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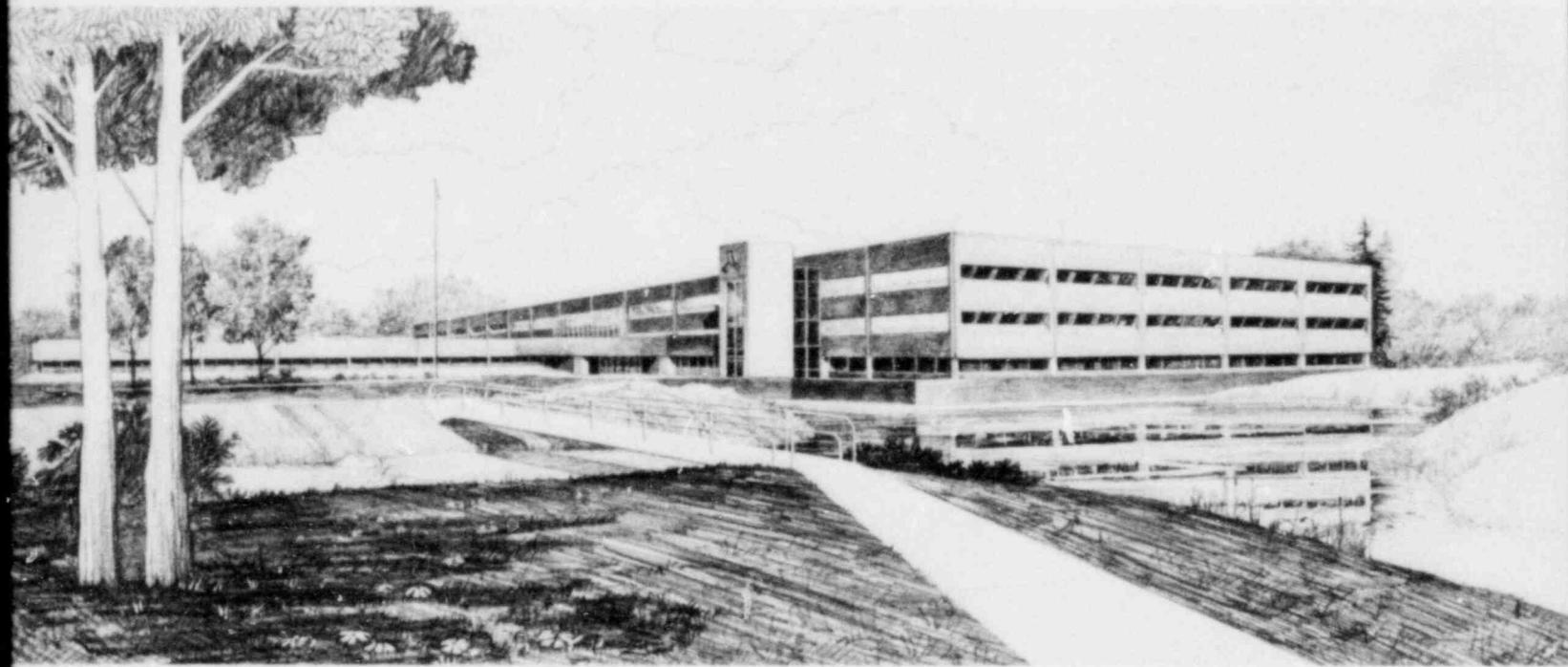
EGG-LOFT-5949
Project No. P 394

July 1982

LOFT MONTHLY PROGRESS REPORT
FOR JUNE 1982

L. P. Leach

U.S. Department of Energy
Idaho Operations Office • Idaho National Engineering Laboratory



This is an informal report intended for use as a preliminary or working document

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L. P. Leach

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G. D. McPherson, Chief, Integral Systems Section, Experimental Programs Branch, USNRC

This document was prepared primarily for preliminary or internal use. It has not received full review and approval. Since there may be substantive changes, this document should not be considered final.

EG&G Idaho, Inc.
Idaho Falls, Idaho 83415

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INTERIM REPORT

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LOFT MONTHLY PROGRESS REPORT FOR JUNE 1982

LOFT MANAGER'S MONTHLY SUMMARY

Experiment L2-5 was completed on the target date of June 16, 1982, in the Loss-of-Fluid Test (LOFT) facility. The principal work effort now in progress in the LOFT Experimental Program is the preparation for LOFT Experiment L6-8 (series) to be conducted during the target period of August 15 through September 1, 1982. Preparation is also in progress for LOFT Experiment L9-4 to be conducted on the target date of September 22, 1982.

