS AMMO

WORK HAS BEEN COMPLETED. THE PROJECT WILL NOT BE IMPLEMENTED SINCE THE FORGING DESIGN IS NOT AMENABLE TO THE PRODUCTION PROCESS.

5 81 4309 09
INVESTIGATE FORMING + HEAT TREAT METHODS F/CORE, APDS

PROJECT COMPLETED AWAITING FINAL TECHNICAL REPORT.

5 81 4309 12
INJECTION MOLDING OF XM829 OBTURATOR

THIS PROJECT IS COMPLETED AND RESULTED IN A PROCEDURE TO REACTION INJECTION MOLD NYLON BLANKS OF THE OBTURATOR TO NEAR NET SHAPE.

5 80 4341
IMPROVED NITROCELLULOSE PURIFICATION PROCESS

THE CONICELL CONTINUOUS TUBE COOKER WAS EVALUATED FOR NC PURIFICATION. IT WAS FOUND THAT BOTH HIGH AND LOW GRADE NC COULD BE STABILIZED BY USING A HYBRID PROCESS CONSISTING OF 1/2 BATCH ACID BOIL TIME FOLLOWED BY CONICELL TREATMENT.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY84
(CONTINUED)

5 83 4061
NITROGUANIDINE PROCESS OPTIMIZATION

TREATMENT OF NITROGUANIDINE DEMONSTRATION PLANT WASTEWATERS WAS CONDUCTED IN PILOT EQUIPMENT. DATA OBTAINED WAS APPLIED IN THE DEVELOPMENT OF DESIGN CRITERIA FOR WASTEWATER TREATMENT FACILITIES.

5 81 4231
IN-PLANT REUSE OF POLLUTION ABATED WATERS

WORK CONDUCTED AT LSAAP AND MAAP UNDER FY81 FUNDING COMPLETED. FINAL TECHNICAL REPORTS PUBLISHED AND DISTRIBUTED.

5 82 4231
IN-PLANT REUSE OF POLLUTION ABATED WATERS

WORK AT PBA WAS CONDUCTED TO INVESTIGATE VARIOUS TREATMENT TECHNOLOGIES TO MINIMIZE BOTH TREATMENT CHEMICAL UTILIZATION AND WATER CONSUMPTION AT THE CWTF. PILOT CARBON TREATMENT PLANT INSTALLED TO EVALUATE TREATMENT OF PBA WASTEWATER EFFLUENT.

5 82 4265
TNT EQUIVALENCY TESTING FOR SAFETY ENGINEERING

A TEST PLAN FOR M8 PROPELLANT WAS PREPARED HOWEVER TESTING WAS DELETED SINCE THE REQUIREMENT WAS CANCELLED. A FINAL TECHNICAL REPORT WAS COMPLETED FOR XM37 PROPELLANT, ARLCD-CR-83034.

5 83 4298
EVALUATION OF DIMETHYLNITROSAMINE DISPOSAL ON HAAP B-LINE

EVALUATION OF SEMI-CONTINUOUS ACTIVATED SLUDGE TREATMENT SYSTEM FOR MUNITIONS WASTEWATERS AND PROCUREMENT OF A DMN DISPOSAL SYSTEM WERE COMPLETED.

5 81 4309
AMMUNITION FOR THE 120MM TANK MAIN ARMAMENT

ALL WORK COMPLETED. THE DETAILED STANDARDS, PROCEDURES + PRODUCTION GUIDELINES HAVE BEEN SUCCESSFULLY RESOLVED.

5 81 4309 01
MFG METHODS FOR STICK + JA-2 PROPELLANT

WORK COMPLETED SPENT ACID SYSTEM DESIGNED INSTALLED + SUCCESSFULLY EVALUATED. SUMMARY REPORT ON OVERALL TASK SUBMITTED FOR PUBLICATION.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY84
(CONTINUED)

5 80 1318
PRODUCTION, FILL, CLOSE AND LAP 8 IN XM736 AND BLU 80 BOMB

ALL WORK IS COMPLETE AND FINAL REPORT WRITTEN. DISTRIBUTION DECEMBER, 1984.

5 81 1318
PRODUCTION, FILL, CLOSE AND LAP 8 IN XM736 AND BLU 80 BOMB

ALL WORK IS COMPLETE AND FINAL REPORT WRITTEN. DISTRIBUTION DECEMBER, 1984.

5 80 1348
SUPER TROPICAL BLEACH

WORK WAS COMPLETED ON THE TECHNOLOGY INVESTIGATION. THREE VIABLE PROCESS WERE IDENTIFIED- METTUR VACUUM, FLUIDIZED BE CHLORINATOR, + LIQUID REACTOR- DOUBLE SALT (LR-DS). THE LR-DS METHOD WAS FOUND TO HAVE SEVERAL ADVANTAGES + WARRENTED MORE STUDY.

5 81 1348
SUPER TROPICAL BLEACH

WORK WAS COMPLETED ON PRE-PILOT EVALUATIONS AND OPTIMIZATION OF THE LIQUID REACTOR DOUBLE SALT PROCESS. THE PLANT DESIGN, FABRICATION AND SET UP WAS COMPLETED AND EVALUATION OF THE PLANT CONTINUED.

5 83 1348
SUPER TROPICAL BLEACH

WORK CONTINUED ON DEFINING THE ENVIRONMENTAL CONSTRAINTS. THE CONTRACTOR PROCURED THE NECESSARY PROCESSING AND MONITORING EQUIPMENT AND CONTINUED THE EVALUATION.

5 84 1348
SUPER TROPICAL BLEACH

EVALUATION OF THE PILOT FACILITY INDICATED THAT IT FUNCTIONED AS DESIGNED. THE PLANT PRODUCED QUANTITIES OF SPECIFICATION STB FROM HYDRATED LIME AND OUT OF SPEC STB. PILOT PLANT DOCUMENTATION WAS COMPLETED. A DRAFT STB SPEC REVISION WAS COMPLETED.

5 81 1907
AUTOMATED CASING FOR MEDIUM CAL. PROJECTILE BODIES (CAM)

FINAL TECH REP IS RECEIVED. NAVY WILL TURN OVER DEVELOPED CASE AND FINAL STATUS REPORT.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY84
(CONTINUED)

AMCCOM (AMMU)

5 83 0900
AUTOMATED MULTIPLE FILTER LIFE TESTER

A TOTALLY AUTOMATIC FILTER LIFE PROTOTYPE TESTER HAS BEEN DESIGNED. A COMPLETE TDP FOR ITS MANUFACTURE IS AVAILABLE. THE TESTER WHEN FABRICATED WILL BE CAPABLE OF TESTING FIVE LIFE FILTERS SIMULTANEOUSLY.

5 82 0913
SPIN COATING OF DECON AGENT CONTAINERS

A CONTRACTOR CONDUCTED A TECHNOLOGY EVALUATION SUPPLEMENTED BY COATING EXPOSURE TESTS. SEVERAL CANDIDATE MATERIALS WERE IDENTIFIED. HALAR AND RYTON WERE REPORTED TO BE THE MOST PROMISING CANDIDATES FOR COATING INSIDE THE DS2 CONTAINERS.

5 83 0913
SPIN COATING OF DECON AGENT CONTAINERS

EXPLSURE OF DS2 AND STB TO SOME MATERIALS CONTINUED WHILE APPLICATION PROCEDURES AND SPECIFICATIONS WERE FORMULATED. HALAR REQUIREMENTS WERE ESTABLISHED FOR DS2 CONTAINERS. REQUIREMENTS WERE ESTABLISHED FOR STB CONTAINERS.

5 84 0913
COATING OF DECON AGENT CONTAINERS

ALL TESTING WAS COMPLETED. THE HALAR COATED DS2 CONTAINERS PASSED ALL TESTS BUT IMPACT. EACH CANDIDATE MATERIAL THAT WAS ABLE TO RESIST DS2 FOR AN EXTENDED PERIOD OF TIME WAS TOO BRITTLE TO PASS THE REQUIRED IMPACT TESTS.

5 81 1001
PILOT LINE FOR FUZE FLUIDIC POWER SUPPLIES

ALL PHASES OF THIS PROJECT HAVE BEEN COMPLETED. THE PHASES INCLUDED THE DESIGN AND DEVELOPMENT OF INVESTMENT CASTINGS AND OTHER PROCESSES TO PRODUCE THE M445 FUZE WHICH IS PART OF THE MLRS. RESULTS OF THIS PROJECT WAS IMPLEMENTED IN NOV 1984.

5 79 1318
CHEMICAL PRODUCTION FILL, CLOSE AND LAP FOR 8 IN XM736 PROJ

ALL WORK IS COMPLETE AND FINAL REPORT WRITTEN. DISTRIBUTION DECEMBER, 1984.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY84
(CONTINUED)

T 82 6011
SPRINGS FROM FIBER/PLASTIC COMPOSITES

THE REAR SPRINGS WERE MODIFIED BY ADDING A SHORT STEEL LEAF. IF RETESTING IS SUCCESSFUL, FIELD TESTING WILL BE SCHEDULED USING 6.3 R&D FUNDING. THE PM WILL BE ASKED TO IMPLEMENT AFTER TESTS ARE DONE BY ASSIGNING PART NUMBERS TO THE COMPOSITE ITEMS.

T 82 6011
SPRINGS FROM FIBER/PLASTIC COMPOSITES

THIS TWO-YEAR PROJECT IS COMPLETE. THE FINAL TECHNICAL REPORT, MANUFACTURING PROCESS FOR THE PRODUCTION OF COMPOSITE LEAF SPRINGS FOR 5-TON TRUCKS, NO. 12999, AND 146681, HAS BEEN DISTRIBUTED.

T 81 6028
PRODUCTION QUALITY CONTROL BY AUTOMATED INSPECT EQUIPMENT

AUTOMATED INSPECTION AND DIAGNOSTIC SYSTEM EVALUATED TO ASSESS ABILITY TO IDENTIFY LEVEL OF ENGINE MAINTENANCE REQUIRED. WORK WAS PERFORMED TO DEVELOP A TECHNIQUE TO DETERMINE ABSOLUTE CYLINDER COMPRESSION W/O REMOVING THE FUEL INJECTORS.

T 79 6038
HIGH DEPOSITION WELDING

WORK COMPLETED ALL WELDS TESTED SATISFACTORILY FOR WELD QUALITY & BALLISTIC INTEGRITY. THE ABOVE CONTRACT VALUE REFLECTS THE COMBINED FUNDS OF THE FY79 AND FY82 PROJECTS.

4 83 6121
CAD/CAM FOR THE BRADLEY FIGHTING VEHICLE

SEE INDIVIDUAL SUBTASK FOR 4 83 6121 FOR WORK STATUS.

4 83 6121 01
ROBOTIC WELDING/WELD SEAM TRACKING

VISION SYSTEM EVALUATED, SELECTION AND PROCUREMENT OF ROBOTIC SYSTEM & VISION SUBSYSTEM COMPLETED, AT-ARC HARDWARE/SOFTWARE COMPATABILITY COMPLETED, PERFORMANCE AND SYSTEM VERIFICATION COMPLETE.

TACOM

T 82 5053
FABRICATION TECHNIQUES FOR HI STRENGTH STRUCTURAL CERAMICS

THE FINAL TECHNICAL REPORT WAS COMPLETED. EFFORT WORK WILL CONTINUE IN 4835053 AND 4845053. THIS PROJECT SHOWED THAT THICK CERAMIC COATINGS SHOULD BE APPLIED BY SPRAYING, AND THAT GRINDING IS THE MANUFACTURING COST DRIVER FOR MONOLITHIC CERAMICS.

T 82 5064
LIGHT WEIGHT SADDLE TANK (PHASE III)

ALL REQUIRED TESTS, AS PER FEDERAL CARRIER SAFETY REGULATIONS AND THOSE CITED BY AMSTA-GBW, WERE SUCCESSFULLY COMPLETED, EXCEPT THE SAFETY VENTING SYSTEM TEST. FUEL TANK ACCRUED 12,501 MILES DURABILITY TESTING AT YPG. PROJECT TERMINATED LATE 1984.

4 83 5064
LIGHT WEIGHT SADDLE TANK (PHASE III)

FINAL TECHNICAL REPORT NO. 13059 WAS COMPLETED AND EDITED. PUBLICATION-JAN 1985. SUPPORTING GUIDELINES MUST BE SET FOR THE SAFETY VENTING SYSTEM TEST ON THE M809 VEHICLE TANK. THERE ARE TWO OPERABLE VENTING PORTS BUT NO SAFETY VENTING SYSTEM.

T 82 5067
PLASTIC BATTERY BOX

MODIFIED STEP PLATE COMPLETED AND DELIVERED AUG 84. ALL STRESS TESTS CONDUCTED AT AMBIENT, 140 DEG F, AND -65 DEG F. NEW PLASTIC BATTERY BOX SHOULD BE IMPLEMENTED INTO THE SYSTEM WITHIN SIX MONTHS.

T 82 5002
FLEXIBLE MACHINING SYSTEM, PILOT LINE FOR TCV COMPONENTS

THIS PROJECT IS COMPLETE. REMAINING FUNDS WILL BE USED TO SUPPORT PROJECT 4 4042 TITLED FLEXIBLE MANUFACTURING TECHNOLOGY INTEGRATION.

T 82 5083
UPSCALING OF ADVANCED POWDERED METALLURGY PROCESSES-PH 4

THE FUNDS FROM THIS PROJECT HAVE BEEN UTILIZED IN-HOUSE TO MONITOR PROJECT T795083.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY84
(CONTINUED)

3 81 1075
ELECTRONICS COMPUTER AIDED MANUFACTURING (ECAM)

BATTELLE COMPLETED A 4-VOLUME FINAL REPORT DETAILING IN IDEF FORM THE MANY OPERATIONS OF AN ELECTRONICS MANUFACTURING PLANT. THE REPORT PROVIDES HUNDREDS OF CHARTS ON EVERY FACET OF MANUFACTURING AND DESCRIBES 17 MT PROJECTS NEEDING WORK.

3 83 1075
ELECTRONICS COMPUTER AIDED MANUFACTURING (ECAM)

BATTELLE COMPLETED THE STUDY DETAILED ABOVE. FUTURE PROJECT NEEDS INCLUDE DESIGN, INTEGRATION + MANUFACTURING MODULES, HYBRID + IC DESIGN + MASK MAKING CAPABILITY, CIRCUIT BOARD ROUTING, ETCHING + PLATING CAPABILITY, + CHASSIS + HARNESS CAPABILITY.

3 83 1086
COBALT REPLACEMENT IN MARAGING STEEL-ROCKET MOTOR COMPONENTS

SCALE-UP TO LARGE DIAMETER 14 INCH MOTOR. CONCEPT DEMONSTRATION WITH PRODUCTION CONTRACTOR HAS BEEN HELD. THE DELIVERY OF PRODUCTION COMPONENTS FOR TEST FIRING HAS BEEN MADE. PREPARATION OF MANUFACTURING PROCEDURES AND PROJ FINAL REPORT COMPLETED.

3 82 1008
OPTIMIZED MANDREL FAB + UTILIZATION F/COMPOSITE MOTOR CASES

THE NET METAL MANDREL CONCEPT WAS SUCCESSFULLY DEVELOPED TO FULL SIZE CAPABILITY. PROJECT COMPLETED WITH TECHNICAL REPORT IN JAN 85. IMPLEMENTATION WITH THE PERSHING II WILL OCCUR IN FY86.

3 84 1126
WOUND ELASTOMER INSULATOR PROCESS

THIS PROCESS CAN FABRICATE CASES THAT EXCEED PERFORMANCE REQUIREMENTS. THE PERSHING PMO HAS FUNDED A QUALIFICATION PROGRAM. FY86 IMPLEMENTATION IS EXPECTED. ESTIMATED COST SAVINGS ARE $34,500 PER MISSILE.

3 84 3423
LOW COST/HIGH PERFORMANCE CARBON-CARBON NOZZLES

FINAL TECH REPORT, LOW COST HIGH PERFORMANCE CARBON-CARBON NOZZLES, NO. RK-CR-85-1, US ARMY MISSILE COMMAND, DEC 84, HAS BEEN PUBLISHED. NEAR-TERM IMPLEMENTATION OF THIS TECHNOLOGY WILL OFFER A MATERIAL HAVING A DESIRABLE COST/PERFORMANCE RATIO.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY84
(CONTINUED)

1 83 7382
LOW-COST COMPOSITE MAIN ROTOR BLADE FOR THE UH-60A

ALL WORK WAS COMPLETED. THE EFFORT OF WHICH THIS PROJECT WAS A PART, WILL CONTINUE WITH PROJECT 1847382. THE WORK COMPLETED WILL BE REPORTED IN THE FINAL TECHNICAL REPORT FOR 1847382.

CECOM

2 76 9898
RUGGEDIZED TACTICAL FIBER OPTIC CABLES

THIS EFFORT DID NOT ACHIEVE THE PRODUCTION PROCESSES FOR THE 6-FIBER CABLE DESIRED AT THE OUTSET. UNFORESEEN DESIGN PROBLEMS WERE TENATIOUS. THE RESULTS WERE OF USE IN THE PRODUCTION OF 2-FIBER CABLES.

F 79 9938
THREE COLOR LIGHT EMITTING DIODE DISPLAY UNIT

THIS PROJECT HAS DEVELOPED AUTOMATED CHIP PLACEMENT TECHNIQUES, AUTOMATED WIRE BONDING AND SPECIAL TEST PROCEDURES THAT HAVE RESULTED IN HIGHER PRODUCTION RATES AND LOWER COST FOR THE 3 COLOR LED DISPLAYS.

MICOM

3 83 1051
REPLACEMENT OF ASBESTOS IN ROCKET MOTOR INSULATIONS

ALL PROJECT WORK WAS COMPLETED. SEE 3 84 1051 FOR A DESCRIPTION OF THE RESULTS OF THIS EFFORT (3 81,83,84 1051).

3 84 1051
REPLACEMENT OF ASBESTOS IN ROCKET MOTOR INSULATIONS

ALL WORK ON THE EFFORT WAS COMPLETED WITH THIS PROJECT, AND THE RESULTS HAVE BEEN PUBLISHED. THIS EFFORT SUCCEEDED IN ESTABLISHING MANUFACTURING PROCESSES THAT ARE ECONOMICAL WITH MATERIALS THAT EQUAL OR EXCEED THOSE OF ASBESTOS MATERIALS.

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY84
(CONTINUED)

1 '82 7197
FABRICATION OF INTEGRAL ROTORS BY JOINING

ALL WORK COMPLETED FINAL REPORT IN PRINTING WILL BE ISSUED SOON.

1 '82 7265
CAST TITANIUM COMPRESSOR IMPELLERS

TECHNICAL EFFORT ON THIS PROJECT IS COMPLETE THE FINAL TECHNICAL REPORT IS AWAITING PRINTING AND DISTRIBUTION.

1 '81 7208
MMT DETERMINATION OF OPTIMAL CURING CONDITIONS

PROJECT WORK WAS TERMINATED. IT WAS DETERMINED THAT IN ADDITION TO MONITORING RHEOLOGICAL CHANGES, A COMPLEMENTARY SYSTEM OF DETERMINING ACTUAL VISCOSITY AND PRESSURE REQUIREMENTS MUST BE IN PLACE TO DIRECT CURING CONDITIONS. A REPORT IS AVAILABLE.

1 82 7298
HIGH TEMPERATURE VACUUM CARBURIZING

THE PROCESSING SPEC FOR AISI 9310 HAS BEEN FINALIZED. VACUUM CARBURIZED BMS 7-223 SPECIMENS SHOWED A 50% IMPROVEMENT IN SCORING LIFE. THE PROCESS SPEC CANNOT BE FINALIZED UNTIL TESTING IS COMPLETE. PHASE I OF THIS EFFORT IS COMPLETE.

1 81 7319
PROD METH F/DIGITAL ADDRESSABLE MULTI-LEGEND DISPLAY SWITCH

AVSCOM EXPENDED ALL FUNDS PREPARING SPEC PROCUREMENT PACKAGE FOR MOUNTING, ALIGNING, + BONDING MULTILEGEND DISPLAY SWITCHES. ACTIVITY INCLUDED SURVEY OF 10 PROSPECTIVE CONTRACTORS. DOCUMENTATION PACKAGE IS NOW AVAILABLE FOR INDUSTRY SOLICITATION.

1 '82 7342
PULTRUSION OF HONEYCOMB SANDWICH STRUCTURES

ALL PROJECT WORK HAS BEEN COMPLETED. A FINAL REPORT HAS BEEN COMPLETED. THE PROJECT WAS TERMINATED BECAUSE OF THE LOSS OF THE NEEDED MACHINE, LOWERED METAL COMPONENT PRICES BECAUSE OF THIS PROJECT, AND BECAUSE OF A DESIGN CHANGE. FUNDS WERE RETURNED.

H 78 9860
PDN TECHQE-GALLIUM ARSENIDE MIWAV FIELD EFFECT TRANSISTORS

E-BEAM LITHOGRAPHY, ION IMPLANTATION AND OTHER PROCESSES WERE OPTIMIZED FOR GAAS FETS. CHIP PERFORMANCE DEMONSTRATED THROUGH 16 GHZ. THE DEVICE PERFORMANCE HAS BEEN RELATED TO THE MATERIAL PROPERTIES. SUBSTANTIAL COST SAVINGS HAVE BEEN REALIZED.

TMDE

3 80 3115
ENGINEERING FOR METROLOGY AND CALIBRATION

SEE INDIVIDUAL SUBTASKS FOR WORK ACCOMPLISHED. AS OF 12/31/84 THIS FY80 PROJECT IS CLOSEOUT.

AMMRC

M 79 6350 2430
ACCEPT TESTER FOR COMMON MODULE SCANNER PERFORMANCE

THIS EFFORT PRODUCED AN COMMON MODULE SCANNER ACCEPTANCE TESTER. THE TECHNICAL WORK HAS BEEN COMPLETED. THE FINAL TECHNICAL REPORT IS IN THE PROCESS OF BEING PREPARED.

TECOM

C 80 5071 57
GENERAL PURPOSE BIT SLICE MICRO-COMPUTER

SEE 0-84-5071-57 FOR WORK STATUS.

O 80 5071 60
RECEIVER OPERATING CHARACTERISTICS MEASUREMENTS

SEE O 83 5071-60 FOR WORK STATUS.

AVSCOM

I 82 7119
NON-DESTRUCTIVE EVALUATION TECH FOR COMPOSITE STRUCTURES

A STATE-OF-THE-ART REVIEW OF LIQUID CHROMATOGRAPHIC TECHNIQUES IS NEARING COMPLETION. IMPLEMENTATION OF RESULTS IS BEING ACCOMPLISHED THROUGH PUBLICATION OF REPORTS, MILITARY HANDBOOKS, ASTM STANDARDS, AND TECHNICAL PAPERS.

H 80 5147
HI RESISTIVITY POLYCRYSTALLINE SILICON

HEMLOCK SEMI CORP. GREW 25, 40 AND 65MM DIAMETER BOULES OF SILICON WHICH IS REFINED TO DETECTOR GRADE IN FLOAT ZONERS AT HUGHES, TI, AND AMORPHOS MTLS CO. LOW DEMAND LED TO LOW PROFITABILITY, HUGHES REMOVED ITS REACTOR + TI CUT ITS 40MM PROD. BAD.

H 83 5174
CAM SPUTTERING CONTROL FOR ZNO

THIS WAS THE FIRST OF A 3 YEAR EFFORT. IT PURCHASED TRAINING, SEMINAR ATTENDANCE, LITERATURE SEARCH, MANUFACTURER VISITS, SPECIFICATION WRITING, AND PROCUREMENT ACTION ALL RELATED TO THE PURCHASE OF A MASS SPECTROMETER. HUGHES IS USING IN HGCDTE MFG.

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

CONTRACTOR CONCLUDED ENVIRONMENTAL STUDY AND DERIVED STAT. DATA FROM METAL COUPONS AT FIELD SITES. ALSO DEVISED SIMULATED AGING TESTS FROM WHICH DURABILITY DATA CAN BE DERIVED. INTENT IS TO PREDICT TIME OF CORROSION FAILURE OF ELECTRICAL PARTS.

H 83 5196
INDUSTRIAL PRODUCTIVITY IMPROVEMENT - ELECTRONICS

HARRIS GOVT SYSTEMS DIV ANALYZED ITS FACILITY AND OPERATIONS FOR AREAS NEEDING IMPROVEMENT. 17 POTENTIAL AREAS WERE IDENTIFIED + 7 CHECKED FOR SAVINGS- MTL HANDLING, COMPONENT PLACEMENT, HYBRID ASSY, BOARD COATING AND CABLE TERM. SEE CONTRACTOR RPT.

2 76 9758
EPITAXIAL + METALLIZATION PROCESSES FOR GAAS IMPATT DIODES

MACOM GA/AS PRODUCTS CO. FINALLY VERIFIED IMPROVED AUTOMATED CONTROL OF EPITAXIAL GROWTH OF GALLIUM ARSENIDE AND OF DIFFUSION AND SELECTION PROCESSES FOR MAKING HIGH POWER, HIGH FREQUENCY IMPATT DIODES. ACHIEVED 4-8 WATTS OF CW POWER AT 8-11 GHZ.

H 78 9758
PULSED GALLIUM ARSENIDE IMPATT DIODES

MACOM GA/AS PRODUCTS CO. DELIVERED 120 GALLIUM ARSENIDE IMPATT DIODES FOR POTENTIAL USE IN MICOM'S KF SEEKER MISSILE. MACOM DEMONSTRATED AUTOMATED, COMPUTER CONTROLLED VAPOR PHASE EPITAXIAL GROWTH PROCESS. IMPLEMENTATION WAS NOT PURSUED DUE TO DELAYS

FINAL STATUS REPORTS RECEIVED DURING 2ND HALF, CY84
(CONTINUED)

6 '82 8243
COMPUTER CONTROL FOR ELECTRODEPOSITION SYSTEMS

THE INITIAL PHASE OF THIS EFFORT IS COMPLETE. THE SIMULATOR CONSOLE HAS BEEN COMPLETELY CONSTRUCTED. THE PROGRAM HAS BEEN DESIGNED TO FACILITATE THE EXISTING PLATING FACILITY AND AN ADVANCED PLATING SYSTEM. WORK WILL CONTINUE UNDER PROJECT 6836243.

6 '8_ 8245
APPLICATION OF EROSION RESIS LOW CONTRACTION CHROMIUM PLATE

FIVE FULL SCALE GUN TUBES HAVE BEEN SUCCESSFULLY PARTIALLY PLATED WITH L.C. CHROMIUM. EACH TUBE IS UNDERGOING WEAR TESTS. FULL LENGTH PLATING OF GUN TUBES WILL BE DONE USING THE 30,000 AMP RECTIFIER. WORK WILL CONTINUE UNDER PROJECT NO. 6836245.

6 '82 8246
GAS CHECK SEAT FINISHING

TECH PROPOSALS WERE RECEIVED AND EVALUATED. A CONTRACT WAS AWARDED. WORK HOLDING FIXTURES HAVE BEEN DESIGNED AND ARE 75 PERCENT COMPLETE.

6 '82 8346
DEBURRING OF L RE EVACUATOR HOLES

AN ELECTROPOLISHING PROCESS FOR ROUNDING SHARP CORNERS ON 120MM BORE EVALUATOR HOLES PRIOR TO CHROME PLATING WAS DEVELOPED AND SUCCESSFULLY DEMONSTRATED IN WVA PRODUCTION FACILITIES.

6 '83 8351
IMP MANUFACTURE OF QUADRANT FLATS AND MUZZLE BRAKE KEYWAY

DURING THE STUDY PHASE OF THIS PROJECT, IT WAS DETERMINED THAT DEVELOPMENT OF CUSTOM EQUIPMENT TO PRODUCE MUZZLE END MILLED PROFILES WAS ECONOMICALLY INFEASIBLE. FOLLOW-ON WORK WILL NOT BE PURSUED.

TROSCOM

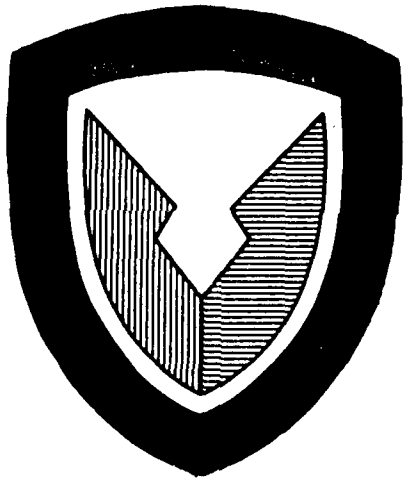
E 79 3532
MOLTEN SALT LITHIUM--CHLORIDE BATTERY

PROJECT IS COMPLETED. LI-AL/FES BATTERY CONCEPT DEVELOPED FOR A FORK-LIFT TRUCK. DOE IS CONTINUING WITH DEVELOPMENT. SNDL WILL MONITOR THIS BATTERY DEVELOPMENT. FINAL TECHNICAL REPORT PUBLISHED AND DISTRIBUTED.

TOTAL PROJECTS COMPLETED IN 2ND HALF, CY84 87

MMT PROGRAM

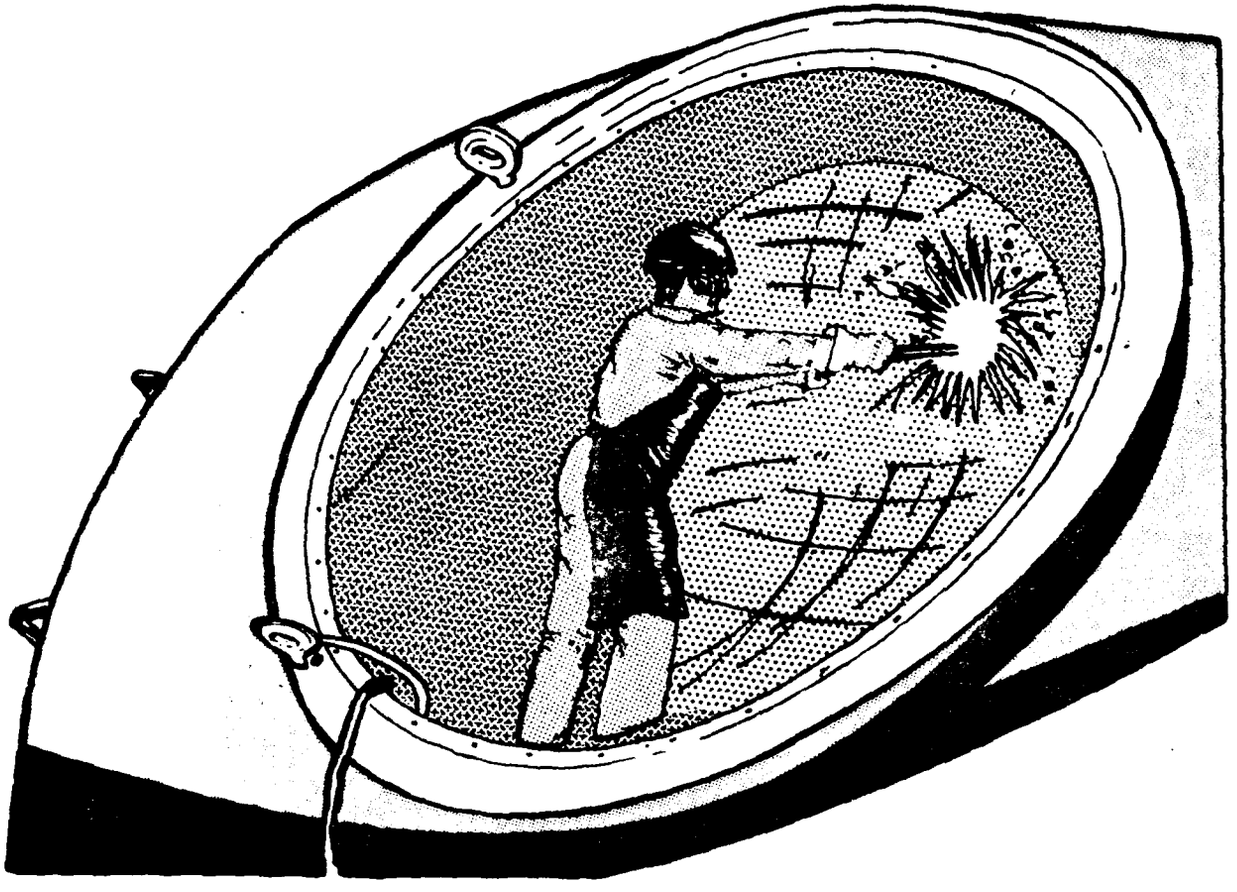
SUMMARY PROJECT STATUS REPORT



MANUFACTURING METHODS AND TECHNOLOGY PROGRAM

SUMMARY PROJECT STATUS REPORT

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



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

AMETA AND DEPOT SYSTEMS COMMAND

CURRENT FUNDING STATUS, 2ND CY84

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	354,500 (92%)	0	0 (0%)
77	0	0	0	0 (0%)	0	0 (0%)
78	1	870,000	743,000	586,500 (78%)	127,000	127,000 (100%)
79	1	495,000	387,800	345,500 (89%)	107,200	107,200 (100%)
80	1	460,000	432,000	198,300 (45%)	28,000	28,000 (100%)
81	2	852,000	797,000	704,600 (88%)	55,000	68,000 (124%)
82	4	3,807,000	1,942,000	414,300 (21%)	1,925,000	137,100 (7%)
83	0	0	0	0 (0%)	0	0 (0%)
84	3	1,021,600	636,600	121,300 (19%)	385,000	15,000 (3%)
85	3	965,000	0	0 (0%)	965,000	0 (0%)
TOTAL	16	8,953,600	5,321,400	2,725,000 (51%)	3,612,200	482,900 (13%)

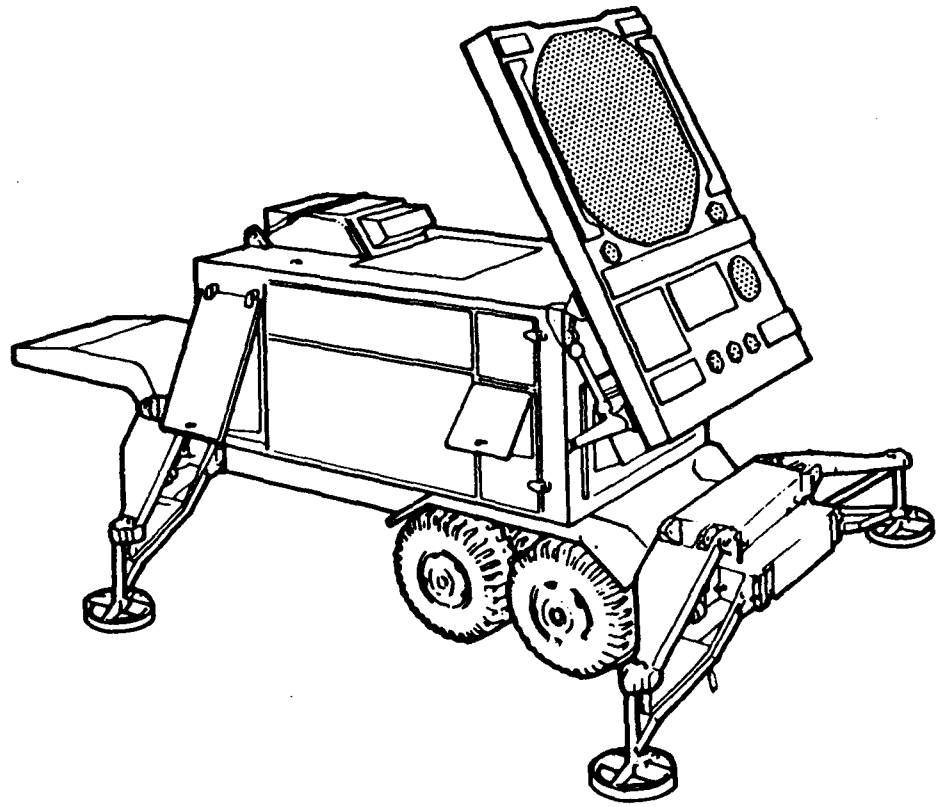
AUTHORIZED FUNDING CONTRACT ALLOCATED 60% INHOUSE REMAINING 40%

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 84 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
+ 77 5052	ARMY ENGINEERING DESIGN HANDBOOK FOR PRODUCTION SUPPORT CONTINUED WORK ON AMC HANDBOOKS 706-158 AND 159, DYNAMICS OF BALLISTIC IMPACT, PARTS 1 AND 2.	383.0	383.0		JUN 78	MAY 85
+ 78 5052	ARMY ENGINEERING DESIGN HANDBOOK FOR PRODUCTION SUPPORT 2 HANDBOOKS PUBLISHED, 3 HANDBOOKS IN PRELIMINARY FINAL DRAFT STAGE, 3 HANDBOOKS IN PRELIMINARY DRAFT STAGE AND 2 ARE IN FINAL DRAFT STAGE. TOTAL OF 64 HANDBOOKS WILL RESULT FROM THIS FUNDING YEAR.	870.0	743.0	127.0	NOV 79	JUL 85
+ 79 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT 2 HANDBOOKS WERE PUBLISHED AND 1 REACHED THE PRELIMINARY FINAL DRAFT STAGE UNDER FY79 FUNDING. 4 HANDBOOKS REACH PRIOR PUBLICATION STAGES USING PRIOR YEARS FUNDING + FY79 FUNDING. 7 HANDBOOKS CONTINUED ON LATER FUNDING YEARS. 14 HANDBOOKS WORKED ON.	495.0	387.8	107.2	MAY 83	JUL 85
+ 80 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT WORK ON 706-480, SAFETY ENGINEERING DESIGN GUIDE FINAL DRAFT CONTINUES. 706-177, PROPERTIES OF EXPLOSIVES OF MILITARY INTEREST FINAL DRAFT CONTINUING AT ARDC. DELAYS EXPERIENCED GETTING 706-123 OUTLINE FINALIZED. STARTED ON OUTLINE FOR 706-210.	460.0	432.0	28.0	JAN 83	JAN 86
+ 81 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT WORK CONTINUING ON HANDBOOKS STARTED WITH PRIOR YEAR FUNDS. DELAY EXPERIENCED IN GETTING TECHNICAL WORK GROUP TO FINALIZE REVISED OUTLINE FOR 706-245, AMMUNITIONS, DESIGN FOR TERMINAL EFFECTS.	431.0	392.0	39.0	JAN 84	JAN 86
+ 82 5052	ARMY ENGINEERING DESIGN HANDBOOKS FOR PRODUCTION SUPPORT WORK CONTINUING ON HANDBOOKS STARTED WITH PRIOR YEAR FUNDS. FINAL DRAFT MANUSCRIPT COMPLETED ON 706-122. PROBLEMS EXPERIENCE IN GETTING TWG FORMED FOR 706-410 AND IN GETTING TWG'S TO FINALIZE OUTLINE ON 706-100 AND 706-170.	580.0	542.0	36.2	SEP 83	SEP 85
+ 84 5052	ARMY ENGINEERING DESIGN HANDBOOKS TECHNICAL WRITING GROUP (TWG) ESTABLISHED FOR 706-482, DELAY IN ESTABLISHING TWG FOR 706-249.	500.0	485.0	15.0	MAR 85	SEP 85
+ 85 5052	ARMY ENGRG DESIGN HANDBOOKS F/PRODUCTION SUPPORT ----- JUST FUNDED. NO 301 REQUIRED. -----					

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 84 RCS DRLMT-301

PROJ NO.	TITLE * STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
6 84 6002	MMT CAM APPLICATION OF ROBOTICS TO SHELTER REFINISHING ON 15 NOV 1984 THE CONTRACT FOR THE DESIGN, FABRICATION, AND INSTALLATION OF THE ROBOTIC PAINTING SYSTEM WAS AWARDED TO MRC DIV OF CHAMBERLAIN MANUFACTURING CORP. DESIGN OF THE SYSTEM IS STILL IN THE EARLY STAGES.	370.0			OCT 86	NOV 85
6 82 2002	LETTERKENNY EVAL ANALYSIS * PLANNING (LEAP) PROGRAM THE CONTRACTOR (TRW) HAS COMPLETED 50-75 PERCENT OF THE TOTAL 'AS IS' MODEL IN DRAFT FORM. SELECTED HIGH LEVEL FUNCTIONAL AREAS HAVE BEEN IDENTIFIED FOR IN DEPTH ANALYSIS.	2,614.0	1,400.0	58.5	JUN 84	SEP 85
6 85 2002	LETTERKENNY EVAL ANALYSIS * PLANNING (LEAP) PROGRAM ----- JUST FUNDED. NO 301 REQUIRED. -----					
6 85 3001	POWER AND INERTIA SIMULATOR (PAIST) COMBAT VEHICLE TESTING AN RFP HAS BEEN ISSUED. SUPPORTING FACILITIES PROJECTS AND EQUIPMENT PROJECTS ARE BEING PROGRAMMED.	985.0			JUL 87	JUL 87
6 81 4002	ROBOTIZED WELDING OF M113A2 SUSPENSION INSTALLATION OF THE ROBOT IS COMPLETE WORK STILL NEEDS TO BE DONE ON DEBUGGING THE SYSTEM. CONTRACT VALUES AND IN-HOUSE EXPENDITURES ARE COMBINED FOR 6 81 4002 AND 6 82 4002.	421.0	405.0	29.6	SEP 81	NOV 85
6 82 4002	ROBOTIZED WELDING OF M113A2 SUSPENSION SEE 6 81 4002 FOR WORK STATUS.	374.0			AUG 84	NOV 85
6 82 4004	AUTOMATED DISASSEMBLY OF DOUBLE PIN TRACK CONTRACT MODIFICATIONS HAVE BEEN MADE WHICH INCLUDE A LUBRICATION SYSTEM, A TRACK FEEDER MECHANISM, AND PROVISIONS TO DISASSEMBLE T-142 TRACK AS WELL.	299.0		42.4	SEP 83	JUL 85
6 84 6002	ANAD SUBASSEMBLY MODERNIZATION CONTRACTOR HAS PERFORMED DATA COLLECTION PORTION OF PROJECT AND MADE GENERAL OBSERVATIONS CONCERNING AREAS FOR IMPROVEMENT.	151.6	151.6		JUN 85	JUN 85



ELECTRONICS
RESEARCH AND DEVELOPMENT COMMAND
(ERADCOM)

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

CURRENT FUNDING STATUS, 2ND CY84

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)		INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)	
79	2	1,246,200	1,097,800	896,200	(81%)	148,400	148,500	(100%)
80	2	1,380,000	1,166,400	952,500	(81%)	213,600	182,600	(85%)
81	4	3,505,800	3,308,900	3,139,200	(94%)	276,900	276,900	(100%)
82	4	3,752,600	3,395,800	2,917,100	(85%)	356,800	280,400	(78%)
83	3	1,178,300	1,114,300	961,300	(86%)	64,000	64,000	(100%)
84	10	8,509,900	6,922,400	4,663,200	(67%)	1,587,500	530,800	(33%)
85	19	6,209,000	690,500	151,900	(21%)	5,518,500	38,900	(0%)
TOTAL	44	25,801,800	17,096,100	13,681,400	(77%)	8,165,700	1,522,100	(18%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 68% INHOUSE REMAINING 31%

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 83 3018	HYBRID MODULATOR FOR PULSED IMPATT MILLIMETER WAVE SOURCES A SLIMED DOWN VERSION OF THE COMPOSITE OSCILLATOR, MODULATOR AND CIRCULATOR BLOCK STRUCTURE WAS FABRICATED AND TESTED. A MODULATOR REPACKAGING EFFORT AND CIRCULATOR CHANGE WILL BE ATTEMPTED TO GAIN MORE SPACE IAW MLRS REQUIREMENTS.	362.3	362.3		SEP 84	JUN 85
M 84 3010	MILLIMETER-WAVE SOURCES FOR 60 AND 94 GHZ ***** DELINQUENT STATUS REPORT *****	209.0				
M 83 3010	HYBRID MODULATOR F/PULSED IMPATT MILLIMETER WAVES SOURCE THE CONTRACT FOR PHASE III HAS NOT YET BEEN AWARDED TO TRW. THE CONFIRMATORY AND PILOT PRODUCTION RUNS AND TESTING WILL BE ADDRESSED IN THIS FY.	650.0			MAY 86	MAY 86
M 82 3011	INDIUM-PHOSPHIDE GUNN DEVICES VARIAN MODIFIED DOPING PROFILE, TIGHTENED CONTROL OF THIN INDIUM PHOSPHIDE STARTING MATERIAL + OBTAINED RIGOROUS CONTROL OF EPITAXIAL PROC. TO BUILD GOOD 56 + 94 GHZ DIODES. YIELD WAS RAISED 10 TIMES TO 50 PCT. VARIAN GAVE A 2 MO. NO-COST EXTENTION.	1,227.1	1,118.1	109.0	AUG 84	MAY 85
M 80 3023	TUBULAR PLASMA PANEL ***** DELINQUENT STATUS REPORT *****	800.0	674.0	95.0	APR 82	OCT 84
M 80 3501	THIRD GENERATION PHOTOCATHODE ON FIBER OPTIC FACEPLATE ITT CANNOT MAKE 3RD GEN PHOTOCATHODES INTO TUBES THAT MEET MINIMUM SENSITIVITY SPEC. FIBEROPTIC + GALLIUM ARS FACEPLATES CRACK DUE TO DIFF COEF OF EXPANSION. BECAUSE OF ICE AND LOW OUTPUT, PROJ ENGR WANTS TO GO TO GLASS FACEPLATES OR DIFF TO GLASS.	580.0	492.4	87.6	MAR 82	MAR 85
M 82 3010	BONDED GRID ELECTRON GUN VARIAN HAD IMPROVED 30 PERCENT YIELDS OF BORON NITRIDE BLANKS RECEIVED FROM SUBCONTRACTOR. SUFFICIENT BLANKS ARE AVAILABLE FOR BOTH ENGINEERING + CONFIRMATORY SAMPLES. BONDED GRID GUN NUMBER 2 WAS FABRICATED WITH REDESIGNED MATERIAL PATTERN.	972.5	883.7	88.8	MAR 84	FEB 86
M 83 3019	LASER-CUT SUBSTRATES FOR MICROWAVE TUBES A 3 MO, NO COST CONTRACT EXTENSION WAS USED TO CHANGE THE HIGH LEAKAGE SAMARIUM COBALT MAGNET DESIGN TO AN ALNICO V-7 DESIGN. THE TWO S-BAND AND TWO C-BAND IBLFA TUBE DELIVERABLES ARE RETAINED AT NORTHROP FOR THE PRODUCTION CAPABILITY DEMO IN APRIL.	408.0	369.0	39.0	NOV 84	APR 85
M 81 3041	MILLIMETER WAVE MIXERS AND ARRAYS TEN 94GHZ MIXER UNITS HAD ALREADY BEEN DELIVERED TO ET+DL. THE DELIVERY OF 30 MIXER UNITS AT 60 GHZ WAS DELAYED BECAUSE THE ALPHA MMW DEVICES GROUP MOVED FROM WOBURN TO METUCHEN. DELIVERY IS EXPECTED IN JANUARY 1985.	575.9	495.0	80.9	JUL 83	MAR 85