Experiment L2-5 was the third experiment in the LOFT Power Ascension Experiment Series L2. Experiment L2-5 simulated a guillotine (offset shear) break in the inlet pipe of a commercial pressurized water reactor simultaneous with a loss of site power. In addition, an atypical primary coolant pump coastdown was imposed in an attempt to avoid the early bottom-up core-wide rewet which occurred in the earlier two Series L2 experiments, L2-2 and L2-3.

The early primary coolant pump trip and atypical coastdown were sufficient to avoid the early bottom-up rewet. A peak temperature of 1077 K (1479°F) was reached and data were collected on core reflood and quench on fuel rods which did not experience early return to nucleate boiling. These are the first such data collected in LOFT from conditions which are specified in 10 CFR 50 Appendix K for loss-of-coolant accident analysis. With the exception of early bottom-up rewet, the thermal and hydraulic responses during Experiment L2-5 were qualitatively similar to those that occurred during Experiment L2-3.

The financial status of the LOFT Program through June 1982 indicates a continued close tracking of the actual cost to the LOFT 2-year baseline budget. The configuration used for this month's report is Q82-2-3. This includes all approved changes to the LOFT 2-year baseline through June 1982. A detailed review of the year-to-date budget versus actual cost variance comments is included in this report following the "Accomplishments" section.

ACCOMPLISHMENTS

LOFT Technical Support Division

1. Drawings for the flow skirt removal cask were released for fabrication.
2. Bids for the design and fabrication of the fuel handling underwater viewing system were received. The order was placed with the low bidder.
3. Modification and checkout of the control console for the fuel module insertion and removal cask were completed.
4. The design for the adaptor-liner for the new spent resin containers in the subsurface disposal area vaults at the Waste Management Facility was completed.
5. The checkout of the waste gas processing system (WGPS) recombiner was completed. The lead check was also completed, and the system was operational for Experiment L2-5.
6. Experiment L2-5 was successfully completed without damage to any reactor cooling system equipment.
7. The programmatic risk assessment document (PRAD) was issued for the conduct of Experiment L2-5.
8. The Experiment L2-5 Mode 8 safety analysis documentation was issued.
9. The following supporting documents for the safety analysis associated with the conduct of Experiment L2-5 were issued:
 - a. LO-08-82-196, "L2-5 Mode 9 Experiment Safety Analysis (ESA)"
 - b. LO-08-82-198, "LOFT L2-5 Pre-Loss-of-Coolant Experiment (LOCE) Maneuver Core Safety Analysis"

- c. LO-08-82-199, "Failure Mode Effects and Consequence Analysis (FMECA) for Large Break Test L2-5."
- 10. The ESA for Experiment L2-5 was approved and issued.
- 11. The following document revision requests (DRRs) authorizing changes to LOFT technical specifications were issued:
 - a. DRR L-3856, WGPS operation
 - b. DRR L-5342, L2-5 Mode 8 operations
 - c. DRR L-5343, L2-5 Mode 9 operations.
- 12. DRRs L-5446 and L-5524 were issued authorizing changes to the LOFT Final Safety Analysis Report (FSAR) that had been identified in recent facility change forms (FCFs).
- 13. LOFT Report LO-04-82-028, "Setpoints for WGPS Radiation Monitors," which establishes the LOFT technical specification setpoints, was issued.
- 14. The Three Mile Island (TMI) status reports for the second quarter of 1982 and for June 1982 were issued.
- 15. Exxon Nuclear Company completed the F2 fuel bundle design drawings, standard fuel rod depressurization or repressurization to 600 psi, fuel bundle skeleton assembly, and the initial instrumented fuel rods.
- 16. Battelle Pacific Northwest Laboratories completed attachment of 26 of 64 F2 fuel rod cladding thermocouples.
- 17. Presentations discussing the thermocouple problem analysis and the F2 fuel bundle cladding thermocouple life cycle testing were made to the Nuclear Regulatory Commission (NRC); Department of Energy, Idaho Office (DOE-ID); and the Light Water Reactor Fuel Research Division.