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
[illegible] 85 5029	LINEAR RESONANCE COOLERS THE LINEAR RESONANCE COOLER DESIGN HAS BEEN OPTIMIZED. CONTRACT FOR MOTOR CIRCUIT HYBRIDIZATION HAS BEEN LET. ALL COOLER PARTS HAVE BEEN ORDERED. FAB TECHNIQUES FOR TRANSFER TUBE, BALANCER, COMPRESSOR CLOSURE WELD AND REGENERATOR DISC STUDIED.	485.0	485.0		APR 85	APR 85
[illegible] 87 5066	EYESAFE RANGEFINDER RECEIVER CONTRACT NOT YET AWARDED. CONTRACTOR WILL DEVELOP SEMI-AUTOMATED ASSEMBLY AND TEST PROCEDURES FOR MAKING 10.06 MICRON GALLIUM/INDIUM/ARSENIDE DETECTORS. WILL BE AN UNCOOLED DETECTOR FOR RANGEFINDERS AND VISIOCEILOMETERS.	250.0			AUG 87	AUG 87
[illegible] 84 5107	AMT EHF SOLID STATE AMPLIFIER TRW BUILT 1-WATT SINGLE DIODE AND 1.5 WATT DOUBLE DIODE IMPATT AMPLIFIERS FOR USE AT 44 GHZ. TRW MACHINED THE HOUSINGS AND INSTALLED CIRCUIT SUBSTRATES AND DIODES. ALSO BUILT TEMP. COMPENSATED POWER SUPPLIES. ARE USED IN SCOTT SATELLITE PROGRAM.	526.0	526.0		AUG 86	FEB 85
[illegible] 5107	EHF SOLID STATE AMPLIFIER FOLLOW-ON OPTION TO TRW NOT AWARDED YET. WILL ESTABLISH AUTOMATIC OR COMPUTER CONTROLLED PROCEDURES + EQUIPMENT FOR MAKING EHF SOLID STATE IMPACT AVALANCHE TRANSIT TIME AMPLIFIERS. (IMPATTS) IN THIS PHASE [illegible] PILOT RUN WILL BE MADE AND TESTED.	407.0		2.0	JUL 86	JUL 86
[illegible] 85 5109	PRECISION LOW-COST SAW DELAY LINES FOR UHF APPLICATIONS PHASE II FOLLOW-ON TO ABOVE. TRW IS ESTABLISHING A PILOT LINE TO VERIFY PRODUCTION TECHNIQUES FOR 403 MHZ + 560 MHZ SAW DEVICES. SEMIAUTOMATIC PROCESS INCLUDE DIE DICING, MOUNTING, ASSEMBLY, AND TEST. COST WILL BE REDUCED BY A FACTOR OF TEN.	408.0	383.0	25.0	JUN 85	JUN 85
[illegible] 85 5109	PRECISION LO-COST SURF ACOUSTIC WAVE DELAY LINES F/UHF APPL ----- JUST FUNDED. NO 301 REQUIRED. -----					
[illegible] 84 5111	VAPOR GROWTH FOR THIRD GENERATION PHOTOCATHODE ITT ELECTRO-OPTICS DIVISION ORDERED 3RD GEN INTENSIFIER TUBE PARTS TO PROVE THE 3RD GEN PHOTOCATHODES. ALSO ORDERED REACTOR COMPONENTS FOR VAPOR EPITAXIAL GROWTH. WILL USE METAL-ORGANIC CHEMICAL VAPOR DEPOSITION (MO-CVD) PROCESS FOR EPITAXIAL LAYERS.	322.0	321.6		SEP 85	OCT 86
[illegible] 85 5111	VAPOR GROWTH FOR THIRD GENERATION PHOTOCATHODE ----- JUST FUNDED. NO 301 REQUIRED. -----					
[illegible] 84 5151	LIQUID PHASE EPITAXY OF HGCDTE F/COMMON MOD DET ARRAYS-PH II SBRC AND TI USED MORE FUNDS FROM MICOM TO SET UP A CD-ZN-TE SUBSTRATE PILOT LINE, LPE LAYER GROWTH, AND ARRAY FAB. AUTOMATED REACTORS ARE IN USE. YIELD UP FROM 7 TO 22 SLICES PER INGOT. WORK MAY NOT BE IMPLEMENTED BECAUSE OF POOR ELECT PROPERTIES.	3,248.9	3,059.9	173.0	MAR 85	MAR 85

PROJ NO.	TITLE + STATUS	...IZED ($000)	VALUES ($000)	LABOR AND MATERIAL ($000)	PROJECTED COMPLETE DATE	PROJECTED COMPLETE DATE
[illegible] 5162	EXSAM BATTERY MANUFACTURING TECHNOLOGY, PHASE II CONTRACT AWARDED SEPT 84. DETAILED SCHEDULES AND PURCHASE SPECS FOR THE CATHODE PROCESSING EQUIPMENT PREPARED. POTENTIAL SUPPLIERS OF EQUIPMENT CONTACTED. QUOTATIONS RECEIVED FOR EASY-ORDER MAJOR PIECES OF EQUIPMENT.	260.0	245.0	14.0	DEC 84	MAR 85
[illegible] 5162	EXSAM BATTERY MANUFACTURING TECHNOLOGY - PHASE III CONTRACT NEGOTIATED, SIGNED AND READY TO BEGIN.	485.0		12.0	DEC 85	DEC 85
[illegible] 5168	AUTOMATIC RETICLE INSPECTION SYSTEM - PHASE II KLA INST. ADAPTED THE DIE-TO-DIE INSPECTION SYS DEVELOPED IN PHASE I TO A DIE-TO-DATA BASE EXPOSURE AND INSPECTION SYSTEM. ELECTRONICS WERE INSTALLED TO ACCEPT DATA BASE SIGNAL AND CONVERT IT TO PSUEDO-OPTICAL IMAGE OF PATTERN. SLES 0.5 MICRON ERRORS	600.0	540.0	60.0	NOV 85	SEP 85
[illegible] 5168	AUTOMATIC RETICLE INSPECTION SYSTEM, PHASE III THE CONTRACT TO KLA INSTRUMENTS FOR PHASE III OF THIS EFFORT HAS NOT BEEN LET YET. DATA FROM THE DEVELOPMENT SYSTEM WILL BE ANALYZED TO DETERMINE WHAT DEFECTS ARE MOST COMMON AND HOW THE EFFECT THE CIRCUITS.	700.0			SEP 85	SEP 85
[illegible] 5174	AUTO SPUT PROC CONT F/PROD ZINC OXIDE ACOUSTIC DEVICES - CAM HARRY DIAMOND LABS ESTABLISHED A COMPUTER CONTROLLED MASS SPECTROMETRY INSPECTION SYSTEM FOR SEMICONDUCTORS. PARAMETERS WHICH AFFECT PROCESS YIELD WERE DETERMINED + A DATA BASE CREATED. NEW TECHNIQUES WILL SIGNIFICANTLY REDUCE IC DEVICE COST.	200.0		158.8	DEC 84	SEP 85
[illegible] 5174	AUTO SPUTTERING PROCESS CONTROL F/PRODUCING ZNO - PHASE II FOLLOW-ON TO ABOVE. HARRY DIAMOND LABS ESTABLISHED DATA VALUES + PRODUCTION MONITORING METHODS USING MASS SPECTROMETRY. CONTROLS WITH FEEDBACK IN REAL TIME WILL PROVIDE PROCESS ADJUSTMENT. DATA IS NOT YET COLLECTED DUE TO SLIPPAGE IN PREVIOUS PHASE.	222.0		24.9	DEC 85	DEC 85
[illegible] 5179	PROGRAM FOR A GRAPHITE/EPOXY ANTENNA REFLECTOR ***** DELINQUENT STATUS REPORT *****	681.0	681.0		APR 82	DEC 84
[illegible] 5180	LOW COST DEWAR + INTERCONNECT ASSEMBLY - PHASE II THE SBRC DESIGN HAD ENV PROBLEMS SO IT WAS REDESIGNED. SPECIFICATIONS FOR PARTS HAVE BEEN WRITTEN. PROTOTYPE PARTS WERE FABRICATED. THE DRAWING PACKAGE IS COMPLETE. PART VENDORS ARE ESTABLISHED. DEWAR PRODUCIBILITY AND PROCESS FEASIBILITY IS STUDIED.	2,144.0	1,979.9	125.0	JUN 85	APR 86
[illegible] 5180	LOW COST DEWAR + INTERCONNECT ASSEMBLY - PHASE II NO WORK HAS BEEN DONE WITH THIS FUNDING. IT WILL [illegible]DRESS THE DA DIRECTED OPTICAL IMPROVEMENT.	211.0	205.5		JUL 86	JUL 86

		SIZED ($000)	VALUES ($000)	LABOR AND MATERIAL ($000)	PROJECTED COMPLETE DATE	PROJECTED COMPLETE DATE
[illegible]	PRODUCTION OF LARGE DIAMETER SILICON FOR LASER SEEKERS BOULES REMOVED 3 IN ZONER FROM CARLSBAD CA PLANT + ASKED TO MOVE IT TO HUGHES SANTA BARBARA RES CTR FOR USE ON AN AF SBI CONTRACT. THIS GOVT FINANCED WESTECH ZONER MADE P-TYPE HIGH RESISTIVITY SILICON AT CARLSBAD. THIS IS A SERIOUS LOSS OF US CAP.	506.0	499.0	67.0	JAN 84	MAR 85
[illegible]	MONOLITHIC MILLIMETER WAVE INP GUNN SOURCES THE FWL PACKAGE FOR THIS EFFORT HAS BEEN DELIVERED TO PRELOCKMENT. AUC IS EXPECTED 20 JUNE 85. PRODUCTION PROCESSES AND PROCEDURES FOR TUNABLE 94 GHZ INP GUNN SOURCES WILL BE DEVELOPED. SOURCE PERFORMANCE SPECS ARE TAKEN FROM MLRS-TGW REQUIREMENTS.	299.0			DEC 87	DEC 87
[illegible]	PROCESS ADJUSTMENTS F/ENVIRON STRESS ON EFECT CIRCUIT METALS ----- JUST FUNDED. NO 301 REQUIRED. -----					
[illegible]	AUTO METHODS F/MFG + APPLY OF LEADLESS CHIP SOCKETS TO PWB AMP INC CORP WILL IMPROVE METHODS FOR MOLDING THE LCC SOLDER SOCKET, IMPROVE LCC TO SOCKET ASSEMBLY METHODS, AND MODIFY EQUIPMENT TO AUTOMATICALLY PLACE SOCKETS ON PCBS. WILL DEVELOP TEST AND REWORK PROCEDURES + PREPARE JEDEC/EIA STANDARD FOR SOCKET.	750.0			MAY 86	JUL 86
[illegible]	HIGH SPEED DIGITAL TO ANALOG CONVERTER ----- JUST FUNDED. NO 301 REQUIRED. -----					
[illegible]	ADVANCED WAFER IMAGING SYSTEM (AWIS) THE ORIGINAL REP WAS INADEQUATE. IT WILL BE REWRITTEN AND REISSUED IN MARCH 1985. A 25 WAFER PER HR ADVANCED WAFER IMAGING SYSTEM WILL BE DEVELOPED. NEW LENS SYSTEM, LIGHT SOURCES, POSITIONING AND HANDLING EQ WILL IMPROVE ALIGNMENT TO 0.1 MICRONS.	1,900.0			MAR 88	MAR 88
[illegible] 5251	AUTOMATIC SEM WAFER INSPECTION AND METROLOGY SYSTEM A SOW WAS PREPARED AND WORK ON CONTRACTING WAS STARTED. AN AUTOMATIC SEM WAFER INSPECTION SYSTEM WITH 0.1 MICRON RESOLUTION WILL BE ASSEMBLED AND DEMONSTRATED.	600.0			JAN 87	JAN 87
[illegible] 5272	TAPE AUTOMATED BONDING (TAB) ----- JUST FUNDED. NO 301 REQUIRED. -----					
[illegible] 5273	FIRST LEVEL PACKAGING AND INTERCONNECTIONS (VHSIC) ----- JUST FUNDED. NO 301 REQUIRED. -----					
[illegible] 5274	MULTICHIP PACKAGES (VHSIC) ----- JUST FUNDED. NO 301 REQUIRED. -----					

		($000)	($000)	($000)	DATE	DATE
[illegible]	LASER POLARIZERS THIS EFFORT WILL ESTABLISH A DOMESTIC SOURCE FOR POLARIZER ELEMENT IN THE TABS LASER DESIGNATOR SYSTEM. THE CONTRACT TO INTERNATIONAL LASER SYSTEMS HAS NOT YET BEEN LET.	250.0	250.0		AUG 85	AUG 85
[illegible]	LASER POLARIZERS ----- JUST FUNDED. NO DOL REQUIRED. -----					
[illegible]	[illegible] DEGRADATION FOR COST IMAGE INTENSIFIER TUBES [illegible] SUCCESSFULLY COMPLETED 1500 HR RELIABILITY TEST ON 10 TUBES WITH ONLY 3 TUBE FAILURES AGAINST CONTRACTUAL ALLOWANCE OF 5. FUNDS ARE NEARLY EXPENDED. REMAINING EFFORT TO OMIT PILOT RUN + CONCENTRATE ON PRODUCTION CAPABILITY DEMO + FINAL REPORT.	1,366.0	1,280.0	106.0	JUN 84	MAR 85
[illegible]	PROCESSING HIGH STABILITY QUARTZ CRYSTAL UNIT DEMO PHASE III FOLLOW-ON TO N 27 9754. LOW YIELDS FROM QUARTZ CRYSTAL FABRICATION FACILITY (QXFF) NECESSITATED CRYSTAL FABRICATION FOR IMAO ON ALTERNATE LAB EQUIPMENT. WORK ON QXFF WAS TERMINATED EXCEPT FOR FINAL REPORT. DUE JUNE 1985.	877.0	819.1	58.0	MAR 81	JUN 85
[illegible]	MINIATURE CATHODE RAY TUBES THE ENVIRONMENTAL AND LIFE TESTS HAVE BEEN COMPLETED ON THE CONFIRMATORY SAMPLES. THE TEST RESULTS ARE BEING EVALUATED.	369.2	278.7	90.5	AUG 81	NOV 85
[illegible]	LO-COST MONOLITHIC GALLIUM ARSENIDE MICROWAVE INTEG CIRCUITS WESTINGHOUSE RECONFIGURED ITS ARTWORK FOR 3-STAGE MICROWAVE ICS IN GALLIUM ARSENIDE. GAIN WAS NOT UP TO SPEC AND NOISE EXCEEDED SPEC. THIS IS A VERY COMPLEX CIRCUIT MADE WITH A SERIES OF HIGH-TECH PROCESSES. NEW WAFERS WILL BE BOUGHT W/EPI ON THEM.	967.0	895.0	15.0	SEP 84	NOV 86
[illegible]	PRODUCTION TECHNIQUES FOR SILICON MW POWER TRANSISTORS MICROWAVE SEMICON. CORP THICKENED AND ENLARGED THE METAL CONTACT ON THE EMITTER AND PASSED THE 1000 HOUR LIFE TEST. UNITS ARE STILL ON TEST. SIX TRANSISTORS WERE PACKAGED AND GIVEN A RADIATION TEST WHICH THEY PASSED WITH LITTLE DEGREDATION.	942.9	852.9	90.0	SEP 83	JUN 85

			($LOC)	VALUES ($OOC)	AND MATERIAL ($OOC)	COMPLETE DATE	COMPLETE DATE
[illegible]	[illegible]	[illegible] PROJECTILE COMPONENT IMMERSION INSPECTION ***** DELINQUENT STATUS REPORT *****				JUL 86	JUL 86
[illegible]	[illegible]	TESTING OF M55 DETONATOR STAB SENSITIVITY AND OUTPUT SYSTEM DESIGN HAS BEEN COMPLETED AND REQUIRED COMPONENTS HAVE BEEN ORDERED AND DELIVERED. FABRICATION OF PARTS WILL BE COMPLETED DEC 1984. FINAL ASSEMBLY AND COMPUTER SOFTWARE DEVELOPMENT IS UNDERWAY.	105.0			FEB 85	FEB 85
[illegible]	[illegible]	IN-BORE [illegible] THREAD WORK INSPECTION CONCEPTUAL DESIGN WORK HAS COMPLETED. DISCUSSIONS WERE HELD WITH POTENTIAL GUN SUPPLIERS AND SYSTEM CONTRACTORS ARE IN PROCESS AND PURCHASE DESCRIPTIONS ARE BEING PREPARED.	135.0			APR 86	MAY 86
[illegible]	[illegible]	[illegible] CHROMIUM ADHESION IN LARGE CALIBER GUNS TO DETERMINE IF THE CHROMIUM COATING ON EACH 120MM XM256 GUN PRODUCED HAS BEEN EVALUATED. THE PROCEDURE INVOLVES TESTING OF CHROMIUM ON AN EXPLOSION BOND WHICH REFLECTS COMPARABLE ADHESION CHARACTERISTICS.	70.0				FEB 86
[illegible]	[illegible]	[illegible] TEST FOR YIELD STRENGTH MEASUREMENT ANALYSIS IS UNDERWAY ON THREE TOPICS, (1) DETERMINING THE MOST APPROPRIATE CANNON COMPONENTS TO TEST IN THE PROGRAM, (2) DETERMINE THE SPECIFIC TEST VARIABLES, (3) OBTAINING THE MOST ACCURATE STRAIN GAGE FOR MEASURE OF YIELD STRENGTH FROM INDENTATION.	50.0			MAY 85	JUN 86
[illegible]	[illegible]	[illegible] LIGHT SOURCE FOR LOW LEVEL PHOTOMETRIC MEAS RADIUM THE REQUEST FOR PROPOSAL WAS ISSUED 26 NOV 84. THERE HAS BEEN A LARGE NUMBER OF REQUESTS FROM INDUSTRY FOR THIS PROPOSAL INDICATING A GOOD PROBABILITY OF SUCCESS FOR THIS PROJECT. CONTRACTOR PROPOSALS WERE DUE NO LATER THAN 20 DEC 84.	75.0			APR 85	DEC 85
[illegible]	[illegible]	APPL OF AN X-RAY TV SYSTEM FOR RECORD + PROC OF DIFFRAC PAT THE NEW SAMPLE POSITIONING DEVICE HAS BEEN CONSTRUCTED WHICH ACCURATELY POSITIONS THE CARTRIDGE CASE IN THE X-RAY BEAM. COMPARISONS WERE MADE BETWEEN THE IMAGE BY THE FIRST GENERATION, THREE STAGE IMAGE INTENSIFIER TUBE.	62.0			DEC 84	FEB 85
[illegible]	[illegible]	PROGRAMMABLE HIGH RESPONSE FUNCTIONAL ACCELERATION TESTER THE PROCUREMENT REQUEST WAS COMPLETED. THE CONTACT AWARD IS SCHEDULED FOR DEC 1984.	109.0			JUL 86	JAN 87
[illegible]	[illegible]	MOBILITY MONITORING SYSTEM ***** DELINQUENT STATUS REPORT *****					DEC 84

			($000)	($000)	MATERIAL ($000)	DATE	DATE
M 84	6350	2814	MEASURE PROJECTILE RESISTANCE TO FREE FALL IMPACT ***** DELINQUENT STATUS REPORT *****				DEC 84
M 84	6350	2876	PROTOTYPE INFRARED SCREEN AND AUTO PILOT TESTING THE INTEGRATION OF THE EXISTING HARDWARE IN-THE-LOOP FACILITY WITH IR SPECIFIC AC-130 SIMULATOR HAS COMPLETED. THIS INCLUDED THE DESIGN, DEVELOPMENT, CODING, CHECKOUT AND INSTALLATION OF THE ASSOCIATED INTERFACE SOFTWARE.	141.6		SEP 84	APR 85
M 84	6350	2878	SIMULANT PERMEATION TESTING OF PROTECTIVE MATLS THIS EFFORT HAS BEEN COMPLETED. ECP'S WILL BE GENERATED TO CHANGE MIL-STD-282 TO INCORPORATE PROJECT RESULTS. ACCEPTANCE TESTING WILL THEN BE ACCOMPLISHED UTILIZING THE SIMULANT, THUS ONLY A FEW VERIFICATION SAMPLES WILL BE TESTED WITH GD.	25.0			JUN 84
M 86	6350	3047	PROCEDURES FOR INSPECTING + MONITORING THERMOPLASTIC RESINS THE PRELIMINARY DRAFT OF A TEST METHOD FOR THE ANALYSIS OF MW'S AND NMD'S OF THE SOLUBLE THERMOPLASTIC RESINS WAS PREPARED AND SUBMITTED TO ASTM TASK GROUP D20.70.02 FOR REVIEW AND EVALUATION.	50.0			JUN 86
M 86	6350	3049	ROCKET MATERIAL SCREENING TEST THE CONTRACTOR HAS CONTINUED TO SIMPLIFY AND IMPROVE THE OPERATION OF THE TEST STATION. THE OPTICS ARE NOW IN PLACE AND A COMPACT STRUCTURE HAS BEEN FABRICATED TO HOUSE THE DEWAR, AND TO PREVENT FROSTING OF THE OPTICS.	155.0			JAN 86
M 84	6350	3094	RESIDUAL STRESS DETERMINATION BY ACOUSTIC WAVE VELOCITY THE DESIGN AND FABRICATION OF A MECHANICAL DEVICE FOR CONSTANT ACOUSTIC COUPLING AND ROTATION OF A SHEAR-WAVE TRANSDUCER HAS BEEN COMPLETED. MODIFICATIONS FOR TESTING ON BOTH A 20 KIP AND 50 KIP TENSILE MACHINE WERE MADE.	40.7		DEC 84	DEC 84
M 85	6350	3095	NDT OF ADVANCED COMPOSITES FOR BRIDGING INSTRUMENTATION REQUIRED TO ASSEMBLE A PROTOTYPE CONTACT ULTRASONIC C-SCAN SYSTEM OF THE LABORATORY MODEL DEVELOPED DURING FY 83 HAS BEEN RECEIVED. WORK HAS BEGUN TO INTERFACE A NEW PORTABLE COMPUTER THAT WILL PROVIDE A FIELD OF C-SCAN CAPABILITY.	41.5		MAR 85	MAR 85
M 84	6350	2896	STANDARDIZED SOFTWARE TEST FACILITIES THE CONTRACTOR PORTION OF THIS EFFORT WAS CANCELLED. DEVELOPMENT OF THE TIS MCS SOFTWARE BY EPG WILL COMMENCE IN 1985 AND IS SCH TO BE COMPLETE DEC 1985. THE GENERIC TIS PORTION SCHEDULED COMPLETION DATE IS APR 1985.	318.0		SEP 85	DEC 85
M 84	6350	2914	AUTO ANALYTICAL + CONTROL SYSTEM FOR GAS LIFE TESTER SOFTWARE DEVELOPMENT IS NEARLY COMPLETE. ALL ALGORITHMS ARE COMPLETED AND THE PROGRAM HAS UNDERGONE PRELIMINARY TESTING USING A STD VOLTAGE SOURCE IN PLACE OF LAB ANALYTICAL INSTRUMENTATION. ALL SYS FUNCTIONED WELL AND ONLY MINOR CHANGES ARE REQUIRED	77.5		FEB 85	FEB 85

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 84 6350 2972	CAPILLARY GAS CHROMATOGRAPHIC TEST OF ARMY SOLID PROPELLANTS SEE M 84 6350-2972 FOR PROJECT STATUS.	45.0			SEP 83	FEB 85
M 84 6350 2977	VEILING GLARE TESTER FOR IMAGE INTENSIFIER SYS MODIFICATIONS TO THE VEILING GLARE TESTER RESULTED IN A 3 MO DELAY IN DELIVERY. THESE MODS WERE COMPLETED IN OCT 84 AND THE TEST SET WAS DELIVERED TO NVEOL ON 15 NOV 84.	83.4				FEB 85
M 84 6350 2980	PORTABILITY OF TEST SOFTWARE FOR VHSIC CHIPS SEE M 84 6350-2980 FOR PROJECT STATUS.	90.0			DEC 83	MAY 85
M 84 6350 2981	FIELD POWER SUPPLY ACCEPTANCE TESTER SEE M 84 6350-2981 FOR PROJECT STATUS.	150.0			JUL 85	JUL 85
M 84 6350	MATERIALS TESTING TECHNOLOGY (MTT) SEE SUBTASKS BELOW FOR PROJECT STATUS.	4,062.0	1,662.2	403.0	OCT 85	OCT 85
M 84 6350 9001	QUALITY ENGINEERING ACTIVITIES ***** DELINQUENT STATUS REPORT *****					
M 84 6350 9002	AUTOMATED CUSTOMER SUPPORT SYSTEM ***** DELINQUENT STATUS REPORT *****					
M 84 6350 2625	TRI-AXIAL VIBRATION TEST PROC S FOR MISSILE + ARTILLERY FUZ CONTRACTOR DELAYS HAVE PREVENTED THE START OF THE VALIDATION TESTING. THESE TESTS HAVE BEEN RESCHEDULED FOR JAN 85. AS A RESULT THE VALIDATION TESTS WILL NOT BE COMPLETED BY MAR 1985 AS ORGINALLY PLANNED. THE WORK WILL BE COMPLETED BY FY85 TASK.	90.0			MAR 85	MAR 85
M 84 6350 2445	ULTRASONIC TIRE INSPECTION ***** DELINQUENT STATUS REPORT *****					
M 84 6350 2611	SORPTION OF AGENTS ON ASC WHETLERITE ADSORPTION ISOTHERMS WERE DETERMINED FOR ASC WHETLERITE CHARCOALS AT FOUR LEVELS OF IMPREGNATION, FOR PRODUCTION LOT OF IMPREGNATED CHARCOAL, AND FOR A STANDARD CHARCOAL OF KNOWN SURFACE AREA USING THE INDEPENDENT METHODS.	33.0			FEB 85	DEC 85
M 84 6350 2642	ADV PENETRATING RADIATION TECH FOR PRODUCT EVALUATION THE OPAQUE PENETRANT EXPERIMENTS ON GRAPHITE/EPOXY MATERIAL REINFORCE THE VALUE OF THE TECHNIQUE. IN-HOUSE WORK WITH ZINC IODIDE ON A GLASS/EPOXY BOX BEAM POINTS OUT SEVERAL REAL ADVANTAGES OF USING ZINC IODIDE.	160.0			SEP 84	JAN 85
M 84 6350 2634	IMPROVED INSPECTION OF TORSION BAR SHOT PEENING AN ENGINEERING CHANGE PROPOSAL WAS WRITTEN TO INCORPORATE THE AUTOMATIC X-RAY DIFFRACTION METHOD INTO THE SHOT-PEENING SPECIFICATION MIL-S-13165. THE PROJECT HAS BEEN COMPLETED AND THE FINAL TECHNICAL REPORT HAS BEEN PUBLISHED.	25.0			SEP 84	SEP 84

	AUTHORIZED ($000)	CONTRACT VALUES ($000)	[illegible] LABOR AND MATERIAL ($000)	PROJECTED COMPLETE DATE	PROJECTED COMPLETE DATE
[illegible] LIFE TESTING OF CHARCOAL FILTERS [illegible] THE DEVELOPMENT OF TWO SIMULANTS THAT [illegible] ACTUAL GB LIFE. THESE SIMULANTS ARE [illegible] APPROPRIATE. IN ADDITION, THESE COMPOUNDS [illegible] NONMUTAGENIC.	10.0				JUL 84
[illegible] FOR PRODUCT EVALUATION [illegible] FILMS HAVE BEEN COMPARED WITH [illegible] GRAPHIC FILM. EXPOSURE CURVES ARE [illegible] FILMS. DUE TO THE FACT THAT THE "LOW [illegible] FROM THE MARKET IMPL IS NOT POSSIBLE	46.8				JUN 84
[illegible] INSPECTION [illegible] FOR PROJECT STATUS.	41.0			APR 84	SEP 84
[illegible] TO FREE FALL IMPACT [illegible] REPORT *****					OCT 84
[illegible] TYPE [illegible] AND AUTOPILOT TESTING [illegible] 84 6350-2876 FOR PROJECT STATUS.	310.0				APR 85
[illegible] FOR [illegible]ING & MONITORING THERMOPLASTIC RESINS [illegible] FOR PROJECT STATUS.	42.0				JUN 86
[illegible] DETERMINATION BY ACOUSTIC WAVE VELOCITY [illegible] 84 6350-2874 FOR PROJECT STATUS.	42.0			OCT 83	DEC 84
[illegible] SOFTWARE TEST FACILITIES [illegible] 84 6350-2896 FOR PROJECT STATUS.	191.0			SEP 83	DEC 85
[illegible] STANDARD MONITORS TO INCREASE SOFTWARE TESTABILITY COMPLETED DEMONSTRATION OF UTILITY OF APPROACH. THE SOFTWARE TESTABILITY [illegible] DRAFT WAS REVIEWED AND COMMENTS WERE FURNISHED TO THE CONTRACTOR. THE FINAL TESTABILITY HANDBOOK IS BEING PUBLISHED.	30.0				FEB 85
[illegible] MOBILITY MONITORING SYSTEM ***** DELINQUENT STATUS REPORT *****				DEC 85	JUN 85
[illegible] 6350 [illegible] AUTOMATION OF 65 DEGREE-C PROPELLANT SURVEILLANCE TEST ***** DELINQUENT STATUS REPORT *****				SEP 85	SEP 85
[illegible] 6350 2[illegible] INVEST OF SCAN [illegible]ACOUSTIC MICROSCOPY F/CERAMICS INSPECT SEE M 84 6350-2908 FOR PROJECT STATUS.	17.0			OCT 84	FEB 85

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 82 6350 2692	REMOTE IMAGING OF PREFORM DEFECTS BY COMPUTER CONTROL WORK PROGRESSED TOWARD BEGINNING THE SCALE-UP OF THE DIGITIZING MATRIX AND ANALOG CHANNELS TO FULL SYSTEM CAPACITY. SPECIFIC GOALS ACHIEVED INCLUDE ACQUISITION OF A MODULAR POWER SUPPLY FOR THE ANALOG SECTION WHICH CAN BE EXPANDED.	85.0			DEC 83	JUL 85
M 82 6350 2694	RESIDUAL STRESS DETERMINATION BY ACOUSTIC WAVE VELOCITY SEE M 84 6350-2694 FOR PROJECT STATUS.	75.0			FEB 83	DEC 84
M 82 6350 2697	STANDARD MONITORS TO INCREASE SOFTWARE TESTABILITY SEE M 83 6350-2697 FOR PROJECT STATUS. THE ABOVE FUNDING REFLECTS THE COMBINED COSTS OF FY82 AND FY83.	131.5	131.5		DEC 85	FEB 85
M 82 6350 2901	LASER AIMING DEVICE THE LASER AIMING DEVICE SYSTEM HAS BEEN COMPLETED. THE LAD WAS SHIPPED TO JPF WHERE IT WAS ASSEMBLED FOR TRAINING. THE DEMONSTRATION WAS COMPLETED AND WAS SUCCESSFUL.	154.2			AUG 84	FEB 85
M 82 6350 2916	AUTOMATING DEPOT REBUILD COMPONENT DIMENSIONAL INSPECTION ***** DELINQUENT STATUS REPORT *****				JUL 85	SEP 84
M 82 6350 2919	AUTO RESIDUAL STRESS INSP OF GUN TUBES + OTHER RELATED COMP PROCUREMENT IS CURRENTLY EVALUATING THE CONTRACTOR'S RESPONSE TO IFB. THE CONTRACT IS SCHEDULED TO BE AWARDED IN DEC 1984.	145.0			NOV 83	JUL 85
M 82 6350 2950	ELECTRICALLY CONDUCTIVE ADHESIVES FOR HIGH STABILITY Q R & B THE CONTRACTOR MODIFIED EQUIP TO TEST RESONATORS. THIS INCLUDED REFLECTOMETER AND OVENS. MEASUREMENTS WERE COMPLETED THAT REQ LENGTHY RESONATOR STABILIZATION TIMES. THIS CONCLUDES THE TECHNICAL EFFORT FOR THIS EFFORT.	77.0			JUN 83	NOV 84
M 82 6350 3024	STANDARD SOFTWARE REQUIREMENTS ENGINEERING LANGUAGE ALL NECESSARY PREPARATORY WORK HAS BEEN COMPLETED, INCLUDING TRAINING OF PERSONNEL. PURCHASED LICENSE TO TOOLS AND THE NECESSARY HARDWARE TO OPERATE IT. TESTING UTILIZING TOOLS HAS BEGUN.	69.3			OCT 85	OCT 84
M 83 6350	MATERIALS TESTING TECHNOLOGY (MTT) SEE SUBTASKS BELOW FOR PROJECT STATUS.	2,149.0	656.6	1,243.4	OCT 84	JUN 85
M 83 6350 0001	QUALITY ENGINEERING ACTIVITIES ***** DELINQUENT STATUS REPORT *****					
M 83 6350 0002	AUTOMATED CUSTOMER SUPPORT SYSTEM ***** DELINQUENT STATUS REPORT *****					

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 82 6350 2445	CERAMIC MATL NDT EVALUATION TECHNIQUES ***** DELINQUENT STATUS REPORT *****				APR 83	DEC 84
M 82 6350 2448	IMPROVED GB SIMULANT FOR LIFE TESTING OF CHARCOAL FILTERS SEE M 83 6350-2448 FOR PROJECT STATUS.	144.0			JUN 83	JUL 84
M 82 6350 2640	TRACK TEST MACHINE THE MAIN HYDRAULIC POWER SUPPLY WILL NOW START WHEN CONTROL SWITCHES ARE ACTIVATED. ALSO, THE DRIVE CLUTCH CAN NOW BE ENERGIZED. THE CIRCUIT BOARD HAD TO BE CORRECTED TO RECTIFY THE MALFUNCTIONING OF THE ABOVE EQUIPMENT.	296.0				DEC 85
M 82 6350 2611	M42/M48 MAGNETIC FLUX LEAKAGE INSPECTION THE MFL INSPECTION SYSTEM HAS BEEN COMPLETED. THE SYSTEM WAS DELIVERED TO NORRIS INDUSTRIES FOR FINAL ACCEPTANCE TESTING. THE ACCEPTANCE TEST IS SCHEDULED TO BE PERFORMED IN DEC 1984.	125.0			FEB 84	AUG 85
M 82 6350 2626	LIQ CHROMATOGRAPHIC ANALYSIS-NITROCELLULOSE BASE PROPELLANTS ***** DELINQUENT STATUS REPORT *****					JUL 84
M 82 6350 2634	IMPROVED TRACK PIN SHOT PEENING INSPECTION SEE M 84 6350-2834 FOR PROJECT STATUS.	173.0			AUG 84	SEP 84
M 82 6350 2644	MEASURING PROJECTILE RESISTANCE TO FREE FALL IMPACT ***** DELINQUENT STATUS REPORT *****				OCT 83	OCT 84
M 82 6350 2876	PROTOTYPE INFRARED SEEKER AND AUTO PILOT TESTING SEE M 83 6350-2876 FOR PROJECT STATUS.	90.0				APR 85
M 82 6350 2678	STRAIGHTENING OF GUN TUBE FORGINGS BY MEANS OF EMAT THE TECHNICAL DATA PACKAGE WAS COMPLETED. AN EXISTING CONTRACT IS BEING MODIFIED TO PURCHASE THE NEW STRAIGHTENING PRESS.	63.0			JUN 86	JUL 85
M 82 6350 2682	NUCLEAR MAG RESONANCE TEST FOR DETM MOISTURE IN COMPOSITES ***** DELINQUENT STATUS REPORT *****				JUN 83	DEC 84
M 82 6350 2687	SIMULANT PERMEATION TESTING OF PROTECTIVE CLOTHING SEE M 84 6350-2687 FOR PROJECT STATUS.	139.0			JUN 83	JUN 84
M 82 6350 2689	PROCEDURES FOR INSPECTING + MONITORING THERMOPLASTIC RESINS SEE M 84 6350-2869 FOR PROJECT STATUS.	80.0			JUN 85	JUN 86
M 82 6350 2891	MG CD TE MATERIAL SCREENING TEST SEE M 84 6350-2891 FOR PROJECT STATUS.	175.0			DEC 84	JAN 86

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 84 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 2600	THERMAL + DYNAMIC MECH CHAR-PREPREG AGING AND CURE BEHAVIOR ***** DELINQUENT STATUS REPORT *****					DEC 84
M 81 6350 2603	AUTO MEAS OF STRENGTH + OXIDE LIMITING FLAWS IN CERAMIC TURB ***** DELINQUENT STATUS REPORT *****				AUG 83	DEC 84
M 81 6350 2604	BINARY MONITORS MECHANICAL RUPTURE PROPERTIES TEST ALL MANUFACTURED PARTS AND FABRICATION WORK HAS BEEN RECEIVED OR IS ON ORDER. ALL ASSEMBLY AND FABRICATION DRAWINGS HAVE BEEN COMPLETED. DELAYS IN PARTS DELIVERIES AND DIMENSIONAL ERRORS ON VALVE PARTS HAVE SERIOUSLY IMPARED THE PROGRAM.	306.0				MAR 85
M 81 6350 2611	M42/M46 MAGNETIC FLUX LEAKAGE INSPECTION SEE M 82 6350-2611 FOR PROJECT STATUS.	224.0				AUG 85
M 81 6350 2615	CANNON TUBE AUTOMATED CHROME PLATE THICKNESS MEASUREMENT THE TECHNOLOGY DEVELOPED BY THIS EFFORT IS CURRENTLY BEING APPLIED TO THE 120MM GUN TUBE INSPECTION STATION. ASSEMBLY OF THE REQUIRED ELECTRONIC CIRCUITY IS UNDERWAY.	69.6			OCT 82	JUN 85
M 81 6350 2658	STRESS READING TRANSDUCER FOR LARGE COMPOSITE COMPONENTS ***** DELINQUENT STATUS REPORT *****				DEC 82	DEC 84
M 81 6350 2944	PROTECTIVE MASK CANISTER ELECTROMAGNETIC INSP PROCEDURES THE CONTRACTOR HAS COMPLETED HIS WORK AND HAS PROVIDED THE REQUIRED DRAWINGS, DEVELOPMENTAL TEST STANDARD AND A FINAL REPORT ON HIS CONTRACTUAL EFFORTS. THE PREPARATION OF THE TECHNICAL REPORT IS IN PROGRESS.	85.0			DEC 82	MAR 85
M 81 6350 2947	MOBILITY MONITORING SYSTEM (MMS) ***** DELINQUENT STATUS REPORT *****				DEC 84	DEC 85
M 82 6350 2977	IMAGE INTENSIFIER SYSTEM VEILING GLARE TESTER SEE M 83 6350-2977 FOR PROJECT STATUS.	83.4			SEP 84	FEB 85
M 82 6350	MATERIALS TESTING TECHNOLOGY (MTT) SEE SUBTASKS BELOW FOR STATUS.	4,573.0	1,920.0	2,653.0	OCT 84	OCT 85
M 82 6350 0001	QUALITY ENGINEERING ACTIVITIES ***** DELINQUENT STATUS REPORT *****					
M 82 6350 0002	AUTOMATED CUSTOMER SUPPORT SYSTEM ***** DELINQUENT STATUS REPORT *****					
M 82 6350 2235	ACOUSTIC EMISSION WELD MONITOR ***** DELINQUENT STATUS REPORT *****					DEC 84

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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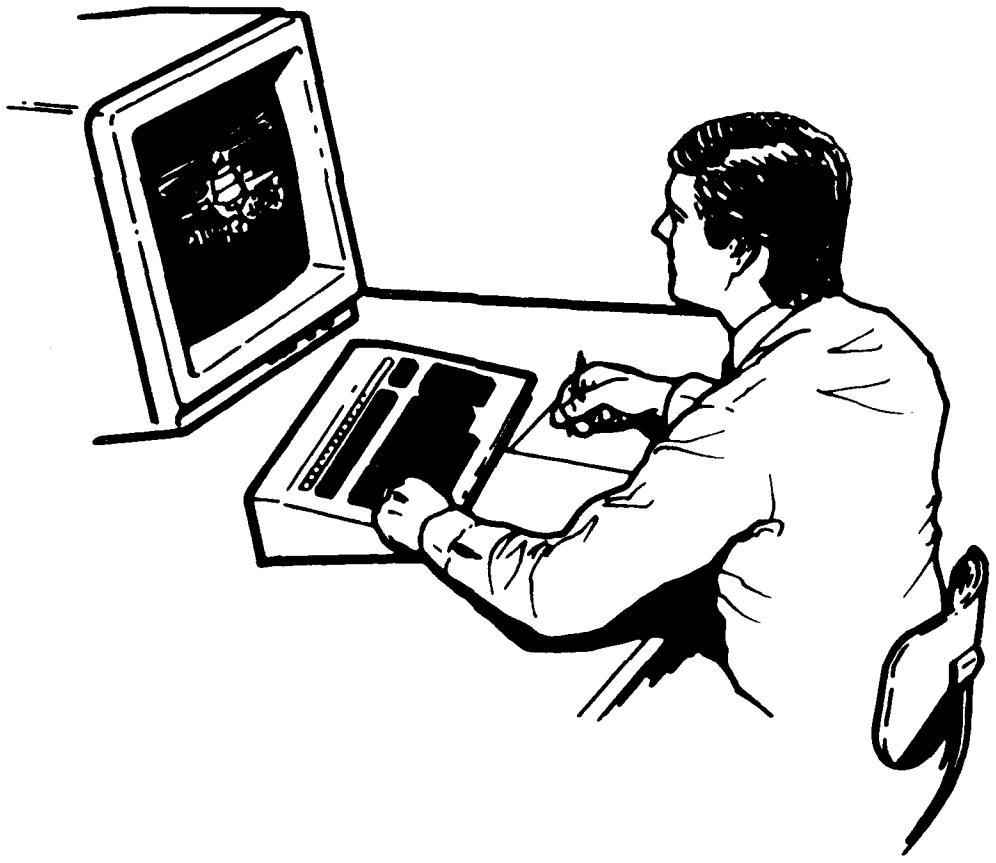
PROJ NO.	TITLE & STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 80 6350	MATERIALS TESTING TECHNOLOGY (MTT) SEE SUBTASKS BELOW FOR STATUS.	4,323.3	1,633.7	2,089.6	APR 83	OCT 85
M 80 6350 2014	PORTABLE NEUTRON RADIOGRAPHY SYS - ENGR MODEL ***** DELINQUENT STATUS REPORT *****					DEC 84
M 80 6350 2446	BLACKLIGHT VIDEO INSPECTION SYSTEM THIS PROJECT WAS SUCCESSFULLY COMPLETED. A BLACK LIGHT VIDEO BORESCOPE WAS DEVELOPED THAT PRODUCES CLEAR SHAPE IMAGES OF CRACKS IN 105MM, 120MM, AND 155MM CANNON TUBES. THE TECHNICAL REPORT HAS BEEN COMPLETED AND WILL BE SUBMITTED BY JAN 31, 1985.	41.2			JUN 83	SEP 84
M 80 6350 2614	TEMP. COMPENSATED VOLTAGE CONT CRYSTAL OSCILLATOR TEST METH. ***** DELINQUENT STATUS REPORT *****					DEC 84
M 81 6350	MATERIALS TESTING TECHNOLOGY (MTT) SEE SUBTASKS BELOW FOR STATUS.	4,349.0	1,479.5	2,869.5	OCT 83	OCT 85
M 81 6350 2224	AUTOMATED ANTENNA PATTERN MEASUREMENT ALL MAJOR COMPONENTS OF THIS SYSTEM HAVE BEEN RECEIVED AND MEET SYSTEM REQUIREMENTS. THE FABRICATION AND TESTING OF COMPUTER INTERFACES AND THEIR INTEGRATION INTO THE MEASUREMENT SYSTEM HAS BEEN COMPLETED.	65.0				APR 85
M 81 6350 2401	CANNON TUBE AUTOMATIC MAGNETIC BORESCOPE INSPECTION THE MRB IS CURRENTLY OPERATIONAL AND BEING USED AT ABERDEEN PROVING GROUND TO INSPECT THE INTERIOR CONDITION OF CANNON TUBES. A SERVICE CONTRACT HAS BEEN NEGOTIATED THAT WILL ENABLE MALFUNCTIONS TO BE QUICKLY REPAIRED AND KEEP EQUIP ON-LINE.	362.0				SEP 85
M 81 6350 2409	EMISSION SPECTROGRAPH ANAL MARAGING STEEL PLASMA EXCITATION ***** DELINQUENT STATUS REPORT *****					DEC 84
M 81 6350 2633	FOURIER TRANSFORM IR TECHNIQUES FOR QC OF PREPREG SYSTEM ***** DELINQUENT STATUS REPORT *****					DEC 84
M 81 6350 2639	ROADWHEEL SEAL TEST MACHINE ***** DELINQUENT STATUS REPORT *****					JUN 85
M 81 6350 2642	ADVANCED PENETRATING RADIATION TECH F/PRODUCT EVALUATION THE EVALUATION OF THE GAMMA-GAUGING EQUIPMENT WAS COMPLETED. A NEGATIVE FINDING CONCERNING THE APPLICABILITY OF EQUIP IS CONTAINED IN THE FINAL TECHNICAL REPORT WHICH IS BEING REVIEWED AND COORDINATION WITHIN AMMRC.	73.0				JUN 84

ARMY MATERIALS AND MECHANICS RESEARCH CENTER

CURRENT FUNDING STATUS, 2ND CY84

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)	INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)
80	1	4,323,300	1,633,700	0 (0%)	2,689,600	2,689,600 (100%)
81	1	4,349,000	1,479,500	0 (0%)	2,869,500	2,869,500 (100%)
82	1	4,573,000	1,920,000	0 (0%)	2,653,000	2,653,000 (100%)
83	1	2,149,000	656,600	656,600 (100%)	1,492,400	1,243,400 (83%)
84	2	4,312,000	1,790,900	128,700 (7%)	2,521,100	403,000 (15%)
85	2	4,066,000	1,431,100	0 (0%)	2,634,900	46,200 (1%)
TOTAL	8	23,772,300	8,911,800	785,300 (8%)	14,860,500	9,904,700 (66%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 37% INHOUSE REMAINING 62%



ARMY MATERIALS AND MECHANICS RESEARCH CENTER (AMMRC)

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 84 WCS DRCMT-301

PROJ NO.	TITLE & STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
3 84 3115	ENGINEERING FOR METROLOGY AND CALIBRATION SEE INDIVIDUAL SUBTASKS FOR WORK STATUS.	700.0	331.0	369.0	SEP 85	DEC 85
3 84 3115 25	BASIC METROLOGY STD FOR USE IN WIDE-RANGING ENVIRONMENTS AUTOMATED CAPACITANCE BRIDGE-THE EQUIPMENT WAS ASSEMBLED AND TESTED TO AUTOMATICALLY CALIBRATE THE CAPACITANCE BRIDGE. NEW DC RESISTANCE METROLOGY- TWO OIL BATHS FOR THE SYSTEM HAS BEEN FABRICATED. 10V TRANSPORTABLE STD- EQUIPMENT BEING EVALUATED.				SEP 85	DEC 85
3 84 3115 36	PRECISION AC AND DC ELECTRICAL STANDARDS FURTHER MEASUREMENTS WERE MADE ON TWO SOLID-STATE TRANSFER STDS. AS VOLTAGE CONVERTERS. THE NEW AUTOMATED CALIBRATION SYSTEM IS BEING ASSEMBLED. EXTENSIVE TESTING HAS BEEN CONDUCTED AND MOST OF THE COMPONENTS HAVE BEEN TESTED.				SEP 85	DEC 85
M 85 3115	ENGINEERING FOR METROLOGY AND CALIBRATION SEE INDIVIDUAL SUBTASKS FOR WORK STATUS.	547.0		232.0	DEC 86	DEC 86
M 85 3115 34	IMPROVED ON-SITE CALIBRATION INDEPENDENT VERIFICATION OF AIRSPEED SOFTWARE IN PNEUMATIC PRESSURE STD. COEFFICIENT STUDY AND STABILITY EVALUATION BEING DONE ON ABOVE STD. DIGITAL IMAGING TECHNOLOGY REVIEW CONTINUED. GAS MASK LEAKAGE TESTERS BEING STUDIED FOR PROBLEM AREAS.				DEC 85	DEC 85
M 85 3115 37	DATA COLLECTION/REDUCTION IMPROVEMENT SEVERAL CURVE FIT PROBLEMS HAVE BEEN SOLVED OR ARE BEING WORKED ON USING NEW SOFTWARE ON A DESKTOP COMPUTER. A MULTIPLE LINEAR REGRESSION CURVE FIT PROGRAM WAS DEVELOPED TO AID IN TEMPERATURE DEPENDENCE STUDIES.				DEC 85	DEC 85

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 84 RCS DRCMT-301

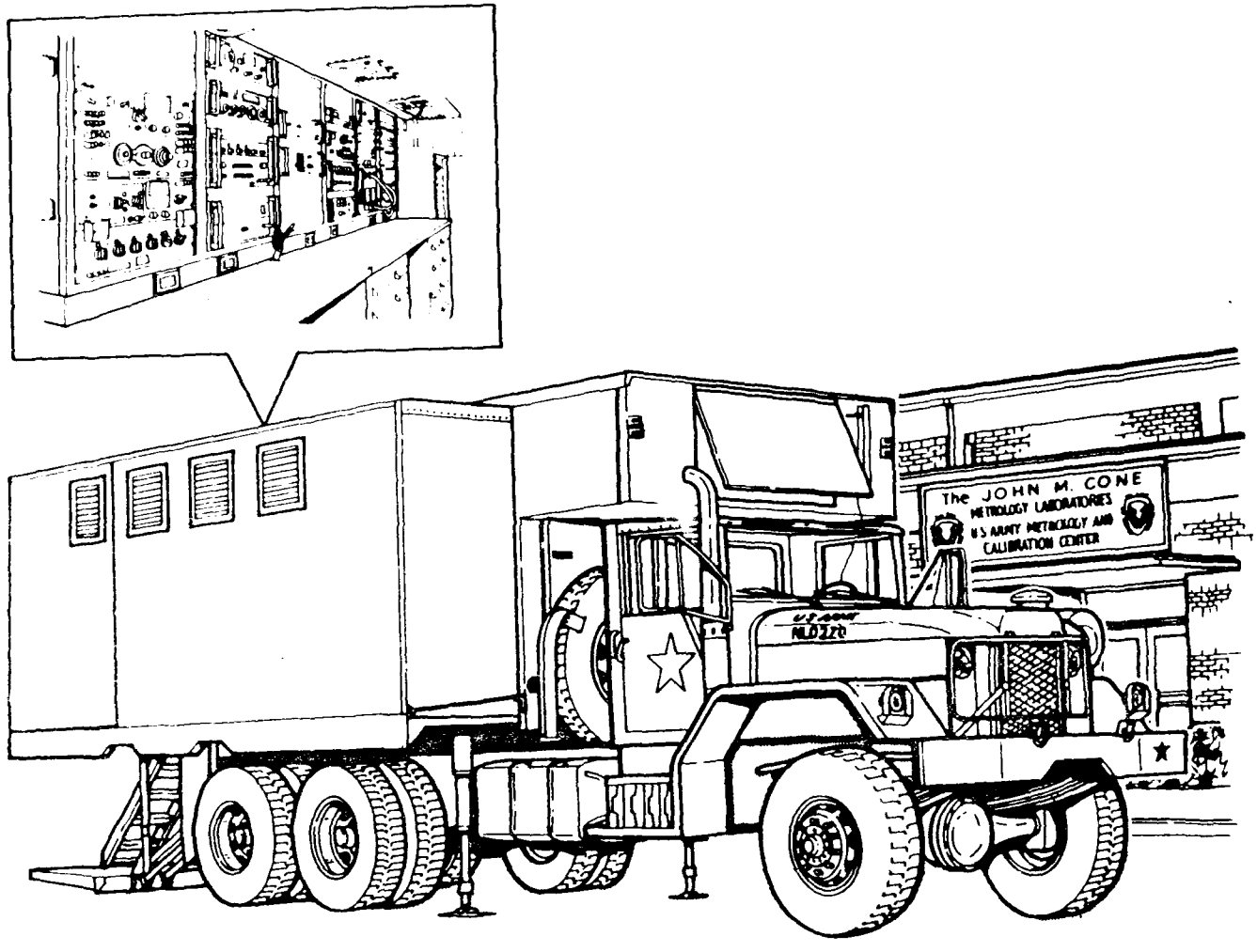
PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
3 82 3115	ENGINEERING FOR METROLOGY AND CALIBRATION 40K IS BEING HELD TO PURCHASE TWO ITEMS AND 15K IN-HOUSE FUNDS ARE BEING RESERVED TO DO THE WORK RESULTING FROM EXPENDITURE OF 40K. SEE INDIVIDUAL SUBTASKS FOR WORK STATUS.	450.0	177.0	258.0	OCT 84	DEC 85
3 82 3115 17	DYNAMIC ELECTRICAL MEASUREMENT STANDARDS THE NECESSARY STDS AND SOFTWARE WERE IDENTIFIED FOR THE IN-SYSTEM CALIBRATION OF THE PII SETS. THE SCOPE OF WORK IS PRESENTLY BEING DEVELOPED FOR THE OUT-OF-SYSTEM CALIBRATION OF THE PII SETS.				JUN 84	DEC 85
3 82 3115 25	BASIC METROLOGY STD FOR USE IN WIDE-RANGING ENVIRONMENTS SEE SUBTASK 25 OF 3 84 3115 FOR WORK STATUS.				JUN 84	DEC 85
3 82 3115 34	IMPROVED ON-SITE SERVICE SEE SUBTASK 34 OF K 85 3115 FOR WORK STATUS.				JUL 83	DEC 85
3 82 3115 35	VISCOSITY AND DENSITY MEASUREMENTS ACQUISITION OF EVALUATION PROTOTYPES DEFERRED UNTIL SECOND QUARTER FY86.				APR 83	DEC 85
3 82 3115 36	DIRECT FLOWMETER READOUT PROJECT DEFERRED. EXTENDED SUSPENSION OF TMDE PROCUREMENT ACTIONS FOR USATSG ADVERSELY AFFECTED ASSOCIATED PROJECTS.				JAN 86	SEP 87
3 82 3115 37	DATA ANALYSIS TECHNIQUES SEE SUBTASK K 85 3115-37 FOR WORK STATUS.				JAN 83	DEC 85
3 83 3115	ENGINEERING FOR METROLOGY AND CALIBRATION SEE INDIVIDUAL SUBTASKS FOR WORK STATUS.	240.0	170.0	70.0	DEC 84	DEC 85
3 83 3115 01	JOSEPHSON EFFECT VOLTAGE STANDARD ***** DELINQUENT STATUS REPORT *****				DEC 83	OCT 84
3 83 3115 25	BASIC METROLOGY STD FOR USE IN WIDE-RANGING ENVIRONMENTS SEE SUBTASK 25 OF 3 84 3115 FOR WORK STATUS.				DEC 84	DEC 85
3 83 3115 34	IMPROVED ON-SITE SERVICE SEE SUBTASK 34 OF K 85 3115 FOR WORK STATUS.				DEC 84	DEC 85
3 83 3115 35	VISCOSITY AND DENSITY MEASUREMENTS ACQUISITION OF EVALUATION PROTOTYPES DEFERRED UNTIL SECOND QUARTER FY86.				FEB 85	DEC 85
3 83 3115 36	DIRECT FLOWMETER READOUT PROJECT DEFERRED. EXTENDED SUSPENSION OF TMDE PROCUREMENT ACTIONS FOR USATSG ADVERSELY AFFECTED ASSOCIATED PROJECTS.				SEP 86	SEP 87

TEST MEASUREMENT DIAGNOSTIC EQUIPMENT SUPPORT GROUP

CURRENT FUNDING STATUS, 2ND CY84

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)	INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)
82	1	450,000	177,000	137,000 (77%)	273,000	258,000 (94%)
83	1	240,000	170,000	170,000 (100%)	70,000	70,000 (100%)
84	1	700,000	331,000	331,000 (100%)	369,000	369,000 (100%)
85	1	547,000	0	0 (0%)	547,000	232,000 (42%)
TOTAL	4	1,937,000	678,000	638,000 (94%)	1,259,000	929,000 (73%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 35% INHOUSE REMAINING 64%



TEST MEASUREMENT DIAGNOSTIC EQUIPMENT SUPPORT GROUP (TMDE)

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
2ND SEMIANNUAL SUBMISSION CY 84 RCS DRCMT-301

PROJ NO.	TITLE & STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
[illegible]	BALLISTIC SIMULATION - SHOCK TESTING OF ARMAMENT COMPONENTS THE DESIGN CONCEPT DEVELOPMENT WAS COMPLETED. THE CRITICAL ELEMENTS OF THE DESIGN WERE PROOF TESTED. THE PROTOTYPE DIGITAL MEMORY MODULE WAS FABRICATED. PRINTED CIRCUIT DESIGN WAS FINALIZED.	160.0			MAR 86	MAR 86
[illegible]	SCANNING PHOTOACOUSTIC MICROSCOPY OF CERAMICS THE CONTRACTOR HAS BEEN PROVIDED SILICON NITRIDE AND SILICON CARBIDE TEST PLATES CONTAINING IMPLANTED FLAWS, SIMULATING SERVICE INDUCED AND PRODUCTION TYPE DEFECTS BY AMMRC. TWO OF THESE HAVE BEEN IMAGED.	23.0				FEB 85
[illegible]	CAPILLARY GAS CHROMATOGRAPHIC TESTING OF SOLID PROPELLANTS THE PROJECT HAS BEEN COMPLETED EXCEPT FOR THE TRACE PROPELLANT INGREDIENT ANALYSIS. THE INSTRUMENTATION FOR THIS TASK HAS BEEN RECEIVED, INSTALLED AND CHECKED OUT. TO DATE, THE PROJECT HAS BEEN VERY SUCCESSFUL.	120.0			FEB 85	FEB 85
[illegible]	SELECTIVE DETECTION OF DOUBLE-BASE STABILIZERS + DECOMP PRO DUE TO LATE RECEIPT OF FUNDING, THIS EFFORT HAS BEEN DELAYED. THE GC CHROMATOGRAPHIC SYSTEM WAS MODIFIED FOR THE PROGRAM. SEVERAL TESTS HAVE BEEN MADE AND ALL SYSTEMS ARE FUNCTIONING PROPERLY.	83.0				JUN 85
[illegible]	TESTING AND EVALUATION OF QUARTZ CRYSTAL RESONATORS THE CONTRACT WAS AWARDED. THE CONTRACTOR SUBMITTED PRELIMINARY DRAWINGS. MODIFICATIONS WERE SUGGESTED AND INCORPORATED. PROGRESS HAS BEEN EXCELLENT AND ALL CONTRACTUAL OBLIGATIONS ARE BEING MET IN A TIMELY MANNER.	100.0			OCT 85	DEC 85
[illegible]	PHOTOLUMINANCE TESTING OF GAAS PHOTOCATHODES CONTRACTOR PROPOSALS HAVE BEEN RECEIVED AND EVALUATED. THE CONTRACT IS SCHEDULED TO BE AWARDED IN DEC 1984.	250.0			AUG 85	DEC 85
[illegible]	PORTABILITY OF TEST SOFTWARE FOR VHSIC CHIPS THE CONTRACTOR COMPLETED A PRELIMINARY MAPPING OF THIS VHSIC CORRELATOR TEST SOFTWARE FROM THE SOURCE LANGUAGE, FACTOR, TO THE INTERMEDIATE LANGUAGE, ADA. THE MAPPING IS BEING ANALYZED TO GENERATE CANDIDATE SOLUTIONS FOR VHSIC CHIP TEST SOFTWARE.	105.0			APR 85	MAY 85
[illegible]	FLEXIBLE POWER SUPPLY ACCEPTANCE TESTER PHASE I OF THE EFFORT WAS COMPLETED. THE SYSTEM WAS COMPLETE. THE COMPUTER AND PNEUMATIC SYS WERE INTEGRATED. THE TRAJECTORY SOFTWARE FOR THE MCRS WAS COMPLETED. ALSO, THE SOFTWARE DEVELOPMENT WAS COMPLETED.	150.0			MAR 85	JUL 85

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION FY 84 RCS DRCMT-301

[illegible]	TITLE & STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
[illegible]	DEPOT INSP OF TRANSMISSION VALVE BODY ***** DELINQUENT STATUS REPORT *****					DEC 84
[illegible]	ACOUSTIC EMISSION MONITORING/CONTROL OF GUN TUBE STRAIGHTEN FEASIBILITY TESTING FOR THE DEVELOPMENT OF THE PROTOTYPE SYSTEM. DESIGNED AND DEVELOPED A PROTOTYPE SYSTEM. PREPARED PURCHASE DESCRIPTION.	15.0			SEP 84	FEB 85
[illegible]	CRYSTAL IMAGE AMPLIFICATION X-RAY SYSTEM (CIAX) EVALUATION OF VARIOUS IMAGING DEVICES CONTINUED, WITH X-RAY IMAGING SYS USING FLUOROSCOPIC SCREENS AND GAMMA-RAY DETECTION CHECKED FOR RESOLUTION CHARACTERISTICS. BOTH TOMOGRAPHIC TECHNIQUES AND REGULAR TRANSMISSION TECHNIQUES WERE USED.	110.0			JAN 85	JUL 85
[illegible]	METHOD DEVELOP FOR VERIFYING BODY CURRENT + ULTRASONIC INSP THIS PROJECT IS A FISCAL YEAR 84 NEW START. THE PROCUREMENT PACKAGE HAS BEEN ADVERTISED AND REQUESTS FOR PROPOSALS HAVE BEEN INITIATED.	84.0			JAN 86	JAN 86
[illegible]	AUTOMATED ACCURACY TARGET SCORING SYSTEM ***** DELINQUENT STATUS REPORT *****				JUN 85	JUN 85
[illegible]	NDI ACCEPT TEST METHODS FOR PENETRATOR COMP AND MATERIALS ***** DELINQUENT STATUS REPORT *****					
[illegible]	120MM GUN TUBE CHROME PLATE EVALUATION SYSTEM INVESTIGATED THE COMPUTER ENHANCEMENT TECHNIQUES AND RESOLUTION. FEASIBILITY STUDIES ON COLOR MONITORS AND CAMERAS WAS COMPLETED. RESEARCHED THE USE OF AN IMAGE ENHANCEMENT SYSTEM.	27.0			JUL 86	JUL 86
[illegible]	PLUTONIC GENERATOR HIGH ALTITUDE SIMULATOR THIS PROGRAM JUST STARTED DUE TO THE LATE ARRIVAL OF FUNDS. ONLY THE MAJOR COMPONENTS HAVE BEEN ORDERED.	100.0			MAR 85	JUL 86
[illegible]	MAGNETIC FLUX LEAKAGE INSPECTION OF THE 60MM M720 MORTAR SCOPE OF WORK WAS COMPLETED. THE PROCUREMENT PACKAGE WAS COMPLETED AND SUBMITTED TO PROCUREMENT FOR SOLICITATION. THE CONTRACT AWARD IS SCHEDULED FOR DEC 1984.	75.0				MAY 85
[illegible]	SOFTWARE TEST DRIVERS THE SCOPE OF WORK FOR SECOND YEAR EFFORT HAS BEEN COMPLETED AND IS CURRENTLY BEING SUBMITTED FOR ARDC CONCURRENCE.	70.0				MAR 87
[illegible]	MATERIALS TESTING TECHNOLOGY (MTT) SEE SUBTASKS BELOW FOR PROJECT STATUS.	3,816.0	1,250.5	46.2	OCT 85	OCT 85

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
M 85 6350 2625	TRI-AXIAL VIBRATION TEST PROCS FOR MISSILE + ARTILLERY FUZ ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 2676	PROTOTYPE INFRARED SEEKER + AUTOPILOT TESTING ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 2678	STRAIGHTENING OF GUN TUBE FORGINGS BY MEANS OF EMAT ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 2691	HGCDTE MATERIAL SCREENING TEST ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 2919	AUTO RESIDUAL STRESS INSP OF GUN TUBES + OTHER RELATED COMP ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 2929	EVAL OF CHROMIUM ADHESION IN LARGE CALIBER GUNS ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 2930	INDENTATION TEST FOR YIELD STRENGTH MEASUREMENTS ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 2946	PROGRAMMABLE HIGH RESPONSE FUNCTIONAL ACCELERATION TESTER ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 2965	BALLISTIC SIMULATOR - SHOCK TESTING OF ARMAMENT COMPONENTS ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 2971	PARTICLE SIZE TESTING OF BALLISTICS MODIFIERS + OXIDIZERS ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 2973	DIFFUSION PERMEABLTY+SOLUBLTY OF GASES IN MIN SIGNATURE PROP ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 2978	TESTING AND EVALUATION OF QUARTZ CRYSTAL RESONATORS ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 2979	PHOTOLUMINANCE TESTING OF GAAS PHOTOCATHODES ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 2994	ALUMINUM WELD AE MONITOR ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 3015	METHODOLOGY FOR MONITORING ULTRASONIC INSPECTION ----- JUST FUNDED. NO 301 REQUIRED. -----					

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
2ND SEMIANNUAL SUBMISSION CY 84 RCS DRCMT-301

PROG NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
M 85 6350 3021	MECHANICAL ACCEPTANCE TEST METHODS FOR PENETRATOR COMPONENTS ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 3022	PRIMER IGNITION TEST SYSTEM ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 3023	AUTOMATED PROPELLANT GRAIN IMAGE ANALYZER ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 3024	STANDARD SOFTWARE REQUIREMENTS ENGINEERING LANGUAGE ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 3027	120MM GUN TUBE CHROME PLATE EVALUATION SYSTEM ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 3045	FLUIDIC GENERATOR HIGH ALTITUDE SIMULATOR ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 3047	FIBER OPTIC COUPLED ISOTROPIC 'E' FIELD MEASUREMENT SYSTEM THE FUNDING WAS RECEIVED IN DEC 84 FOR THIS NEW START FY 85 PROJECT.	225.0			AUG 87	AUG 87
M 85 6350 3058	ESTABLISH HI-SENS GC/MS + GC/LS METHODS-ANAL F/CHEMICAL AGNT ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 3063	CHEMICAL AGENT MONITOR TEST SYSTEM ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 3075	NONDESTRUCTIVE TEST DEVICE FOR CDS DETECTOR ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 3080	TUNABLE EYESAFE LASER EVALUATION SYSTEM (TELES) ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 3081	DIAPHRAGM TESTING MACHINE FOR MLRS FLUIDIC GENERATOR ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 3082	FLEX FIXTURE/ACCEPTANCE LEVELS FOR PATRIOT FUZE ELECTRONICS ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 3083	EFFICIENT TEST SOFTWARE FOR EVALUATING NDI MICROCHIPS ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 3084	NONDESTRUCTIVE TESTING OF COMBUSTIBLE CARTRIDGE CASES ----- JUST FUNDED. NO 301 REQUIRED. -----					

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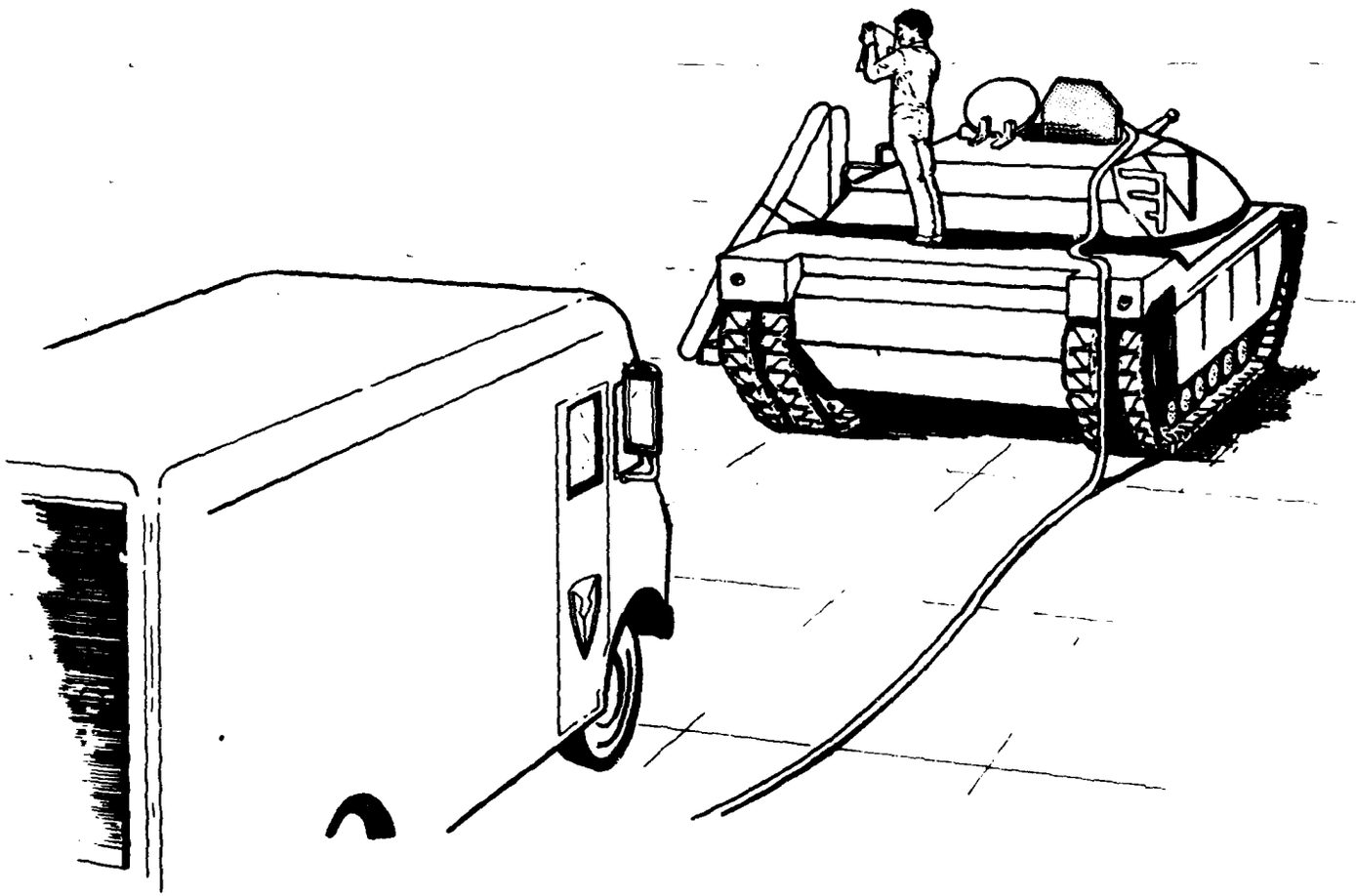
M 85 6350 3085	TOMOGRAPHIC AUTOMATIC INSPECTION OF MUNITIONS (TAIM) ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 3091	DETERMINATION OF SILVER IN IMPREGNATED CHARCOAL ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 85 6350 3095	INFRARED NONDESTRUCTIVE INSP (IRNDI) OF PRINTER CIRCUIT BOAR ----- JUST FUNDED. NO 301 REQUIRED. -----					
M 84 6390	PROGRAM IMPLEMENTATION AND INFORMATION TRANSFER PUBLISH THE MANTECH JOURNAL. ESTABLISH THE MANUFACTURING INFORMATION ANALYSIS CENTER. PROVIDE FUNDING FOR PUBLISHING NTIS - MANUFACTURING NOTES.	250.0	128.7		MAR 85	SEP 85
M 85 6390	PROGRAM IMPLEMENTATION + INFORMATION TRANSFER PUBLISH THE MANTECH JOURNAL. ESTABLISH THE MANUFACTURING INFORMATION ANALYSIS CENTER. PROVIDE FUNDING FOR PUBLISHING NTIS - MANUFACTURING NOTES.	250.0	180.6		MAR 86	MAR 86



TEST AND EVALUATION COMMAND
(TECOM)

TEST AND EVALUATION COMMAND

CURRENT FUNDING STATUS, 2ND CY84

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)	INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)
81	1	770,000	0	0 (0%)	770,000	769,000 (99%)
82	1	726,000	0	0 (0%)	726,000	725,400 (99%)
83	1	1,038,000	0	0 (0%)	1,038,000	436,000 (42%)
84	1	1,012,000	0	0 (0%)	1,012,000	797,000 (78%)
85	1	0	0	0 (0%)	0	0 (0%)
TOTAL	5	3,546,000	0	0 (0%)	3,546,000	2,727,400 (76%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 0% INHOUSE REMAINING 100%

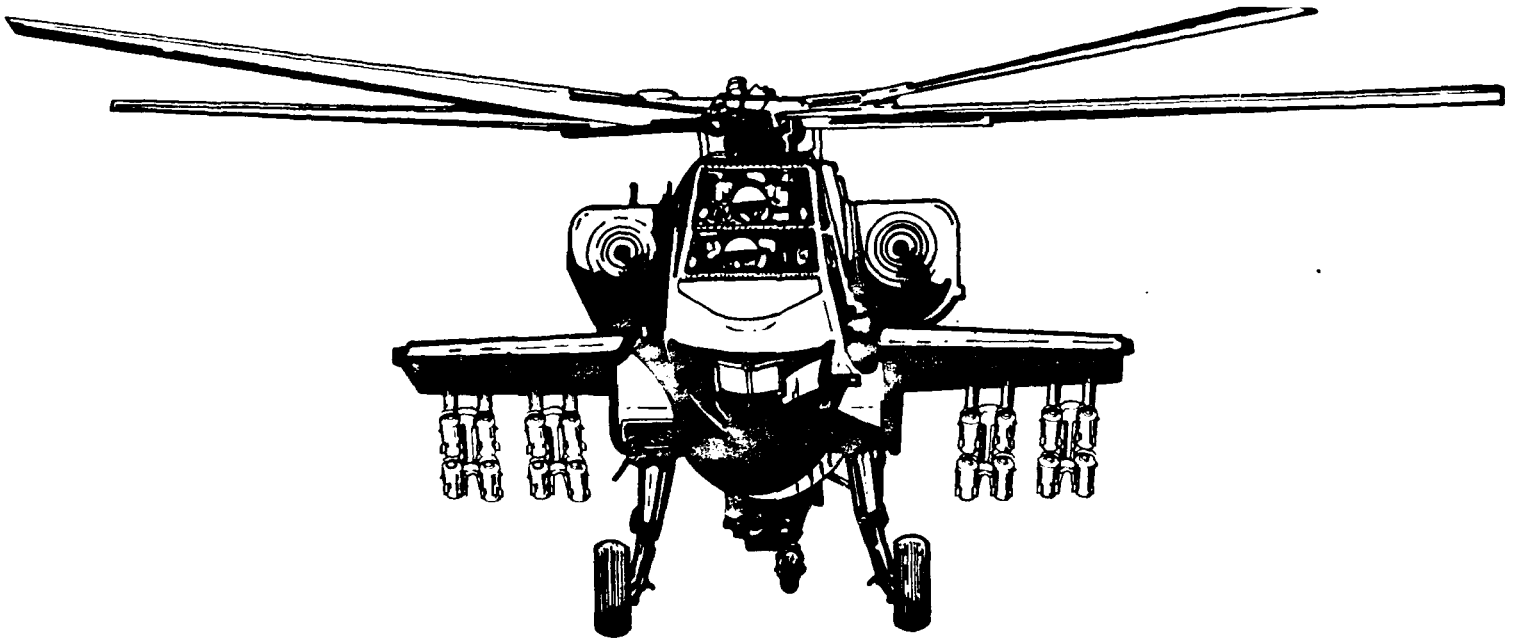
PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
0 81 5071	TECOM PRODUCTION TEST METHODOLOGY ENGINEERING MEASURES SEE INDIVIDUAL SUBTASKS FOR WORK STATUS.	770.0		769.0	DEC 83	DEC 86
0 81 5071 37	ROLLOVER TEST OF MILITARY VEHICLES SEE 0-84-5071-37 FOR WORK STATUS.				DEC 83	DEC 86
0 81 5071 43	TEST AUTOMATION DEVELOPMENT ***** DELINQUENT STATUS REPORT *****				DEC 83	DEC 84
0 81 5071 57	GENERAL PURPOSE BIT SLICE MICRO-COMPUTER SEE 0-84-5071-57 FOR WORK STATUS.				DEC 83	DEC 84
0 81 5071 59	SOLAR POWERED INSTRUMENTATION VAN SEE 0-84-5071-59 FOR WORK STATUS.				DEC 83	DEC 86
0 81 5071 60	RECEIVER OPERATING CHARACTERISTICS MEASUREMENTS SEE SUBTASK 0 83 5071-60 FOR WORK ACCOMPLISHED.				DEC 83	DEC 84
0 81 5071 67	INTEROPERABILITY TEST METHODOLOGY SEE 0-84-5071-67 FOR WORK STATUS.				DEC 83	DEC 86
0 81 5071 71	COPPER CRUSHER PRESSURE GAGES ***** DELINQUENT STATUS REPORT *****				DEC 83	DEC 84
0 81 5071 76	GAMMA DOSIMETRY IMPROVEMENT + MODERNIZATION PROGRAM SEE 0-84-5071-76 FOR WORK STATUS.				DEC 83	DEC 86
0 81 5071 77	ELECTROMAGNETIC RADIATION EFFECTS/SUSCEPTIBILITY OF ARMY MAT ***** DELINQUENT STATUS REPORT *****				DEC 83	DEC 84
0 81 5071 96	CALIBRATION PROCEDURES FOR TV TRACKING SYSTEM SEE 0 82 5071-96 FOR WORK STATUS.					DEC 84
0 82 5071	TECOM PRODUCTION TEST METHODOLOGY ENGINEERING MEASURES ALL FOUR SUBTASKS HAVE BEEN COMPLETED. THE FINAL REPORT FOR 5071-90, TOXIC GAS ANALYSIS BY GAS CHROMATOGRAPHY HAS NOT BEEN PREPARED. SEE INDIVIDUAL SUBTASKS FOR WORK STATUS.	726.0		725.4	DEC 84	JUN 85
0 82 5071 100	AUTO PARTICLE CONTAMINATION MEAS IN HYDRAULIC OIL MIL-H-5606 HYDRALIC FLUID WAS SELECTED AS THE BASE OIL FOR DILUTION OF SMALL SAMPLES OF CONTAMINATED OIL. PHASE II WAS DESIGNED TO MEASURE PARTICLE COUNTS IN CONTAMINATED OIL AND DETERMINE THE REPRODUCIBILITY OF THE PROCEDURE. FINAL RPT IN PROCESS.				DEC 84	DEC 84

PROJ NO.	TITLE * STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
0 82 5071 37	ROLLOVER TEST OF MILITARY VEHICLES SEE 0-84-5071-37 FOR WORK STATUS.					DEC 86
0 82 5071 43	TEST AUTOMATION ***** DELINQUENT STATUS REPORT *****					DEC 84
0 82 5071 57	GENERAL PURPUSE BIT SLICE MICROCOMPUTER SEE 0-84-5071-57 FOR WORK STATUS.					DEC 84
0 82 5071 59	SOLAR POWERED INSTRUMENTATION VAN SEE 0-84-5071-59 FOR WORK STATUS.					DEC 86
0 82 5071 67	INTEROPERABILITY TEST METHODOLOGY SEE 0-84-5071-67 FOR WORK STATUS.					DEC 86
0 82 5071 71	COPPER CRUSHER PRESSURE GAGES ***** DELINQUENT STATUS REPORT *****					DEC 84
0 82 5071 76	GAMMA DOSIMETRY IMPROVEMENT * MODERNIZATION PROGRAM SEE 0 84 5071-76 FOR WORK STATUS.					DEC 86
0 82 5071 77	ELECTROMAGNETIC RADIATION EFFECTS * SUSCEPTIBILITY OF ARMY M ***** DELINQUENT STATUS REPORT *****					DEC 84
0 82 5071 81	BINARY MUNITIONS PRODUCTION TEST METHODOLOGY ***** DELINQUENT STATUS REPORT *****					DEC 85
0 82 5071 90	TOXIC GAS ANAL BY GAS CHROMATOGRAPHY THE PROTOTYPE HEATING FLUSHING SYSTEM MODIFIED TO ELIMINATE REACTIONS W/ ACIDIC COMPONENTS. TO ELIMINATE SMALL LEAKS AN IMPROVED SYSTEM WILL BE BUILT USING TEFLON PIPES AND A TEFLON LINED PUMP. PROBLEMS W/ THE GAS ANALYZER. FINAL REPORT IN-PROCESS.				DEC 84	JUN 85
0 82 5071 95	RAPID EVALUATION OF ENVIRONMENTAL HAZARDS SEE 0 84 5071-95 FOR WORK STATUS.					DEC 85
0 82 5071 96	CALIBRATION PROCEDURES FOR TV TRACKING SYSTEM FIELD DATA WAS ACQUIRED AND STATISTICALLY EVALUATED. MODIFIED CALIBRATION TECHNIQUES HAVE BEEN PROPOSED. THIS PROJECT WAS NOT FUNDED IN FY84 OR FY85. THIS TASK HAS BEEN TRANSFERRED TO THE RDT&E PROGRAM AND SHOULD BE DELETED FROM THE MMT PROGRAM.					DEC 84
0 82 5071 97	IMP METH FOR PERFORMANCE TESTING MORTARS AT EXTREME TEMP A PRELIMINARY CHAMBER DESIGN HAS BEEN DEVELOPED. THE CHAMBER IS BEING FABRICATED FROM WOOD TO VERIFY THE DIMENSIONS AND INTERIOR CLEARANCES REQUIRED FOR GUN CREW PERSONNEL. A FINAL REPORT HAS BEEN SUBMITTED AND APPROVED FOR PUBLICATION.				DEC 84	DEC 84

PROJ NO.	TITLE * STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
0 83 5071	TECOM PRODUCTION TEST METHODOLOGY ENGINEERING MEASURES SEE INDIVIDUAL SUBTASKS.	1,038.0		436.0	DEC 85	DEC 85
0 83 5071 43	TEST AUTOMATION ***** DELINQUENT STATUS REPORT *****					DEC 85
0 83 5071 57	GENERAL PURPOSE BIT SLICE MICROCOMPUTER SEE 0 84 5071-57 FOR WORK STATUS.					DEC 84
0 83 5071 59	SOLAR POWERED INSTRUMENTATION VAN SEE 0 84 5071-59 FOR WORK STATUS.					DEC 86
0 83 5071 60	RECEIVER OPERATING CHARACTERISTICS MEASUREMENTS ONE SUBTASK WAS COMPLETED DURING THIS PERIOD. 5071-60, RECEIVER OPERATING CHARACTERISTICS(ROC) MEASUREMENTS. BECAUSE THE SUBTASK WAS ONLY PARTIALLY FUNDED IN FY83 AND REQUIRED EQUIPMENT WAS NOT PURCHASED IT WAS CANCELLED.					DEC 84
0 83 5071 67	INTEROPERABILITY TEST METHODOLOGY SEE 0 84 5071-67 FOR WORK STATUS.				JUN 83	DEC 86
0 83 5071 71	IMPROVED COPPER CRUSHER PRESSURE GAGES ***** DELINQUENT STATUS REPORT *****					DEC 85
0 83 5071 76	GAMMA DOSIMETRY IMPROVEMENT + MODERNIZATION PROGRAM SEE 0 84 5071-76 FOR WORK STATUS.					DEC 86
0 84 5071	TECOM PRODUCTION TEST METHODOLOGY ENGINEERING MEASURES SEE INDIVIDUAL SUBTASKS.	1,012.0		797.0	DEC 86	DEC 86
0 84 5071 01	ACCEPTANCE TEST PROCEDURES (ATPS) THE FOLLOWING WORK WAS DONE ON ACCEPTANCE TEST PROCEDURES(ATP'S). 2 NEW MUNITIONS ATP'S WERE WRITTEN. 55 BALLISTIC TEST REQUEST ATP'S WERE REVIEWED, 42 WERE COMPATIBLE W/EXISTING ATP'S AND 13 REQUIRED REVISION. ATP INDEX AND SUPP'S WERE PUBLISHED.				DEC 86	DEC 86
0 84 5071 10	TEST OPERATIONS PROCEDURES (TOPS) A TOTAL OF 23 TEST OPERATION PROCEDURES HAVE BEEN FINALIZED DURING THIS REPORTING PERIOD. TOPICS RANGED FROM BODY ARMOR TO VIBRATION TESTING.				DEC 86	DEC 86
0 84 5071 121	REAL TIME MEASUREMENT OF TOTAL HCL IN ROCKET MOTOR EXHAUST HCL MEASUREMENT INSTRUMENTATION TESTS WILL BE HELD AT WHITE SANDS MISSILE RANGE IN 1985. 29 SMALL ROCKET MOTORS WILL STATICALLY FIRED. STILL AND VIDEO DOCUMENTARY ALONG WITH ATMOSPHERIC DATA WILL BE PROVIDED. PRE-TEST PREPARATIONS ARE COMPLETED.				DEC 86	DEC 86

PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PROJECTED COMPLETE DATE
[illegible]	SOFTWARE INFO RETRIEVAL SYSTEM + REPOSITORY MOST OF THIS REPORT PERIOD WAS SPENT ON THE DESIGN OF THE SYSTEM AND THE DOCUMENTATION OF THIS DESIGN IN THE PROGRAM DESIGN SPECIFICATION(PDS). THE PRELIMINARY PDS WAS COMPLETED AND REVIEWED BY DCSRSYSTEMS AND APG. WORK IS ON SCHEDULE.				DEC 86	DEC 86
[illegible]	TAILORED TEST CONDITIONS FOR CLIMATIC TESTING TEST OPERATION PROCEDURES HAVE BEEN REVIEWED AND SPECIFIC PROCEDURES FOR ENVIRONMENTAL TESTS WHICH REQUIRES REVISION TO CONFORM TO THE NEW 'D' VERSION OF MIL-STD-810 HAVE BEEN IDENTIFIED. FINAL REPORT HAS BEEN APPROVED AND PUBLISHED.				DEC 86	DEC 84
[illegible]	COMPILATION OF PROJECTILE DRAG COEFFICIENTS A COMPUTER PROGRAM TO CALCULATE PROJECTILE DRAG COEFFICIENTS AS A FUNCTION OF VELOCITY HAS BEEN WRITTEN. DATA ON IN-FLIGHT BALLISTIC CHARACTERISTICS SUCH AS BALLISTIC COEFFICIENTS AND DRAG FUNCTIONS ARE BEING PUBLISHED IN A FINAL REPORT.				DEC 86	DEC 86
[illegible]	ROLL-OVER TESTS OF MILITARY VEHICLES PH 1 OF TASK IDENTIFIED 5 ARMY VEHICLES W/HIGH ROLL-OVER HISTORY. AN ALGORITHM OF ROLL-OVER PROPENSITY WAS DEVELOPED BY VARIGAS RESEARCH, INC. PH 2 INVOLVES AN EXTENDED ROLL-OVER ALGORITHM. FABRICATION AND TESTING OF A ROLL-OVER INDICATOR IN-PROCESS.				SEP 84	DEC 86
[illegible]	GENERAL PURPOSE BIT SLICE MICROCOMPUTER INTERFACE A GENERAL COMPUTER INTERFACE HAS BEEN DEVELOPED USING BIT-SLICE INTERFACE HARDWARE. THE SYSTEM SAVES COMPUTER PROGRAMMING TIME BECAUSE THE BIT-SLICE TECHNIQUE ALLOWS FOR REPROGRAMMING OF THE WEAPON SYSTEM'S GENERAL PROGRAM. TECH REPORT SUBMITTED.				DEC 86	DEC 84
[illegible]	SOLAR POWERED INSTRUMENTATION VAN THE FINAL REPORT WAS COMPLETED IN DEC 1984. SOLAR POWERED INSTRUMENTATION VAN COMPLETED MID-84. VAN AND SOLAR POWER SYSTEM CURRENTLY UNDOING TESTING, THE SYSTEM HAS PERFORMED SATISFACTORY.				DEC 86	DEC 86
[illegible]	INTEROPERABILITY TEST METHODOLOGY THE PURPOSE OF INTEROPERABILITY TEST METHODOLOGY IS TO DEFINE THE MEASURE-OF-PERFORMANCE REQUIRED TO ACCOMPLISH COMPATIBILITY AND INTEROPERABILITY TESTING AND EVALUATION. RESULTS OF STUDY ARE BEING PUT INTO A TEST OPERATION PROCEDURE.				DEC 86	DEC 86
[illegible]	UPGRADING OF THE GAMMA DOSIMETRY PROGRAM WORK ON THE GAMMA DOSIMETRY IMPROVEMENT AND MODERNIZATION PROGRAM (GDIMP) HAS CENTERED AROUND SOFTWARE DEVELOPMENT. THE SOFTWARE DEVELOPMENT IS AIMED AT INCREASING ACCURACY IN DATA ENTRY, INCREASE EFFICIENCY OF DB MANAGEMENT AND INTEGRATE SOFTWARE.				DEC 86	DEC 86

PROJ NO.	TITLE + STATUS	AUTHO- RIZED ($000)	VALUES ($000)	LABOR AND MATERIAL ($000)	PROJECTED COMPLETE DATE	PROJECTED COMPLETE DATE
85 5071 95	RAPID DETERM OF ENVIRON HAZARDS-BINARY AGENT PERSIST + DECAY THE ANIMAL TOXICITY STUDIES USING GE CONTAMINATED BEAN PLANT LEAF HOMOGENATE APPLIED TO SHAVED BACKS OF RABBITS HAS BEEN SUSPENDED DUE TO ANALYTICAL PROBLEMS. FATE OF GL AND VX IN THE DPG ENVIRONMENT IS BEING REVIEWED.				DEC 86	DEC 86
85 5071	TECOM PRODUCTION TEST METHODOLOGY ENGRS METHODS ----- JUST FUNDED. NO 301 REQUIRED. -----					
85 5071 0.	ACCEPTANCE TEST PROCEDURES ----- JUST FUNDED. NO 301 REQUIRED. -----					
85 5071 10	TEST OPERATIONS PROCEDURES - TOPS ----- JUST FUNDED. NO 301 REQUIRED. -----					
85 5071 113	PROG FLOW ANALYZER TOOLS F/COMP SOFTWARE SYS SPEC ENCODERS ----- JUST FUNDED. NO 301 REQUIRED. -----					
85 5071 115	ADAPTATION OF COMPUTER AID TOMOGRAPHY TO MISSILE RADIOGRAPHY ----- JUST FUNDED. NO 301 REQUIRED. -----					
85 5071 121	REAL TIME MEASUREMENT OF TOTAL HCL IN ROCKET MOTOR EXHAUSE ----- JUST FUNDED. NO 301 REQUIRED. -----					
85 5071 130	SOFTWARE CONFIGURATION MANAGEMENT/REPOSITORY ----- JUST FUNDED. NO 301 REQUIRED. -----					
85 5071 140	HUMAN FACTORS ENGINEERING FIELD INSTRUMENTATION PACKAGE ----- JUST FUNDED. NO 301 REQUIRED. -----					
85 5071 143	VEHICLE PERFORMANCE RECORDER ----- JUST FUNDED. NO 301 REQUIRED. -----					
85 5071 74	IMPROVE OF SMOKE MONIT/GENERATOR PRODUCTION TEST PROCODURES ----- JUST FUNDED. NO 301 REQUIRED. -----					
85 5071 76	UPGRADING OF GAMMA DOSIMETRY PROGRAM ----- JUST FUNDED. NO 301 REQUIRED. -----					



AVIATION SYSTEMS COMMAND
(AVSCOM)

AVIATION SYSTEMS COMMAND

CURRENT FUNDING STATUS, 2ND CY84

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)		INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)	
81	4	1,015,200	773,900	722,500	(93%)	241,300	241,500	(100%)
82	10	6,914,900	6,165,700	4,668,100	(75%)	749,200	744,400	(99%)
83	4	4,008,400	3,401,500	1,926,400	(56%)	606,900	537,000	(55%)
84	23	8,218,800	2,761,600	931,600	(33%)	5,457,200	925,000	(16%)
85	20	3,701,000	241,600	0	(0%)	3,459,400	23,500	(0%)
TOTAL	61	23,858,300	13,344,300	8,248,600	(61%)	10,514,000	2,271,400	(21%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 56% INHOUSE REMAINING 44%

AD-A155 144 MANUFACTURING METHODS AND TECHNOLOGY PROJECT EXECUTION REPORT(U) ARMY INDUSTRIAL BASE ENGINEERING ACTIVITY ROCK ISLAND IL D O'CONNOR APR 85 2/2

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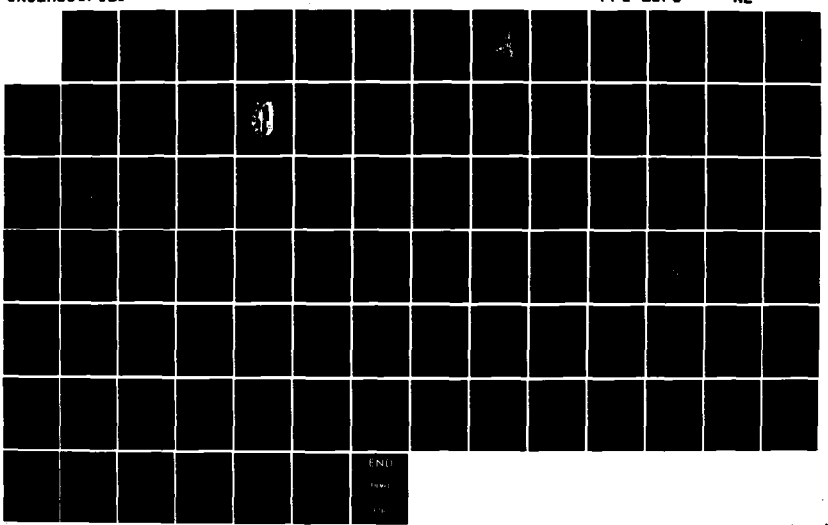