18. An abstract, entitled "Loss of Fluid Test Findings in Pressurized Water Reactor Loss-of-Coolant Accident Core Cooling," was accepted for presentation at the Thermal Engineering Joint Conference Session on Two-Phase Flow and Boiling Heat Transfer to be held at Honolulu, Hawaii.
19. The LOFT Fuel Requalification Working Group recommendation that the core be qualified for Experiment L2-5 was accepted by the Fuel Requalification Review Committee with (a) the condition that power escalations are restricted until fuel preconditioning is reestablished and (b) a precaution to prepare for core instrument failures.
20. Delivery of all required F2 fuel bundle pressure sensors was completed to Exxon Nuclear Company.

LOFT Facility Division

1. Inservice inspection and waste gas processing system, isotope detection system, and surveillance testing were completed in preparation for Experiment L2-5.
2. Experiment Operating Procedure (EOP) L2-5, "Power Ascension Test Series L2," was successfully completed.
3. Experiment L2-5 requalification testing, including pump operations and cold rod drops, was performed.

LOFT Program Division

1. The following papers were completed and submitted to the Second International Topical Meeting on Nuclear Reactor Thermal-Hydraulics to be held at Santa Barbara, California, on January 11-14, 1983:
 - a. "Primary Pump Power as a Measure of Fluid Density During Bubbly Two-Phase Flow"

- b. "Natural Circulation Cooling Characteristics During PWR Accident Simulations"
 - c. "Effects of Cladding Surface Thermocouples and Electrical Heater Rod Design on Quench Behavior"
 - d. "Application of an Assessed Analytical Capability to Predict Rapid Cladding Quench During the Blowdown Phase of a Large Break Loss-of-Coolant Accident."
- 2. The Quick-Look Report for LOFT Experiment L2-5 (EGG-LOFT-5921) was completed.
- 3. Two LOFT personnel were members of the NRC-LOFT team which visited most of the European laboratories participating in the current LOFT program. Technical information was exchanged, and several presentations on LOFT results were given at each laboratory. Preparations are continuing for a similar information exchange with Japan, Taiwan, and South Korea, scheduled for late July 1982.
- 4. The following LOFT topical reports were completed and issued:
 - a. EGG-LOFT-5555, "Evaluation of Analytical Capability to Predict Blowdown Cladding Quench During a PWR Large Break Accident"
 - b. EGG-LOFT-5865, "A Comparison of Thermal Hydraulic Response of Three Large Break Test Facilities."
- 5. A paper, entitled "The LOFT Pulsed Neutron Activation System of Fluid Flow Measurement," was presented at the American Institute of Aeronautics and Astronautics/American Society of Mechanical Engineers Symposium in St. Louis, Missouri. A paper, entitled "Automated Data Qualification (ADQ)," was presented at the 1982 Symposium on Instrumentation and Control for Fossil Energy Processes in Houston, Texas.

6. The Experiment Data Report for LOFT Experiment L6-6 was published on schedule.
7. The posttest analysis documents for Experiments L5-1/L8-2 and L9-1/L3-3 are in final review and editing.
8. A presentation discussing the past LOFT Experimental Program was made to DOE-Washington personnel at the request of DOE-ID.

Foreign-Funded Task Summaries

Foreign funded projects are summarized in this section.

Summary of Tasks Funded by Japan (JAERI)

Numerous checkout tests for the postcritical heat flux (post-CHF) test section were conducted, and numerous data acquisition system, instrumentation, and hardware problems had to be resolved before acceptable data could be recorded. Orifice flow measurements were added to complement the turbine meter measurements.

Summary of Tasks Funded by Germany (FRG)

Results from the calculation for Experiment L3-7 were documented.

Work was performed for the F2 fuel rod pressure transducer temperature compensation. The algorithm derivation for all 31 Kaman pressure sensors was completed. All of the pressure sensors were delivered to Exxon Nuclear Company, and the end caps were welded to the transducers.