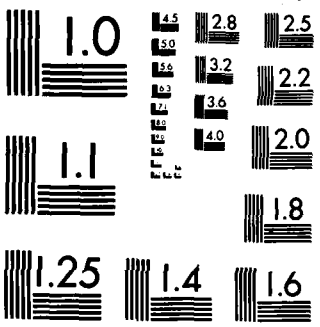

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
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PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
1 81 7036	ISOTHERMAL ROLL-FORGING OF COMPRESSOR BLADES SOLAR HAS PRODUCED 98 FORGINGS. ALL 98 ARE DIMENSIONALLY DESCREPANT DUE TO DIFFICULTY COMPLETING POST-FORGING FINISH OPERATION. SOLAR HAS PRODUCED 120 ADDITIONAL FORGINGS AT NO CHARGE + IS NEGOTIATING WITH THE SUBCONTRACTOR ON POST-FORGING FINISH.	190.2	124.4	65.8	NOV 82	MAR 85
1 81 7143	CERAMIC GAS PATH SEAL-HIGH PRESSURE TURBINE ***** DELINQUENT STATUS REPORT *****	430.0	396.8	33.2	FEB 83	DEC 84
1 82 7143	CERAMIC HIGH-PRESSURE GAS PATH SEAL ***** DELINQUENT STATUS REPORT *****	405.0	357.2	45.0	FEB 83	DEC 85
1 84 7167	POWDER METALLURGY GEARS FOR HELICOPTER APPLICATIONS CONTRACT NOT AWARDED. REVISION OF THE REQUEST TO ELIMINATE WORK NOT ESSENTIAL TO THE EFFORT. THE BEST AND FINAL OFFERS ARE EXPECTED TO LOWER THE COST CLOSER TO THE ESTIMATED COST.	400.0		60.0	AUG 85	MAY 86
1 85 7167	POWDER METALLURGY GEARS FOR HELICOPTER APPLICATION NO WORK ACCOMPLISHED.	550.0			OCT 85	OCT 85
1 81 7202	APPLICATION OF THERMOPLASTICS TO HELICOPTER SECONDARY STRUC THE FINAL REPORT WAS PUBLISHED IN AUGUST 1984. A PRODUCTION READY PROCESS DID NOT RESULT BECAUSE DEMONSTRATION COMPONENT EXHIBITED WRINKLES AND FOLD OVER PROBLEMS. WORK WILL CONTINUE IN 1847473 WITH NEW MATERIAL AND IMPROVED FORMING TECHNIQUES.	180.0	68.2	112.0	OCT 81	JUN 85
1 82 7241	HOT ISOSTATIC PRESSED TITANIUM CASTINGS FATIGUE TESTING OF THE BRACKETS INDICATES A MEAN FATIGUE STRENGTH SLIGHTLY HIGHER THAN THE FORGED MATERIAL AND WITH A COEFFICIENT OF VARIATION SIMILIAR TO FATIGUE DATA FOR FORGED MATERIAL.	450.0	308.9	141.0	JAN 83	MAR 85
1 82 7266	HIGH QUALITY SUPERALLOY POWDER PROD F/TURBINE COMPONENTS OPERATION OF PREP POWDER CONVERSION EQUIPMENT HAS BEEN UNSUCCESSFUL AND IS BEING ABANDONED. NEW ATOMIZATION TECHNIQUES ARE BEING INCORPORATED WITH CONTRACT MODIFICATION IN PROCESS.	370.0	300.0	70.0	APR 85	MAR 86
1 82 7291	TITANIUM POWDER METAL COMPRESSOR IMPELLER CONSOLIDATION IN JUNE 1984 WAS SUCCESSFUL IN ACHIEVING BOTH FULL DENSITY AND QUALITY MICROSTRUCTURE. SHAPE ANALYSIS HAS BEEN INTERPRETED INTO TOOLING MODIFICATION. WORK PROCEEDING TOWARD NEXT SHAPE ITERATION. REVISED COST ANALYSIS IN PROGRESS.	275.0	210.0	65.0	MAR 84	AUG 86
1 83 7298	HIGH TEMPERATURE VACUUM CARBURIZING PHASE II MATERIALS (DOUBLE MELTED VIM-VAR VASCO X2M AND 9310) HAVE BEEN OBTAINED. GEAR DWGS HAVE BEEN UPDATED TO INCLUDE BOTH 9310 AND VASCO X2M MATERIALS. MACHINING OF GEARS IS BEING PERFORMED.	375.5	340.0	35.5	SEP 84	JUL 85

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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 84 7298	HIGH TEMPERATURE VACUUM CARBURIZING THIS FY'S FUNDING COVERS A SMALL PART OF PHASE II WORK AND ALL OF PHASE IB AND PHASE III. THIS PROJECT'S PORTION OF PHASE II AND PHASE III HAS NOT BEEN INITIATED.	400.0	203.0	50.0	SEP 85	DEC 85
1 84 7300	IMPROVED LOW CYCLE FATIGUE (LCF) CAST ROTORS MICROSTRUCTURAL EVALUATION + MECHANICAL PROPERTY TESTING ARE COMPLETE. SPIN PIT AND FLUIDIZED BED TESTING ARE IN PROGRESS AND NEARING COMPLETION.	415.0	290.0	45.0	JUN 85	SEP 85
1 85 7300	IMPROVED LOW CYCLE FATIGUE CAST ROTORS MICROSTRUCTURAL EVALUATION + MECHANICAL PROPERTY TESTING ARE COMPLETE. SPIN PIT AND FLUIDIZED BED TESTING ARE IN PROGRESS.	185.0	29.8	1.0	SEP 85	SEP 85
1 84 7302	PRODUCTION OF BORIDE COATED LONG LIFE TOOLS THE REQUEST FOR PROPOSAL WAS ADVERTISED, AND THE RESPONSES WERE EVALUATED. NEGOTIATIONS ARE IN PROGRESS. CONTRACT AWARD IS EXPECTED IN THE SECOND QUARTER OF FY85.	400.0		91.0	SEP 86	SEP 86
1 85 7302	PROD OF BORIDE COATED LONG LIFE TOOLS NO WORK WAS ACCOMPLISHED SINCE FUNDING WAS JUST RECEIVED.	90.0			FEB 02	
1 82 7322	LOW-COST TRANSPIRATION-COOLED COMBUSTOR LINER CONTRACTOR HAS REQUESTED A SIX MONTH EXTENTION OF THE CONTRACT IN ORDER TO COMPLETE THE PROGRAM.	530.0	460.0	70.0	MAR 85	MAR 85
1 84 7344	RIM MOLDING OF HELICOPTER COMPONENTS CONTRACT NEGOTIATIONS ARE IN PROCESS. CONTRACT AWARD DATE IS SCHEDULED NLT 31 JANUARY 1985.	175.0		4.0	AUG 85	JUN 86
1 85 7344	RIM MOLDING OF HELICOPTER COMPONENTS CONTRACT NEGOTIATIONS ARE BEING CONDUCTED WITH 1847344 FUNDS. WORK FOR THIS PROJECT IS PLANNED FOR INITIATION ON 31 JANUARY 1986.	225.0			FEB 87	FEB 87
1 82 7351	COMPOSITE SHAFTING FOR TURBINE ENGINES THE SCOPE OF WORK HAS BEEN MODIFIED TO ADDRESS A SILICON CARBIDE FIBER DRY WOVEN FABRIC TECHNIQUE. HYBRID TUBES WILL BE FABRICATED IN A HIGH PRESSURE HIP CONSOLIDATION CYCLE.	403.9	328.9	75.0	SEP 83	APR 86
1 84 7371	INTEGRATED BLADE INSPECTION SYSTEM (IBIS) ***** DELINQUENT STATUS REPORT *****	525.0	465.0		DEC 84	DEC 84
1 81 7376	AUTO INSPECT AND PRECISION GRINDING OF SB GEARS ***** DELINQUENT STATUS REPORT *****	215.0	184.5	30.5	DEC 84	MAY 85

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1 82 7376	AUTO INSPECT AND PRECISION GRINDING OF SB GEARS ***** DELINQUENT STATUS REPORT *****	1,012.0	939.5	70.6	JUN 85	JUN 86
1 85 7377	SPF/DB STATIC STRUCTURE F/TURBINE ENGINES ----- JUST FUNDED. NO 301 REQUIRED. -----					
1 84 7378	STAINLESS STEEL GEARBOX HOUSING PROJECT TERMINATED THE REMAINING FUNDS TO BE RE-PROGRAMMED TO PROJECT NO. 7384.	400.0		70.0	DEC 87	DEC 87
1 85 7378	STAINLESS STEEL GEARBOX HOUSING PROJECT TERMINATED THE REMAINING FUNDS TO BE RE-PROGRAMMED TO PROJECT NO. 7384.	360.0		14.0	DEC 87	DEC 87
1 84 7382	LOW-COST COMPOSITE MAIN BLADE FOR THE UH-60A THE CONTRACT WAS MODIFIED TO FABRICATE FOUR ADDITIONAL SPARS. THIS STEP WAS NECESSARY TO VALIDATE A CHANGE IN CURING PROCEDURE FOR THE SPAR WHICH APPEARED TO RESOLVE A DEFORMATION PROBLEM IN THE CONICS SECTION. A TWO MONTH DELAY HAS RESULTED.	700.0	477.0	129.1	SEP 84	JAN 85
1 84 7383	MOLDED HARDWARE FOR TWO AXIS DRY GYROS CONTRACT NEGOTIATION IS IN PROCESS. CONTRACT AWARD DATE IS SCHEDULED NLT 31 JAN 85.	218.8		4.0	JUN 85	JAN 86
1 85 7383	MOLDED HARDWARE FOR TWO AXIS DRY GYROS ----- JUST FUNDED. NO 301 REQUIRED. -----					
1 84 7384	COMPOSITE ENGINE GEARBOX HOUSING PROCUREMENT OF A CONTRACTOR IS IN PROGRESS.	600.0		90.0	DEC 85	DEC 85
1 85 7384	COMPOSITE ENGINE GEARBOX HOUSING PROCUREMENT OF A CONTRACTOR IS IN PROGRESS. CONTRACT AWARD IS EXPECTED FEB 1985.	360.0			SEP 87	SEP 87
1 84 7389	PRODUCTION OF ALUMINUM AIRFRAME COMPONENTS TOOLING WAS COMPLETED + 4 TOOLING PROOFING ARTICLES WERE FORMED. TESTING OF PROCESS VERIFICATION PARTS (PVP) WAS ACCEPTED WITH MINOR CORRECTIONS, WHICH ARE BEING MADE PRIOR TO FABRICATING A LIMITED PRODUCTION OF PROTOTYPE PARTS.	417.0	332.0	85.0	JUN 85	JUN 85
1 85 7389	PROD OF ALUMINUM AIRFRAME COMPONENTS (SUPERPLASTIC FORMING) TOOLING WAS COMPLETED + 4 TOOLING PROOFING ARTICLES WERE SUCCESSFULLY FORMED. TESTING OF PROCESS VERIFICATION PARTS (PVP) WAS ACCEPTED WITH MINOR CORRECTIONS, WHICH ARE BEING MADE PRIOR TO FABRICATING A LIMITED PRODUCTION OF PROTOTYPE PARTS.	205.0	139.8		JUN 85	JUN 85

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1 82 7415	MMT T700 BLISK REPAIR CONTRACTOR HAS SUBMITTED A DRAFT MMT BASED ON THE BASELINE REFURBISHMENT PROCESS WHICH INCLUDES HEAT TREATMENT OF THE BLISK AT UNIFORM TEMP. THIS SHOULD RESTORE VIRGIN ALLOY CORRUSION RESISTANCE TO THE REPAIRED AIRFOIL • REDUCE REJECTION RATES.	800.0	602.2	197.8	MAR 85	SEP 85
1 84 7416	ADVANCED TURBINE AIRFOIL CASTINGS FOR LONG LIFE CONTRACT AWARDED INITIAL TOOL DESIGN COMPLETED.	360.0	300.0	51.0	DEC 86	JUL 86
1 85 7416	ADVANCED TURBINE AIRFOIL CASTINGS FOR LONG LIFE CONTRACT AWARDED. INITIAL TOOL DESIGN COMPLETED.	340.0	22.0		JUL 86	JUL 86
1 84 7417	LOW-COST DISKS BY CAP -CONSOLIDATION BY ATMOSPHERIC PRESSURE MATERIAL PROCUREMENT WAS COMPLETED. CONSOLIDATION TRIALS AND EXTRUSION RUNS HAVE BEEN INITIATED.	275.0	250.0	16.5	JUN 87	JUN 87
1 85 7417	LOW COST DISKS BY CONSOLIDATED ATMOSPHERIC PRESSURE MIPR TO AIR FORCE ACCOMPLISHED. FY85 EFFORT UNDER PROCUREMENT BY AIR FORCE.	430.0			JUN 87	JUN 87
1 82 7426	MMT-IPI PROGRAM-MARTIN MARIETTA TADS/PNVS ***** DELINQUENT STATUS REPORT *****	110.0	100.0	10.0	MAY 85	MAY 85
1 83 7427	ATTALK HELICOPTER PRODUCTIVITY IMPROVEMENT (API) PROGRAM ***** DELINQUENT STATUS REPORT *****	1,585.0	1,285.4	129.6	MAR 84	SEP 84
1 83 7433	MMT - IPI PGM - BELL HELICOPTER, INC. - AHIP ***** DELINQUENT STATUS REPORT *****	1,034.2	1,024.1	10.1	MAY 84	SEP 84
1 84 7443	ROBOTICS FOR HIGH PRODUCTIVITY FORGINGS ***** DELINQUENT STATUS REPORT *****	115.0				
1 85 7453	CERAMIC-FREE ATOMIZATION OF SUPERALLOY POWDER ----- JUST FUNDED. NO 301 REQUIRED. -----					
1 84 7456	ADVANCED FUSELAGE TOOLING PREPARATIONS ARE UNDER WAY FOR CONTRACT SOLICITATION.	522.0		24.4	NOV 87	NOV 87
1 85 7456	LOW COST TOOLING FOR AIRFRAME COMPONENTS WORK ON THIS EFFORT, WHICH CONSISTS OF PREPARATIONS FOR CONTRACT PROCUREMENT, IS BEING ACCOMPLISHED WITH PROJECT 1847456.	90.0			NOV 87	NOV 87
1 83 7465	ADVANCED COMPOSITE SENSOR SUPPORT STRUCTURE (ACS-3) TESTING OF THE COMPOSITE SUPPORT STRUCTURE WAS COMPLETED, AND THE SUCCESSFUL PERFORMANCE HAS RESULTED IN THE AUTHORIZATION OF BENCH AND FLIGHT QUALIFICATION TESTING.	1,013.7	752.0	161.8	APR 84	JAN 86

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
1 84 7465	FABRICATION TECH F/ADVANCED COMPOSITE SENSOR SUPPORT STRUCT ***** DELINQUENT STATUS REPORT *****	515.0				
1 85 7465	FABRICATION TECHNIQUES FOR ADVANCED COMPOSITE SENSOR ----- JUST FUNDED. NO 301 REQUIRED. -----					
1 84 7468	INTEGRATION OF ADVANCED REPAIR BONDING ***** DELINQUENT STATUS REPORT *****	515.0		35.0	JUN 86	JUN 86
1 84 7470	HAND HELD AUTOMATIC POWER CRIMPER A COMPETITIVE, SMALL BUSINESS SET-ASIDE RFQ WAS ISSUED TO 63 SMALL BUSINESSES ON 5 JULY 1984. ONLY TWO PROPOSALS WERE RECEIVED. THESE WERE EVALUATED AND FOUND TO BE UNACCEPTABLE. THE RFQ WAS CANCELLED. RFQ WILL BE REISSUED JAN 85, UNRESTRICTED BASIS.	218.0		40.0	FEB 86	JUN 86
1 84 7471	PROCESS CONTROL SYSTEM FOR N/C AND CNC MACHINES PROCUREMENT + THE PRINCIPAL INVESTIGATOR ARE NEGOTIATING WITH ALLISON GAS TURBINE (ONLY BIDDER) ON PROPOSED CONTRACT. THE FINAL NEGOTIATION ARE IN PROCESS AND AN AWARD IS EXPECTED BY THE END OF JANUARY.	200.0		35.0		JUL 86
1 85 7471	PROCESS CONTROL SYSTEM FOR N/C AND CNC MACHINES PROCUREMENT AND THE PRINCIPAL INVESTIGATOR ARE NEGOTIATING WITH ALLISON GAS TURBINE (ONLY BIDDER) ON PROPOSED CONTRACT. THE FINAL NEGOTIATION ARE IN PROCESS AND AN AWARD IS EXPECTED BY THE END OF JANUARY.	440.0			JUL 86	JUL 86
1 84 7472	SURFACE HARDENING GEARS BY LASER PROCUREMENT COMPLETED. AWARD OF CONTRACT 18 DEC 84 CONTRACTOR INITIATED MATERIAL PROCUREMENT.	450.0	326.6	30.0	DEC 85	DEC 85
1 85 7472	SURFACE HARDENING GEARS BY LASER PROCUREMENT COMPLETED. CONTRACT AWARDED ON 18 DEC 84 WITH FY 84 FUNDS.	45.0		3.5	SEP 85	SEP 85
1 84 7473	MMT - FIBER REINFORCED THERMOPLASTIC STRUCTURES WORK IS CONTINUING TO PLACE THE CONTRACT.	150.0		35.0	MAY 87	MAY 87
1 85 7473	FIBER REINFORCED THERMOPLASTIC STRUCTURES EFFORT WORK TO PLACE A CONTRACT IS BEING ACCOMPLISHED WITH PROJECT 1 84 7473.	326.0			MAY 87	MAY 87
1 84 7474	SINGLE CURE TAIL ROTOR THE CONTRACT WAS PLACED. PHASE I WORK, PRELIMINARY DESIGN WORK, WAS INITIATED.	148.0	118.0	30.0	NOV 85	MAR 86

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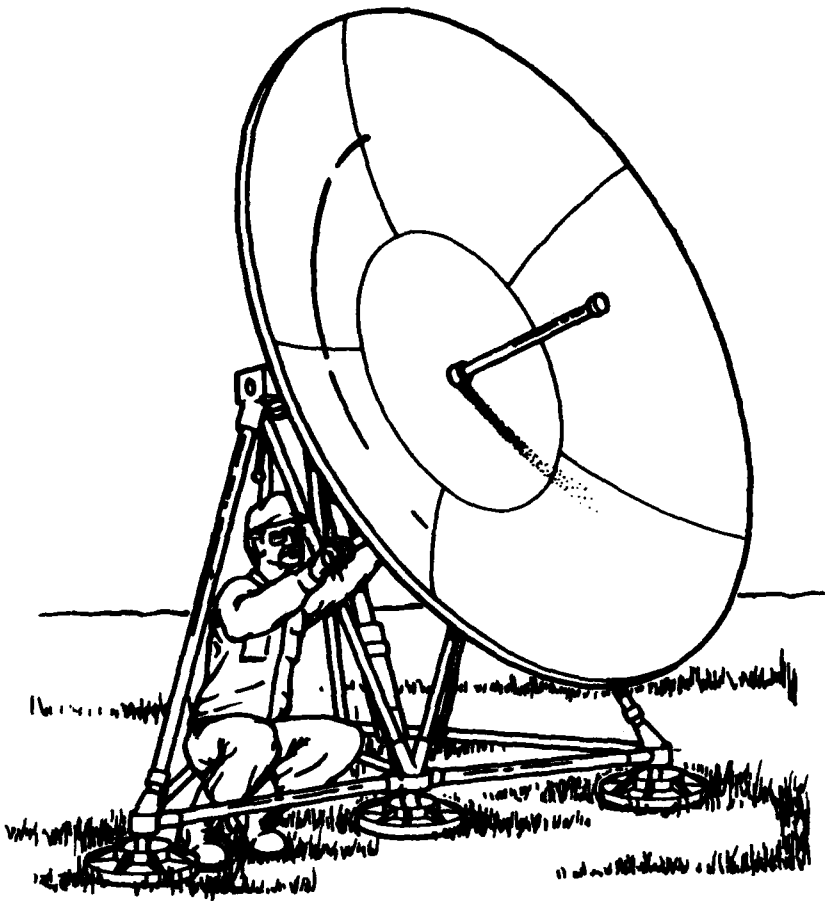
PROJ NO.	TITLE * STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
1 85 7474	SINGLE CURE TAIL ROTOR PROJECT WORK WAS JUST INITIATED, AND CONSISTED OF SUPPORTING ACTIONS TO PLACE THE CONTRACT.	55.0	50.0	5.0	MAR 86	MAR 86
1 85 7535	AUTOMATED PRECISION GRINDING OF SPUR GEARS BY CNC ----- JUST FUNDED. NO 301 REQUIRED. -----					
1 85 7549	ECM OF T700 COMPRESSOR BLISKS ----- JUST FUNDED. NO 301 REQUIRED. -----					
7 82 6192	TURBINE ENGINE PRODUCTIVITY IMPROVEMENT ***** DELINQUENT STATUS REPORT *****	2,559.0	2,559.0		MAR 84	SEP 84
7 84 6198	T-700 TURBINE ENGINE MFG PRODUCTIVITY IMPROVEMENT ***** DELINQUENT STATUS REPORT *****	100.0				



COMMUNICATIONS AND ELECTRONICS COMMAND (CECOM)

COMMUNICATIONS • ELECTRONICS COMMAND

CURRENT FUNDING STATUS, 2ND CY84

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)		INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)	
80	1	780,000	706,000	679,200	(96%)	74,000	73,500	(99%)
81	4	4,793,200	4,494,700	3,599,600	(80%)	298,500	253,700	(84%)
82	2	2,270,000	1,855,600	1,517,000	(81%)	414,400	158,400	(38%)
83	2	1,280,500	1,253,700	1,253,700	(100%)	26,800	20,700	(77%)
84	2	1,602,000	1,572,500	216,600	(13%)	29,500	900	(3%)
85	8	2,750,800	847,800	0	(0%)	1,903,000	0	(0%)
TOTAL	19	13,476,500	10,730,300	7,266,100	(67%)	2,746,200	507,200	(18%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 80% INHOUSE REMAINING 20%

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F 81 3050	EPITAXY OF III-V SEMICONDUCTOR PHOTODETECTORS RCA, QUEBEC, OBTAINED IMPROVED ALUMINA SUBSTRATES FROM RCA BURLINGTON AND WITH NEW JIGGING AND RAPID SOLDERING JOINED DELICATE III-V DETECTORS TO THICK FILM CIRCUITRY ON THE SUBSTRATES. EPOXY WAS ELIMINATED. $230K COST GROWTH + 5 MOS SLIPPAGE.	670.0	588.2	37.0	DEC 83	DEC 85
F 80 3054	PRODUCTION METHODS FOR MULTI-LAYER FOLDED CIRCUITS HUGHES INSTITUTED CHANGES IN SUBCONTRACTORS RIGID-FLEX CIRCUIT BOARD SPECS TO ELIMINATE PLATED-THROUGH-HOLE (PTH) CRACKING, FLEXIBLE LAYER DELAMINATION, + POLYIMIDE ADHESIVE OUTGASSING. YIELD HAS BEEN INCREASED TO 50 PERCENT. FINAL REPORT DUE 1 MAY.	780.0	706.0	73.5	SEP 82	MAY 85
F 81 3056	ELECTROLUMINESCENT NUMERIC MODULES ROCKWELL COLLINS CONTINUED EFFORTS TO RESOLVE ELECTROLUMINESCENT LAYER UNIFORMITY + THIN FILM CONDUCTOR ETCHING PROBLEMS. IMPROVEMENTS IN DEPOSITION PROCEDURES + CLEAN ROOM TECHNIQUES HAVE IMPROVED DMD PANEL QUALITY. TWO ENG SAMPLES WERE RECEIVED.	1,270.7	1,131.7	139.0	DEC 82	MAY 85
F 81 3057	HIGH STABILITY VIBRATION RESISTANT QUARTZ CRYSTALS FEI CORRECTED FLATPACK SEALING PROBLEMS WITH PREFORM GOLD/TIN GASKETS. PARALLEL GAP WELDING WAS ENHANCED BY A NEW FIXTURE WHICH REDUCED ELECTRODE PRESSURE + SHOCK. CUT QUARTZ CRYSTALS WERE CHEMICALLY POLISHED TO FREQUENCY + SUCCESSFULLY TESTED.	1,785.3	1,717.6	67.7	JUL 83	JUN 86
F 83 3068	INCREASE PRODUCIBILITY OF VARACTORS AND PIN DIODES STUDIES OF M/A-COM HAVE SHOWN THAT GaAS VARACTORS WITH BREAKDOWN OF -25V AND HIGH CAPACITANCE CANNOT BE FABRICATED. THE LOWER CAPACITANCE DIODES HAVE NO PROBLEMS. THE SILICON PIN DIODES ARE IN DOUBLE STUD PACKAGES. 100 PIN DIODES ARE DELIVERED.	215.0	210.0		JUL 85	JUL 85
2 84 3068	INCREASE PRODUCIBILITY OF VARACTORS AND PIN DIODES LOW CAPACITANCE VARACTORS ARE AWAITING PACKAGE SELECTION. SILICON MAY BE USED FOR THE HIGH CAPACITANCE ONES. A POLYSILICON LAYER IS BEING ADDED TO THE PIN DESIGN TO ELIMINATE SHORTING. THE 3RD ENG SAMPLE IS BEING FABRICATED.	250.0	220.5	0.9	JUL 85	JUL 85
2 85 3068	INCREASE PRODUCIBILITY OF VARACTORS + PIN DIODES (CAM) ----- JUST FUNDED. NO 301 REQUIRED. -----					
F 82 3073	TACTICAL GRAPHICS DISPLAY PANEL GTE IS STILL HAVING BREAKS IN TFEL PANEL INDIUM TIN OXIDE (ITO) LAYERS + IS UNABLE TO FABRICATE A PERFECT PANEL. HERMETIC SEAL WAS IMPROVED WITH AN OPTIMUM FRIT MATERIAL THAT MATCHES EXPANSION OF GLASS PANEL. AN 18 MO. SCHEDULE SLIPPAGE IS EXPECTED.	950.0	881.6	68.4	OCT 84	MAY 86

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F 82 3083	MM WAVE COMMUNICATIONS FRONT END MODULE (CFEM) MICROWAVE ASSOCIATES FIXED EARLIER PROBLEMS- RF FILTER IS NOW ELECTROFORMED FOR FINER TOLERANCES. VCO GUNN DIODES COULD NOT MEET THE SPEC SO THE SPECS WERE RELAXED. PILOT RUN WAS CUT FROM 20 TO 10 + CONTRACT RAISED $200K FOR AN ADD-ON 'LOCK-ON' UNIT.	1,320.0	974.0	90.0	JUN 84	MAR 86
2 85 3090	GAINASP LIGHT EMITTING DIODE PACKAGING THE ADC FOR THE SELECTED CONTRACTOR WILL BE IN JAN 85. THE AIR FORCE HAS INCORPORATED THE ARMY REQUIREMENTS IN THE CONTRACT AND IS MANAGING THE EFFORT. THE RESULTING LEDS WILL BE USED IN ARMY FIBER OPTICS LONG-HAUL COMMUNICATIONS.	300.0			SEP 86	SEP 86
F 83 3094	COMMUNICATIONS TECHNOLOGY TECHMOD FOR JTIDS ROCKWELL COLLINS AND IBM ARE MODIFYING IBM'S SOFTWARE FOR A HIGH VOLUME, LOW-MIX FACTORY TO A HIGH-MIX, LOW-VOLUME ENVIRONMENT. ALSO PROGRAMMED FOR ROBOTIC KITTING AND PCB ASSEMBLY + ROBOT AIDED CABLE ASSY. SOWS WERE WRITTEN FOR 12 NEW EQUIPMENTS.	1,065.5	1,043.7	20.7	SEP 84	OCT 85
2 84 3094	COMUNICATIONS TECHNOLOGY TECHMOD FOR JTIDS (CAM) SINGER KEARFOTT SURVEYED PICK+PLACE EQUIP, ROBOTIC WORK CELLS, VAPOR PHASE + INFRARED SOLDER REFLOW MACHINES, IN-CIRCUIT TEST SYSTEMS, RF MODULE TESTERS, AND QC DATA COLLECTION AND CONSOLIDATION SYSTEMS. SINGER IS REPEATING COLLINS' DISCOVERY PHASE.	1,352.0	1,352.0		OCT 85	OCT 85
2 85 3094	COMMUNICATIONS TECHNOLOGY TECHMOD FOR JTIDS SINGER EVALUATED A ROBOTIC WORK CELL, PICK+PLACE EQUIP, VAPOR PHASE + IR REFLOW SOLDERING, AND AUTOMATED DATA COLLECTION, INSPECTION, AND TEST SYSTEMS. COLLINS WORKED ON A DATA DISTRIBUTION SYSTEM, CHIP ASSEMBLY, PART PREPARATION, + BAR CODE READER.	785.0			OCT 86	OCT 86
2 85 3108	CONTROL OF GAAS BOULE DIAMETER A COMPLETED RFP HAS BEEN FORWARDED TO PROCUREMENT. IMPROVED GAAS CRYSTAL BOULES WILL RESULT FROM THE COMPUTER CONTROL SOFTWARE TO BE DEVELOPED. SENSORS FOR ALL OBSERVABLE PHYSICAL PHENOMENA WILL DRIVE THE SOFTWARE. THE COMPUTER WILL DO THE PROCESS.	251.0			APR 87	APR 87
2 85 3111	MMT AUTOMATIC MATCHING OF IMPEDANCE CONTRACT NLT YET AWARDED. TECHNIQUES FOR AUTOMATIC ADJUSTMENT + MATCHING OF INTERFACE CIRCUIT IMPEDANCES WILL BE ESTABLISHED. AUTOMATIC NETWORK ANALYZERS + MICROPROCESSOR CONTROLLED LASER TRIM WILL BE UTILIZED. CLASS OF LABOR NEEDED WILL BE REDUCED.	250.0			AUG 87	AUG 87
2 85 3139	AUTOMATED INTEROVEN TRANSFER OF GLASS PREFORMS A COMPLETED RFP FOR THIS EFFORT WAS SENT TO PROCUREMENT. A HONEYWELL-OWNED ROBOT WILL BE PROGRAMMED FOR THE CLEAN-ROOM OPERATIONS OF FABRICATING THE AN/TAS-6 COMMON MODULE DEWAR. THE CURRENT GLASS VERSION WILL BE THE SUBJECT OF THE EFFORT.	100.0			MAY 86	MAY 86

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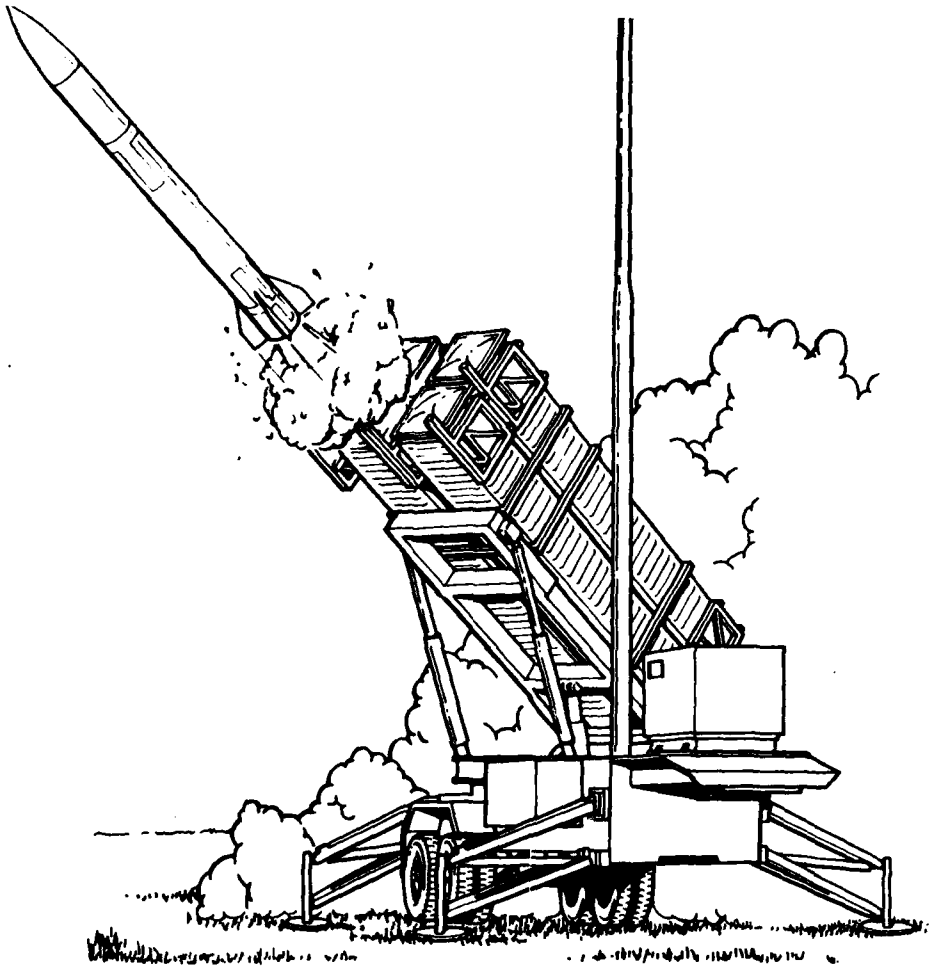
2 85 9289	AUTOTEST OF MICROWAVE DEVICE WAFERS (CAM) MICROWAVE ASSOCIATES WILL MODIFY AN AUTOMATIC WAFER PROBE TO PERMIT EVALUATION OF GALLIUM-ARSENIDE WAFERS. THE WAFERS MUST BE SUITABLE FOR MICROWAVE DEVICES AND WILL BE CHARACTERIZED PRIOR TO GROWTH OF INDIVIDUAL DEVICES. WILL ALSO DO SILICON WAFERS.	874.8	847.8		DEC 86	DEC 86
2 85 9290	MMT AUTOMATIC MICROWAVE SEMICONDUCTOR DEVICE TESTING DATA FOR AN RFP WAS PREPARED AND SENT TO PROCUREMENT. CONTRACTOR WILL IMPLEMENT AN AUTOMATIC, HIGH VOLUME INSPECTION PROCEDURE FOR EVALUATING SOLID STATE MICROWAVE DEVICES AT INCOMING INSPECTION. 100 PERCENT OF DEVICES WILL BE EVALUATED.	190.0			JUL 87	JUL 87
F 81 9851	TACTICAL MINIATURE CRYSTAL OSCILLATORS BENDIX RESOLVED TMXO HYBRID PACKAGE CRACKING PROBLEM BY MINOR DESIGN MODIFICATION. FIFTEEN ENGINEERING SAMPLE UNITS PROVIDED GOVT. ARE NOW UNDER TEST. TWO ENG SAMLES WERE SENT TO EFRATIUM, • EG•E FOR RUBIDIUM-CRYSTAL OSCILLATOR DEVELOPMENT PROGRAM.	1,067.2	1,057.2	10.0	MAR 84	SEP 85



MISSILE COMMAND
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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
4 83 6095 03	SURFACE TREATMENT AND CASE HARDENING OF STEEL COMPONENTS TASK IS NEARING COMPLETION. GEARS HAVE BEEN HARDENED, AWAITING DELIVERY FOR TESTING.	150.0	132.0	18.0	SEP 84	APR 85
4 83 6095 05	SKIVE HOBBING CONTRACT WAS AWARDED ON 19 JUN 84. WORK IS UNDERWAY WITH SUBCONTRACTOR TO MAKE SKIVE HOBS AND ASSOCIATED FIXTURES.	154.0	154.0			JAN 86
4 85 6095	ABRAMS TRANSMISSION PRODUCTIVITY IMPROVEMENTS PHASE III WORK IS UNDERWAY WITH SUBCONTRACTOR (GLEASON, MACHINE DIV.) TO MAKE SKIVE HOBS, FIXTURES. THIS TASK WILL PROVIDE PROTOTYPE TOOLING.	70.0	70.0		JAN 86	JAN 86
4 85 6095 05	SKIVE HOBBING OF GEARS CONTRACT WAS AWARDED ON 26 OCT 84. WORK IS UNDERWAY WITH SUBCONTRACTOR TO MAKE SKIVE HOBS AND ASSOCIATED FIXTURES.	70.0	69.0		JAN 86	JAN 86
T 81 6098	PRODUCTION OF SPECIAL ARMOR STEEL ALL WORK HAS BEEN COMPLETED FINAL TECHNICAL REPORT IS BEING PREPARED.	900.0	447.0	453.0	NOV 83	DEC 85
T 81 6099	MANUFACTURING METHODS FOR SPECIALIZED ARMOR MATERIALS WORK HAS PROGRESSED IN THE AREA OF MATERIALS, PROCESSES AND FACILITIES TOWARD REALIZING THE PROGRAM OBJECTIVE THAT OF ESTABLISHING MANUFACTURING METHODS FOR SPECIAL ARMOR.	6,550.0		6,515.0	JUL 84	SEP 85
4 83 6107	IMPROVED MBT TRACK THE EFFORT TO FABRICATE SIC/ALUMINUM TRACK PINS BY CASTING CONTINUED. THE ADAPTIVE FLUIDIC DAMPER TASK WAS COMPLETED. FABRICATION OF COMPOSITE ROAD WHEELS WAS INITIATED.	761.0	651.0	100.0	AUG 84	JUL 85
4 83 6107 01	COMP MFG FRM HI STR/LTWEIGHT FERROUS, NON-FERR + MTL MATRIX CASTING TRIALS WERE CONDUCTED FOR PRODUCING CONTINUOUS SILICON CARBIDE/ALUMINUM METAL MATRIX TRACK PINS. GATING PROCEDURES WERE ESTABLISHED, AND LEACHABLE CERAMIC MOLDS WERE ORDERED.	314.0	285.0	29.0	JUN 84	JUL 85
4 83 6107 02	ADAPTIVE FLUIDIC DAMPER THE FINAL TECHNICAL REPORT WAS COMPLETED. THE PROGRAM OBJECTIVES WERE ACHIEVED BY EVALUATING ALL FLUIDIC DAMPER COMPONENTS, DEVELOPING A PRODUCT SPECIFICATION, SURVEYING VENDORS, SOLICITING QUOTATIONS, RATING MATERIALS, AND EVALUATING PROCESSES.	90.0	57.0	33.0	MAR 84	DEC 84
4 83 6107 03	ORGANIC COMPOSITE ROAD WHEEL FABRICATION OF A 'C' SCAN SYSTEM FOR INSPECTING ROADWHEELS WAS INITIATED. THE DEVELOPMENT OF ANCILLARY EQUIPMENT FOR THE POLAR WINDING MACHINE WAS COMPLETED. WINDING OF ROADWHEELS HAS BEEN INITIATED.	343.0	309.0	34.0	AUG 84	JUN 85

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4 83 6079 03	DI-CAST HIGH PRESSURE TURBINE NOZZLE TOOLING FOR THE FABRICATION OF THE DICAST NOZZLE HAS BEEN COMPLETED. CASTING PARAMETERS HAVE BEEN ESTABLISHED. PRODUCTION PROTOTYPE HARDWARE HAS BEEN PRODUCED. THE NOZZLE WILL BE FINISHED MACHINED FOR ENGINE TESTING.	498.0	475.0	23.0		SEP 85
4 83 6079 05	AUTOMATIC DEBURRING OF ENGINE COMPONENTS NO SIGNIFICANT ACCOMPLISHMENT DURING THIS REPORTING PERIOD. AVCO LYCOMING IS INSTALLING A ROBOTIC DEBURRING SYSTEM.	442.0	419.0	23.0		AUG 85
4 85 6079	AGT-1500 ENGINE SEE INDIVIDUAL SUBTASK.	900.0		70.0	MAR 86	MAR 86
4 85 6079 05	AUTOMATED DEBURRING OF ENGINE COMPONENTS ACTIONS WERE INITIATED FOR PROCUREMENT AND PLACING OF FOLLOW-ON CONTRACT WITH AVCO-LYCOMING.	480.0			JUL 86	JUL 86
4 85 6079 06	ADVANCED BALANCING MACHINING DETERMINATION AND FINDINGS, JUSTIFICATION FOR AUTHORITY TO NEGOTIATE AND PROCUREMENT REQUESTS HAVE BEEN WRITTEN FOR PROCUREMENT ACTION.	190.0			MAR 86	MAR 86
4 85 6079 11	EROSION RESISTANT COATINGS FOR COMPRESSOR BLADES/VANES WORK HAS BEEN INITIATED TO DOCUMENT JUSTIFICATION FOR PROCUREMENT ACTION TO NEGOTIATE A CONTRACT.	300.0			SEP 85	SEP 85
T 81 6089	ABRAMS TANK PLANT - TECH MOD PROGRAM THE FINAL REPORT HAS BEEN SUBMITTED. THE PROGRAM IS CURRENTLY ON HOLD PENDING DIRECTION FROM DA.	4,100.0	4,000.0	100.0	SEP 83	MAR 85
T 82 6090	TEAD DEPOT ANALYSIS OF RESOURCES AND TECHNOLOGY (DART) A CONTRACT TO ANALYZE THE ENTIRE TOOELE ARMY DEPOT WAS LET ON 29 SEP 84 TO THE AUSTIN CO., EVANSTON, IL. A DETAILED PLAN OF ACTION WAS DELIVERED BY THE CONTRACTOR IN NOV 84.	100.0		8.0	MAY 83	AUG 85
4 84 6090	TEAD DEPOT ANALYSIS OF RESOURCES AND TECHNOLOGY (DART) CONTRACT AWARDED TO AUSTIN CO., 29 SEP 84. CONTRACT IS APPROXIMATELY 7 PERCENT COMPLETE.	2,061.1	1,461.1	120.0	SEP 85	AUG 85
4 85 6090	TEAD DEPOT ANALYSIS OF RESOURCES AND TECHNOLOGY (DART) WORK CANNOT PROCEED UNTIL FUNDS HAVE BEEN RELEASED.	50.0			MAY 86	MAY 86
4 83 6095	ABRAMS TRANSMISSION PRODUCTIVITY IMPROVEMENTS (PHASE I) SEE SUBTASKS.	304.0	286.0	18.0	DEC 84	JAN 86

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4 83 6059 17	PRE-PAINT CLEANING SYSTEM A REQUIREMENT SPEC HAS BEEN EVALUATED. PARKER CHEMICAL SUBMITTED QC PROCEDURES FOR THE NON-CHROME CONVERSION COATING, TO 1325 FB/TO 1355 AN. COST STUDY FOR CADMIUM REPLACEMENTS WILL BE RELEASED SOON.	325.0	275.0	46.0	OCT 84	AUG 85
4 83 6059 19	SQUEEZE CAST ROAD WHEELS PROCESS SPECIFICATIONS ARE BEING EVALUATED AND MANUFACTURING COSTS HAVE BEEN DETERMINED. A FINAL REPORT OF THIS PROJECT IS BEING PREPARED.	170.0	154.0	14.0	APR 85	MAY 85
4 84 6059	M2 AND M3 FIGHTING VEHICLE SYSTEM SEE SUBTASK 4 84 6059-08.	263.0	213.0	6.0	JAN 86	JAN 86
4 84 6059 08	PRODUCTION METHODS FOR COMPOSITE TURRET BASKET THIS PROJECT IS BEING RE-EVALUATED WITH RESPECT TO THE RESULTS OF THE ROAD TESTS AND THE IMPLEMENTATION PLAN THAT IS BEING DETERMINED.	263.0	213.0	6.0	JAN 86	JAN 86
T 81 6076	AUTOMATED DEPOT INSPECTION OF ROADWHEELS A CONTRACT PACKAGE HAS BEEN PREPARED TO REPROGRAM THE ADRIS AND EVALUATE IT FOR PRODUCTION IMPLEMENTATION. AFTER THE EQUIP IS REPROGRAMMED, 132 PRODUCTION ROADWHEELS WILL BE ULTRASONICALLY INSPECTED PRIOR TO PEEL TESTING, IN ORDER TO VALIDATE PROC.	415.0	389.0	22.0	SEP 83	APR 86
T 82 6079	AGT-1500 ENGINE SEE INDIVIDUAL SUBTASKS.	1,660.0	1,324.0	294.0	MAR 85	JAN 85
T 82 6079 01	MONOCRYSTAL ALLOY FOR HIGH PRESSURE TURBINE BLADES THE EFFORT FOR ALL THREE SUBTASKS HAS BEEN COMPLETED AND THE FINAL TECHNICAL REPORT HAS BEEN DISTRIBUTED.	400.0	300.0	100.0	SEP 83	AUG 84
T 82 6079 12	LASER WELDER FOR RECUPERATOR ID/OD CONTRACT AWARDED SEPT 84 AWAITING LASER VENDORS PROVE OUTS OF BEAM DELIVERY CONCEPTS.	260.0	257.9		DEC 85	DEC 85
4 83 6079	AGT-1500 ENGINE SEE INDIVIDUAL SUBTASKS.	1,534.0	1,442.0	92.0	OCT 85	DEC 85
4 83 6079 01	MONOCRYSTAL ALLOY FOR HIGH PRESSURE TURBINE BLADES MONOCRYSTAL APPLICATION ANALYSIS HAS BEEN COMPLETED. BLADE DEMONSTRATION HAS BEEN COMPLETED THE PRODUCTION PROCESS DEMONSTRATION WILL DEMONSTRATE THE PRODUCTION CAPABILITY.	231.0	208.0	23.0		OCT 85
4 83 6079 02	RAPIDLY SOLIDIFIED RATE (RSR) NICKEL-BASE SUPERALLOY COMPONENTS HAVE BEEN SHIPPED TO AVCO LYCOMING. AVCO LYCOMING IS CURRENTING LABORATORY TESTING THE COMPONENTS, AND WILL SPIN TEST PRIOR TO ENGINE TESTING.	363.0	340.0	23.0		SEP 85

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T 80 6059	LARGE CAST ALUMINUM COMPONENTS SEE INDIVIDUAL SUBTASKS.	1,638.0	1,230.0	92.0	JUL 81	MAR 85
T 80 6059 01	M2 AND M3 CAST ALUMINUM COMPONENTS A SPR WAS ISSUED TO REVISE THE SCOPE OF WORK TO INCLUDE ARMOR APPLIQUES.	738.0	524.0	14.0		MAR 85
T 80 6059 06	PRODUCTION METHODS FOR COMPOSITE TURRET BASKET ***** DELINQUENT STATUS REPORT *****					SEP 84
T 82 6059	M2 AND M3 FIGHTING VEHICLE SYSTEM SEE INDIVIDUAL SUBTASKS.	1,429.0	1,238.0	167.0	DEC 84	MAR 85
T 82 6059 01	M2 AND M3 CAST ALUMINUM COMPONENTS SCOPE OF WORK HAS BEEN CHANGED TO INCLUDE ARMOR APPLIQUES AND BALLISTIC TESTING.	490.0	445.0	45.0	DEC 83	MAR 85
T 82 6059 02	SELF-THREADING FASTENERS IMPLEMENTATION OF THE SELF THREADING FASTENERS HAS BEEN INITIATED AND THE FINAL REPORT DRAFT HAS BEEN STARTED.	130.0	106.0	18.0	FEB 83	MAY 85
T 82 6059 03	ADHESIVE BONDING THE 6000 MILE ROAD TEST OF AN ADHESIVELY BONDED AMMO RACK IS CONTINUING.	130.0	105.0	24.0		FEB 85
T 82 6059 06	LASER HEAT TREATING HARDWARE HAS BEEN HEAT TREATED AND SIMULATED FIELD TESTING IS COMPLETE. PREPARATION OF THE FINAL REPORT IS UNDERWAY.	130.0	107.0	19.0	SEP 84	APR 85
T 82 6059 06	PRODUCTION METHODS FOR COMPOSITE TURRET BASKET A 6000 MILE ROAD TEST OF TWO COMPOSITE TURRET BASKETS WAS INITIATED, AND IS PROGRESSING WELL. IMPLEMENTATION PLANS ARE BEING PREPARED. IMPLEMENTATION IS PLANNED FOR THE BFV-A1.	131.0	107.0	24.0	JUN 83	JAN 86
T 82 6059 20	CARC APPLICATION PROCESSING TECH PRODUCTION PROCESSES HAVE BEEN ESTABLISHED. CARC PRIMER COATING AND TOP COATING HAVE BEEN IMPLEMENTED INTO PRODUCTION.	418.0	368.0	37.0	DEC 84	JAN 86
4 83 6059	M2 AND M3 FIGHTING VEHICLE SYSTEM SEE INDIVIDUAL SUBTASKS.	805.0	689.0	106.0	APR 85	AUG 85
4 83 6059 13	METAL ARC SPRAYING A REQUIREMENT SPECIFICATION HAS BEEN EVALUATED AND A TEST PLAN HAS BEEN DEVELOPED. TESTING HAS BEEN INITIATED. PREPARATION OF FINAL REPORT HAS BEEN STARTED.	310.0	260.0	46.0	OCT 84	MAY 85

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T 82 6057	XM1 COMBAT VEHICLE SEE INDIVIDUAL SUBTASKS.	2,312.0	1,462.0	617.0	SEP 83	MAY 85
T 82 6057 05	MACHINE DIAGNOSTICS HISTORICAL + PROCEDURAL DATA ON INSPECTION + MACH TOOL MAINT, MACH TOOL PARAMETERS + MONITORING OF TOOL WEAR + FAILURE HAS BEEN GATHERED. CONCEPTUAL DESIGN FOR A DIAGNOSTICS SYS IS BEING PREPARED. A BRASSBOARD TECHNOLOGY DEMONSTRATOR IS BEING BUILT.	1,355.0	1,105.0	250.0	SEP 83	MAR 85
T 82 6057 13	LASER CUTTING ADDITIONAL SOURCES WERE INVESTIGATED FOR LASER CUTTING ARMOR 1/4 TO 1-INCH. CONTROL LASER CORP., UNITED TECHNOLOGIES RESEARCH CTR, WESTINGHOUSE MARINE USING AVCO-EVERETT, + CINCINNATI MILACRON. PHASE I FINAL REPORT WAS SUBMITTED TO TACOM IN DEC 84.	420.0	186.0	234.0	MAY 83	MAY 85
T 82 6057 17	MANUFACTURING METHODS FOR SPECIAL ARMORS WORK HAS PROGRESSED IN THE AREA OF MATERIALS, PROCESSES AND FACILITIES TOWARD REALIZING THE PROGRAM OBJECTIVE THAT OF ESTABLISHING MANUFACTURING METHODS FOR SPECIAL ARMOR.	3,000.0		2,601.0	JAN 85	SEP 85
4 83 6057	ABRAMS M1 COMBAT VEHICLE SEE INDIVIDUAL SUBTASKS.	92.0		92.0	FEB 84	MAY 85
4 83 6057 05	MACHINE DIAGNOSTICS SEE MMT 3 82 6057-05.	55.0		55.0	FEB 84	MAR 85
4 83 6057 13	LASER CUTTING OF TRACKED COMBAT VEHICLE PARTS SEE MMT 4 82 6057-13.	32.0		32.0	FEB 84	MAY 85
4 84 6057	ABRAMS (M1) COMBAT VEHICLE SEE SUBTASK 4 84 6057-04.	450.0	450.0		SEP 85	SEP 85
4 84 6057 04	THERMAL AND MECHANICAL CUTTING AND BEVELING ARMOR PLATE 4846057-04 CONTRACTOR IS SELECTING TOOLS FOR REGRIND + OBTAINING ROUTES FOR TEST. 4846057-04A DEVELOPING DETAIL PLAN + SCHEDULE FOR CARBIDE SAWING PROCESS. 4846057-04B SURVEY OF COMMERCIALLY AVAILABLE EQUIPMENT HAS BEGUN.	450.0	450.0		SEP 85	SEP 85
4 85 6057	ABRAMS M1 COMBAT VEHICLE SEE INDIVIDUAL SUBTASK.	74.8		5.0	MAY 85	MAY 85
4 85 6057 13	LASER CUTTING LASER CUTTING TESTS HAVE BEEN PERFORMED WITH A NUMBER OF SUBCONTRACTORS. RESULTS INDICATE THE NEED TO CONTROL- LASER BEAM TYPE, FOCAL POINT LOCATION, FOCAL LENGTH, LASER OPTIC LENSE AND SYSTEM, ASSIST GAS CONFIGURATION + GAS TYPE. DETAILS SENSITIVE.	25.0		5.0	MAY 85	MAY 85

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T 82 5075	MILITARY ELASTOMERS FOR TRACK VEHICLES (PHASE II) T142 TRACK PADS HAVE BEEN SUCCESSFULLY MADE INCLUDING SOME CONTAINING KEVLAR FIBER. BOTH T142 AND T156 TRACK PADS HAVE BEEN TESTED. TRACK RUBBER SPECIFICATIONS WILL BE CHANGED TO INCORPORATE IMPROVEMENTS.	200.0	52.0	103.5	SEP 83	JUN 85
4 83 5075	MILITARY ELASTOMERS FOR TRACK VEHICLES TRACK PADS ARE BEING MANUFACTURED FOR TEST WORK. TRACK RUBBER SPECIFICATIONS ARE BEING CHANGED TO INCORPORATE IMPROVEMENTS.	145.0		118.8	JAN 86	JUN 85
4 83 5082	FLEX MACHINING SYS (FMS) PILOT LINE F/TLV COMPS (CAM) (PH V) FINAL REPORT HAVE BEEN SUBMITTED FOR APPROVAL.	350.0	350.0		OCT 84	APR 85
T 79 5063	UPSCALING OF ADVANCED POWDERED METALLURGY PROCESSES-PH 3 THE FINAL REPORT HAS BEEN WRITTEN, APPROVED AND IS CURRENTLY BEING PREPARED FOR DISTRIBUTION.	328.0	204.0	124.0	MAR 81	APR 85
4 83 5090	IMPROVED AND COST EFFECTIVE MACHINING TECHNOLOGY (PHASE V) TWO COMPONENTS ARE IN DEMONSTRATION PHASE USING WIRE CUT EDM. ENGINEERING DRAWINGS HAVE BEEN SUPPLIED TO VENDORS FOR PRICE QUOTE.	190.0	165.0	25.0	SEP 84	JUN 85
4 83 5091	HEAVY ALUMINUM PLATE FABRICATION (PHASE I) ALUMINUM ARMOR PLATE + WELDING ELECTRODES RECEIVED. HOLDING FIXTURES + WELD JOINTS DESIGNED. TEST RUNS BEING MADE WITH PLASMA CUTTING TORCH TO DETERMINE CURRENT + SPEED SETTINGS. TESTS BEING RUN ON AS-CUT SURFACES TO DETERMINE QUALITY OF WELD JOINTS.	74.0		74.0	DEC 84	JAN 87
4 85 5091	HEAVY ALUMINUM PLATE FABRICATION PROJECT ON HOLD PENDING WELDER AVAILABILITY.	100.0		5.0	JAN 87	JAN 87
T 82 6038	HIGH DEPOSITION WELDING WELDING + TESTING COMPLETED. A TORRET WAS MADE AND HAS PERFORMED SATISFACTORILY THE FINAL REPORT IS BEING PREPARED. SEE T 79 6038 FOR THE CONTRACT VALUE OF THIS EFFORT.	297.0		115.0	DEC 84	DEC 85
T 82 6054	ADVANCED METROLOGY SYSTEMS INTEGRATION SEE PROJECT 4 83 6054 FOR PROJECT STATUS.	848.0	828.0	11.0	FEB 85	DEC 85
4 83 6054	ADVANCED METROLOGY SYSTEMS INTEGRATION (PHASE II) THE SECOND DRAFT OF THE FINAL TECHNICAL REPORT HAS BEEN EVALUATED AND SUBMITTED TO THE CONTRACTOR FOR FINAL REVISION AND PUBLICATION. SOFTWARE CONVERSION OF THE COMPUTER SIMULATION MODEL FROM VAX FORMAT TO PRIME REMAINS A PROBLEM.	100.0		100.0	DEC 85	DEC 85

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T 82 5024	GEAR DIE DESIGN + MFG UTILIZING COMPUTER TECHNOLOGY (CAM) FORGED TRIALS WERE CONDUCTED TO OPTIMIZE THE PROCESS PARAMETERS. THE PREFORM INDUCTION HEATING SYSTEM WAS CHANGED TO PRODUCE A MORE UNIFORM HEATING. THE FINAL FORGING TRIALS WERE PERFORMED IN FEBRUARY.	375.0	289.0	67.0	OCT 83	JUN 85
4 83 5053	ADIABATIC DIESEL ENGINE COMPONENTS (PHASE II) PROJECT WORK WAS DIVIDED INTO THREE PHASES. WORK ACCOMPLISHED IS REPORTED UNDER THE PHASE REPORTS. SEE 4835053-01, 4835053-02, AND 4835053-03.	778.0	633.3	93.0	FEB 85	SEP 85
4 83 5053 01	ADIABATIC DIESEL ENGINE COMPONENTS WORK IS CONTINUING TO OPTIMIZE THE MATERIAL TECHNOLOGY AND THE MANUFACTURING PROCESS ESTABLISHED IN PHASE 1. SINGLE CYLINDER ENGINE TESTS, TIME/TEMPERATURE AGING TESTS, COATING SURFACE POROSITY TESTS, AND EXTENSION OF BRAZING EFFORT ARE IN PROCESS.	563.0	443.0	87.0	SEP 85	SEP 85
4 83 5053 02	BISQUE FIRED CERAMICS WORK TO ESTABLISH BISQUE FIRE CERAMIC PROCESS CONTINUED. ZIRCONIA DISCS AT VARIOUS GRAIN SIZES WERE FIRED AT 1200 AND AT 1500 DEGREES FAHRENHEIT, AND THEN TESTED FOR DIMENSIONAL CHANGE, POROSITY/DENSITY, STRENGTH, AND MACHINABILITY.	107.4	94.4	3.0	SEP 85	SEP 85
4 83 5053 03	LASER BEAM MACHINING WORK TO ESTABLISH MACHINING PROCESSES FOR HARD FIRE CERAMIC COMPONENTS CONTINUED. A RESISTANCE HEATED FURNACE WAS DESIGNED AND CERAMIC MATERIALS WERE ORDERED.	107.9	95.9	3.0	SEP 85	SEP 85
4 84 5053	ADIABATIC DIESEL ENGINE COMPONENTS (PHASE III) WORK WILL BE INITIATED IN PHASE WITH COMPLETION OF 4835053.	645.0	545.0		JAN 86	JUN 86
4 84 5053 01	ADIABATIC DIESEL ENGINE COMPONENTS WORK WILL BE INITIATED IN PHASE WITH THE COMPLETION OF 4835053.	645.0	545.0		JUN 86	JUN 86
4 85 5053	ADIABATIC DIESEL ENGINE COMPONENTS (PHASE IV) ----- JUST FUNDED. NO 301 REQUIRED. -----					
T 82 5054	LASER SURFACE HARDENED COMBAT VEHICLE COMPONENTS HARDWARE HAS BEEN HEAT TREATED AND TESTED. FINAL TECHNICAL REPORT WILL BE SUBMITTED.	290.0	243.0	45.0	JAN 84	JAN 85
4 83 5068	NEW ANTI-CORROSIVE MATERIALS AND TECHNIQUES (PHASE III) NO PROGRESS HAS BEEN MADE.	184.0	134.0	50.0	SEP 85	NOV 86
T 81 5075	MILITARY ELASTOMERS FOR TRACK VEHICLES (PHASE II) PADS HAVE BEEN MANUFACTURED AND FIELD TESTED. THE PADS ARE BASED ON THE A54 FORMULA, WHICH IS THE TRIBLEND DEVELOPED AT ROCK ISLAND, IL. THIS TRIBLEND WILL BE INCORPORATED INTO THE MIL-T-11891C SPECIFICATION.	200.0	55.3	124.7	SEP 82	JUN 85

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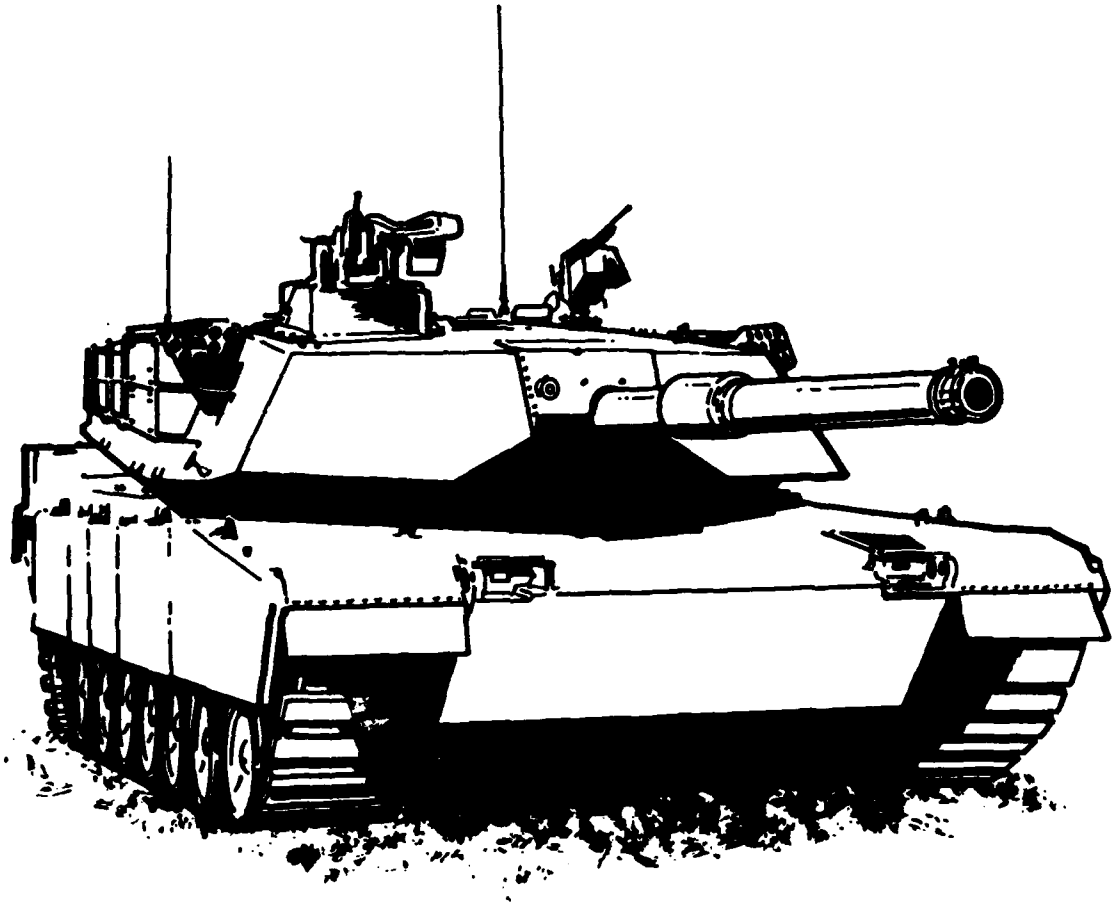
E 77 3749	HYDRAULIC ROTORY ACTUATORS A HYDRAULIC SIMULATOR HAS BEEN FABRICATED AND USED TO TEST AN ACTUATOR UNDER MISSION PROFILE LOADS FOR 300 HOURS ALL CONTRACT ITEMS SHOULD BE COMPLETED BY 31 MARCH 85.	750.0	742.0		MAY 79	MAR 85
E 80 3749	HYDRAULIC ROTARY ACTUATORS SIMULATOR COMPLETED AND UNDER TEST FOR 300 HOURS. ALL CONTRACT ITEMS SHOULD BE COMPLETED BY 31 MARCH 85.	145.0	134.0		DEC 81	MAR 85
E 81 3749	HYDRAULIC ROTARY ACTUATORS FOR M9 SIMULATOR COMPLETED AND UNDER TEST FOR 300 HOURS. ALL CONTRACT ITEMS SHOULD BE COMPLETED BY 31 MARCH 85.	157.0	150.0		JUL 81	MAR 85
4 85 4001	MFG FOR CORROSION PREVENTION IN TACTICAL VEHICLES SEE SUBTASK 01 FOR WORK STATUS.	450.0		20.0	SEP 85	SEP 85
4 85 4001 01	NON-CORROSIVE COMPOSITE ASSEMBLIES FOR TACTICAL VEHICLES CONTRACT AWARD IS EXPECTED TO OCCUR IN FEBRUARY 1985.	130.0		20.0	SEP 85	SEP 85
4 85 4008	COMPOSITE DRIVE SHAFTS THE CONTRACT HAS NOT BEEN AWARDED YET. THE PROCUREMENT REQUEST AND DETERMINATION AND FINDINGS HAVE BEEN PROCESSED AND ARE CURRENTLY IN THE PROCUREMENT DIVISION. AWARD IS EXPECTED IN MAY 1985.	250.0		0.0	SEP 86	SEP 86
4 84 4042	FLEXIBLE MANUFACTURING TECHNOLOGY INTEGRATION THIS WORK IS BEING CONDUCTED AT NBS. A ROBOT ALONG WITH END EFFECTOR AND BASIC FIXTURING ELEMENTS HAVE BEEN SET UP.	419.0		30.0		DEC 85
T 82 4575	LASER WELDING TECHNIQUES FOR MILITARY VEHICLES DEOXIDANTS HAVE PROVED SUCCESSFUL, SHOWING, SOUND POROSITY FREE WELDS OBTAINABLE WITH CORWELD 70 TUBULAR METAL ELECTRONIC.	308.0	277.0	3.0	OCT 84	JUL 85
4 83 5005	COMPUTER AIDED DESIGN FOR COLD FORGED GEARS (PHASE II) 20 SPUR GEARS AND 20 HELICAL GEARS WERE PRODUCED. TECHNOLOGY ASPECTS OF PROCESS WERE ESTABLISHED. DIMENSIONS, MICROSTRUCTURE, HARDNESS DISTRIBUTION AND SURFACE QUALITY ARE PROGRESSING. GEARS ARE BEING FINISHED TO ALL DRAWING REQUIREMENTS.	376.0	346.0	24.0	OCT 85	APR 85
T 82 5014	FOUNDRY CASTING PROCESSES USING FLUID FLOW + THERM ANALYS NO SIGNIFICANT ACCOMPLISHMENTS DURING THIS REPORTING PERIOD. CONTRACT EXTENDED TO JUNE 1985 TO COMPLETE FINAL REPORT.	100.0	80.0	18.0	MAR 84	JUN 85
T 82 5019	STORAGE BATTERY LOW MAINTENANCE THIS PROJECT IS COMPLETED. TESTING WORK WAS CARRIED OUT AT YPG, CRTC AND IN THE LABORATORIES. A FINAL REPORT ON THE 2HL TACTICAL VEHICLE LOW MAINTENANCE BATTERY HAS BEEN PREPARED.	115.0		115.0	JAN 84	JUN 85

TANK-AUTOMOTIVE COMMAND

CURRENT FUNDING STATUS, 2ND CY84

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)	INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)
77	1	750,000	742,000	742,000 (100%)	8,000	0 (0%)
78	0	0	0	0 (0%)	0	0 (0%)
79	1	328,000	204,000	204,000 (100%)	124,000	124,000 (100%)
80	2	1,783,000	1,364,000	1,330,000 (97%)	419,000	92,000 (21%)
81	6	12,322,000	5,041,300	4,046,000 (80%)	7,280,700	7,214,700 (99%)
82	12	8,034,000	5,793,000	4,110,500 (70%)	2,241,000	1,563,500 (69%)
83	13	5,693,000	4,696,300	3,142,000 (66%)	996,700	892,800 (89%)
84	6	4,444,100	3,249,100	145,000 (4%)	1,195,000	164,000 (13%)
85	12	2,869,800	230,000	100,000 (69%)	2,639,800	126,000 (4%)
TOTAL	53	36,223,900	21,319,700	13,879,500 (65%)	14,904,200	10,177,000 (68%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 59% INHOUSE REMAINING 41%



TANK-AUTOMOTIVE COMMAND
(TACOM)

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 84 RCS DRCMT-301

PROJ NO.	TITLE & STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
3 84 2001	TAB/GLASS ENCAPSULATED INTEGRATED CIRCUITS CONTRACT NOT YET AWARDED. CONTRACTOR WILL MOUNT A PASSIVATED CHIP ON TAPE & ENCAPSULATE IT WITH A SILICON/GLASS MATERIAL. PROTECTIVE ENCAPSULATION WILL ALLOW CHIPS TO MEET REQUIREMENTS FOR HERMETICITY SET BY MIL-STD-883.	600.0			OCT 87	OCT 87
3 81 3449	ALTERNATE PROCESS FOR IPDI ALL WORK PLANNED HAS BEEN COMPLETED. FINAL REPORT HAS BEEN DRAFTED. END-OF-PROJECT DEMONSTRATION PLANNED FOR 28 MAR 85.	250.0	134.7	115.3	SEP 84	MAR 85
3 83 3449	ALTERNATE PROCESS FOR IPDI ALL WORK PLANNED HAS BEEN COMPLETED. FINAL REPORT DRAFTED AND WILL BE PUBLISHED BY MARCH 85. END-OF-PROJECT DEMONSTRATION PLANNED FOR 28 MARCH 85.	150.0	125.0	25.0	SEP 85	MAR 85
3 84 3449	ALTERNATE PROCESS FOR IPDI THE DRAFT OF THE FINAL REPORT IS NEARING COMPLETION. END-OF-PROJECT DEMONSTRATION OF THE NEW SAFE MANUFACTURING PROCESS IS PLANNED FOR 28 MARCH 1985.	150.0	136.6	13.4	JAN 85	MAR 85

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 84 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
3 85 1120	DETECTOR GRADE CADMIUM SULFIDE (CDS) FUNDING WAS JUST RECEIVED.	550.0			OCT 85	OCT 85
3 84 1124	SCANNING TDI FOCAL PLANE ARRAY DETECTORS MICOM TRANSFERRED $750K TO NVL FOR CONTRACTING TO HUGHES SANTA BARBARA RESEARCH AND TI. THEY GREW + CHARACTERIZED CD-ZN-TE WAFERS AND GREW MERC-CAD-TELLURIDE ON THEM EPITAXIALLY. ARRAYS HAVE BEEN DEFINED ON THE LPE GROWN WAFER SURFACE.	800.0	750.0	7.0	OCT 86	DEC 84
3 85 1124	IMPROVED MFG PROCESSES FOR SCANNING FOCAL PLANE SENSOR ASSY MICOM TRANSFERRED $450K TO NVL FOR EXERCISING OPTIONS TO CONTINUE CONTRACTS WITH HUGHES AND TI. OPTIONS NOT YET EXERCISED. HUGHES AND TI BOTH SET UP PILOT LINES AND GREW MERC-CAD-TELLURIDE ON CD-ZN-TE WAFERS. NOISE PROBLEM IS BEING ADDRESSED.	575.0			SEP 85	SEP 85
3 85 1131	MMT FOR INTEGRATED 94 GHZ SUBMUNITION TRANSCEIVER ----- JUST FUNDED. NO 301 REQUIRED. -----					
3 85 1134	RF/LASER HARDENING OF DOMES FOR DUAL MODE SYSTEMS UV BANDPASS FILTERS HAVE BEEN FABRICATED ON GLASS COUPONS AND TESTED. THE GOLD PERFORMS BETTER THAN ALUMINIUM. BATTELLE ALSO PREPARED SAMPLE TIN-TELLURIDE FILTERS BUT THEY HAD LOW IR TRANSMISSION. A SPUTTERING TARGET CASTING PROCESS WAS REFINED.	1,000.0	875.0		NOV 85	NOV 85
3 85 1144	ELECTROFORMED ASPHERIC METAL MIRROR ----- JUST FUNDED. NO 301 REQUIRED. -----					
3 85 1147	OPTICAL FIBER WIND THE SOW HAS BEEN FINALIZED. AN EXISTING OPTICAL FIBER WINDING SYSTEM DESIGN WILL BE MODIFIED TO PROVIDE MONITOR AND CONTROL CAPABILITY AS WELL AS MAXIMUM MULTI-PARAMETER FREEDOM IN WINDING OPTICAL FIBER ON A BOBBIN FOR THE FOG-M SYSTEM.	484.0			SEP 85	SEP 85
3 85 1148	MILLIMETER WAVE MONOLITHIC/INTEGRATION RECEIVER CONTRACT NOT YET AWARDED. CONTRACTOR WILL ESTABLISH MANUFACTURING TECHNIQUES FOR A 30 GHZ GAAS MONOLITHIC RECEIVER. A PILOT LINE WILL BE CONSTRUCTED. ITEMS BENEFITING ARE MMW RADIOS, MULTIMODE GUIDANCE, GUIDED BOMBS, SMART MUNITIONS, AND SEEKERS.	589.0			JUN 87	JUN 87
3 85 1150	LITHIUM NIOBATE LASER Q-SWITCHES CONTRACT NOT YET AWARDED. CONTRACTOR WILL OPTIMIZE PROCESSES FOR GROWING LARGE DIAMETER LITHIUM NIOBATE CRYSTALS. CZOCHRALSKI METHOD WILL BE USED. ANTIREFLECTION COATINGS WITH LOW REFLECTIVITY, GOOD ADHESION, + HIGH DAMAGE THRESHOLDS WILL BE REFINED.	750.0			DEC 86	DEC 86

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 84 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
3 83 1060	ELECTRICAL TEST AND SCREENING OF CHIPS ***** DELINQUENT STATUS REPORT *****	395.0	235.5	129.4	DEC 85	OCT 84
3 84 1060	ELECTRICAL TEST AND SCREENING OF CHIPS A PROTOTYPE SYSTEM HAS BEEN FABRICATED AND WILL HAVE AN INDUSTRY DEMONSTRATION ON 13 MAY 85. A TOP FOR THE INSPECTION SYSTEM WILL BE A DELIVERABLE WITH FINAL DOCUMENTATION IN MAY 85.	1,000.0	813.0	185.0	DEC 84	SEP 85
3 85 1066	SEMIADDITIVE SINGLE AND MULTILAYER CIRCUITRY CONTRACT NOT YET AWARDED. CONTRACTOR WILL USE ELECTROLYTIC ADDITIVE + SEMIADDITIVE TECHNIQUES THAT ARE NOT ETCH DEPENDENT TO PRODUCE 2 MIL LINES + 2 MIL SPACES ON MULTILAYER PRINTED CIRCUIT BOARDS.	450.0			MAR 86	MAR 86
3 84 1075	ELECTRONICS COMPUTER AIDED MANUFACTURING (ECAM) BOEING SUBMITTED A DRAFT FINAL REPORT WHICH IS BEING REVIEWED AT MICOM. BOEING REVIEWED CABLE AND HARNESS MFG. CAPABILITIES AND FUTURE PRODUCT MIX AND DEVELOPED A 'TEST BED' CONCEPT. COMPUTER INTEGRATED MANUFACTURING GUIDELINES WERE STARTED.	366.0	265.7	78.4	DEC 84	JUN 85
3 82 1076	AUTOMATIC RECOGNITION OF CHIPS KULICKE + SOFFA IMPROVED SPAR ROBOT DECELERATION BY CHANGING 0 AXIS BUMPERS. NEW POWER DETECT BOARD WAS ASSEMBLED + TESTING STARTED. HOST/AXIS SERIAL COMMUNICATION CODE DEBUGGING WAS COMPLETED. AUTOMATIC HYBRID DIE BONDER DIAGNOSTICS IS CONTINUING.	700.0	495.8	204.1	FEB 84	JUN 85
3 84 1089	INTEGRAL ROCKET MOTOR COMPOSITE ATTACHMENTS DESIGN, FABRICATION AND DELIVERY HAS BEEN COMPLETED FOR EIGHT OF TEN SUBSCALE (20 IN) PRESSURE VESSELS. THE PREPARATION OF AN INTERIM TECH REPORT IS UNDERWAY.	475.0	355.9	25.0	OCT 84	FEB 85
3 85 1089	INTEGRAL ROCKET MOTOR COMPOSITE ATTACHMENTS THE TECHNICAL EFFORT FOR THIS LAST PHASE OF THE PROJECT WILL BEGIN IN MARCH 1985.	515.0	499.5		APR 86	APR 86
3 85 1095	AUTOMATIC SEALING OF HYBRID PACKAGES (CAM) A TECH DATA PACKAGE WAS WORKED ON. A CONTRACTOR WILL DEVELOP A HYBRID PACKAGE SEALING SYSTEM THAT WILL USE COMPUTER CONTROL AND AUTOMATION TO WELD OR SOLDER AND MAKE FINE AND GROSS LEAK TESTS ON VARIOUS PACKAGE CONFIGURATIONS.	625.0			SEP 85	SEP 85
3 84 1109	ROBOTIZED WIRE HARNESS ASSEMBLY SYSTEM ALL MAJOR EQUIPMENT HAS BEEN RECEIVED BY THE CONTRACTOR AND IS BEING INTEGRATED INTO THE FINAL CONFIGURATION. SOFTWARE DEVELOPMENT IS PROGRESSING WELL IN EACH OF THE SUBSYSTEM AREAS. THE LASER MARKER HAS BEEN INSTALLED AND CHECKED OUT.	1,050.0	1,023.0	26.0	AUG 85	SEP 85

MISSILE COMMAND

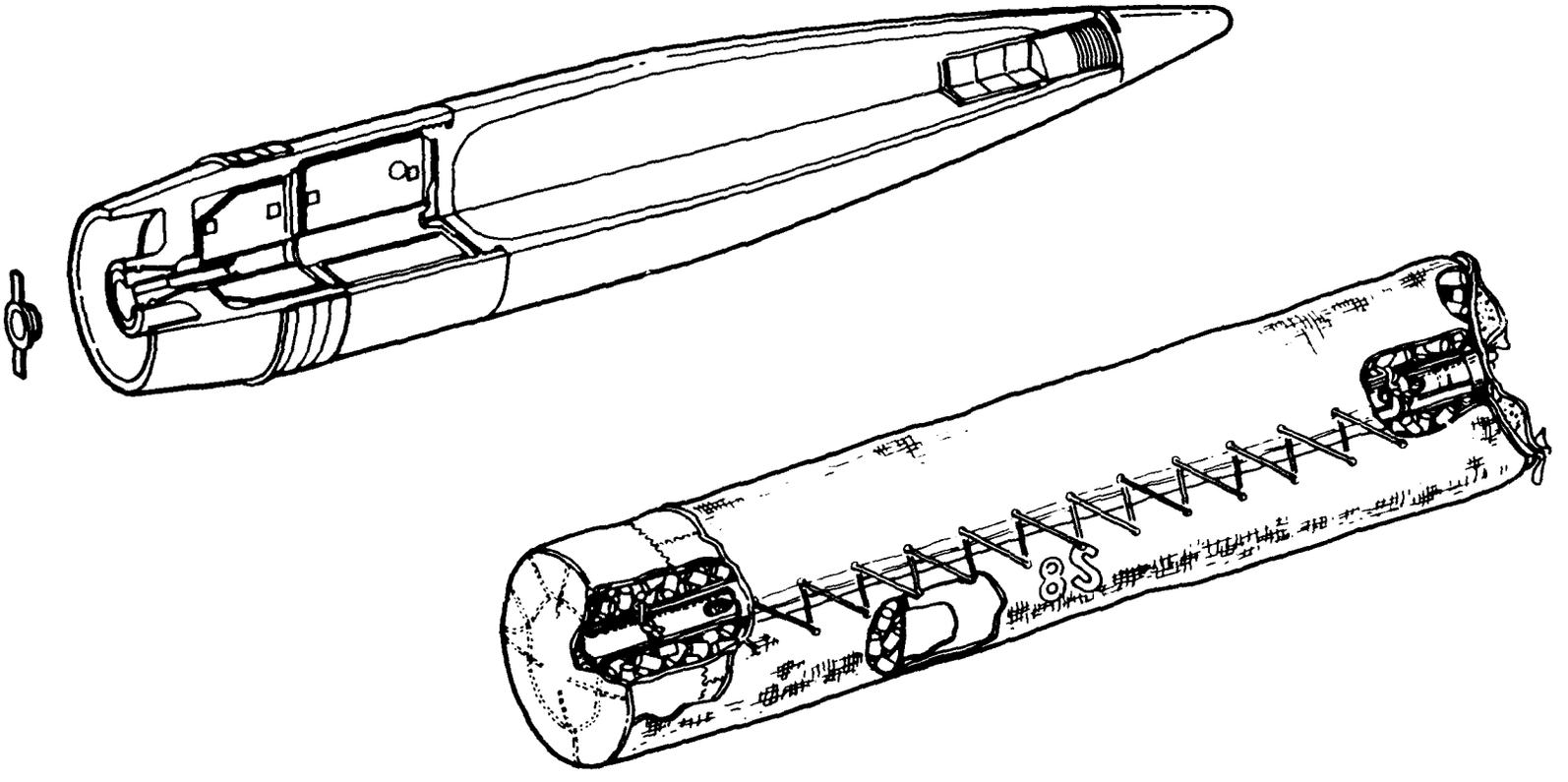
CURRENT FUNDING STATUS, 2ND CY84

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)		INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)	
81	1	250,000	134,700	134,700	(100%)	115,300	115,300	(100%)
82	1	700,000	495,800	495,800	(100%)	204,200	204,100	(99%)
83	2	545,000	360,500	325,000	(90%)	184,500	154,400	(83%)
84	7	4,441,000	3,344,200	2,779,000	(83%)	1,096,800	335,600	(30%)
85	11	5,538,000	1,374,500	526,400	(38%)	4,163,500	0	(0%)
TOTAL	22	11,474,000	5,709,700	4,260,900	(74%)	5,764,300	809,400	(14%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 50% INHOUSE REMAINING 50%

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 84 RCS DRCMT-301

PROJ NO.	TITLE • STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
4 85 6107	IMPROVED MBT TRACK PROJECT WORK WAS DIVIDED INTO TWO TASKS. A CONTRACT FOR TASK 1 WAS PLACED, AND A REQUEST FOR PROCUREMENT OF CONTRACT FOR PHASE 2 IS IN PROCESS.	450.0	160.0	15.0	SEP 85	SEP 85
4 84 6121	CAD/CAM FOR THE BRADLEY FIGHTING VEHICLE SEE INDIVIDUAL SUBTASKS ON 4 84 6121.	606.0	580.0	8.0	JAN 86	JAN 86
4 84 6121 01	ROBOTIC WELDING THE FOLLOWING TASKS WERE COMPLETED. PROGRAM PLAN APPROVED, CONSTANT CURRENT POWER SUPPLY INSTALLED, WIRE FEEDER MODIFIED, SAMPLE PLATES FABRICATED, LITERATURE SURVEY STARTED AND VENDORS LIST MADE FOR TORCHS AND WIRE FELDERS.	606.0	580.0	3.0	JAN 86	JAN 86
4 85 6121	CAD/CAM FOR THE BRADLEY FIGHTING VEHICLE ----- JUST FUNDED. NO 301 REQUIRED. -----					
4 85 6123	CERAMIC TURBOCHARGER ROTOR A PROCUREMENT REQUEST AND DETERMINATION AND FINDINGS HAVE BEEN WRITTEN.	250.0		5.0	SEP 86	SEP 86
4 85 6125	WELD PROCESSING PLANNING AND CONTROL FUNDS TRANSFERRED TO AMMRC DEC 84, EFFORT UNDERWAY.	275.0			OCT 85	OCT 85



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

A M C C O M (AMMUNITION)

CURRENT FUNDING STATUS, 2ND CY84

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)		INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)	
76	1	93,000	14,000	6,000	(42%)	79,000	77,000	(97%)
77	0	0	0	0	(0%)	0	0	(0%)
77	1	1,452,900	1,184,100	1,174,100	(99%)	268,800	268,800	(100%)
78	1	322,500	0	0	(0%)	322,500	281,000	(87%)
79	4	4,734,000	2,412,000	2,198,900	(91%)	2,322,000	1,387,600	(59%)
80	4	2,497,000	786,700	739,700	(94%)	1,710,300	412,300	(24%)
81	13	7,914,300	3,605,100	2,829,900	(78%)	4,309,200	2,267,300	(52%)
82	29	30,353,400	21,548,800	19,827,000	(92%)	8,804,600	6,579,400	(74%)
83	17	8,828,100	5,428,700	4,515,100	(83%)	3,399,400	2,799,400	(82%)
84	45	24,062,300	14,938,100	3,993,900	(26%)	9,144,200	2,974,600	(32%)
85	45	17,886,000	3,194,000	0	(0%)	14,692,000	17,100	(0%)
TOTAL	160	98,163,500	53,111,500	35,284,600	(66%)	45,052,000	17,064,500	(37%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 54% INHOUSE REMAINING 45%

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 84 RCS DRCMT-301

PROG NO.	TITLE & STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
5 84 0904	CHEMICAL REMOTE SENSING SYSTEMS CRYOGENIC DETECTOR CONTRACT WAS AWARDED APRIL 1984. COOLER CONTRACT WAS AWARDED IN SEPTEMBER 1984.	1,910.0	1,775.0	40.0	NOV 86	NOV 86
5 85 0904	MFG TECH FOR CHEMICAL REMOTE SENSING SYSTEMS CONTRACT FOR OPTICS AND INTERFEROMETER WAS AWARDED.	1,441.0	1,350.0		JUL 86	JUL 86
5 84 0905	MANUFACTURE OF IMPREGNATED CHARCOAL-WHETLERITE TWO PROCESSES WERE SELECTED FOR INVESTIGATION. SAMPLES WERE PREPARED REPRESENTING DIFFERENT PROCESS CONDITIONS AND CYANOGEN CHLORIDE TESTS PERFORMED. GOOD RESULTS FROM AMMONIA AND GAS SORBTION TESTS. PHASE I COMPLETE. COM COMPLETE.	282.0	103.0	171.0	DEC 84	MAR 86
5 84 0905	MANUFACTURE OF IMPREGNATED CHARCOAL (WHETLERITE) WORK WAS COMPLETED ON PROCUREMENT PACKAGE FOR FABRICATION OF A PILOT PLANT. PILOT PROCESS DESIGN COMPLETED. SYSTEM SAFETY HAZARD REPORT COMPLETED. CONTRACT REQUEST PACKAGE FOR POLLUTION ABATEMENT COMPLETED.	456.0		33.0	MAR 86	MAR 86
5 85 0905	MANUFACTURE OF IMPREGNATED CHARCOAL ----- JUST FUNDED. NO 301 REQUIRED. -----					
5 84 0918	MODERNIZATION OF FILTER PENETRATION EQUIPMENT EVALUATION OF THE FLASH VAPORIZATION/CONDENSATION 'MONODISPERSE' AEROSOL GENERATOR WITH TETRAETHYL GLYCOL (TEG) STARTED. THE U-127 WAS MADE OPERATIONAL AND WAS TESTED WITH THE TEG.	300.0	200.0	30.0	SEP 85	SEP 85
5 85 0918	MODERNIZATION OF FILTER PENETRATION EQUIPMENT ----- JUST FUNDED. NO 301 REQUIRED. -----					
5 85 0923	VELOCITY TRAVERSE MAPPER F/CHARCOAL FILTERS TECHNICAL REQUIREMENTS FOR EQUIPMENT HAVE BEEN IDENTIFIED AND PREPARATION OF SOW FOR FLAT-BED FILTERS WAS INITIATED.	200.0		1.0	JUN 87	JUN 87
5 85 0924	MANUFACTURING PROCESS FOR GAS MASK CANISTERS CONTRACTOR HAS RECOMMENDED USE OF A NEW EDGESEAL MATERIAL, NEW SCRIM MATERIAL, AND NEW ADHESIVE FOR USE IN PARTICULATE FILTER ASSEMBLY. SOURCE FOR SCREEN MATERIAL USED IN BOTTOM AND TOP RETAINERS IS STILL BEING INVESTIGATED.	283.0	228.0	55.0	SEP 85	DEC 85
5 84 0924	MANUFACTURING PROCESS FOR GAS MASK CANISTERS TOOLING FOR THE SHEET METAL COMPONENTS WERE COMPLETED. INVESTIGATION OF USA SOURCES FOR WHETLERIZED EXTRUDED CHARCOAL PROVED TO BE NEGATIVE. MAKING CANISTER COMPONENTS OF PLASTIC SHOWED NOT TO BE FEASIBLE DUE TO INCREASE IN WEIGHT AND SIZE.	800.0	465.0	130.0	MAR 86	MAR 86

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 84 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
5 85 0924	MANUFACTURING PROCESS FOR GAS MASK CANISTERS ----- JUST FUNDED. NO 301 REQUIRED. -----					
5 85 0925	PROTECTIVE MASK LEAKAGE TESTING AN ANALYSIS REPORT OF THE M14 AND M4A1 FIELD TESTER WAS RECEIVED AND APPROVED. A DESIGN PROPOSAL WAS RECEIVED AND APPROVED. CONTRACTOR INITIATED WORK ON THE DRAWING AND FABRICATING OF THE BREADBOARD MODEL.	199.0	150.0	49.0	JUN 84	JAN 85
5 84 0925	PROTECTIVE MASK LEAKAGE TESTING THE CONTRACTOR COMPLETED FABRICATION OF THE BREADBOARD. A TEST PLAN WAS RECEIVED AND APPROVED. EVALUATION TESTING WAS PERFORMED AT BOTH THE CONTRACTOR'S FACILITY AND AT APG. THE BREADBOARD MODEL WAS DELIVERED TO APG IN DEC 84 FOR FURTHER TESTING.	600.0		70.0	OCT 85	AUG 86
5 85 0925	PROTECTIVE MASK LEAKAGE TESTING ----- JUST FUNDED. NO 301 REQUIRED. -----					
5 84 0926	MMT FOR XM22 CHEMICAL AGENT ALARM SYSTEM BENDIX, PRIME CONTRACTOR, AWARDED A SUBCONTRACT TO ENVIRO MARINE SYSTEMS INC., TO BEGIN WORK ON AN AUTOMATED WELDING PROCESS FOR SHUTTER AND APERTURE GRIDS.	700.0	456.0	80.0	OCT 87	SEP 87
5 85 0926	MFG TECH F/CHEMICAL AGENT ALARM, XM22 ----- JUST FUNDED. NO 301 REQUIRED. -----					
5 85 0927	COMPUTER AIDED PROCESS PLANNING FOR CB FILTERS (CAM) ----- JUST FUNDED. NO 301 REQUIRED. -----					
5 82 1019	MMT PENTABURANE PROCESS ENGINEERING ***** DELINQUENT STATUS REPORT *****	340.0				JUN 84
5 83 1295	MODERNIZATION OF CHARCOAL FILTER TEST EQUIPMENT ***** DELINQUENT STATUS REPORT *****	219.0	148.0	45.0	JUL 84	JAN 85
5 84 1295	MODERNIZATION OF CHARCOAL FILTER TEST EQUIPMENT PROCEDURES FOR THE AWARDING OF A CONTRACT WERE INITIATED.	600.0		5.0	SEP 85	SEP 85
5 85 1295	MODERNIZATION OF CHARCOAL FILTER TEST EQUIPMENT ----- JUST FUNDED. NO 301 REQUIRED. -----					
5 80 1354	SLUDGE VOLUME REDUCTION AND DISPOSAL PROCESS STUDY DEBUGGING OF PILOT EQUIPMENT AT THE CENTRAL WASTE TREATMENT PLANT (CWT) WAS COMPLETED. ALSO, THREE SLUDGE DEWATERING RUNS WERE ACCOMPLISHED DURING THE PERIOD. FINAL TECHNICAL REPORT INITIATED.	156.0	4.0	152.0	DEC 80	MAR 85

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 84 RCS DRCMT-30L

PROJ NO.	TITLE + STATUS	AUTHO-RIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
5 81 1354	SLUDGE VOLUME REDUCTION AND DISPOSAL PROCESS EQUIPMENT DEBUGGING WAS COMPLETED AND THREE STARTUP SLUDGE DEWATERING RUNS YIELDED SLUDGE WITH SOLIDS BETWEEN 35.1 AND 38.9 PERCENT. WORK ON TECHNICAL REPORT BEGUN.	110.0	44.3	65.1	SEP 83	MAR 85
5 81 1360	EVAL INDUST CAPABILITY F/LOAD COMMERCIAL EXPL-HIGH USE MUNIT ***** DELINQUENT STATUS REPORT *****	543.0	294.0	248.0	SEP 82	SEP 84
5 82 1360	EVAL INDUST CAPABILITY F/LOAD COMMERCIAL EXPL-HIGH USE MUNIT ***** DELINQUENT STATUS REPORT *****	450.0		302.0	OCT 83	SEP 84
5 82 1366	THREE PIECE SHAFT FOR THE SUU-65/B TAILCONE ***** DELINQUENT STATUS REPORT *****	250.0				DEC 84
5 82 1701	BULK TRANSFER OF CHEMICAL MATERIALS ARCHITECTURAL ENGINEERING FIRM COMPLETED STUDY AND SUBMITTED FINAL REPORT INCORPORATING COMMENTS FROM ALL CONCERNED PSA DEPARTMENTS AND HAZARDS CONTRACTOR REPORT.	221.0	91.2	119.8	SEP 85	SEP 85
5 83 1701	BULK TRANSFER OF CHEMICAL MATERIALS WORK WAS CONTINUING ON PROCUREMENT AND INSTALLATION OF EQUIPMENT FOR EVALUATION OF TRANSPORTAINERS AND IN-LINE MIXERS FOR MATERIAL HANDLING. HAZ ANAL WAS PERFORMED ON PROPOSED INTEGRAL SHOKE COMPLEX. DOCUMENTATION REQUIRED FOR SAFETY APPROVAL W/PREP.	207.0	38.2	60.1	SEP 85	SEP 85
5 82 1709	IMPROVED PROCESSING OF PYROTECHNIC MIXTURES HELD DESIGN TECHNOLOGY TRANSFER MEETING FOR REPRESENTATIVES FROM FIVE PLANTS THAT WILL SHARE IN THE MMT PROJECT TECHNOLOGY IS MODERNIZATION EFFORTS.	500.0	93.0	362.5	JUL 84	SEP 85
5 83 1709	IMPROVED PROCESSING OF PYROTECHNIC MIXTURES COMPLETED INSTALLATION OF JAYGO MIXER AND ASSOCIATED EQUIPMENT. INITIATED CHECK-OUT OF JAYGO MIXER AND ASSOCIATED EQUIPMENT USING INERT STARTER MIX SIMULANT. COMPLETED PREPARATION OF STANDING OPERATING PROCEDURES.	446.0	270.4	160.5	JUL 84	SEP 85
5 82 1711	RED PHOSPHORUS POLLUTION ABATEMENT EVALUATIONS LOCATION OF WASTE WATER STORAGE TANKS AND OZONATION EQUIPMENT AT THE IPF WERE FINALIZED. DESIGN ENGINEERS CONDUCTED INSPECTIONS, SITE SURVEYS, AND PREPARED COST ESTIMATES FOR WASTE WATER FACILITY INSTALLATION. IMPL WILL BE IN AN MCA FY87 PROJ.	125.0	28.3	49.6	OCT 83	SEP 85
5 84 1802	AUTOMATED OPTICAL MICROELECTRONICS INSPECTION GOULD IS ESTABLISHING AN OPTICAL SCANNING SYSTEM FOR 3 DIMENSIONAL HYBRID CIRCUIT INSPECTION. A COMPUTER SYSTEM WILL BE UTILIZED TO COORDINATE DIGITIZING + SCANNING TASKS. PHASE I WILL PRODUCE HARDWARE + ADDRESS 12 OF 25 HYBRID INSPECTION CRITERIA.	663.8	625.0	18.4	JUN 87	AUG 86