Summary of Tasks Funded by France (CEA)

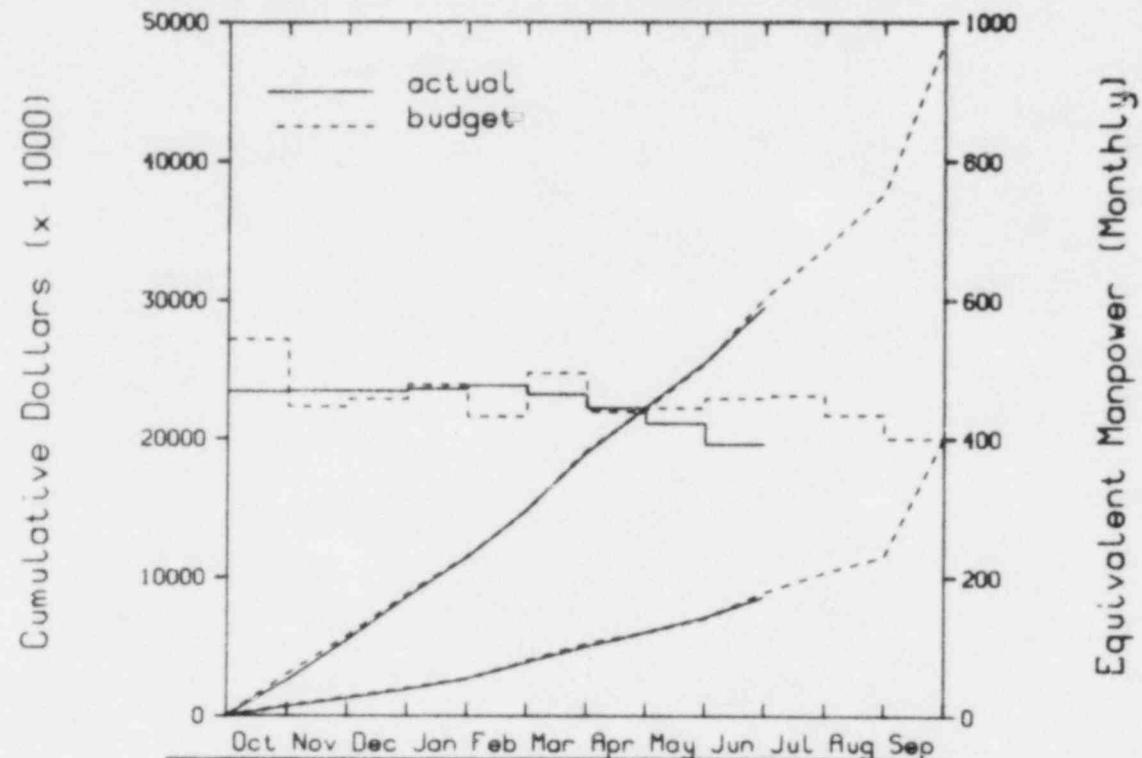
The Kaman pressure sensors and electronics were delivered to Westinghouse at the Hanford Engineering Development Laboratory for algorithm derivation. Plans for testing pressure transducers at Westinghouse and Exxon Nuclear Company were completed.

LOFT Overall Funding

5xxxxx

9xxxxx

LOFI Program Cost/Budget Summary
LOFT OVERALL FUNDING



Total

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Bud	3006	5760	8791	11500	14789	19141	22181	25438	30177	33807	37662	48614
Act	2577	5480	8570	11432	14872	18996	22266	25558	29565			

Material

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Bud	742	1318	2008	2649	3955	5204	6016	7030	8924	10355	11506	20072
Act	659	1261	1902	2676	3858	4996	6013	7120	8604			

Manpower

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Bud	543	446	457	478	432	495	439	444	458	462	434	400
Act	468	469	469	472	477	464	444	422	392			

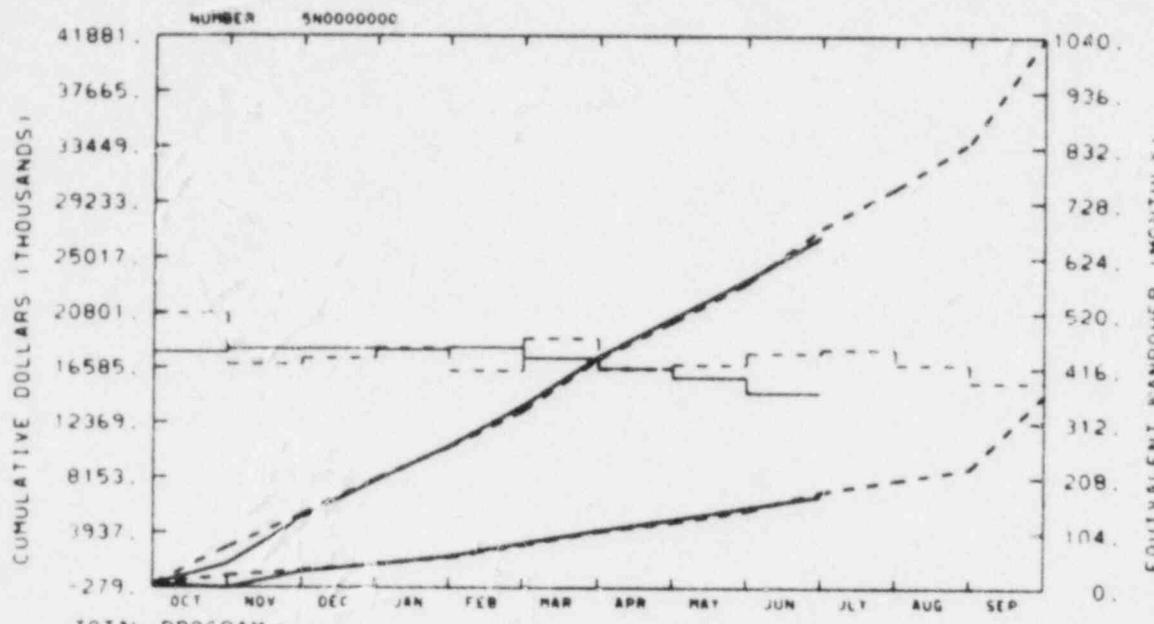
The NRC operating, foreign funded, and capital equipment budgets reflect the LOFT Q82-2, Rev. 3 baseline with approved changes through June 1982. The year-to-date underrun is within 2% of the budgeted costs of work scheduled. Refer to the Manager's Monthly Summary for comments. The above figures and other cost graphs exclude LTSF, A6108, A6308, A6363, A6384, and DOE Improved Licensing Criteria (categorized as RES-Other).

5N--NRC Operating Funding

5F--Foreign Funding

9R--Capital Equipment Funding

EG&G IDAHO INC.
LOFT-NRC OPERATING FUNDS



MATERIAL

	BUDGET	1073	1566	2056	2987	4057	4767	5630	7075	7980	8869	14575
	ACTUAL	278	473	1503	2138	3141	4113	4947	5861	6769		

FANPOWER

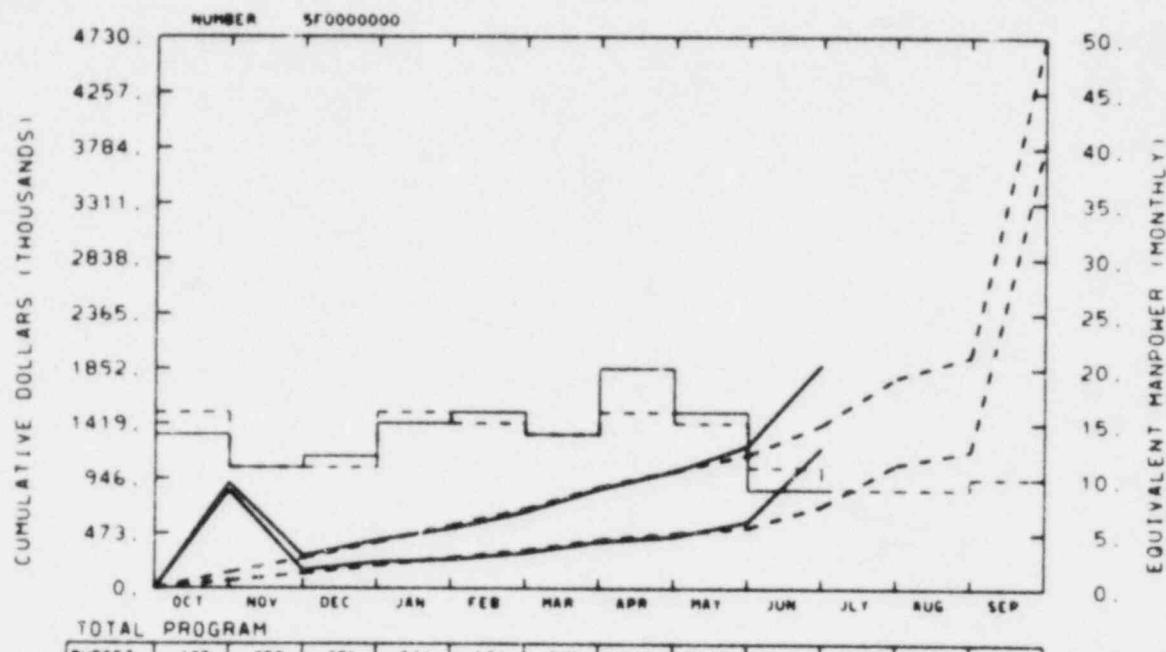
	BUDGET	518	422	434	453	410	471	414	422	446	451	423	389
	ACTUAL	445	451	452	450	454	438	415	398	365			