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
S U M M A R Y P R O J E C T S T A T U S R E P O R T
2ND SEMIANNUAL SUBMISSION CY 84 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
5 85 1862	AUTOMATED OPTICAL MICROELECTRONICS INSPECTION FOLLOW-ON TO 5 84 1862 ABOVE. GOULD WILL COMPLETE IMAGE PROCESSING SOFTWARE, CONTROL SOFTWARE, + INTERFACE FOR PHASE I HARDWARE. COMPUTER ALGORITHMS WILL PERFORM REQUIRED PATTERN COMPARISONS BETWEEN AN ACCEPTABLE WIREBOUND + ONE UNDER INSPECTION.	556.0	74.2		MAR 87	MAR 87
5 84 1863	IMPROVED LEAD DIOXIDE ELECTROPLATING TECHNOLOGY CONTRACT AWARDED 23 OCT 84. MOD 1 WAS INITIATED TO MAXIMIZE THE QUANTITY OF LEAD DIOXIDE PLATED.	346.0	271.0	5.0	MAR 86	MAR 86
5 85 1865	IMPROVED PRODUCTION VIBRATION TESTS-M732 (PIP) FUZE CONTRACT NOT YET AWARDED. CONTRACTOR WILL DUPLICATE EXACT FUZE SERVICE TRI-AXIAL VIBRATION BY REPRODUCING ACTUAL RECORDED ACCELERATION WAVE FORM. 3D-VIBRATION SYSTEM BUILT UNDER PREVIOUS MMT WILL BE EXPANDED. MEMORY + SOFTWARE WILL BE ADDED.	200.0			DEC 86	DEC 86
5 84 1914	PROCESS ENGINEERING FOR EAK EXPLOSIVES ***** DELINQUENT STATUS REPORT *****	450.0		229.3	SEP 85	SEP 85
5 81 3961	IMPRVD VIBR ACCEPTANCE TESTING F/M732,XM587/724 FUZES ? STA THE VIBRATION TEST EQUIPMENT HAS BEEN FABRICATED, INSTALLED, AND ACCEPTANCE TESTING IS UNDERWAY. THIS PROJECT APPEARS TO BE A HIGHLY SUCCESSFUL EFFORT.	690.0	645.0	45.0	DEC 83	JUN 85
5 79 4000	AUTOMATED M55 DETONATOR PRODUCTION EQUIPMENT CONTRACTUAL EFFORTS WITH THE CONTRACTOR ON THE INSPECTION MODULE ARE BEING TERMINATED. CLOSE OUT IS IN PROCESS.	1,750.0	868.4	881.6	MAR 81	JUN 85
5 81 4000	AUTOMATED M55 DETONATOR PRODUCTION EQUIPMENT REPROGRAMMED FUNDING HAS BEEN RECEIVED AND EFFORT HAS BEEN INITIATED IN PREPARATION OF THE PROJECT FINAL TECHNICAL REPORT.	403.5	11.3	342.4	SEP 81	JUN 85
5 79 4024	USN DEV OLD PROT COMP AND AUTO ASSY MACH M223 FUZE LITTLE PROGRESS ON THE DEVELOPMENT OF THE AUTOMATIC MACHINE HAS BEEN MADE BY THE CONTRACTOR SINCE JUL 84. THE CONTRACTOR SUBMITTED A PROTEST TO RECOVER $150K MORE THAN HIS FIXED PRICE CONTRACT. PBM DECIDED TO TERMINATE THE CONTRACT.	1,935.0	1,506.1	380.9	SEP 81	DEC 85
5 82 4062	AUTO MANUFACTURE SYSTEM FOR MORTAR INCREMENT CONTAINERS SEE INDIVIDUAL SUBTASKS- 01,02,03 AND 06.	4,743.7	4,007.9	636.4	SEP 84	JUN 85
5 82 4062 01	SLURRY VACUUM FORMING MFG SYS A FIXED PRICE COST-TO-COMPLETE CONTRACT AMENDMENT WAS NEGOTIATED WITH THE CONTRACTOR AND AWARDED ON 24 AUGUST 1984 FOR A TOTAL OF $60775. CONTRACTOR HAS SUBMITTED REQUIRED DOCUMENTATION AND IS AWAITING ACCEPTANCE. PREP OF FINAL TECH REPORT 26 1985.				SEP 83	JUN 85

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5 82 4062 02	PAPER MOLDING MANUFACTURING SYSTEM FABRICATION EFFORT COMPLETE AND CURRENTLY BEING INSTALLED FOR DEBUG AND TESTING. INSTALLATION SHOULD BE COMPLETE BY FEB 1985. ESD CORP. AWARDED A COST-TO-COMPLETE CONTRACT 19 SEPT 1984 FOR A TOTAL OF $249900.				JUL 84	JUN 85
5 82 4062 03	ASSEMBLY SYSTEM THE TWO CONTRACT EFFORTS W/ ESD CORP. WERE RESUMED AND THE TESTING OF THE ASSEMBLY/INSPECTION SYSTEM DURING THE REPORTING PERIOD. DUE TO OPERATING DEFICIENCIES, THE ASSEMBLY/INSPECTION SYSTEM WAS NOT ACCEPTED BY AKDL.				SEP 83	JUN 85
5 82 4062 06	PROTOTYPE PRODUCTION TOOLING CONTRACT EFFORT COMPLETED 60MM M204 AND 81MM M205 INCREMENT CONTAINERS SUCCESSFULLY TESTED. A TECHNICAL REPORT DETAILING THE PAPER MOLDING OPERATION IS BEING PREPARED.					JUN 85
5 84 4078	UPGRADE SAFETY, READINESS + PROD OF EXISTING MELT POUR LINES THE IOWA AAP CONTRACT WAS MODIFIED TO PROCURE LONG LEAD-TIME EQUIPMENT. LAYOUT DESIGN FOR RELOCATION OF LINE 3A EQUIPMENT TO LINE 3 COMPLETED. DESIGN OF CONTROLLED COOLING OVEN CONTINUED. RFQ'S FOR OVEN HOT WATER SYSTEM ISSUED.	621.0	488.0	21.3	SEP 85	SEP 85
5 82 4145	CONTROL DRYING AUTO SB + BALL PROPELLANT MANUFACTURING SEE INDIVIDUAL TASKS 1 AND 2.	479.2	260.1	195.0	SEP 83	SEP 85
5 82 4145 01	CONTROL DRYING AUTO SB PROP MFG SINCE PROJECT KEYED TO CASBL, MILESTONES REVISED TO REFLECT LATEST CASBL PROVEOUT SCHEDULE. LATEST REVISION DUE TO THERMAL DEHYDRATION UNIT REQUIRED MODIFICATIONS. PGC INSTALLED TO MEASURE SOLVENT CONTENT OF CONDENSATE. FLOWMETER INSTALLED, NOW CHRG.	335.8	218.7	93.0	SEP 83	SEP 85
5 82 4145 02	CONTROL DRYING AUTO BALL PROP MFG PILOT SCALE TEST SUCCESSFULLY COMPLETED. THE STUDY SHOWED THAT IN THE FALLING RATE RANGE OF DRYING, A LINEAR CORRELATION EXISTS BETWEEN M+V CONTENT AND PROPELLANT BED TEMPERATURE. FOXBORO EQUATION PROMISING CONTROL TECHNIQUE FOR DRYING PROPELLANT.	143.4	41.4	102.0	SEP 83	DEC 84
5 80 4150	NEW MANUFACTURING PROCESSES FOR SAWS AMMUNITION A COST EFFECTIVE HEADING PROCESS WAS DEVELOPED FOR MANUFACTURING THE STEEL PENETRATORS. THE PROJECT IS COMPLETE EXCEPT FOR THE FINAL REPORT AND OTHER DOCUMENTATION.	489.0	332.7	156.3	JUN 82	JUN 85
5 81 4150	NEW MANUFACTURING PROCESSES FOR SMALL CALIBER PENETRATORS THE KINEFAC ROLL FORMING MACHINE WILL NOT BE USED AT LAKE CITY AAP. LOCAL SHOPS CAN PROVIDE A MORE ECONOMICAL PART BY COLD HEADING. THE ROLL FORMING MACHINE WILL BE REMOVED.	211.0	64.2	141.9	JUL 82	JUN 85

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5 82 4161	PRODUCTION TECHNIQUES FOR IMPROVED SMOKE MUNITION (81 MM) TESTED WYSSMONT TURBO DRYER. PENN FIELD COMPLETED PELLET LOADING MACHINE. ITS DELIVERY IS SCHEDULED FOR FEBRUARY 1985. THE PROCESS BASELINE WAS COMPLETED.	516.0	97.5	380.0	JUL 83	MAY 85
5 84 4260	TNT CRYSTALLIZER FOR LARGE CALIBER MUNITIONS WORK CONTINUED ON THE CRYSTALLIZER CONTRACT. THE FABRICATION EFFORT IS 90-95 PERCENT COMPLETE. ALL COMMERCIAL ITEMS HAVE BEEN PURCHASED AND RECEIVED, AND THE CONTROL SYSTEM HAS BEEN DESIGNED, 100 PERCENT COMPLETED AND READY FOR INSTALLATION.	570.0	339.7	115.0	JUN 85	JUN 85
5 85 4260	TNT CRYSTALLIZER F/LARGE CALIBER MUNITIONS A SHELL CARRIER WAS FABRICATED TO SUPPORT THE TNT CRYSTALLIZER SYSTEM. TV MONITORS AND ASSOCIATED CONTROL CABLES/CAMERA HAVE BEEN OBTAINED. AN INSTALLATION SCHEDULE, COMPATABLE WITH THE MODIFICATIONS TO THE BUILDINGS WAS INITIATED.	235.0		8.0	DEC 85	DEC 85
5 81 4226	ON-LINE MONITORS FOR WATER POLLUTANTS ALL TESTING UNDER THE PROJECT HAS BEEN COMPLETED. THE HPLC MONITOR HAS PERFORMED ACCEPTABLY AT ALL SITES, MONITORING ENT, DNT, NG, NQ, DNG AND DEGUN AT CONCENTRATIONS LESS THAN 1 MG/L. A FINAL TECHNICAL REPORT IS BEING PREPARED AT RAAP.	415.9	301.9	110.6	SEP 82	SEP 85
5 81 4267	CONTINUOUS PROCESS FOR GRANULAR COMP B ***** DELINQUENT STATUS REPORT *****	175.0	158.8		SEP 82	DEC 84
5 82 4267	CONTINUOUS PROCESS FOR GRANULAR COMP B A CONTRACT WAS AWARDED TO DESIGN AND OPERATE A TEST RIG TO PRODUCE LIVE GRANULAR COMP B VIA A ROTATING CUP ATOMIZATION TECHNIQUE. INITIAL DESIGN EFFORT HAS BEEN COMPLETED AND IS BEING FORWARDED FOR REVIEW AND APPROVAL.	330.5	229.3	91.7	MAR 84	SEP 85
5 82 4273	AUTOMATED PRODUCTION OF STICK PROPELLANT DC SERVO MOTOR CUTTER SHOWED NO DETRIMENTAL EFFECTS AFTER ONE MONTH CONTINUOUSLY CYCLING AT 5 CPS. SLOPE CONVEYING OF STICKS TESTED WITH TWO TYPES OF CONVEYORS. A MODEL STICK COLLECTOR/DISPENSER/TRAYER FROM ROBERTS WAS TESTED SUCCESSFULLY.	821.2	689.2	132.0	DEC 83	MAR 85
5 84 4273	AUTOMATED PRODUCTION OF STICK PROPELLANT MODIFICATIONS TO THE C4 (12 INCH) PRESS HOUSE WERE BEGUN AS REQUIRED TO HOUSE THE STICK CUTTING, TRAYING, AND HANDLING EQUIPMENT. SUPERVISORY CONTROL SYSTEM IS BEING DESIGNED. OPERATIONS ACTUATORS WILL BE PNEUMATIC.	1,028.0	846.0	110.4	MAR 86	MAR 86
5 85 4273	AUTOMATED PRODUCTION OF STICK PROPELLANT SCOPE OF WORK PREPARED AND FORWARDED TO AMCCOM-PLO(R) FOR ACTION.	712.0	577.0	4.0	MAR 87	MAR 87

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5 81 4281	CONSERVATION OF ENERGY AT ARMY AMMUNITION PLANTS FINAL TECH RPTS FOR TASKS 6 AND 10 WERE PUBLISHED AND DISTRIBUTED. PREPARATION OF PROCESS DESIGN CRITERIA FOR TASK 12 WERE COMPLETED. PREPARATION OF A FINAL REPORT FOR TASK 4-5 AND WASHOUT SYSTEM MODIFICATION FOR TASK 8 ARE UNDERWAY.	1,326.0	632.7	619.8	SEP 84	DEC 85
5 81 4281 A04	ENERGY RECOVERY FROM WASTE HEAT BIDS TO DESIGN, FABRICATE, AND INSTALL THE STAND ALONE PARALLEL DOUBLE EFFECT ALCOHOL DISTILLATION COLUMNS WERE RECEIVED. THE SYSTEM COST WAS ABOUT $440K. ADDITIONAL COSTS TO IMPLEMENT THE SYSTEM WAS ESTIMATED AT $446K BUT, FUND ARE NOT AVAILABLE.	409.1	194.1	201.0		SEP 85
5 81 4281 A08	CAVITATIONAL REMOVAL OF EXPLOSIVES THE TOW NEW FILTER SYSTEMS WERE RECEIVED AND TESTED WITH EXPLOSIVE SIMULANTS. WASHOUT SYSTEM MODIFICATIONS, INCLUDING FILTERS, IS UNDERWAY.	375.0	269.6	68.6	JUN 83	DEC 85
5 82 4281	CONSERVATION OF ENERGY AT ARMY AMMUNITION PLANTS FINAL TECHNICAL REPORTS FOR TASK 1, TASK 4-3 OF SUBPROJECT 1 AND TASK 1 OF SUBPROJECT 3 WERE PUBLISHED AND DISTRIBUTED. EQUIPMENT EVALUATION FOR TASK 12 WAS INITIATED.	1,362.0	1,095.2	253.8	SEP 84	DEC 85
5 82 4281 A01	PROCESS ENERGY INVENTORY THE ENERGY SURVEY AND AUDIT AT RADFORD AAP FOR THE TNT MFG LINE AND HIGH ENERGY CONSUMPTION SUPPORT SYSTEM IN THE TNT AREA WAS COMPLETED AND THE DRAFT FINAL REPORT WAS FORWARDED TO ARDC. THE RPT IS BEING REVIEWED IN PREPARATION FOR PUBLICATION.	193.2	136.3	56.5	JUN 84	JUN 85
5 82 4281 A04	ENERGY RECOVERY FROM WASTE HEAT EQUIPMENT EVALUATION FOR THE HEAT PIPE WASTE HEAT RECOVERY SYSTEM WAS COMPLETED. TEST RESULTS HAVE INDICATED THAT THE SYSTEM IS ABLE TO RECOVER HEAT FROM THE HOT WASTEWATER TO PREHEAT COLD FRESH WATER AT A RATE OF 12M BTU/HR. ANNUAL SAVINGS ABT $70K.	419.4	281.9	130.7	SEP 84	SEP 85
5 82 4281 A12	POWER PRODUCTION FROM WASTE HEAT INSTALLATION OF THE ORGANIC RANKINE CYCLE ENGINE WAS COMPLETED AND TESTING OF THE ENGINE WAS INITIATED. THE ENGINE IS BEING PREPARED TO GENERATE ELECTRICITY FROM HOT CONDENSATE.	426.9	354.9	66.6	JUN 84	DEC 85
5 82 4281 C01	PROCESS ENERGY INVENTORY AT PINE BLUFF ARSENAL PINE BLUFF ARSENAL HAS COMPLETED AN ENERGY AUDIT OF ITS PRODUCTION, PRODUCTION SUPPORT, AND POLLUTION ABATEMENT FACILITIES. THE FINAL TECHNICAL REPORT WAS PUBLISHED AND DISTRIBUTED.	322.0	297.0	24.0		DEC 85

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5 84 4201	CONSERVATION OF ENERGY AT ARMY AMMUNITION PLANTS SOME CANDIDATE INSULATION MATERIALS, TO INSULATE A MELT-POUR SYSTEM AT IOWA AAP, HAVE BEEN RECEIVED AND PREPARATION OF THE EQUIPMENT IS UNDERWAY.	180.0	120.0	4.4	MAR 85	SEP 85
5 84 4201 A02	OPTIMIZED INSULATION THE CANDIDATE INSULATION MATERIALS HAVE BEEN SELECTED AND ORDERED AND SOME MATERIAL HAS BEEN RECEIVED. THE INSTALLATION TECHNIQUE HAS BEEN DESIGNED AND PREPARATION OF THE MELT-POUR SYSTEM STARTED.	180.0	120.0	4.4	MAR 85	SEP 85
5 85 4201	CONSERVATION OF ENERGY AT ARMY AMMUNITION PLANTS PROJECT WAS FUNDED IN LATE NOV 84. NO STATUS REPORT REQUIRED.	95.0	62.0		SEP 85	SEP 85
5 76 4303	ACCEPTANCE OF CONTINUOUSLY PRODUCED BLACK POWDER CURRENT WORK IS PART OF FY76 ADDED EFFORT. COMPLETION OF TECHNICAL ASPECTS OF THIS PROJECT WILL ADVANCE PENDING COMPLETION OF TESTING BY THE CONTRACTOR. THE REMAINING TESTS ARE PLANNED FOR MARCH 85.	93.0	14.0	77.0	APR 77	JUN 85
5 82 4309	AMMUNITION FOR THE 120MM TANK MAIN ARMAMENT MILESTONE + COMPLETION DATE REVISED DUE TO CONTRACT EXTENTION REQUIRED FOR DEVELOPMENT OF AUTOMATIC DEFLASHING EQUIPMENT FOR 120MM REAR SEAL.	3,945.6	3,273.3	605.5	SEP 84	DEC 85
5 82 4309 02	EXPLOSIVE LOADING OF 120MM HEAT-MP ALL WORK ON THIS EFFORT HAS BEEN COMPLETED.	502.0	392.0	110.0		DEC 84
5 82 4309 04	COMBUSTIBLE CARTRIDGE CASE, 120MM THE PROCESS PARAMETERS FOR THE OVENS HAVE BEEN DETERMINED AND THE OVENS ARE BEING RENOVATED TO INCLUDE THE NECESSARY CHANGES.	2,946.0	2,488.7	405.6		JUN 85
5 82 4309 09	INVESTIGATE FORMING + HEAT TREAT METHODS F/CORE, APDS WORK COMPLETED BASED ON THE RESULTS OF RESIDUAL STRESS AND BALLISTIC TEST RESULTS ROTARY STRAIGHTENING PROCESS HAS BEEN APPROVED.	88.5	28.5	60.0		DEC 84
5 82 4309 25	AUTOMATIC DEFLASHING EQUIPMENT FOR 120MM REAR SEAL SUBCONTRACT AWARDED BY HONEYWELL. THE SUBCONTRACTOR COMMENCED INVESTIGATION OF CONCEPTS FOR SELECTION OF THE BEST DEFLASHING METHOD.	262.1	247.0	1.0	OCT 86	OCT 86
5 77 4311	DEVELOP AUTOMATED PRODUCTION EQUIPMENT FOR XM 692 THE MACHINE HAS BEEN DEBUGGED AND IS CAPABLE OF PRODUCING A SATISFACTORY PRODUCT. THIS WILL BE PROVEN DURING THE PRODUCTION RUN SCHEDULED FOR JAN 1985.	1,452.9	1,184.1	268.8	AUG 78	MAR 85

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5 81 4311	DEVELOP AUTOMATED PRODUCTION EQUIPMENT FOR XM 692 LAAP HAS FORWARDED A REVISED DRAWING TO METAL PARTS VENDORS FOR QUOTES ON PROVIDING OVERLAY TOOLING & THE REQUIRED NUMBER OF TEST PARTS.	464.9	428.9	33.0	SEP 82	SEP 85
5 82 4312	ANTI-ARMOR CLUSTER MUNITION PRODUCTION EXPLOSIVE INVECTION THE MULTI-CELL INJECTOR WAS USED SUCCESSFULLY LOAD CEM BOMBLETS. INJECTION TRIAL LOADING AND ACCEPTANCE TESTS WERE NOT COMPLETED.	546.1	351.4	169.7	JUN 83	JUN 85
5 81 4341	IMPROVED NITROCELLULOSE PURIFICATION PROCESS SHORT TERM TESTS OF STORAGE OF PROPELLANT MADE WITH CONICELL PURIFIED NC WERE CONDUCTED. RESULTS INDICATE NO APPARENT DIFFERENCE BETWEEN PROPELLANT MADE WITH HYBRID PROCESSED NC AND PROPELLANT MADE WITH CONVENTIONAL BATCH PURIFIED NC.	617.0	215.6	396.3	MAR 83	MAR 85
5 82 4341	IMPROVED NITROCELLULOSE PURIFICATION PROCESS BALLISTIC TESTS OF PRODUCTION PILOT LOTS OF PROPELLANT WERE CONDUCTED. RESULTS IN ALL CASES WERE SATISFACTORY.	358.5	195.7	49.5	SEP 83	MAR 85
5 82 4344	ESTABLISH WASTE DISPOSAL TECHNIQUE FOR M687 BINARY PROJECT ITEMS REQUIRED TO RUN AND OPERATE THE DISTILLATION COLUMN AND HCL OFF GAS STUDIES HAVE BEEN RECEIVED AND INSTALLED. ADDITIONAL FUNDS WERE RECEIVED TO PERFORM BATCH VACUUM DISTILLATION.	574.0	180.0	174.0	NOV 83	JAN 86
5 76 4349	MODERNIZATION OF PRESS LOADING FOR HEP PROJECTILES ***** DELINQUENT STATUS REPORT *****	322.5		281.0	JUN 80	DEC 84
5 80 4357	NONDESTRUCTIVE TEST EQUIP F/LARGE CALIBER MUNITIONS F/M483A1 SEE PROJECT NO 5 84 4539 FOR STATUS.	554.0	450.0	104.0	JUN 83	FEB 86
5 82 4357	NONDESTRUCTIVE TEST EQUIP F/LARGE CALIBER MUNITIONS F/M483A1 THE TESTING TO ASSESS THE AMFLIS SHORTCOMINGS HAS BEEN SUCCESSFULLY COMPLETED AND A QUALIFICATION TEST WITH AMFLIS ON LINE IS ANTICIPATED TO BE INITIATED MAR 85 AND COMPLETED DEC 85.	199.0	69.0	68.0	OCT 83	FEB 86
5 84 4358	AUTO LINE PROCESS INSPECT OF NEW EEDS (ALPINE) THE DESIGN WORK BY THE CONTRACTOR STARTED. THE DESIGN REVIEW IS SCHEDULED FOR JAN 1985. IF THE DESIGN REVIEW IS SUCCESSFUL, FABRICATION WILL BE INITIATED PRIOR TO THE FINAL DESIGN REVIEW.	355.0	250.0		JAN 87	JAN 87
5 85 4358	AUTO LINE PROCESS INSPECT OF NEW EED (ALPINE) ----- JUST FUNDED. NO 301 REQUIRED. -----					
5 82 4364	ON-LINE BIO SENSORS TO MONITOR MIXED WASTE STREAMS FINAL REPORT AND OPERATION MANUAL WERE DRAFTED BY CONTRACTOR AND SUBMITTED FOR GOVERNMENT REVIEW. CONTRACTOR IS INCORPORATING RECOMMENDED CHANGES.	324.0	261.0	63.0	SEP 83	MAR 85

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5 82 4456	IMPROVING THE YIELD OF HMX DURING RDX NITROLYSIS THE PILOT PLANT DESIGN, TEST PLAN AND PRELIMINARY HAZARDS ANALYSIS WERE COMPLETED. AN IMPROVED PROCESS FOR COPRODUCT SEPARATION USING SPENT ACID WAS DEVELOPED.	869.9	697.4	172.0	DEC 83	MAR 85
5 84 4456	IMPROVING THE YIELD OF HMX DURING RDX NITROLYSIS THE DMSO PILOT PLANT EQUIPMENT WAS DISMANTLED, PACKAGED AND SHIPPED TO HOLSTON AAP.	217.0		56.0	MAR 85	JUN 85
5 85 4456	IMPROVING THE YIELD OF HMX DURING RDX NITROLYSIS FUNDING JUST RECEIVED.	1,393.0			MAR 86	MAR 86
5 83 4444	BODY FOR M42/M46 GRENADE AWAITING RESULTS OF BALLISTIC TESTS AT WHICH TIME A FINAL TECHNICAL REPORT WILL BE PREPARED.	61.5		2.0	MAR 85	JUN 85
5 83 4449	PROCESS IMPROVEMENT FOR COMP C-4 PBX #109 PRECOAT WAS DRYED SUCCESSFULLY IN THE PILOT WYSSMONT DRYER.	503.2	365.5	161.0	MAR 85	DEC 85
5 85 4449	PROCESS IMPROVEMENT FOR COMP C-4 + PBX EXPLOSIVES CONTRACT AWARDED FOR COMP C4 FROM NOMINAL CLASS 1 RDX EVALUATION. SCOPE OF WORK AMENDED TO INCLUDE INSTALLATION AND EVALUATION OF TUBULAR VACUUM DRYER.	352.0	240.8	2.7	MAR 86	MAR 86
5 79 4454	AUTO INSPECTION DEVICE EXPLOS CHARGE SHELL (AIDECS) CAM SEE 5 82 4454 FOR PROJECT AND FUNDING STATUS.	878.0			DEC 81	DEC 85
5 80 4454	AUTO INSPECTION DEVICE EXPLOS CHARGE SHELL (AIDECS) CAM SEE 5 82 4454 FOR PROJECT AND FUNDING STATUS.	1,298.0			APR 82	DEC 85
5 80 4454 01	AUTOMATIC INSPECTION DEVICE FOR EXPLOSIVE CHARGE IN SHELL (A SEE 5 82 4454-01 FOR PROJECT AND FUNDING STATUS.	1,298.0			APR 82	DEC 85
5 80 4454 02	AUTOMATIC X-RAY INSPECTION SYSTEM (AXIS) SEE 5 82 4454-02 FOR PROJECT AND FUNDING STATUS.				AUG 80	DEC 85
5 81 4454	AUTO INSPECTION DEVICE EXPLOS CHARGE SHELL (AIDECS) CAM SEE 5 82 4454 FOR PROJECT AND FUNDING STATUS.	1,885.0			OCT 82	DEC 85
5 81 4454 01	AUTOMATIC INSPECTION DEVICE FOR EXPLOSIVE CHARGE IN SHELL SEE 5 82 4454-01 FOR PROJECT AND FUNDING STATUS.	1,885.0			MAY 82	DEC 85
5 81 4454 02	AUTOMATIC X-RAY INSPECTION SYSTEM (AXIS) SEE 5 82 4454-02 FOR PROJECT AND FUNDING STATUS.				OCT 82	DEC 85

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5 82 4454	AUTO INSPECTION DEVICE EXPLOS CHARGE SHELL (AIDECS) CAM SEE SUBTASK BELOW FOR PROJECT AND FUNDING STATUS.	5,886.0	4,920.0	921.0	JUL 83	DEC 85
5 82 4454 01	AUTO INSP DEVICE FOR EXPLOSIVE CHARGE IN SHELL (AIDECS) ALL ARDC AND CONTRACTOR TECHNICAL WORK HAS BEEN COMPLETED. THE TECHNICAL REPORT IS IN THE PROCESS OF BEING PREPARED AND IS SCHEDULED TO BE COMPLETED DEC 1985.	4,714.0	3,984.0	693.0	JUL 83	DEC 85
5 82 4454 02	AUTO X-RAY INSPECTION SYSTEM (AXIS) THE FUNDING TO MODIFY THE SOFTWARE PROGRAMS TO IMPLEMENT THE SUBTRACTION ANALYSIS TECHNIQUE WAS RECEIVED. NEW ANALYSIS ROUTINES HAVE BEEN DEVELOPED TO COPE WITH ANOMOLIES IN M456 IMAGES ALONG WITH STANDARDS AND FIXTURING FOR MICAN PRODUCTION LINE.	1,169.0	936.0	228.0	JUL 83	MAR 85
5 84 4413	AUTOMATED LEAK DETECTION OF WP MUNITIONS THE CONTRACTOR HAS CONDUCTED TESTS TO DETERMINE THE INTERNAL MUNITION PRESSURE AT ELEVATED TEMPERATURES. LEAK RATES HAVE BEEN ESTABLISHED AT THESE PRESSURES, AND METHODS OF HEATING AND LEAK DETECTION HAVE BEEN SUCCESSFULLY CONDUCTED.	410.0	185.0	40.0	JUN 85	JUN 85
5 85 4413	AUTOMATED LEAK DETECTION OF WP MUNITIONS ----- JUST FUNDED. NO 301 REQUIRED. -----					
5 82 4489	ADVANCED POLLUTION ABATEMENT TECHNOLOGY G/OARCOM FACILITIES PROJECT 5824489 IS AN ORDERLY TRANSITION OF PROJECT 5XX4114, POLLUTION ABATEMENT METHODS FOR P+E, AND PROJECT 57X4214, POLLUTION ENGINEERING FOR 1983-85 REQUIREMENTS, AND IS DIRECTED TO MEETING FUTURE REGULATORY STANDARDS. SEE INDIVIDUAL TASKS.	1,319.3	964.9	345.4	DEC 84	MAR 85
5 82 4489 01	DISPOSAL OF WASTEWATER TREATMENT SLUDGES ALL TECHNICAL WORK HAS BEEN COMPLETED. FINAL 301 REPORT IS IN PROGRESS.	420.9	367.9	53.0	DEC 84	MAR 85
5 82 4489 02	ADVANCED PINK WATER TREATMENT (TNT/RDX/HMX IN WATER) THE PROCUREMENT/INSTALLATION OF THE SURFACTANT COMPLEXING/CARBON ADSORPTION SYSTEM HAS BEEN COMPLETED. A LOGIC PROGRAM HAS BEEN DRAFTED FOR THE PROGRAMMABLE CONTROLLER AND IS READY FOR USE IN DEBUGGING THE PR TOTYPE HYBRID SYSTEM.	370.1	255.1	115.0	DEC 84	MAR 85
5 82 4489 03	TERTIARY TREATMENT OF HOLSTON WASTEWATER A SKID MOUNTED MODULAR CARBON ADSORPTION SYSTEM HAS BEEN EVALUATED AS A TERTIARY TREATMENT SYSTEM. SLIPPAGE ON THE COMPLETION OF THE FINAL TECHNICAL REPORT WAS DUE TO LATE RECEIPT OF THE OPERATING CONTRACTOR'S FINAL REPORT.	141.4	96.9	44.5	DEC 84	MAR 85

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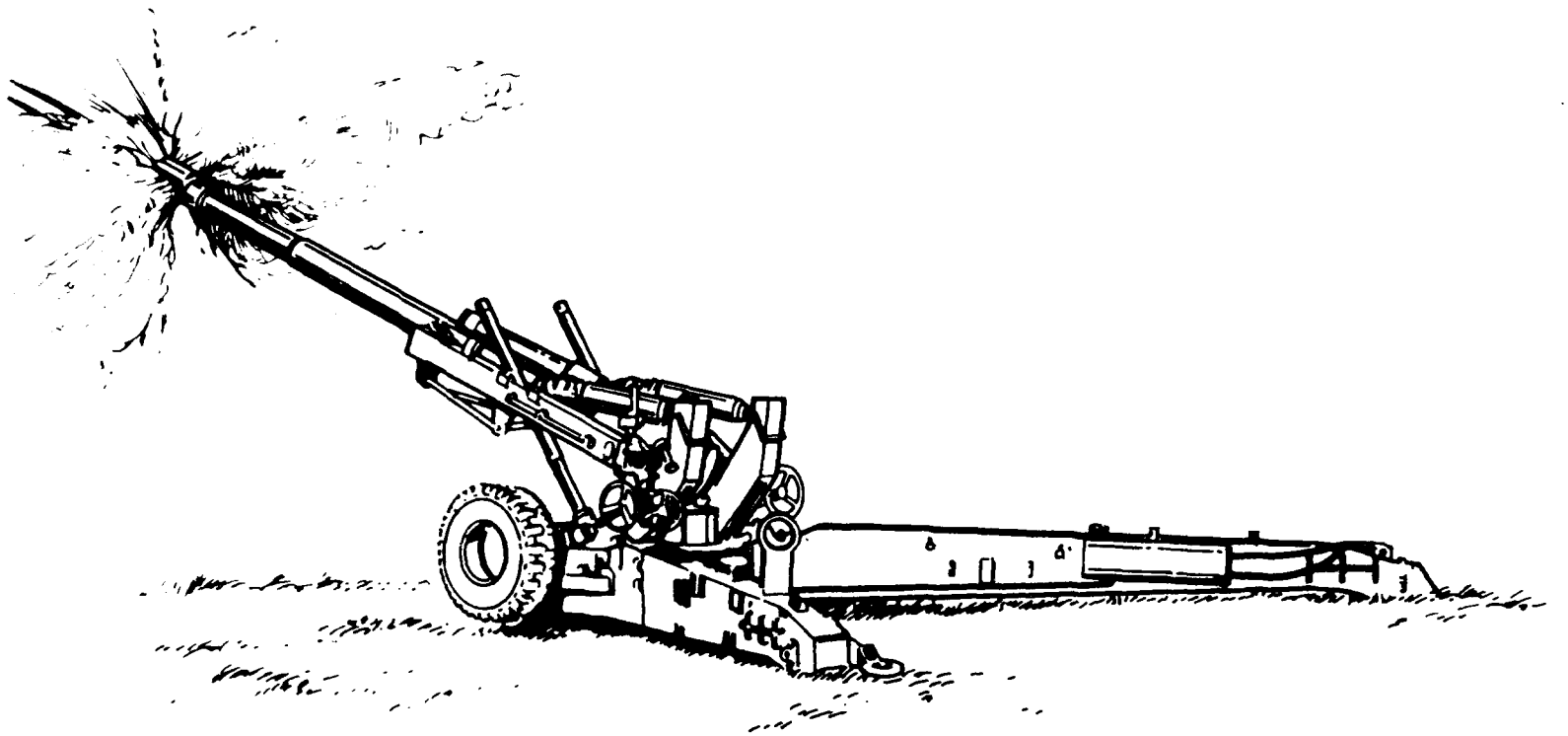
6 78 7580	PILOT AUTOMATED SHOP LOADING AND CONTROL SYSTEM- CAM PROJECT IS TECHNICALLY COMPLETE AND FULLY IMPLEMENTED. DUE TO HIGHER PRIORITIES THERE HAS BEEN A LONG DELAY IN WRITING THE FINAL REPORT. THE FINAL REPORT WILL BE A SHORTENED VERSION OF ORGINAL PLANNED REPORT BUT IS TO MEET MINIMUM REQUIREMENTS.	331.1	285.2	45.9	SEP 78	MAY 85
6 79 7605	CHEMICALLY BONDED SAND FOR CLOSE TOLERANCE CASTING ALL WORK COMPLETED EXCEPT FINAL TECHNICAL REPORT.	127.0	22.0	105.0	MAR 80	JUN 85
6 80 7605	CHEMICALLY BONDED SAND FOR CLOSE TOLERANCE CASTING ALL WORK COMPLETED EXCEPT FINAL TECHNICAL REPORT.	252.8		250.1	FEB 82	JUN 85
6 82 7707	AUTOMATED PROCESS CONTROL FOR MACHINING COMPUTER PROCEDURES WERE CONVERTED FROM FORTRAN ON TAPE TO BASIC ON A FLOPPY DISC. IMPLEMENTATION IS PLANNED ON A MILLING SYSTEM AT ROCK ISLAND ARSENAL.	135.0	63.2	71.8	SEP 83	JUN 85
6 81 7724	GROUP TECHNOLOGY OF WEAPON SYSTEMS (CAM) GROUP TECHNOLOGY AND PROCESS PLANNING SOFTWARE WAS PURCHASED, INSTALLED AND EVALUATED. THIS PROJECT FORMED THE BASIS FOR DEVELOPING A PROCESS PLANNING SYSTEM COMPATIBLE WITH WATERVLIET ARSENAL'S WORKLOAD.	180.0	148.1	22.5	JUN 83	SEP 85
6 83 7724	GROUP TECHNOLOGY OF WEAPON SYSTEMS (CAM) A VARIANT PROCESS PLANNING SYSTEM IS BEING CONVERTED TO OPERATE ON MICROCOMPUTERS.	250.0	111.1	75.5	SEP 85	SEP 85
6 80 7730	MANUFACTURE OF SPLIT RING BREECH SEALS DESIGN OF INTERCHANGEABLE JAWS COMPLETED. MANUFACTURE OF ONE SET IS COMPLETED. TESTING OF THE ABRASIVE SAW INDICATED THAT THE CLAMPING ARRANGEMENT IS WDEQUATE. REDESIGN AND MODIFICATION WILL DELAY DELIVERY OF MACHINE. SANDING MACHINES WERE MOUNTED.	363.0	89.5	229.5	DEC 82	SEP 85
6 84 7730	MANUFACTURE OF SPLIT RING BREECH SEALS MODIFICATIONS TO FIXTURING AND HYDRAULIC CLAMPING DEVICE WERE DETERMINED TO BE NECESSARY + ARE UNDERWAY. WIRING AND PIPING INSTALLATION IS CONTINUING. BELT SANDERS HAVE BEEN INSTALLED. TESTING INDICATES CHANGES WILL BE REQUIRED FOR PROPER OPERATION.	108.0		69.0	SEP 84	SEP 85
6 79 7802	ESTABLISH MACHINE TOOL PERFORMANCE SPECIFICATIONS CHANGES AND SHORTENING OF TECHNICAL REPORT STARTED. TECHNOLOGY FROM THIS PROJECT WAS USED IN PROCURING AN NC MILL FOR MMT PROJECT 6818135.	287.6	267.5	19.7	JUN 81	JUN 85
6 81 7807	PROGRAMMED OPTICAL SURFACING EQUIPMENT AND METHODOLOGY (CAM) INDUSTRY/GOVERNMENT DEMONSTRATION FOR THE CAM OPTICAL FABRICATION SYSTEM WAS HELD IN JULY 1984. COMMENTS MADE BY PERSONS IN ATTENDANCE LED TO A >220K COST GROWTH REQUEST TO MAKE MODIFICATIONS. REQUIRED MODIFICATIONS WILL COMMENCE 2QFY85.	374.0	129.0	19.0	JUL 83	DEC 85

A M C C O M (WEAPONS)

CURRENT FUNDING STATUS, 2ND CY84

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)		INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)	
76	1	331,100	285,200	285,200	(100%)	45,900	45,900	(100%)
77	0	0	0	0	(0%)	0	0	(0%)
78	0	0	0	0	(0%)	0	0	(0%)
79	0	0	0	0	(0%)	0	0	(0%)
79	2	414,600	289,500	289,500	(100%)	125,100	124,700	(99%)
80	7	1,613,300	378,000	360,300	(95%)	1,235,300	1,124,300	(91%)
81	13	4,068,000	2,429,700	2,192,200	(90%)	1,638,300	1,168,600	(71%)
82	26	7,282,500	2,565,900	1,375,600	(53%)	4,716,600	2,434,500	(51%)
83	15	3,902,000	1,479,800	695,700	(47%)	2,422,200	1,226,800	(50%)
84	29	8,559,600	1,770,900	602,700	(34%)	6,788,700	1,077,900	(15%)
85	26	3,427,000	0	0	(0%)	3,427,000	0	(0%)
TOTAL	121	29,598,100	9,199,000	5,801,200	(63%)	20,399,100	7,202,900	(35%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 31% INHOUSE REMAINING 68%



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

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
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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 [illegible] 4868	ELECTROSTATIC PRECIP IMPROVEMENTS (SMCC HOG) CONTRACT AWARDED TO MCI ON 29 SEPT 84. SUBCONTRACT AWARDED TO OAMC IN NOV 84. PLANNING MEETING SCHEDULED FOR 22 JAN 85.	233.0	198.0		SEP 85	SEP 85
5 85 4878	MULTI-FELTING + PRESSING OF COMBUSTIBLE CART CASE COMPONENTS ----- JUST FUNDED. NO 301 REQUIRED. -----					
5 85 4763	MANUFACTURING PROCESS FOR AMMO ----- JUST FUNDED. NO 301 REQUIRED. -----					
5 84 4773	120MM COMBUSTIBLE CASE BODY REMOVAL SYSTEM A SCOPE OF WORK AND PROCUREMENT PACKAGE FOR A SOLE SOURCE CONTRACT WITH ARMTEC DEFENSE PRODUCTS COMPANY HAS BEEN PREPARED AND FORWARDED TO THE PROCUREMENT DIRECTORATE FOR ACTION. CONTRACT AWARD IS CURRENTLY PROJECTED FOR 3Q FY85.	200.0		9.5	MAR 86	MAR 86
5 77 [illegible]869	BALL PROPELLANT DETERRENT COATING-CAM RELATED DRAFT OF FINAL REPORT INITIATED. IT WILL BE FINISHED, REVIEWED AND EDITED BY THE END OF JUN 85.	171.0	37.5	125.1	NOV 80	JUN 85

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5 85 4633	AUTO SENSOR SYSTEMS TEST F/MMR + IR SNESOR AN AUTOMATED SENSOR TUNING SYSTEM WILL BE DEVELOPED BY AEROJET. THE FREQUENCY, GAIN, AND OTHER SENSOR PARAMETERS WILL BE MEASURED AND ERROR CORRECTIONS WILL BE PROGRAMMED. THE MULTIPLE SENSORS WILL ALSO BE SYNCRONIZED. A SOW WAS SENT TO PROCUREMENT.	639.0			SEP 86	SEP 86
5 85 4637	AUTO MFG OF SFF WARHEAD LINERS ----- JUST FUNDED. NO 301 REQUIRED. -----					
5 85 4642	CAL .50 CARTRIDGE FEEDING FUNDING FOR THIS PROJECT WAS RECEIVED IN DEC 84 AND A SCOPE OF WORK WAS GENERATED. THIS PROJECT WILL DEVELOP AN AUTOMATIC CARTRIDGE FEED SYSTEM FOR CAL 50 CARTRIDGE PRODUCTION.	388.0			MAR 86	MAR 86
5 85 4656	NITRAMINE PROPELLANT PROCESSING ----- JUST FUNDED. NO 301 REQUIRED. -----					
5 84 4657	BINARY FACILITY MONITORING AND DETECTION SOW TO EVALUATE SAMPLING SYSTEM WAS PREPARED. INITIAL TESTING OF DETECTOR SYSTEM WAS PERFORMED AT VENDOR SITE. INITIAL EXPERIENCE WITH THIS DETECTOR/MONITOR SYS. SHOWS IT TO BE VERY RESPONSIVE TO OF VAPOR IN CONCENTRATIONS RANGING DOWN TO .005MG/M3.	290.0	45.0	215.0	MAY 85	MAY 85
5 [illegible] 4660	AUTOMATED BLENDING OF STICK PROPELLANT ----- JUST FUNDED. NO 301 REQUIRED. -----					
5 85 4663	REMOVAL OF BARIUM FROM COMP A-3, TYPE II WASTEWATER THE FY84 PROCUREMENT REQUIREMENT FOR COMP A-3 TYPE II HAS BEEN MANUFACTURED AND PASSED ALL ACCEPTANCE REQUIREMENTS. HOWEVER, PROBLEMS HAVE BEEN ENCOUNTERED WITH MEETING THE EFFLUENT REQUIREMENTS FOR BARIUM. A SOLUTION IS BEING EVALUATED.	134.3	83.3	51.0	SEP 84	SEP 85
5 84 4663	REMOVAL OF BARIUM FROM COMP A-3, TYPE II WASTEWATER THE LIFE CYCLE ENVIRONMENTAL ASSESSMENT (LCEA) WAS REVISED AND MODIFIED SEVERAL TIMES BEFORE IT WAS ACCEPTABLE TO HDL, HSAAP, AND ARDC.	50.0		18.7	SEP 85	SEP 85
5 [illegible] 4664	RADIOLOGICAL INSPECTION OF AMMUNITION FOR THE SGT YORK HE LOADED M811 AND M822 PROJECTILES HAVE BEEN ACQUIRED FOR USE DURING SYSTEM DEVELOPMENT. IN ADDITION EMPTY PROJECTILE BODIES OF EACH TYPE HAVE BEEN OBTAINED TO BE EMPLOYED IN FABRICATION OF INERT DEFECT STANDARDS.	91.0			APR 85	APR 85
5 84 4665	COMPUTER SIMULATION OF DU QUENCHING THE QUENCH TANK AND EXPERIMENTAL SET-UP ARE BEING FABRICATED. THIS EQUIPMENT WILL BE USED FOR QUENCHING TRIALS.	400.0		106.4	SEP 86	SEP 86

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5 84 4606	AUTOMATED ASSEMBLY OF BLU 97/B COMBINED EFFECTS MUNITION THE FABRICATION OF THE INDEX MACHINE CONTINUED ON SCHEDULE. THE CONTRACT FOR THE ASSEMBLY MACHINE WAS PLACED AND MATERIALS AND COMPONENTS WERE ORDERED.	1,417.7	1,270.7	25.1	DEC 85	DEC 85
5 85 4612	NITRAMINE (LOVA) PROPELLANT WASTEWATERS ABATEMENT ----- JUST FUNDED. NO 301 REQUIRED. -----					
5 85 4613	METHOD E/PROCESS ANALYSIS OF RDX/HMX SLURRY OPERATING CONTRACT FOR HOLSTON AAP WAS MODIFIED TO INCLUDE NEW SCOPE OF WORK.	319.0	212.0	1.4	MAR 86	MAR 86
5 85 4615	IMPROVED SOLVENTLESS PASTE BLENDING ----- JUST FUNDED. NO 301 REQUIRED. -----					
5 85 4623	CALCIUM CYANAMIDE PROCESS CONTROL FUNDS WERE RECEIVED AND PROJECT PLANNING WAS INITIATED.	263.0	101.0		DEC 85	DEC 85
5 85 4624	AUTOMATED MFG OF MILLIMETER WAVE DIODES (CAM) THIS EFFORT WILL ADDRESS THE WIDE VARIETY OF PROBLEMS WITH PRODUCING GUNN, VARACTOR AND SCHOTTKY DIODES IN THE PRODUCTION ENVIRONMENT FOR USE AT 35 GHZ. THE SOW AND POP HAVE BEEN SENT TO PROCUREMENT.	2,843.0			SEP 86	SEP 86
5 85 4625	AUTO MFG OF SILICON IF AMPLIFIER IC (CAM) STATEMENT OF WORK WAS PREPARED. A FIRM WILL OPTIMIZE AN AUTOMATED TEST STATION FOR CHECKING INTERMEDIATE FREQUENCY INTEGRATED CIRCUIT AMPLIFIERS AT ROOM, HOT AND COLD TEMPERATURES OVER A RANGE OF FREQUENCIES FROM 0 TO 50 MHZ AND TEST FIXTURES.	265.0			JUN 86	JUN 86
5 84 4626	AUTOMATED ASSEMBLY OF MILLIMETER WAVE TRANSDUCERS CONTRACTORS WILL CHECK INTO AUTOMATED METHODS FOR PICKING TINY MILLIMETER WAVE DIODE DICE FROM A WAFFLE-PACK, PLACING THEM ON A FLIABLE DUROID SUBSTRATE, + VAPOR PHASE SOLDERING THE WHOLE. VERIFY WITH A PATTERN RECOGN. SYS, AND TEST AUTOMATICALLY.	180.0			DEC 84	DEC 86
5 85 4626	AUTO ASSEMBLY OF MILLIMETER WAVE TRANSDUCER CONTRACTS NOT LET YET BECAUSE OF NEED TO RE-WRITE CONTRACT DOCUMENTS. WORK SUPPORTS AUTOMATIC ASSEMBLY SYSTEM FOR MILLIMETER WAVE TRANSDUCERS. WILL USE AUTOMATED ASSEMBLY METHODS WHICH INCLUDE PATTERN RECOGNITION AND COMPUTER-CONTROLLED TESTING.	2,294.0			JUN 86	JUN 86
5 85 4627	AUTO TESTING OF MILLIMETER WAVE TRANSDUCER AN AUTOMATED TEST AND TUNE SYSTEM WILL BE DEVELOPED FOR HIGH PRODUCTION ENVIRONMENT. THE COMPLETED TRANSCEIVER WILL BE PERFORMANCE TESTED AND THE COPPER CIRCUIT TRACES WILL BE TRIMMED WITH A LASER FOR TUNING.	1,943.0			SEP 86	SEP 86

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5 84 4574	IMPROVED PROCESS FOR RDX/HMX FINES MANUFACTURE EQUIPMENT FOR LABORATORY EVALUATION OF RDX/HMX FINES HAS BEEN PROCURED AND DELIVERED. LABORATORY TESTS WERE INITIATED IN DECEMBER 84.	148.7	98.7	21.2	SEP 85	SEP 85
5 85 4574	IMPROVED PROCESS FOR RDX/HMX FINES MANUFACTURE ----- JUST FUNDED. NO 301 REQUIRED. -----					
5 84 4578	MODIFICATION + IMPROVEMENT OF DMSO PILOT PROCESS FOR RDX/HMX MODIFICATION OF PLANT EQUIPMENT WAS INITIATED BY PROCURING OR FABRICATING ITEMS. A BENCH SCALE TEST OF CLASS 3/4 HMX RECRYSTALLIZATION WAS CONDUCTED. WORK ON HAZARDS ANALYSIS AND TEST PLANS BEGAN.	430.2	308.2	35.0	MAR 85	SEP 85
5 85 4578	MOD + IMP OF THE DMSO PILOT PROCESS FOR RDX/HMX FUNDING WAS RECEIVED AND A CONTRACT WAS AWARDED TO HOLSTON AAP.	159.0	110.9		MAR 86	MAR 86
5 84 4579	WHITE WATER RECOVERY SYS F/COMBUSTIBLE CASE MANUFACTURING CONTRACT AWARDED FOR THE DESIGN, PROCUREMENT, INSTALLATION, AND OPERATION OF A WHITE WATER TREATMENT SYSTEM. THE DESIGN WAS COMPLETED AND SUBMITTED TO ARDC FOR FINAL APPROVAL. APPROVAL IS ANTICIPATED FOR EARLY 1985.	500.0	355.1	40.9	DEC 85	DEC 85
5 85 4580	UV-CURE PAINT FOR LARGE CALIBER PROJECTILES TEST PANELS COATED WITH UV CURE PAINT FORMULATIONS WERE SHIPPED TO ARDC AND NI INDUSTRIES FOR SALT SPRAY TESTING. A UV CURE LIGHT WAS SET UP ON PROJECTILE PRODUCTION LINE. THE BEST PAINT SAMPLES WERE TEST AT NI. RESULTS FORTHCOMING IN NI REPORT.	80.0	65.0	8.4	MAR 85	JUN 85
5 85 4584	LOADING EQUIPMENT FOR CAL .50 AMMUNITION FUNDS FOR THIS PROJECT WERE RECEIVED IN DEC 84 AND A SCOPE OF WORK HAS BEEN PREPARED. THE PURPOSE OF THIS PROJECT IS TO DESIGN A LOAD AND ASSEMBLY MACHINE FOR CAL 50 PRODUCTION.	650.0			DEC 85	DEC 85
5 84 4597	MFG PROC F/CANNON CALIBER DU PENETRATOR (20MM, 25MM, 30MM) ACTION WAS TAKEN TO OBTAIN DU MATERIAL. THE INSTALLATION SITE FOR THE KINEFAC MACHINE HAS BEEN CLEARED. DESIGN PARAMETERS HAVE BEEN DEVELOPED FOR INDUCTION HEATING COIL. DESIGN OF DIES AND MACHINE MODIFICATION HAVE BEEN INITIATED AT KINEFAC.	374.0	200.0	89.0	NOV 85	DEC 85
5 83 4605	PROPELLANT BED DEPTH CONTROL IN CASBL AIR DRY A CONTRACT FOR THE BED DEPTH CONTROL SYSTEM WAS AWARDED TO GARD INC. NILES, IL IN JUNE 84. A BREADBOARD DEMONSTRATION WAS CONDUCTED. INSTALLATION OF THE SENSOR SYSTEM WAS COMPLETED AT RADFORD AAP.	569.9	451.9	86.0	JUL 84	JUN 85

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5 84 4563	PROCESS IMPROVEMENT FOR TANK DU PENETRATORS SEE INDIVIDUAL SUBTASKS.	2,350.0	1,393.7	543.1	MAR 86	MAR 86
5 84 4563 05	REDUCTION OF CHIP OXIDATION A CONTRACT HAS BEEN AWARDED TO NMI. THE DESIGN OF THE LATHE ENCLOSURES IS NEAR COMPLETION. FABRICATION OF THE INNER WORKPIECE ENCLOSURE IS COMPLETED AND PRELIMINARY MACHINING TRIALS HAVE BEEN INITIATED.	656.3	548.7	36.6	MAR 86	MAR 86
5 84 4563 13	ELIMINATE/REDUCE NITRIC ACID PICKLING CONTRACT HAS BEEN AWARDED TO NMI AND THE SALT POT HAS BEEN DELIVERED. TEST PLANS FOR THE BENCH SCALE TESTS HAVE BEEN APPROVED.	282.8	240.5	14.5	SEP 85	SEP 85
5 84 4563 14	EVALUATE MOLD COATINGS THE CONTRACTOR IS EVALUATING ADDITIONAL COATINGS THAT SHOULD OUTPERFORM HIS PRODUCTION COATING PENDING APPROVAL THESE MOLDS + INGOT COATINGS WILL BE USED IN FULL SCALE PROVE OUT OF SELECTED MELTS.	295.2	252.9	21.2	SEP 85	SEP 85
5 84 4563 17	NEUTRON MEASUREMENT OF RESIDUAL STRESSES NBS HAS MEASURED STRESSES IN PRODUCTION DU PENETRATOR BLANKS AND IS CURRENTLY ANALYZING THE STRESS PROFILE IN THE MEASURED BLANKS. MATERIAL FROM OTHER MMT EVALUATIONS IS IN PROCESS OF BEING EVALUATED FOR STRESS PROFILE CHANGES.	124.5		60.8	NOV 85	SEP 85
5 84 4563 18	FILTRATION OF MOLTEN URANIUM CONTRACT AWARDED TO NMI WHO HAS CHOSEN THE FILTER SYSTEM AND HAS ADAPTED THEIR MELT/CAST SYSTEM. RESULTS OF THE INITIAL MELT TESTS HAVE BEEN INCONCLUSIVE. PROGRAM IS BEING RESTRUCTURED TO ATTACK PROBLEM AREAS.	432.9	351.6	35.0	DEC 85	DEC 85
5 84 4563 24	MACHINING LONG ROD DU PENETRATORS THE CNC LATHE IS IN PLACE AND SHOULD BE RUNNING BY THE TIME MATERIAL IS RECEIVED SO THAT THE MACHINING TRIALS CAN BEGIN.	558.3		375.0	DEC 85	DEC 85
5 84 4570	IMPR MFG PRO TES PROC F/XM762 ARTY ELECT TIME FUZE MOTOROLA, SCOTTSDALE, CONTRACTED TO INVESTIGATE SEVERAL WAYS TO IMPROVE CRYSTAL MAKING PROCESSES. WILL ETCH LOW FREQUENCY TUNING FORK TYPE CRYSTALS. ALSO, LIQUID CRYSTAL DISPLAY MODULES WILL BE TESTED AS ASSEMBLED. DELAY 3 MOS DUE TO DESIGN CHANGES.	367.0	307.4	51.9	SEP 85	DEC 85
5 85 4570	IMPROVE MFG PROCESSES + TEST PROC F/ARTIL ELECT TIME FUZES FOLLOW-ON TO ABOVE. A STATEMENT OF WORK WAS PREPARED, REVIEWED, AND SENT TO PROCUREMENT. MOTOROLA WILL CONTINUE PRODUCTION ENGINEERING, TOOLING AND FACILITIES FOR BUILDING THE XM/762 ARTILLERY ELECTRONIC TIME FUZE. DESIGN CHANGES CAUSED 3 MO DELAY.	976.0			SEP 86	SEP 86

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5 83 4563	PROCESS IMPROVEMENT FOR TANK DU PENETRATORS SEE INDIVIDUAL SUBTASKS.	2,703.8	1,773.7	755.3	JUN 85	JUN 85
5 83 4563 04	HEAT TRANSFER AND RESIDUAL STRESSES WORK HAS BEEN COMPLETED ON DEVELOPING A COMPUTER PROGRAM TO SIMULATE THE PHASE CHANGES AND STRESS PATTERN FOR QUENCHING DU BLANKS. A DRAFT FINAL REPORT HAS BEEN SUBMITTED AND REVIEWED. FINAL REPORT WILL BE SUBMITTED DURING THE NEXT REPORTING PERIOD.	281.2		275.5	JUN 85	JUN 85
5 83 4563 05	REDUCTION OF CHIP OXIDATION SCI HAS COMPLETED THE ECONOMIC ANALYSIS OF THE PROCESS AND CONCEPTUAL OUTLINE OF THEIR PROPOSED LATHE ENCLOSURE AND REMELT SYSTEM IN A DRAFT FINAL REPORT. IT HAS BEEN REVIEWED, WITH COMMENTS GENERATED.	182.9		174.4	MAR 85	MAR 85
5 83 4563 06	RECYCLING OF STABALLOY MACHINING CHIPS AUC HAS SUCESSFULLY MELTED CHIPS + IS INVESTIGATING ALTERNATIVES TO NITRIC ACID F/REMOVAL OF OXIDES. NMI HAS ONLY LIMITED SUCCESS WITH CHIP RECYCLE DUE TO IRON CONTAMINATION + LOW CHIP PROCESSING YIELDS.	784.8	696.8	69.1	JUL 85	JUN 85
5 83 4563 07	FORMING TO NEAR NET SHAPE PROGRAM HAS BEEN PHYSICALLY COMPLETED. CONTRACTOR HAS SUCCESSFULLY PROCESS NEAR-NET-SHAPE COMPONENTS TO THE FINISH MACHINED CONDITION. THE PROBLEM AUDITOR-ACCEPTED REVISED OVERHEAD AND G+A RATES NOW PROJ A $30K OVERRUN. THE PROBLEM IS BEIN RESOLVED.	345.9	299.4	33.5	JUN 85	JUN 85
5 83 4563 08	NON-DESTRUCTIVE TESTING OF A PREFORMED SHAPE A VISIT TO AEROJET TO DISCUSS ULTRASONIC TESTING ON STEPPED BLANKS. CONCEPTUAL DESIGNS FOR PROTOTYPE UNIT CONTINUE.	227.5		124.9	SEP 85	DEC 85
5 83 4563 11	PROCESS IMPROVE FOR DU PENETRATORS-MG F2 LINERS THE FORMING TRIALS, OPTIMIZING THE VESSELS HEATING PARAMETER + PRODUCTION VERIFICATION OF THE NEW RETORT VESSEL DESIGN HAVE BEEN COMPLETED. AWAITING FINAL PROCESSING TO OBTAIN DATA.	317.6	276.1	29.8	JUL 85	JUN 85
5 83 4563 16	QUENCH PARAMETERS FOR HEAT TREATING DU ALL EXPERIMENTAL AND CONTROL GROUP QUENCH EXPERIMENTS HAVE BEEN COMPLETED. METALLURGICAL, TIR, AND ULTRASONIC DATA IS CURRENTLY BEING OBTAINED FOR COMPARISON PURPOSES. THE FINAL REPORT IS CURRENTLY BEING PREPARED.	498.3	451.8	35.9	JUN 85	JUN 85
5 83 4563 20	IMPROVED DU REDUCTION PROCESSING CONTRACTOR COMPLETED ASSESSMENT OF UF6 TO DU REDUCTION TECHNOLOGY + SUBMITTED HIS RECOMMENDATIONS.	65.6	49.6	12.5	JUL 85	JUL 85

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5 83 4548 04	BAY DESIGN SAFETY ENHANCEMENT OPEN AIR AND OPEN AND CLOSED CUBICLE TESTS WERE CONDUCTED ON M206 FLARE COMPOSITIONS. HIGH FLAME TEMPERATURE AND FIRE BALL DIAMETERS WERE OBSERVED IN THE OPEN AIR TESTS. BURNING CHARACTERISTICS OF THE M206 CLASSIFY IT AS A DEFLAGRATING MATERIAL.	216.5	145.5	71.0	APR 84	MAR 85
5 84 4548	PYRO SAFETY ENHANCEMENT SEE THE FOLLOWING TASKS FOR WORK STATUS.	471.6	240.9	90.1	MAR 86	MAR 86
5 84 4548 02	TRANSPORT AND CONVEYING SAFETY ENHANCEMENT LIVE TESTING OF M206 AND MK45 FLARE COMPOSITIONS WERE EVALUATED WITH REMOTE HANDLING SYSTEMS.	275.0	188.0	87.0	MAR 86	APR 85
5 84 4548 04	BAY DESIGN SAFETY ENHANCEMENT A CONTRACT WAS AWARDED TO AMMANN WHITNEY TO ADAPT TEST RESULTS OF NSTL TO AN IMPROVED BAY DESIGN.	83.4	41.4	42.0	MAR 86	SEP 85
5 84 4548 05	OPERATORS CLOTHING SAFETY A PROGRAM PLAN WAS WORKED OUT FOR ELECTROSTATIC DISCHARGE AND FIRE TESTING OF SEVERAL MATERIALS UNDER CONSIDERATION FOR USE IN OPERATOR CLOTHING. THE CLOTHING IS WORN DURING THE MIXING/GRANULATING AND PRE-PACKOUT INCORPORATION OPERATIONS.	125.0	75.0	42.0	MAR 86	MAR 86
5 85 4548	PYRO SAFETY ENHANCEMENT ----- JUST FUNDED. NO 301 REQUIRED. -----					
5 84 4550	AUTOMATED ASSEMBLY OF M22 FLASH SIMULATOR A CONTRACT WAS AWARDED TO DEVELOP AUTOMATED ASSEMBLY EQUIPMENT FOR THE M22 SIMULATOR. THE CONTRACTOR PREPARED PRELIMINARY CONCEPTS FOR THE FOUR ASSEMBLY MACHINES INVOLVED IN THE PROJECT.	403.8	394.8	43.0	DEC 85	DEC 85
5 82 4551	MANUFACTURING PROCESS PARAMETER FOR XM855/856 AMMO M855 CARTRIDGE TESTS IN THE M16A2 RIFLE AND THE M249 MACHINE GUN HAVE BEEN COMPLETED. BALL CARTRIDGE PRODUCTION AND DELIVERY HAVE BEGUN. TESTING OF THE M856 TRACER HAS BEEN DELAYED DUE TO ACCURACY PROBLEMS.	619.0	83.0	316.0	MAR 83	MAY 87
5 84 4556	ON-LINE MONITORS F/WATER POLLUTANTS GENERATED BY MFR OF EXPL AN HPLC WAS PROCURED AND SUCCESSFULLY LABORATORY TESTED. TWO ELECTROCHEMICAL MONITORS TRANSFERRED FROM RAAP WERE FOUND UNSATISFACTORY. ELECTROCHEMICAL AND PHOTOCHEMICAL HPLC DETECTORS WERE PROCURED BUT FAILED SPECIFICATIONS. THEY ARE BEING REPLACED.	430.1	333.1	45.4	SEP 85	SEP 85
5 82 4557	ARBAT ARBAT WAS OFFICALLY TRANSITIONED TO TECOM JANUARY 1985. A CAPABILITY NOW EXISTS AT THE YUMA PROVING GROUND TO PROVIDE COMPLETE PROJECTILE TRAJECTORY DATA ON A REAL/NEAR REAL-TIME BASIS.	2,975.0	2,672.0	303.0	JUN 84	AUG 85

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PROJ NO.	TITLE + STATUS	AUTHO-RIZED	CONTRACT VALUES	EXPENDED LABOR AND MATERIAL	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
		($000)	($000)	($000)		
5 84 4540	CACO3 COATING OF 7.62MM BALL PROPELLANT THIS PROJECT IS PROCEEDING AS PLANNED. A PROCESS OF CACO3 COATING ON 7.62 PROPELLANT HAS BEEN DEVELOPED. A 24 HOUR DEMONSTRATED WILL BE CONDUCTED DURING 3 QTR FY85.	321.0	210.8	65.2	JUN 85	JUN 85
5 84 4541	HIGH SPEED INSPECTION OF SAA PRIMED CASES ADDITIVES TO ENHANCE THE ULTRAVIOLET EMISSION WERE SELECTED BY THE CONTRACTOR AND SUBMITTED TO ARDC FOR SAFETY AND COMPATIBILITY TESTING. ALSO, A CHOPPING DEVICE WAS SUCCESSFULLY TESTED TO ELECTRONICALLY IMPR DISCRIMINATION OF THE FLUORESCENCE SIG.	499.0	387.9	34.0	JUN 86	JUN 86
5 84 4544	THIRD GENERATION DYNAGUN (GAMMA) TO SIMULATE TANK GUNS PROJECT WAS DELAYED DUE TO ITERATIONS BETWEEN PROCUREMENT AND BIDDER.	416.0	362.0	32.0	JUL 85	SEP 85
5 85 4544	THIRD GENERATION DYNAGUN (GAMMA) TO SIMULATE TANK CONTRACT SCOPE OF WORK PREPARED FOR RADFORD AAP.	317.0	51.0		SEP 85	SEP 85
5 85 4545	DIGITAL IMAGE AMPLIFICATION X-RAY SYSTEM (DIAX) THE SCOPE OF WORK AND A PROCUREMENT PACKAGE HAS BEEN ASSEMBLED AND SUBMITTED TO THE PROCUREMENT DIRECTORATE. A SHORT DELAY WAS ENCOUNTERED IN PROCUREMENT ACTIVITIES WHILE CLARIFICATION OF IN-HOUSE VS CONTRACT FUNDING WAS OBTAINED.	180.0			SEP 85	SEP 85
5 84 4547	PROCESS TECHNOLOGY FOR XM76 IR SCREENING GRENADE A PILOT OPN WAS ESTABLISHED TO PROCESS THE IR SMOKE COMPOSITION AND FILL THE CONTAINER. A DOM WAS OUTLINED AND A DRAFT WAS STARTED. A DEVICE TO ASSIST THE FLOW OF THE IR SMOKE COMPOSITION INTO THE EXTRUDER HOPPER WAS INSTALLED AND TESTED.	301.0	200.0	35.0	FEB 85	MAY 85
5 85 4548	PYRO SAFETY ENHANCEMENT SEE THE FOLLOWING TASKS FOR WORK STATUS.	1,129.3	421.2	684.0	SEP 84	DEC 84
5 85 4548 01	MIXER SAFETY ENHANCEMENT TEFLON BLADES OR SCRAPER ARMS OF A MIX MULLER AT CHANE AAA WERE EVALUATED WITH VARIOUS COMPOSITIONS. EPOXY BINDERS WERE DIFFICULT TO REMOVE. DRY COMPOSITIONS CAUSED WEARING OF THE TEFLON BLADES. POSITIVE CHARGES WERE DETECTED ON THE BLADES.	250.0	168.0	82.0	SEP 84	MAR 85
5 85 4548 02	TRANSPORT AND CONVEYING SAFETY ENHANCEMENT INERT SIMULANT ILLUMINANT COMPOSITIONS WERE EVALUATED IN THE REMOTE TRANSFER AND CONVEYING SYSTEMS DEVELOPED.	348.0	266.0	82.0	SEP 84	MAR 85
5 85 4548 03	QUENCHING SAFETY ENHANCEMENT DELUGE TESTS WERE COMPLETED WITH M206 AND MK45 FLARE COMPOSITIONS. THE DELUGE SYSTEM WAS INEFFECTIVE FOR DRY M206 AND MK45 COMPOSITIONS. THE DUAL MODE SMOKE/UV DETECTORS WERE INEFFECTIVE IN SENSING GREEN OR YELLOW SMOKE FIRES.	298.0	194.0	104.0	SEP 84	DEC 84

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5 82 4529	MANUFACTURE OF PRECISION CONES FOR HEAT PROJECTILES THREE INDIVIDUAL CONTRACTS WERE AWARDED 9/12/84 TO ENVIROTRONICS INC. TO MANUFACTURE TRUMPET CONES, MILAN ARMY AMMO PLANT FOR STATIC TESTING OF THE CONES AGAINST TARGET PLATES, AND CHAMBERLAIN MFG FOR TESTING VEHICLE'S METAL PARTS.	525.0	181.0	84.0	SEP 82	DEC 85
5 85 4531	AUTO PROD OF MULTI-BASE STICK PROPELLANT ON CABML ----- JUST FUNDED. NO 301 REQUIRED. -----					
5 83 4533	LOVA PROPELLANT PROCESSING THE IN-PROCESS HAZARDS TEST PROCEDURES SELECTED FOR THIS PROJECT WERE DEVELOPED FOR THE ARMY BY IITRI. ALL TESTS HAVE BEEN COMPLETED. THE SENSITIVITY TESTS WERE CONDUCTED AT NOS, IH, MD. THE EFFECTS TESTS WERE RUN AT NSWC, DAHLGREN, VA.	398.0		390.7	SEP 84	MAR 85
5 82 4534	XM855 BULLET CONVERSION OF SCAMP EQUIPMENT DRAFT COPIES OF THE CONTRACTORS FINAL REPORT + SYSTEM MANUALS WERE FURNISHED TO LCAAP + ARDC FOR REVIEW AND COMMENTS. CLOSE OUT OF THIS PHASE OF THE EFFORT HAS BEEN INITIATED.	402.0	342.0	60.0	SEP 83	JUN 85
5 83 4534	SAWS 8 LLET CONVERSION OF SCAMP EQUIPMENT THE PI OTYPE PENETRATOR FEEDER/ORIENTER HAS BEEN FABRICATED AND ASSEMBLED. A DRAWING PACKAGE IS COMPLETE AND FEEDING OF THE M193 POINTED LEAD WILL BE TESTED.	812.0	640.4	103.4	APR 85	SEP 85
5 84 4534	M855 BULLET CONVERSION OF SCAMP EQUIPMENT A CONTRACT WAS AWARDED TO DESIGN AND FABRICATE AN INDUCTION COIL TYPE INTERDRAW ANNEALING SYSTEM FOR THE SCAMP CASE SUBMODULE 3.	1,792.0	1,428.1	125.5	MAY 86	SEP 85
5 85 4534	M855 BULLET CONVERSION OF SCAMP EQUIPMENT PROCUREMENT NEGOTIATIONS FOR THE FOLLOW-ON ANNEALING SYSTEM WORK HAS BEEN COMPLETED. A SCOPE OF WORK FOR THE LCAAP MATERIAL AND MANPOWER SUPPORT FOR TESTING THE SYSTEM IS COMPLETE.	557.0	64.4		SEP 85	SEP 85
5 83 4538	5.56 SAWS LINK ORIENTER AND FEED SYSTEM BATTELLE NW LAB HAS COMPLETED THE CONCEPT STUDY FOR THE LINK, ORIENT, INSPECTION AND FEED SYSTEM. DETAIL DESIGN WAS COMPLETED. FABRICATION OF AUTOMATIC INSPECTION EQUIPMENT IS IN PROGRESS.	496.0	391.0	88.0	MAR 85	JUN 85
5 84 4539	AUTOMATED CARTRIDGE CASE HARDNESS MEASUREMENT AND CONTROL THE CONTRACTOR HAS COMPLETED THE FEASIBILITY OF MEASURING HARDNESS OF CARTRIDGE CASES BY USE OF EDDY CURRENT TECHNOLOGY. THE FINAL TECHNICAL REPORT IS SCHEDULED FOR PUBLICATION FEB 1985.	182.0	102.5	10.0	DEC 85	FEB 85
5 85 4539	AUTOMATED CARTRIDGE CASE HARDNESS MEAS + CONTROL COMPLETED THE SECOND YEAR EFFORT SCOPE OF WORK AND NEGOTIATED THE COST WITH THE CONTRACTOR. THE CONTRACT WILL BE AWARDED UPON RECEIPT OF FY85 FUNDS.	397.0	256.2		OCT 85	OCT 85

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S 82 4506	5.56MM CARTRIDGE LINKING SYSTEM NO ADDITIONAL INFORMATION IS PROVIDED FOR THIS FY. SEE PROJECT S 82 4506.	577.0	338.0	209.0	JAN 84	JUN 85
S 82 4508	PROCESS IMPROVEMENT OF PRESSABLE RDX COMPOSITIONS THE WYSSMONT DRYER INSTALLATION AND CHECKOUT WAS COMPLETED IN OCT 84. INERT DRYING TESTS WERE COMPLETED IN NOV 84. VACUUM DRYING CONTRACT WAS COMPLETED AND REPORT RECEIVED IN OCT 84. M109 PRECOAT AND COMP A5 SUCCESSFULLY DRIED IN WYSSMONT DRYER.	603.4	325.4	197.5	SEP 84	JUN 85
S 84 4510	AUTO ASSY OF ADDITIVE LINER TO TANK CTG CONTRACT NEGOTIATIONS WITH MILAN AAP SUCCESSFULLY CONCLUDED. THEY WILL DEVELOP, MAKE, TEST AND INSTALL PRODUCTION LINE FOR ASSEMBLY OF ADDITIVE LINERS TO CARTRIDGE CASES. DELIVERY STIPULATED FOR MAY 1985.	295.0	225.0	50.2	SEP 85	SEP 85
S 83 4510	AUTO ASSEMBLY OF ADDITIVE LINER TO TANK CARTRIDGE CASE MILAN AAP WILL DEBUG, TEST AND INSTALL THE DELIVERED PROTOTYPE HARDWARE WITH FUNDS RECEIVED FOR PHASE II OF THEIR CONTRACT.	217.0	94.5		MAR 86	MAR 86
S 83 4511	DISPOSAL OF FINAL SLUDGE FROM ACID RECOVERY OPERATIONS DMN EQUIPMENT PROCUREMENT CONTINUED. ALL ITEMS HAVE BEEN DELIVERED EXCEPT TWO PROCESS TANKS. REINFORCED CONCRETE WORK RELATED TO DMN REACTOR COMPLETED IN DEC 84.	420.1	337.1	81.0	OCT 85	JUN 85
S 84 4511	DISPOSAL OF FINAL SLUDGE FROM ACID RECOVERY OPERATIONS CONTRACTOR COST ESTIMATE PREPARED SHOWING HIGHER COSTS FOR AMMONIA NEUTRALIZATION. PROGRAM RESTRUCTURED BY PBM TO INCLUDE ONLY DMN WORK IN MMT PROJECT. DMN EQUIPMENT INSTALLATION WILL BEGIN UNDER THE REVISED FY84 PROGRAM.	161.5	110.5	15.0	JUN 85	SEP 85
S 85 4511	DISPOSAL OF FINAL SLUDGE FROM ACID RECOVERY OPERATIONS FUNDS RECEIVED IN WROC IN DEC 84. CONTRACT NEGOTIATIONS CONTINUING ON REVISED FY85 PROGRAM.	275.0			DEC 85	DEC 85
S 84 4523	RAPID MOISTURE ANALYSIS OF EXPLOSIVE MIXES MOISTURE ANALYSIS WITH KARL FISCHER AND VACUUM OVEN TECHNIQUES COMPLETED. KARL FISCHER CAN BE USED WITH LEAD AZIDE BUT NOT FOR NOL 130. VACUUM OVEN REQUIRES MORE TEST TIME BUT CAN BE USED FOR BOTH DETONATOR MIXES.	200.0	39.0	92.0	SEP 85	SEP 85
S 84 4524	AUTOMATED MELT POUR EQUIPMENT FOR SMALL AP MINES THE DZ INC, LSAAP CONTRACTOR WAS AWARDED A CONTRACT FOR DESIGN AND PROCUREMENT OF A PRODUCTION INJECTOR. TOOLING FOR MINE CASE/LIFT FIXTURE ATTACHMENT WAS FABRICATED. A TEST PLAN, SOP, AND INSPECTION PLAN WAS SUBMITTED BY KAAP DZ,INC. FOR APPROVAL.	305.0	94.1	51.0	SEP 85	SEP 85

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5 82 4489 05	ADVANCED AIR EMISSIONS ABATEMENT TESTING COMPLETED. H2O2 INCREASES NOX SCRUBBING EFFICIENCY MARKEDLY. HOWEVER, EXCESS AMOUNTS DO NOT FURTHER INCREASE EFFICIENCY. STAINLESS STEEL MESH PACKING ALSO INCREASES SCRUBBING EFFICIENCY. CONTRACTOR'S TECHNICAL REPORT HAS BEEN COMPLETED.	387.0	245.0	142.0	DEC 82	MAR 85
5 85 4489	ADVANCED POLLUTION ABATEMENT TECHNOLOGY F/DARCOM FACILITIES EFFORT 58X4489 REPRESENTS AN ORDERLY TRANSITION FROM EFFORTS 5XX4114 AND 57X4214 AND IS DIRECTED TOWARDS MEETING FUTURE REGULATORY STANDARDS. SEE INDIVIDUAL TASK.	86.0	65.0	19.0	SEP 86	MAR 85
5 85 4489 05	TERTIARY TREATMENT OF HOLSTON WASTEWATER ALL WORK HAS BEEN COMPLETED. THE FINAL TECHNICAL REPORT HAS BEEN PREPARED FOR PUBLICATION ON THIS PROGRAM EFFORT. ALSO, AN INDEPENDENT DESIGN REVIEW HAS BEEN COMPLETED. IMPLEMENTATION WILL AWAIT FUTURE MORE RESTRICTIVE DISCHARGE LIMITS.	86.0	65.0	19.0	SEP 86	FEB 85
5 84 4489	ADVANCED POLLUTION ABATEMENT TECHNOLOGY F/DARCOM FACILITIES EFFORT 58X4489 REPRESENTS AN ORDERLY TRANSITION FROM EFFORTS 5XX4114 AND 57X4214 AND IS DIRECTED TOWARDS MEETING FUTURE REGULATORY STANDARDS. SEE INDIVIDUAL TASKS.	905.9	611.9	141.6	JUN 85	SEP 85
5 84 4489 01	DISPOSAL OF WASTEWATER TREATMENT SLUDGES CASTINGS OF STABILIZED SLUDGE FORMULATIONS AT LSAAP HAVE BEEN COMPLETED AND PULVERIZED IN PREPARATION FOR EPA LEACHATE TESTING. PILOT TESTING AT ISU WITH REGARD TO REGENERATION OF CALCIUM SULFATE SLUDGE IS CONTINUING.	460.5	329.5	51.0	JUN 85	SEP 85
5 84 4489 02	ADVANCED PINK WATER TREATMENT (TNT/RDX/HMX IN WATER) OPERATION OF THE SURFACTANT COMPLEXING/CARBON ADSORPTION PILOT PLANT WAS IMPLEMENTED WITH THE TREATMENT OF SOME 45,000 GALS OF PINK WASTEWATER. OPERATIONS WERE CURTAILED WITH COMPLETE SHUTDOWN OF THE SYSTEM UNTIL MARCH 1985.	445.4	282.4	90.0	JUN 85	SEP 85
5 81 4503	NEW PROCESS FOR SAWS TRACER AMMUNITION SAWS TRACER BULLETS WILL NOT BE SENT TO TECOM UNTIL THE ACCURACY PROBLEMS HAVE BEEN SOLVED. AN ON-GOING JOINT EFFORT BETWEEN ARDC AND REMINGTON ENGINEERING STAFF HAS BEEN ESTABLISHED TO STUDY THE PROBLEM.	500.0	402.4	97.6	AUG 82	JUL 85
5 82 4503	NEW PROCESS FOR SAWS TRACER AMMUNITION NO ADDITIONAL STATUS GIVEN FOR THIS PROJECT. SEE 5 81 4503.	209.0		148.0	SEP 83	JUL 85
5 81 4506	5.56 MM CARTRIDGE LINKING SYSTEM THE DEMONSTRATION REPORT, OPERATING MANUALS AND TECH DATA PACKAGE FOR THE CARTRIDGE LINKING SYSTEM HAVE BEEN COMPLETED. THIS SYSTEM WILL BE USED AT LAKE CITY AAP.	573.0	406.0	167.0	JAN 83	JUN 85

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6 82 7926	HOT ISOSTATIC PRESSING (HIP) OF LARGE ORDNANCE COMPONENTS SIX HIPPED PREFORMS WERE HEAT TREATED TO DEVELOP MECHANICAL PROPERTIES AND ESTABLISH HEAT TREAT PARAMETERS. PREFORMS ARE BEING NON-DESTRUCTIVELY INSPECTED. LABORATORY STUDY OF FATIGUE CRACK GROWTH BEHAVIOR IN THE HIPPED STEEL IS CONTINUING.	295.0	82.1	177.0	SEP 84	SEP 85
6 81 7928	ROBOTIZED BENCHING OPERATIONS (CAM) THERE HAVE BEEN TWO DELAYS TOWARDS PROJECT COMPLETION. FIRST DELAY RESULT OF ASBESTOS REMOVAL FROM PIPES IN AREA WERE THE WORK WAS BEING DONE. THE ROBOT HAD TO BE MOVED. SECOND DELAY DUE TO PROGRAMMING ERRORS INTRODUCED AFTER SET UP IN NEW LOCATION.	287.0	251.2	30.0	SEP 83	SEP 85
6 80 7949	APPLICATION OF GROUP TECHNOLOGY TO RIA MFG (CAM) THIS PROJECT IS TECHNICALLY AND FINANCIALLY COMPLETE EXCEPT FOR COMPLETION OF THE FINAL REPORT. THE TECHNOLOGY DEVELOPED UNDER THIS PROJECT WILL BE USED TO SUPPORT COMPUTER AIDED PROGRESS PLANNING AT RIA.	139.5	108.0	31.5	MAY 82	JUN 85
6 80 7963	GROUP TECHNOLOGY FOR FIRE CONTROL PARTS AND ASSEMBLIES MANUFACTURING COST ESTIMATING SOFTWARE CONVERTED TO RUN ON CDC MAINFRAME. GTSS SYSTEM RECEIVED FROM WPAFB. AN ADDITIONAL $80K HAS BEEN REQUESTED TO FINISH THIS PROJECT.	348.5	21.8	310.0	DEC 81	DEC 85
6 81 7985	SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY SEE SUBTASKS.	436.0	253.0	171.0	OCT 82	JUN 85
6 81 7985 02	BARREL BROACHING ***** DELINQUENT STATUS REPORT *****					
6 81 7985 03	HIGH SPEED MACHINING ***** DELINQUENT STATUS REPORT *****					
6 81 7985 04	SMALL ARMS WEAPONS NEW TECH-RAPID FLOW PLATING THE EFFORT DETERMINED THAT 20MM BORE SIZES CANNOT BE RAPID FLOW PLATED, AND THAT 5.56/7.62MM BARRELS COULD BE IDEAL FOR A RAPID FLOW PLATING PROCESS.				JUL 84	JUN 85
6 82 7985	SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY SEE SUBTASKS.	620.0	316.0	134.0	OCT 83	JUN 85
6 82 7985 01	SMALL ARMS WEAPONS NEW PROCESS TECH-ROTARY FORGING THE HOT ROTORY FORGE AT MAREMONT IS NOT YET EQUIPPED WITH GFM CORP MANDREL CAPACITY. THEREFORE MANDREL STUDIES ARE BEING CONDUCTED ON MAKE SHIFT SYSTEM. THE PURPOSE OF THIS STUDY IS TO DETERMINE HEAT TRANSFER TO A NUMBER OF SUPERALLOY MANDRELS.					JUN 85

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6 82 7985 05	SMALL ARMS WEAPONS NEW PROCESS TECH-HS MACHINING ***** DELINQUENT STATUS REPORT *****					OCT 84
6 84 7985 05	RECYCLE OF GUN STEEL SEE MMT 0837985-05.				JAN 85	JUN 85
6 83 7985	SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY SEE SUBTASKS.	530.0	355.0	140.0	OCT 84	JUN 85
6 83 7985 01	SMALL ARMS WEAPONS NEW PROCESS TECH-ROTARY FORGING SEE MMT 0827985-01.				OCT 86	JUN 85
6 83 7985 05	RECYCLE OF GUN STEEL RECYCLING OF ARTILLERY TUBES FOR SMALL CALIPER GUN TUBES HAS BEEN SUCCESSFUL WITH NO ADVERSE INDICATIONS. THE FEASIBILITY OF USING THIS MATERIAL FOR SMALL ARMS HAS BEEN PROVEN IN ALL RESPECTS EXCEPT EROSION LIFE TESTING.				JAN 85	JUN 85
6 83 7985 06	TRAVELLING ELECTRODE ECM RIFLING SEE MMT 6 84 7985-06.					JUN 85
6 84 7985	SMALL ARMS WEAPONS NEW PROCESS PRODUCTION TECHNOLOGY SEE SUBTASKS.	728.0	524.0	20.0	OCT 85	JUN 85
6 84 7985 01	SMALL ARMS WEAPONS NEW PROCESS TECH-ROTARY FORGING SEE MMT 0827985-01.					JUN 85
6 84 7985 04	RAPID FLOW PLATING OF GUN TUBES THE FY84 CONTRACT WAS AWARDED IN JUNE 1984. PRELIMINARY DESIGNS ARE IN PROCESS.				OCT 86	JUN 85
6 84 7985 06	TRAVELING ELECTRODE ECM RIFLING FY85/86 COMPETITIVE PACKAGE WAS SUBMITTED FOR PROCUREMENT. IT IS SCHEDULED FOR AWARD IN JULY 1985.					JUN 85
6 84 7985 07	STRAIGHTENING THE GFE PRESS FROM DIPEC IS UNSUITABLE BECAUSE OF AN ERROR. THE PRESS WAS LISTED AS A 25 TON HYDRAULIC PRESS BUT UNFORTUNATELY THE PRESS HAD BEEN MISLABELED AND WAS A MUCH SMALLER PRESS. A CONTRACT MODIFICATION HAS BEEN PREPARED * WILL BE SUBMITTED.				JAN 85	JUN 85
6 84 7985 08	TRIBOLOGY THE FY84 CONTRACT WAS AWARDED IN JUNE 1984. THE PROCESS EFFORTS WILL BE AIMED TOWARD OPTIMIZATION OF COATINGS APPLIED.				JAN 85	JUN 85

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6 85 7985	SMALL ARMS WPNS NEW PROCESS PRODUCTION TECHNOLOGY ----- JUST FUNDED. NO 301 REQUIRED. -----					
6 80 8017	POLLUTION ABATEMENT PROGRAM THE RECYCLING OF USED CUTTING FLUIDS WAS FULLY UNDERWAY. APPROXIMATELY 500 MACHINES ARE NOW BEING MONITORED. PIPING HAS BEEN INSTALLED TO PROVIDE THE RECYCLED FLUID TO ALL FLOORS. A PUMP IS BEING OBTAINED FOR THIS PURPOSE.	86.0		86.0	JAN 81	JUN 85
6 82 8024	HIGH SPEED ABRASIVE BELT GRINDING INSTALLATION OF EQUIPMENT IS CONTINUING. PROBLEMS HAVE ARISEN DUE TO BANKRUPT CONTRACTOR BUT ARE BEING RESOLVED THROUGH COOPERATION OF PROJECT LEADER AND WVA'S MAINTENANCE AND INSTALLATION PERSONNEL.	142.0		79.2	SEP 84	SEP 85
6 82 8030	MANUFACTURING GUIDE FOR ELASTOMERIC SEALS WORK CONTINUED TO ESTABLISH INHOUSE MANUFACTURING TECHNIQUES FOR NONMETALLIC SEAL FOR THE M140 GUN MOUNT. FABRICATION AND TESTING OF ELASTOMERIC SEALS, AND FABRICATION OF BACKUP RINGS OF THERMOPLASTIC AND NYLON FILLED PHENOLIC IS IN PROCESS.	123.0	21.0	55.8	MAY 83	MAR 85
6 81 8035	COATING TUBE SUPPORT SLEEVES WITH BEARING MATERIALS 410 M-1 PISTONS AND 381 M-1 FOLLOWERS HAVE BEEN PRODUCED USING THE GMAW PROCESS. A 4130 M-140 TUBE SUPPORT SLEEVE WAS EXPLOSIVELY BONDED ON THE INSIDE AND OUTSIDE DIAMETER WITH AN AL BRONZE SLEEVE. THE PROCESS WAS UNSUCCESSFUL.	200.0	18.7	179.2	JUN 82	MAY 85
6 80 8051	APPLICATION AND CONTROL OF MACHINE TOOLS (CAM) DEVELOPMENT OF OVERALL CONTROLS SYSTEMS USING THE DATA BASE CONTINUES. EXPANSION OF PROGRAMS TO RELATE SPECIFIC CUTTING TOOLS, MACHINE TOOLS + AND WORKPIECES IS BEING EVALUATED. CHANGES IN TECHNICAL REPORT HAVE BEEN COMPLETED + IT HAS BEEN SUBMITTED.	208.5	150.6	55.1	AUG 81	MAY 85
6 80 8057	DUAL RIFLING BROACH REMOVAL SYSTEM THE RIFLING BARS HAVE BEEN REMACHINED AND ARE READY FOR INSTALLATION. THE MACHINE IS BEING USED BY OPERATIONS FOR A PRODUCTION ORDER. IT SHOULD BE AVAILABLE IN MARCH 1985 AT WHICH TIME THE RIFLING BARS WILL BE INSTALLED AND THE PROJECT CONTINUED.	215.0	8.1	162.1	SEP 82	DEC 85
6 82 8102	POWDER METALLURGY FORGINGS WEAPONS COMPONENTS CONTRACT TO PRODUCE P/M FORGES SPLIT RINGS HAS BEEN LET TO BATTELLE COLUMBUS WITH PARTIAL WORK SUBCONTRACTED TO HOEGANAES CORP. MEETING HELD WITH BATTELLE, HOEGANAES AND WVA TO DETERMINE PROCEDURES FOR PRODUCING SPLIT RINGS.	110.0	74.2	28.7	SEP 84	DEC 86

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6 83 8102	APPL OF POWDER METALLURGY FORGING TO WEAPON COMPONENTS NO TECHNICAL WORK ACCOMPLISHED, CONTRACT RECENTLY BEEN LET UNDER PRIOR YEAR FUNDING.	142.0		41.1	SEP 85	SEP 86
6 83 8103	HIGH VELOCITY MACHINING WORK CONTINUED ON THE INSTALLATION AND INSTRUMENTATION OF A LATHE TO BE USED FOR MACHINING TESTS. INFORMATION WAS OBTAINED REGARDING A MAGNETIC BEARING HIGH SPEED SPINDLE MANUFACTURED IN FRANCE.	110.0		65.5	SEP 85	DEC 86
6 84 8103	HIGH VELOCITY MACHINING MONITORED PROGRESS OF WORK INVOLVING MODIFICATION TO TEST LATHE.	160.0		9.7	DEC 87	SEP 88
6 84 8105	ESTABLISH ROUGH THREAD BLANKS, 8 IN M201 BUSHING THE SLOTTING MACHINE WAS INSTALLED AND FULL ACCEPTANCE MADE. A BUBBLE MEMORY FOR THE CNC CONTROLLER WHICH WILL STORE PROGRAMS WHEN POWER IS SHUT OFF, WAS ORDERED. TOOLHOLDERS WITH MODIFIED TOOL AND CLAMPING ARRANGEMENTS ARE BEING MANUFACTURED.	292.0	199.9	81.7	SEP 83	SEP 85
6 84 8107	CREEP FEED CRUSH FORM GRINDING SEVERAL ATTEMPTS TO FINALIZE THE INSTALLATION OF EQUIPMENT HAVE FAILED DUE TO SCHEDULE CONFLICTS, COR WORKLOAD AND COR ILLNESS.	73.0		61.5	JUL 84	SEP 85
6 83 8134	ADAPTIVE CONTROL TECHNOLOGY (CAM) A SUITABLE MACHINE HAS BEEN LOCATED. A DETAILED SPECIFICATION HAS BEEN COMPLETED AND A TWO STEP PROCUREMENT PROCESS INITIATED.	495.0		100.8	SEP 85	SEP 85
6 84 8135	IN-PROCESS CONTROL OF MACHINING THIS PROJECT IS ALMOST COMPLETE. REAL TIME IN-PROCESS GAUGING WAS SUCCESSFULLY DEMONSTRATED.	906.0	685.3	220.7	OCT 82	MAR 85
6 84 8135	IN-PROCESS CONTROL OF MACHINING A NC CONTROLLER WAS SELECTED AS THE PERFERRED SYSTEM FOR TOOL/WORKPIECE PATH CONTROL. WORKPIECES ARE BEING EVALUATED TO DETERMINE THE BEST TEST PART.	841.0	557.6	10.3	FEB 84	FEB 86
6 84 8136	IMPROVED IMPULSE PROGRAMMERS FOR HYDRAULIC SIMULATORS THE IMPULSE PROGRAMMERS FOR THE HYDRAULIC SIMULATOR HAVE BEEN REDESIGNED. NEW PARTS HAVE BEEN FABRICATED AND ARE BEING INSTALLED.	80.0		44.1	SEP 83	SEP 85
6 82 8151	PORTABLE ENGRAVING SYSTEM THE PORTABLE ENGRAVER WAS DELIVERED TO WATERVLIET ARSENAL. INTERFACE BETWEEN HARDWARE AND SOFTWARE ALMOST COMPLETE. DUE TO SOFTWARE PROBLEMS DECISION MADE TO DROP GRAPHICS DISPLAY (NOT PART OF CONTRACT). MINOR PROBLEM WITH ENGRAVING CONSISTENCY.	171.0	93.1	45.3	JAN 84	SEP 85