BUDGET

ACTUAL

The year-to-date underrun is within 2% of the budgeted cost of work scheduled. Refer to the lower graphs for a more detailed variance of cost versus budget comments and review. No significant variances are anticipated at year end.

EG&G IDAHO INC.
LOFT-FOREIGN FUNDING



MATERIAL

	BUDGET	ACTUAL										
	65	843	127	157	198	226	263	248	328	307	420	404

BUDGET

ACTUAL

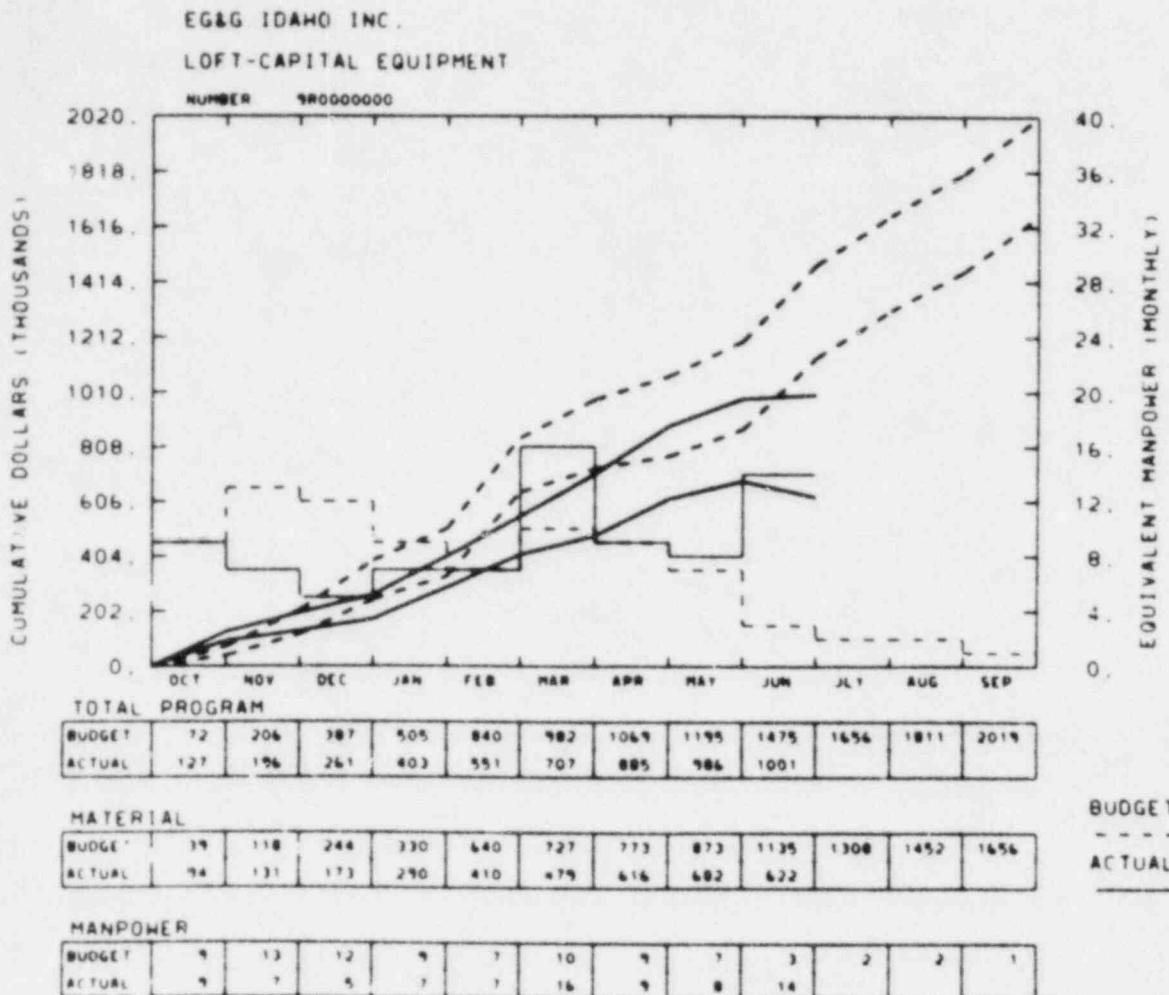
MANPOWER

	BUDGET	ACTUAL										
	16	14	11	11	11	12	16	15	14	14	16	20

BUDGET

ACTUAL

The overrun of <\$519K> was primarily due to the use of inappropriate charge numbers relating to the F2 fuel bundle task. A cost transfer will be made to correct this situation. Refer to the lower level graphs for a more detailed variance review.