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6 84 8153	INCREASING GUN TUBE HEAT TREATMENT CAPACITY A BASIC COMPUTER SIMULATION HAS BEEN COMPLETED WHICH CAN COMBINE VARIOUS HEAT TREAT APPROACHES. FURTHER ENHANCEMENTS ARE IN PROCESS TO ADD ADDITIONAL EVALUATION FACTORS AND TO SIMPLIFY THE I/O CAPABILITIES OF THE COMPUTER SIMULATION.	250.0		44.9	OCT 86	OCT 86
6 83 8154	COMPUTER INTEGRATED MANUFACTURING (CIM),DDNC A PILOT DNC SYSTEM (HARDWARE) HAS BEEN RECEIVED AT WVA. HARDWARE INSTALLATION HAS BEEN COMPLETED FOR THE DNC HOST SYSTEM IN THE COMPUTER ROOM AND THREE MACHINE INTERFACE UNITS ON THE SHOP FLOOR. ALL MAJOR SYSTEMS SOFTWARE. SEE MMT PROJ 6 83 8154.	442.0	326.5	115.5	DEC 83	JUN 85
6 83 8154	COMPUTER INTEGRATED MANUFACTURING (CIM) FOR CANNON SEE MMT PROJECT 6 81 8154. HAS BEEN DELIVERED, INSTALLED AND TESTED WITH THE EXCEPTION OF THE MIS MODULE. SYSTEMS PROGRAMMER TRAINING, ALL SITE PREPARATION, OPERATING PROCEDURES AND ACCEPTANCE TEST PROCEDURES HAVE BEEN COMPLETED.	650.0	357.1	187.1	SEP 84	SEP 85
6 84 8154	COMPUTER INTEGRATED MANUFACTURING (CIM) FOR CANNONS A SPECIFICATION WAS WRITTEN TO HAVE AN 5 AXES MACHINING CENTER RETROFITTED WITH AN APPROPRIATE CNC COMPATIBLE WITH WATERVLIET ARSENAL'S DNC SYSTEM. A RFP WILL BE RELEASED IN THE NEAR FUTURE.	450.0		90.7	SEP 86	SEP 86
6 81 8165	STANDARDS FOR DIAMOND TURNED OPTICAL PARTS NO SIGNIFICANT WORK ACCOMPLISHED UNDER THIS PROJECT DURING THIS REPORT PERIOD. SEE PROJECT 6828165 FOR EFFORT STATUS.	189.0	84.0	105.0	DEC 82	JUN 85
6 82 8165	STANDARDS FOR DIAMOND TURNED OPTICAL PARTS TECHNICAL WORK HAS BEEN COMPLETED. FINAL REPORT IS BEING PREPARED BY NAVAL WEAPONS CENTER AT CHINA LAKE, CA. ACCEPT/REJECT CRITERIA HAS NOT BEEN CORRELATED WITH FUNCTIONAL CRITERIA. IMPLEMENTATION PLANS ARE BEING REVISED. PROTOTYPE SYSTEM WORKS.	258.0	125.0	125.0	OCT 83	JUN 85
6 81 8209	PILOT PRODUCTION OF GRADIENT INDEX OPTICS THIS EFFORT HAS UNDERGONE AN END-ITEM CHANGE, EYE-PIECE DESIGN, REDESIGN, DELAY, AND A $100K COST-GROWTH. THE REDESIGN IS FINISHED AND THE LENSES ARE BEING FABRICATED. THE PROJECT OFFICER IS REQUESTING A SECOND FUNDING INCREASE TO COMPLETE PHASE III.	374.0	334.0	40.0	MAY 83	JUL 85
6 82 8231	IMPROVED CASTING TECHNOLOGY (CAD/CAM) A COMPUTER DATA BASE FOR SAND CONDITIONS HAS BEEN COMPLETED AND IS BEING IMPLEMENTED. A FOUNDRY SAND TEST DATA SHEET HAS BEEN DESIGNED FOR RECORDING THE DATA DURING TESTING.	250.0		70.7	MAR 84	FEB 86
6 83 8231	IMPROVED CASTING TECHNOLOGY (CAD/CAM) ***** DELINQUENT STATUS REPORT *****	136.0		4.7	FEB 85	SEP 85

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6 84 8231	IMPROVED CASTING TECHNOLOGY NO SIGNIFICANT WORK ACCOMPLISHED ON THIS PROJECT DURING THIS REPORT PERIOD. SEE PROJECT 6828231 FOR EFFORT STATUS.	122.0		5.6	MAR 86	DEC 86
6 84 8238	BORING BREECH RING LUGS TWELVE DOUBLE END HORIZONTAL DRILLING MACHINES WERE DETERMINED TO BE INADEQUATE FOR THE USE OF INDEXIBLE CARBIDE INSERT DRILLS. THE USE OF INDEXIBLE DRILLS WAS ALSO QUESTIONED. AN RFP FOR INDEXIBLE DRILLS THAT OFFSETS AND BORES TO SIZE IS UNDERWAY.	203.0	12.5	116.8	AUG 84	DEC 85
6 84 8240	COMPUTER DIAGNOSTICS AND CONTROL FOR BORE GUIDANCE THE OBJECTIVE OF THIS PROGRAM IS TO ATTACH A MICROCOMPUTER TO A GUIDED BORE LATHE. A PROSPECTIVE CONTRACTOR HAS BEEN SELECTED. PRIOR TO CONTRACT AWARD THE CONTRACTOR MUST PASS A GOVERNMENT AUDIT.	308.0		44.3	JUN 85	MAY 86
6 84 8241	COMPUTER DIAGNOSTICS & CONTROL APPL TO BORE GUIDANCE (CAM) SEE MMT PROJECT 6 82 8241.	85.0		25.8	MAR 86	MAY 86
6 84 8242	COMPUTER CONTROL FOR ELECTRODEPOSITION SYSTEMS PROGRAMMING FOR CONTROL, MONITORING AND RECORDING OF THE OPERATION OF THE 8 INCH CHROME PLATING FACILITY IS UNDERWAY. THE GRAPHIC DISPLAY UNIT HAS BEEN INTEGRATED INTO THE SYSTEM AND VISUAL DISPLAY OF THE OPERATION IS BEING PROGRAMMED.	260.0	27.0	175.0	SEP 84	SEP 85
6 84 8244	OPTIMIZE THE HEAT TREATMENT OF ROTARY FORGE TUBES TWENTY PREFORMS HAVE BEEN FORGED INTO 105MM M68 GUN TUBES AND HEAT TREATED. THE MECHANICAL PROPERTY TESTING OF EACH TUBE IS COMPLETE.	350.0	63.0	103.1	MAR 84	SEP 85
6 84 8245	APPLICATION OF EROSION RESIS LOW CONTRACTION CHROMIUM PLATE THE 50K AMP RECTIFIER IS INSTALLED AND READY FOR TEST. THE PUMP-THRU FACILITY HAS BEEN REVAMPED TO PLATE L.C. CHROMIUM AND WILL UNDERGO TESTING TO DETERMINE LEAKS, RATE OF SOLUTION HEATING AND FLOW RATES.	195.0	49.0	133.9	SEP 84	SEP 85
6 84 8248	APPLICATION OF HIGH-RATE CUTTING TOOLS TURNING TOOL INVESTIGATION CONDUCTED ON SELECTED MULTI-COATED CARBIDE INSERTS. PROCEDURES TO CORRELATE MACHINING PROPERTIES ESTABLISHED AND IMPLEMENTED. PHOTOGRAPHIC DOCUMENTATION MADE OF TEST INSERTS.	102.0		99.3	JUN 83	JUN 85
6 84 8249	SHORT-CYCLE HEAT TREATMENT OF WEAPON COMPONENTS SPECIMENS ARE BEING MACHINED FROM 4140, 4330, 8620 AND GUN BARREL STEEL. SPECIMENS WILL BE CAST USING WOOD PATTERNS. SPECIMENS HAVE BEEN DESIGNED TO PROVIDE DATA REGARDING THE RELATIONSHIPS BETWEEN COMPOSITION CONFIGURATION AND THICKNESS OF STEEL.	152.0		25.9	JUN 85	AUG 85

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3 80 6249	SHORT-CYCLE HEAT TREATMENT OF WEAPON COMPONENTS A COMPUTER PROGRAM DEVELOPED BY AMAX MATERIAL RESEARCH CENTER WILL BE USED. A PROGRAM LISTING AND SAMPLE RUNS WRITTEN IN ANSI FORTRAN AND FOR THE IBM AND/OR APPLE BASIC VERSION WERE RECEIVED. RIA PERSONNEL WILL MODIFY PROGRAM FOR OUR COMPUTER SYSTEM.	165.0			MAR 86	MAR 86
[illegible] 6250	IMPROVED FABRICATION OF RECOIL WEAR SURFACES HISTORICAL RECORDS OF PARTICLE SAMPLES WERE EXAMINED TO OBTAIN STATISTICS ON SYSTEM FAILURE. ANALYSIS IS BEING DONE WHERE THE M178 SYSTEM HAS SEVERE CONTAMINATION PROBLEMS. AUTHORITIES ON MACHINING STRESSES AND PRESSURE CLEANING ARE BEING CONTACTED.	28.0		5.9	DEC 84	MAR 85
[illegible]	IMPROVED FABRICATION OF RECOIL WEAR SURFACES ----- JUST FUNDED. NO 301 REQUIRED. -----					
[illegible]	IMPROVED MELTING PRACTICES CONTRACT HAS BEEN AWARDED AND THE SOW HAS BEEN APPROVED.	193.0	5.1	116.8	JUN 83	SEP 85
[illegible]	IMPROVED MELTING PRACTICES A MODIFIED SOW ALONG WITH SPECIFICATIONS WAS SENT TO PROCUREMENT.	164.0		54.0	FEB 85	SEP 85
[illegible]	INDUCTION HEATING OF A VARYING DIAMETER PREFORM IPE-CHESTON COMPANY WAS AWARDED A CONTRACT TO MODIFY THE POWER CONTROL. THE MODIFICATION IS TO BE COMPLETED APRIL 1985.	301.0	53.9	123.0	MAR 84	SEP 85
[illegible]	MACHINE TOOL DYNAMIC MEASUREMENTS AND DIAGNOSTICS ANTICIPATED DATES FOR DELIVERY, INSPECTION, USER TRAINING, AND IMPLEMENTATION OF SYSTEM WERE ESTABLISHED IN NOVEMBER MEETING WITH CONTRACTOR PERSONNEL. AOD USER PERSONNEL WERE ALSO SELECTED AND ASSIGNED RELATIVE TO THIS PROJECT.	250.0		92.0	APR 84	SEP 85
[illegible]	AUTOMATED SURFACE COATING OF CANNON - PAINTING DISCUSSIONS HAVE BEEN HELD ON A VARIETY OF CONCEPTS AND POTENTIAL AUTOMATION LINE LAYOUTS. THE IMPLICATIONS AND COMPLICATIONS OF APPLYING CARC IS ALSO UNDERWAY.	80.0		62.7	JAN 84	SEP 85
[illegible]	IMPROVED MANUFACTURING PROCESS FOR FIRE CONTROL REGISTERS COMPLETED CONTACT W/ ELECTRICAL AND ELECTRONIC HARDWARE FIRMS. THE SCOPE OF WORK IS BEING PREPARED FOR THE ELECTRICAL EQUIPMENT NEEDED FOR AN ANALOG LEVELING MEASURING MACHINE. WORK IS CONTINUING ON A MEASURING MACHINE BASE.	261.0		147.8	SEP 84	SEP 85
[illegible]	PRODUCTION METHODS FOR OPTICAL WAVEGUIDES BECAUSE MARK MENTZER RESIGNED, WESTINGHOUSE IS REVISING THE SCHEDULE. ED MARKLEY IS NOW THE PE. THE CHANNEL WAVEGUIDE AND DIRECTIONAL COUPLER DESIGN IS COMPLETE. PROTOTYPES ARE BEING FABRICATED.	480.0	306.0	174.0	JAN 83	APR 85

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6 84 8262	PRODUCTION METHODS FOR OPTICAL WAVEGUIDES THE RESULTS OF THE OPTICAL INDEX PROFILE MEASUREMENTS SHOWED THAT THE PROCESS PRESCRIPTION WAS NOT SATISFACTORY. IT WAS REVISED. A 2ND SET OF WAVEGUIDES WAS DELIVERED TO ARDC FOR EVALUATION.	155.0		123.2	APR 85	APR 85
6 85 8262	PRODUCTION METHODS FOR OPTICAL WAVEGUIDES THE SPECIFICATION OF EQUIPMENT NEEDED TO PRODUCE AND CHARACTERIZE GAAS IS COMPLETED. THE PREPARATION FOR PURCHASE IS COMPLETE. THERE IS AN MOA BETWEEN ARDC AND AIR FORCE WEAPON LAB FOR RADIATION DAMAGE RESISTANCE STUDIES.	156.0			DEC 85	DEC 85
6 82 8263	PRODUCTION/IN-PROCESS INSPECTION OF LASER RANGEFINDERS THE TECHNICAL WORK ON THIS EFFORT HAS BEEN COMPLETED. THE UTILIZATION OF THIS SYSTEM IN A PRODUCTION AND ENVIRONMENTS WILL BE USEFUL IN QUANTIFYING LASER RANGEFINDER PERFORMANCE. IT WILL ALSO BE USEFUL AS A DIAGNOSTIC TOOL.	355.0	100.0	249.0	AUG 83	MAY 85
6 82 8267	STRESS PEENING OF HELICAL COMPRESSION SPRINGS SPRINGS OF THREE DIFFERENT WIRE SIZES HAVE BEEN FABRICATED, CONVENTIONALLY PEENED OR STRESS-PEENED AND FATIGUE TESTED. DRAFT FINAL REPORT HAS BEEN RECEIVED FOR REVIEW. FINAL REPORT SHOULD BE DISTRIBUTED IN FEB 1985.	139.5	80.5	59.0	AUG 83	FEB 85
6 81 8305	INTEGRATED MANUFACTURING SYSTEM (IMS) - (CAM) SCOPE OF WORK WAS SENT OUT FOR BID IN A REQUEST FOR PROPOSAL. RESPONSES TO THE RFP HAVE BEEN RECEIVED AND CONTRACTOR SOURCE SELECTION IS IN PROGRESS.	235.0		78.6	JUL 82	SEP 85
6 82 8305	INTEGRATED MANUFACTURING SYSTEM (IMS) - (CAM) NO SIGNIFICANT WORK ACCOMPLISHED UNDER THIS PROJECT. SEE PROJECT 6818305 FOR EFFORT STATUS.	204.0		18.5	SEP 86	SEP 85
6 83 8305	INTEGRATED MANUFACTURING SYSTEM (IMS) - (CAM) THIS PROJECT IS COMPLETED. NO SIGNIFICANT ACCOMPLISHMENT DURING THIS REPORT PERIOD. SEE PROJECT 6818305 FOR EFFORT STATUS.	75.0		75.0	OCT 84	SEP 85
6 84 8305	INTEGRATED MANUFACTURING SYSTEM (IMS) (CAM) NO SIGNIFICANT WORK ACCOMPLISHED UNDER THIS PROJECT. SEE PROJECT 6 81 8305 FOR EFFORT STATUS.	1,677.0			SEP 85	SEP 85
6 85 8305	INTEGRATED MANUFACTURING SYSTEM - IMS ----- JUST FUNDED. NO 301 REQUIRED. -----					
6 82 8306	ON-LINE PRODUCTION INFORMATION SYSTEM (CAM) CONTRACT AWARDED FOR STRUCTURED ANALYSIS OF COMPUTER SYSTEMS IN PLANNING AND CONTROL FUNCTIONS. INTERVIEWS INITIATED WITH RIA MANUFACTURING SYSTEMS AND FUNCTIONAL PERSONNEL. REVIEW AND EVALUATION OF EXISTING SYSTEMS AND ENHANCEMENTS COMPLETED.	70.0	60.0	6.6	OCT 84	MAY 85

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6 85 6306	ON-LINE PRODUCTION INFORMATION SYSTEM - RIA (CAM) SEE PROJECT 6828306 FOR SIGNIFICANT ACCOMPLISHMENTS. PROTOTYPE TOOL CONTROL SYSTEM ON A UNIX BASED MICROCOMPUTER WAS PHASED INTO USE. THE SYSTEM MAINTAINS INVENTORY LEVELS, IDENTIFIES TOOL CRITERIA, IDENTIFIES TOOL REORDERING, REQUISITIONS AND USE.	200.0	112.1		SEP 84	OCT 85
6 84 6306	ON-LINE PRODUCTION INFORMATION SYSTEM - RIA (CAM) NO SIGNIFICANT ACCOMPLISHMENTS DURING THIS REPORTING PERIOD. REFER TO PROJECT 6828306 AND 6838306 FOR EFFORT STATUS.	571.0		0.9	OCT 85	FEB 86
6 84 6323	SPRAY-AND-FUZE PROCESSING OF ARMAMENT COMPONENTS SEVERAL COATING MATERIALS HAVE BEEN SELECTED AND APPLIED ON TEST COUPONS BY POWDER PLASMA SPRAY METHOD. VARIOUS FUSION PROCESSES SUCH AS VACUUM HEAT TREAT, INDUCTION HEAT AND LASER HEAT TREAT ARE BEING APPLIED AND EVALUATED.	200.0	103.3	81.4	APR 85	JAN 85
6 85 6323	SPRAY-AND-FUZE PROCESSING OF ARMAMENT COMPONENTS AFTER THE COATING PROCESSES ARE EVALUATED BASED ON PRELIMINARY TEST MATERIALS, THE FINAL COATING WILL BE APPLIED ON ACTUAL M140 RECOIL PISTON, EVALUATED AND PROCESS OPTIMIZED. THIS EFFORT WILL BEGIN IN THE JAN-FEB 85 TIME FRAME.	48.0			DEC 85	DEC 85
6 84 6324	PROCESS CONTROLS FOR POWDERED METAL WEAPON COMPONENTS TWELVE GROUPS OF POWDER FORGED BLANKS WERE MADE FROM A 4600 STEEL POWDER, REPRESENTING 4 PROCESSING LEVELS FOR EACH OF 3 CARBON LEVELS. HARDENABILITY, TENSILE AND IMPACT PROPERTIES WERE DETERMINED FOR EACH GROUP AT 2 TO 3 HARDNESS LEVELS.	161.0	118.5	36.0	SEP 84	JUL 85
6 84 6324	PROCESS CONTROLS FOR P/M WEAPON COMPONENTS CONTRACT AWARDED TO SPS TECHNOLOGIES ON 17 SEP 84. AN ORDER PLACED WITH HOEGANAES TO POWDER FORGE FOUR GROUPS OF BLANKS.	160.0	66.2	56.1	JUN 85	SEP 85
6 85 6324	PROCESS CONTROLS FOR P/M WEAPON COMPONENTS FIRST STATUS REPORT. PROCUREMENT PACKAGE IN PROCUREMENT.	300.0			SEP 85	SEP 85
6 84 6326	APPLICATION OF CORROSION RESISTANT COATINGS A STUDY WAS MADE TO IDENTIFY THE EXTENT OF THE CORROSION AND WEAR OF PARTS IN THE M16 RIFLE. A CONTRACT WAS AWARDED TO SYNER TECH INC. TO WORK ON THE UNIQUE CORROSION AND WEAR RESISTANT PROBLEM.	185.0	25.0	97.6	FEB 85	SEP 85
6 84 6329	FIRE CONTROL OPTICAL DEVICES NEW PROCESS PRODUCTION TECH A CONTRACT/HAS BEEN LET TO OPTO MECHANIK INC AND ONE HAS BEEN LET TO OPTIC ELECTRONIC CORP. THESE MOB FIRE CONTROL PRODUCERS WILL STUDY THEIR RESPECTIVE OPERATIONS TO ASSESS THE MANUFACTURING PROBLEMS THAT THEY ARE EXPERIENCING.	424.0	275.0	90.0	APR 85	JUL 85

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6 [illegible] 8329	IPI - FIRE CONTROL OPTICAL DEVICES NEW PROCESS PROD TECH SPECIFIC FINDINGS AND PROPOSED SOLUTIONS RESULTING FROM THE STUDY WILL BE REPORTED NEXT PERIOD. THESE ARE USUALLY KNOWN BEFORE THE EFFORT IS FUNDED. ANY TOOLING RESULTING FROM THIS EFFORT WILL BE SELF-IMPLEMENTING. THE RECOMMENDATIONS WILL DRIVE PIF.	275.0			DEC 85	DEC 85
6 [illegible] 8341	HOLLOW CYLINDER CUT OFF MACHINE ACQUISITION OF AN ABRASIVE CUT-OFF MACHINE SUITABLE FOR THICK WALL CANNONS IS UNDERWAY. CHANGES TO THE BASIC MACHINE DESIGN HAVE BEEN REQUESTED AND ARE BEING PROCESSED THRU PROCUREMENT CHANNELS.	535.0	341.1	11.8	SEP 84	MAY 86
6 85 8352	SKIVING (METAL SHAVING) GUN TUBE BORES MATERIAL HAS BEEN PREPARED TO CONTRACTOR SPECIFICATION AND SHIPPED TO HIS FACILITY.	120.0	20.0	96.2	SEP 84	SEP 85
6 [illegible] 8354	CUTTING OF HOT ROTARY FORGE TUBES AN AUTOMATIC ABRASIVE CUT-OFF MACHINE IS CURRENTLY UNDER CONTRACT AND BEING BUILT. MODIFICATION TO THE CONTRACT IS BEING EVALUATED BY PROCUREMENT TO INCORPORATE REQUESTED CHANGES TO THE BASIC MACHINE. IF MODIFICATION IS APPROVED NEW DELIVERY AUG 85.	414.0	330.0	42.2	SEP 85	MAY 86
6 84 8370	AUTO INSP AND PROC CONTROL OF WPNS PARTS MFG SEE 6 85 8370 FOR PROJECT STATUS.	300.0	221.0	48.0	SEP 86	SEP 86
6 85 8370	AUTO INSP * PROCESS CONTROL OF WPNS PARTS MFG (CAM) A BENCH SET UP OF AN ELECTRO-OPTICAL FLAW DETECTION SYSTEM WAS SUCESSFULLY DEMONSTRATED. THIS TECHNIQUE WILL BE DEVELOPED INTO AN AUTOMATIC LASER BARREL STRAIGHTNESS INSPECTION DEVICE. THE DEMONSTRATION IS SCHEDULED FOR AUG 1985.	225.0			SEP 86	SEP 86
6 84 8402	WARM FORGING FOR WEAPON COMPONENTS ***** DELINQUENT STATUS REPORT *****	227.0	100.0	20.0	SEP 85	SEP 85
6 85 8402	WARM FORGING FOR WEAPON COMPONENTS ----- JUST FUNDED. NO 301 REQUIRED. -----					
6 84 8403	DESIGN CRITERIA FOR HARDENING (CAD/CAM) ***** DELINQUENT STATUS REPORT *****	261.0		4.1	SEP 85	SEP 85
6 82 8416	FLEXIBLE MACHINING SYSTEM - RIA (CAM) A PROCUREMENT SPECIFICATION FOR DETAILED FMS ENGINEERING DESIGNS AND THE FMS ITSELF WAS PREPARED.	138.0	100.0	2.8	SEP 83	APR 85
6 84 8416	FLEXIBLE MFG SYSTEMS W/SPECIAL TOOLING SEE SUBTASKS.	260.0		16.0	OCT 85	FEB 86

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6 84 0416 01	FLEXIBLE MACHINING SYSTEM A PROCUREMENT STRATEGY WAS DEVELOPED AND APPROVED. TWO OR THREE DETAILED FMS DESIGNS WILL BE PURCHASED DURING THE NEXT REPORTING PERIOD.	260.0		16.0	OCT 85	FEB 86
6 84 0416 02	FLEXIBLE MFG SYSTEM W/SPECIAL TOOLING RIA-CAM ***** DELINQUENT STATUS REPORT *****				SEP 85	SEP 85
6 85 0416	FLEXIBLE MFG SYSTEM W/SPECIAL TOOLING - RIA ----- JUST FUNDED. NO 301 REQUIRED. -----					
6 85 0416 02	FLEXIBLE MFG SYS W/SPECIAL TOOLING - RIA (CAM) ----- JUST FUNDED. NO 301 REQUIRED. -----					
6 84 0426	APPLICATION OF LASERS TO CANNON MANUFACTURE A PROPOSAL HAS BEEN SUBMITTED FOR THE PURCHASE OF AN ND-YAG LASER ENGRAVER. A CONTRACT HAS BEEN AWARDED TO SPECTRA PHYSICS TO PROVIDE SERVICES ON HEAT TREATING THREE DIFFERENT PARTS USING A 6KW CONTINUOUS WAVE LASER.	622.0	3.5	64.0	SEP 86	SEP 86
6 84 0430	AUTOMATED WELDING OF ROTARY FORGE HAMMERS REQUEST FOR OUTSIDE CONTRACT HAVE BEEN PREPARED AND SENT TO PROCUREMENT. SPECIFICATIONS ARE BEING PREPARED FOR AN AUTOMATED MIG-ARC GRUGING SYSTEM.	137.0		30.8	SEP 86	NOV 85
6 84 0431	AUTOMATED WELDING OF BORE EVACUATORS SPECIFICATIONS AND WORK PARAMETERS ARE BEING READIED FOR PROCUREMENT.	215.0		22.7	SEP 86	JUL 86
6 84 0433	IN PROCESS CONTROL OF SEAL HEAT TREAT SYSTEM (CAM) AN ACCEPTABLE BIDDER HAS NOT BEEN OBTAINED FOR STUDIES OF THE TWO FURNACES IN THE SEAL HEAT TREAT SYSTEM. THE RESULTS OF THESE TEMPERATURE STUDIES MUST BE OBTAINED BEFORE THE SPECIFICATION CAN BE COMPLETED FOR THE COMPUTER MONITOR AND CONTROL.	165.0		9.0	JUN 86	SEP 86
[illegible] 434	EDDY CURRENT INSPECTION OF GUN TUBES TESTS WERE CONDUCTED USING THE 165MM SENSOR HEAD ON A SECTION OF 4340 SEAMLESS STEEL TUBING. THE TESTS HAVE PROVED INCONCLUSIVE AS TO WHETHER THE EDDY CURRENT DEVICE WILL BE EFFECTIVE IN LOCATING CRACKS.	118.0		21.2	JUL 85	FEB 86
[illegible] 435	BENCH CYCLE PROFILE MEASUREMENT SYSTEM SEE 6 85 0436 FOR PROJECT STATUS.	148.0		16.7	SEP 85	JUN 85
6 85 0436	BENCH CYCLE PROFILE MEASUREMENT SYSTEM A COMPLETE SET OF SPECIFICATIONS WERE SUBMITTED TO PROCUREMENT. A CONTRACT WILL BE AWARDED USING BOTH FY84 AND FY85 FUNDS.	147.0			JUL 86	JUL 86

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6 84 0437	DENSIFICATION OF WEAPON CASTINGS (HIP) EVALUATION OF SMALL SPECIMENS IS CONTINUING TO DETERMINE THE CORRECT PROCESSING PARAMETERS. MUZZLE BRAKE CASTINGS WITH POROSITY ARE AWAITING HIPPING AND EVALUATION.	108.0	75.0	19.0	SEP 86	SEP 86
6 84 0439	IMPROVED RIFLING PROCEDURES TITANIUM NITRIDE COATING FOR HIGH SPEED STEEL RIFLING CUTTERS WAS EVALUATED AND DETERMINED TO BE ADVANTAGEOUS. A REQUEST FOR SERVICE IS BEING PROCESSED TO HAVE A SET OF 105MM M68 BROACHES COATED WITH TITANIUM NITRIDE.	80.0		45.3	SEP 85	SEP 85
6 84 0440	BRAIDED PROCESS FOR BORE EVACUATOR A BRAIDING MACHINE WAS PURCHASED AND INSTALLED. A ROBOT HAS BEEN ORDERED, AND ACTION WAS INITIATED TO PURCHASE A RESIN ACTUATOR.	260.0	111.6	129.6	SEP 84	JUN 86
6 85 0449	OPTIMAL RIFLING CONFIGURATION FOR CR PLATING ----- JUST FUNDED. NO 301 REQUIRED. -----					
6 84 0473	APPL FUSED SALT PROCESS TO COAT TANTALUM ON L CAL LINERS APPROPRIATE DOCUMENTATION FOR SPECIFIC EQUIPMENT TO FABRICATE AND CONTROL A FUSED SALT BATH IS 95% COMPLETE. DESIGN OF THE PROCESSING UNIT HAS BEEN COMPLETED. SITE LAYOUT AND CONSTRUCTION DETAILS ARE BEING DEVELOPED.	242.6	145.0	33.1	SEP 85	SEP 85
6 85 0473	APPL FUSED SALT PROCESS NO ACTIVITY CAN BE REPORTED AS OF THIS DATE.	100.0			SEP 86	SEP 86
6 84 0474	APPL OF PARTIAL REFRACTORY LINERS TO CANNON TUBES THE SOW TO PROCURE INDUCTION HEATING AND WORK HANDLING EQUIPMENT WAS PREPARED AND SUBMITTED. A BROACHING FIXTURE WAS DESIGNED AND PROCUREMENT ACTION WAS INITIATED. THE DESIGN LAYOUT FOR THE PROTOTYPE FACILITY WAS STARTED.	389.0	232.9	44.1	SEP 86	SEP 86
6 85 0474	APPL OF REFRACTORY LINERS TO CANNON TUBES NO REPORTABLE EFFORT HAS BEEN MADE DURING THIS REPORTING PERIOD.	118.0			SEP 86	SEP 86
6 85 0511	CASTING OF ANTIFRICTION METAL COMPONENTS ----- JUST FUNDED. NO 301 REQUIRED. -----					
6 85 0544	WIRE E.D.M. MACHINING OF RIFLING BROACHES COORDINATION BETWEEN THIS PROJECT AND AN EXISTING EQUIPMENT ACQUISITION ACTION IS CONTINUING. IT IS INTENDED THAT THIS PROJECT WILL MODIFY THE INCOMING EQUIPMENT TO SATISFY SEVERAL REQUIREMENTS.	70.0			JAN 86	JAN 86

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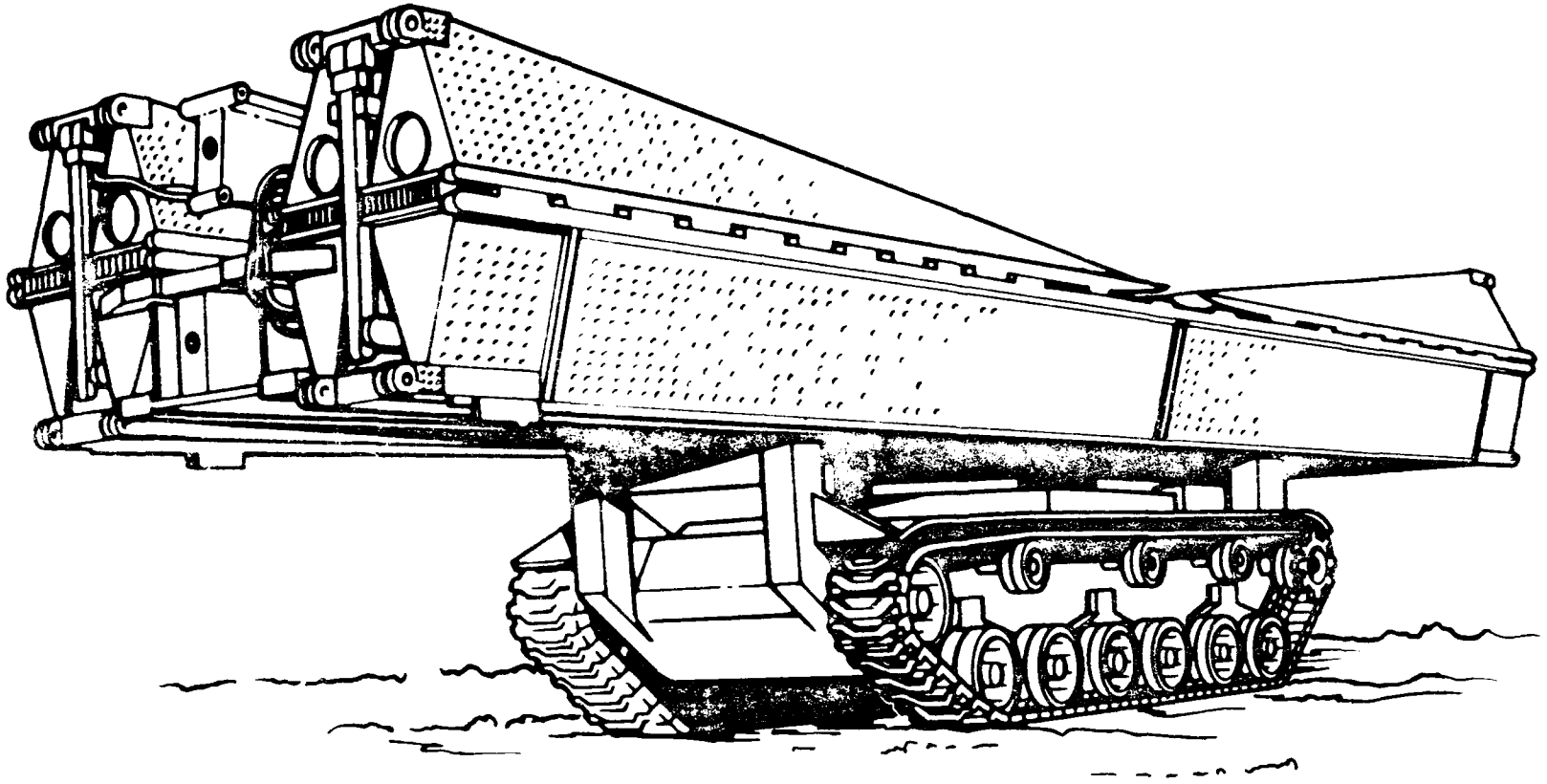
6 83 8946	MACHINERY CONDITIONS SURVEILLANCE SYSTEM ENGINEERING STUDY AND SYSTEM SPECS HAVE BEEN COMPLETED. STEP ONE OF TECH PROPOSAL TO BE OPENED DURING FEB 1985.	253.0			SEP 87	SEP 87
6 83 8952	ELECTROPOLISHING TO IMPROVE TUBE FATIGUE LIFE ----- JUST FUNDED. NO 301 REQUIRED. -----					
6 83 8953	CIM FOR CANNON CAD/CAM/COMM AN EVALUATION OF THE CURRENT OPERATIONS WAS COMPLETED. A TECHNICAL APPROACH STUDY WAS COMPLETED AND IDENTIFIED THE STATE-OF-THE-ART CAE/CAM/COMM TECHNOLOGIES AS THEY APPLIED TO THE WATERVLIET ARSENAL REQUIREMENT. LOCAL AREA NETWORK PLANS INITIATED.	1,010.0			JAN 86	JAN 86
6 84 8501	APPLICATION OF COUNTER HOLDER EQUIPMENT TO ROTARY FORGING AN ORDER HAS BEEN PLACED TO PURCHASE HOLLOW PREFORMS OF THREE DIFFERENT SIZES TO BE USED IN TESTING COUNTER HOLDER.	190.0			DEC 85	DEC 85
6 84 8513	GENERIC GUN GYNMASTICATOR THIS PROJECT WAS JUST STARTED.	105.0			SEP 88	SEP 88
6 83 8603	ROBOTIC WELDING - RIA ----- JUST FUNDED. NO 301 REQUIRED. -----					
6 83 8606	APPLICATION OF FLUIDIZED BED HEAT TREATMENT ----- JUST FUNDED. NO 301 REQUIRED. -----					
6 84 8645	MANUFACTURE OF MULTI-LUG BREECH MECHANISMS INITIAL ANALYSIS HAS DETERMINED THAT MODIFICATION TO THE PREVIOUSLY DEVELOPED CREEP FEED GRINDING PROCESS MAY BE FEASIBLE. ALTERNATE EQUIPMENT AND ADDITIONAL METHODS WORK IS ANTICIPATED.	80.0			JAN 86	JAN 86
6 83 8623	A THREE DIMENSIONAL NON-CONTACT MEASURING SYSTEM THE PURCHASE DESCRIPTION HAS BEEN PREPARED AND IS IN THE PROCESS OF BEING REVIEWED BY VARIOUS ARSENAL SECTIONS.	125.0			DEC 86	DEC 86



TROOP SUPPORT COMMAND
(TROSCOM)

AMRDL
US Army Applied Technology Laboratory
Army Research Technology Lab (AVSCOM)
ATTN: DAVDL-ATL-ATS/J. Waller
Fort Eustis, VA 23604

C: 804 878-5921/2401
AV: 927-5921/2401

AVSCOM
US Army Aviation Systems Command
ATTN: AMSAV-PEC/Mr. Fred Reed
4300 Goodfellow Blvd.
St. Louis, MO 63120

C: 314 263-3079/3080
AV: 693-3079/3080

CECOM
US Army Communications & Electronics Command
ATTN: AMSEL-POD-P-G/Mr. Al Feddeler
AMSEL-PC-SI-I/Mr. Leon Field
Fort Monmouth, NJ 07703

C: 201 535-4926
AV: 995-4926
C: 201 532-4035
AV: 992-4995

DESCOM
US Army Depot Systems Command
ATTN: AMSDS-RM-RMT/Mr. Mike Ahearn
Chambersburg, PA 17201

C: 717 263-6591
AV: 238-6591

ERADCOM
US Army Electronics R&D Command
ATTN: AMLDL-PS-SP/Mr. Harold Garson
2800 Powder Mill Road
Adelphi, MD 20783

C: 202 394-3812
AV: 290-3812

HDL
Harry Diamond Laboratories
ATTN: SLCHD-PO-P/Mr. Julius Hoke
2800 Powder Mill Road
Adelphi, MD 20783

C: 202 394-1551
AV: 290-1551

IBEA
US Army Industrial Base Engineering Activity
ATTN: AMXIB-M/Mr. James Carstens
Rock Island, IL 61299-7260

C: 309 782-5113
AV: 793-5113

MICOM
US Army Missile Command
ATTN: AMSMI-RT/Mr. Bobby Park
Redstone Arsenal, AL 35898

C: 205 876-2147
AV: 746-2147

RIA
Rock Island Arsenal
ATTN: SMCRI-ENM-Mr. J. W. McGarvey
Rock Island, IL 61299-5000

C: 309 782-4142
AV: 793-4142

TACOM
US Army Tank-Automotive Command
ATTN: AMSTA-RYM/Mr. Donald Cargo
Warren, MI 48090

C: 313 574-8709
AV: 786-6191

ARMY MMT PROGRAM REPRESENTATIVES

Department of the Army
ODCSRDA
ATTN: DAMA-PPM-P/LTC S. Marsh
Room 3C400, The Pentagon — C: 202 695-0507
Washington, DC 20310 — AV: 225-0506

HQ, AMC
US Army Materiel Command
ATTN: AMCMT/Mr. F. Michel
5001 Eisenhower Avenue — C: 202 274-8284/8298
Alexandria, VA 22333-0001 — AV: 284-8284/8298

AMCCOM
US Army Armament, Munitions & Chemical Command
ATTN: AMSMC-PBS-A (R)/Mr. Carrol Schumacher — C: 309 782-3517/3665
Rock Island, IL 61299-6000 — AV: 793-3517/3665

US Army Armament, Munitions & Chemical Command
Armament Research and Development Center
ATTN: AMSAR-PMP-P/Mr. Donald J. Fischer — C: 201 724-6092
Dover, NJ [illegible] — AV: 880-6092

US Army Armament, Munitions & Chemical Command
Chemical Research and Development Center
ATTN: AMSCB-PMI/Mr. John Kurtz
Building E[illegible] — C: (301) 724-3418/3586
Aberdeen Proving Grounds, MD 21010 — AV: 584-3418/3586/3010

US Army Armament, Munitions & Chemical Command
Production Base Modernization Agency
ATTN: AMSMC-PB (D)/Mr. Joseph Taglairino — C: 201 724-3560/3563
Dover, NJ 07801 — AV: 880-3560/3563

AMC Intern Training Center
ATTN: AMXMC-ITC-E/Mr. Mickey Carter
Red River Army Depot — C: 214 838-2001
Texarkana, TX 75507 — AV: 829-2001

AMETA
US Army Management Engineering Training Activity
ATTN: AMXOM-OE/Mr. Paul Wagner — C: 309 782-4041
Rock Island, IL 61299 — AV: 793-4041

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

APPENDIX IV:

ARMY MMT PROGRAM REPRESENTATIVES

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.

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 84 RCS DRCMT-301

PROJ NO.	TITLE + STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
4 85 6107	IMPROVED MGT TRACK PROJECT WORK WAS DIVIDED INTO TWO TASKS. A CONTRACT FOR TASK 1 WAS PLACED, AND A REQUEST FOR PROCUREMENT OF CONTRACT FOR PHASE 2 IS IN PROCESS.	450.0	160.0	15.0	SEP 85	SEP 85
4 84 6121	CAD/CAM FOR THE BRADLEY FIGHTING VEHICLE SEE INDIVIDUAL SUBTASKS ON 4 84 6121.	606.0	580.0	8.0	JAN 86	JAN 86
4 84 6121 01	ROBOTIC WELDING THE FOLLOWING TASKS WERE COMPLETED. PROGRAM PLAN APPROVED, CONSTANT CURRENT POWER SUPPLY INSTALLED, WIRE FEEDER MODIFIED, SAMPLE PLATES FABRICATED, LITERATURE SURVEY STARTED AND VENDORS LIST MADE FOR TORCHS AND WIRE FEEDERS.	606.0	580.0	8.0	JAN 86	JAN 86
4 85 6121	CAD/CAM FOR THE BRADLEY FIGHTING VEHICLE ----- JUST FUNDED. NO 301 REQUIRED. -----					
4 85 6123	CERAMIC TURBOCHARGER ROTOR A PROCUREMENT REQUEST AND DETERMINATION AND FINDINGS HAVE BEEN WRITTEN.	250.0		5.0	SEP 86	SEP 86
4 85 6125	WELD PROCESSING PLANNING AND CONTROL FUNDS TRANSFERRED TO AMMRC DEC 84, EFFORT UNDERWAY.	275.0			OCT 85	OCT 85
(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.

APPENDIX III: USER'S GUIDE

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

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
AMETA	8	13		13			25	50
DESCOM	8	13	38			25	13	13
ERADCOM	44	20	36	7	11	5	7	14
TMDE	4		25	25		50		
AMMRC	8		38	13	25		13	13
TECOM	5	20	40	20				20
AVSCOM	61	18	43	16	10		3	10
CECOM	19	5	53			11	16	16
MICOM	22	9	59	23	5	5		
TACOM	53	6	34	9	13	13	6	19
AMCCOM (AMMO)	160	13	36	14	6	9	5	16
AMCCOM (WPNS)	121	8	29	7	17	6	15	17
TROSCOM	3		67					33
SUMMARY (AMC WIDE)	516	12	36	11	10	7	8	16
2ND CY83 SUMMARY	511	27	20	10	14	8	7	14

Figure 1 - Slippage Profile

PROJECT SLIPPAGE

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. As in the past, the slippage profile has shown very little change. The number of projects in the "No Data" column is usually larger during the 2nd period of the year than the 1st since that is the period when most new projects are funded. When combined with the figures from the "0 Mo" column, you have that part of the program for which no slippage problems exist. As can be seen, the combination of these two columns for this period is almost identical to those of the corresponding 2nd half CY83 period. The other five columns continue to remain within the percentage point range which has consistently been exhibited from reporting period to reporting period. In the comparison reporting period, the percentage of projects which had slipped more than 1 year was, for the first time under 30%. Over the years, this number had varied between 32% and 37%. In the current period that number is back over 30%.

There are two problems that affect accurate project slippage reporting. One problem is delinquent status reports which, during the current reporting period, numbered 28. This delinquency results in a larger number of active projects because final status reports are not submitted for those delinquent projects that have in actuality been closed out. These "completed" projects then increase in months of slippage which could account for a larger than actual percentage of projects in the higher slippage columns. A further decrease in delinquency of project status reports will improve the accuracy of the project slippage profile.

Another problem that affects accurate project slippage reporting is the basis on which final status reports are submitted. Some organizations await financial close-out before submitting final status reports and some await for the entire work effort to be done in order to avoid the preparation of technical reports for the "completed" interim projects. 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 for each project 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.

APPENDIX II: PROJECT SLIPPAGE

APPENDIX: ARMY ACTION COMMAND/ACTIVITY IDENTIFICATION

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

NOTE: Abbreviation - R&D - Research and Development

APPENDIX I: COMMAND IDENTIFICATION

APPENDICES

MANUFACTURING METHODS AND TECHNOLOGY PROGRAM
SUMMARY PROJECT STATUS REPORT
2ND SEMIANNUAL SUBMISSION CY 84 RCS DRCMT-301

PROJ NO.	TITLE • STATUS	AUTHORIZED ($000)	CONTRACT VALUES ($000)	EXPENDED LABOR AND MATERIAL ($000)	ORIGINAL PROJECTED COMPLETE DATE	PRESENT PROJECTED COMPLETE DATE
E 81 3717	HIGH TEMPERATURE TURBINE NOZZLE FOR 10 KW POWER UNIT ALL PLANNED TESTING FOR THE EVALUATION OF CERAMIC NOZZLES WAS COMPLETED. THE FINAL TECHNICAL REPORT WAS DRAFTED.	422.0	322.0	100.0	APR 82	JUN 85
E 84 3796	COMBAT VEHICLE DEPERMING PRODUCTION FACILITY PHASE 1- THE DESIGN PHASE WAS COMPLETED IN JAN 84. VEHICLE SIGNATURE MEASUREMENTS WERE COMPLETED IN FEB 84. THE FABRICATION PHASE WORK BEGAN IN MID JUNE 84 AND WILL BE OF EIGHTEEN MONTHS DURATION.	1,628.0	1,624.0	4.0	DEC 85	DEC 85
E 85 3796	COMBAT VEHICLE DEPERMING PRODUCTION FACILITY NO SEPARATE STATUS PROVIDED FOR THIS FY. SEE STATUS FOR E84 3796.	860.0	776.0	29.2	DEC 85	DEC 85

TROOP SUPPORT COMMAND

CURRENT FUNDING STATUS, 2ND CY84

FISCAL YEAR	NO. OF PROJECTS	AUTHORIZED FUNDS ($)	CONTRACT FUNDING ALLOCATED ($)	CONTRACT FUNDING EXPENDED ($)	INHOUSE FUNDING REMAINING ($)	INHOUSE FUNDING EXPENDED ($)
81	1	422,000	322,000	322,000 (100%)	100,000	100,000 (100%)
82	0	0	0	0 (0%)	0	0 (0%)
83	0	0	0	0 (0%)	0	0 (0%)
84	1	1,628,000	1,624,000	818,200 (50%)	4,000	4,000 (100%)
85	1	860,000	776,000	0 (0%)	84,000	29,200 (34%)
TOTAL	3	2,910,000	2,722,000	1,140,200 (41%)	188,000	133,200 (70%)

AUTHORIZED FUNDING CONTRACT ALLOCATED 94% INHOUSE REMAINING 6%

TECOM
US Army Test & Evaluation Command
ATTN: AMSTE-AD-M/Mr. William Deaver — C: 301 278-3677
Aberdeen Proving Ground, MD 21005 — AV: 283-3677

TMDE
US Army Test Measurement Diagnostic Equipment Support Group
ATTN: AMXTM-S/Mr. Ken Magnant — C: 205 876-1850/2575
Redstone Arsenal, AL 35898 — AV: 746-1850/2575

TROSCOM
US Army Troop Support Command
ATTN: AMSTR-PT/Mr. Richard Green
4300 Goodfellow Blvd. — C: 314 263-2878
St. Louis, MO 63120 — AV: 693-2818

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

US Army Troop Support Command
Natick R&D Center
ATTN: STRNC-EML/Mr. Ralph Merullo — C: 617 651-4899
Natick, MA 01760 — AV: 256-4899

WVA
Watervliet Arsenal
ATTN: SMCWV-PPI/Mr. William Garber — C: 518 266-5319
Watervliet, NY 12189 — AV: 974-5319

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PROJECT EXECUTION REPORT

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Cdr, Rock Island Arsenal (RIA), ATTN: SMCRI-ENM/Mr. J. W. McGarvey
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Cdr, Milan AAP, ATTN: SMCMI-EN
Cdr, Mississippi AAP, ATTN: SMCMS

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Cdr, Letterkenny Army Depot, ATTN: SDSLE-MME/David Kaufman, SDSLE-MMS/Gerald Cline
Cdr, Mainz Army Depot, ATTN: SDSMZ-FMD/Ruby Demesone
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Cdr, Red River Army Depot, ATTN: SDSRR-MO, SDSRR-ME/Gary Fuller
Cdr, Sacramento Army Depot, ATTN: SDSSA-QSM-2/Mike Sheehan, SDSSA-RPM-1/Pat Coughlan, SDSSA-R/B. Grindle
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Cdr, Naval Ordnance Station, ATTN: Code 5253/Mr. Craig Smith
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