There is a year-to-date underrun of \$474K due to actual work performed being behind schedule and costs being incurred (~\$200K) in inappropriate large numbers. A recovery plan is still in progress to correct this problem. The capital equipment budget will be realigned to reflect current spending performance and criteria.

LOFT 189a Summary

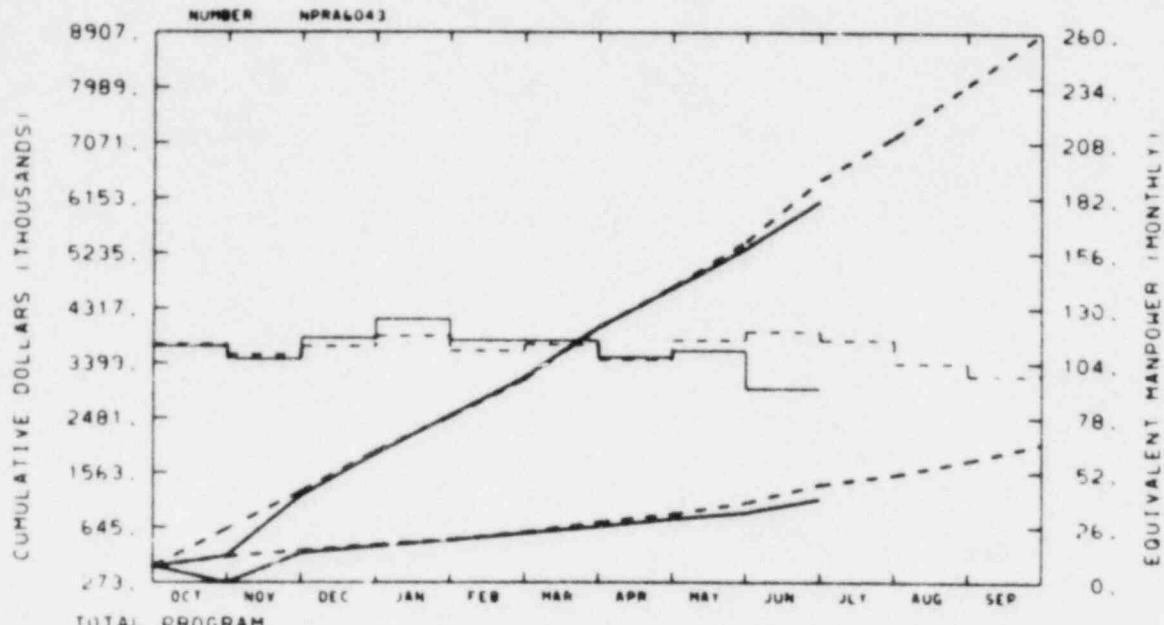
5NX--NRC 189a

5FXX--Foreign 189a

9RX--Capital Equipment 189a

EG&G IDAHO INC.

MEASUREMENTS - 53



TOTAL PROGRAM

BUDGET	619	1245	1917	2505	3136	4006	4675	5433	6465	7171	8046	8906
ACTUAL	-74	1177	1880	2521	3168	4007	4656	5218	6108	6846	8046	8906

MATERIAL

BUDGET	160	259	355	438	562	729	870	1055	1364	1528	1766	2049
ACTUAL	272	221	332	436	549	663	786	894	1121	1284	1528	1766

MANPOWER

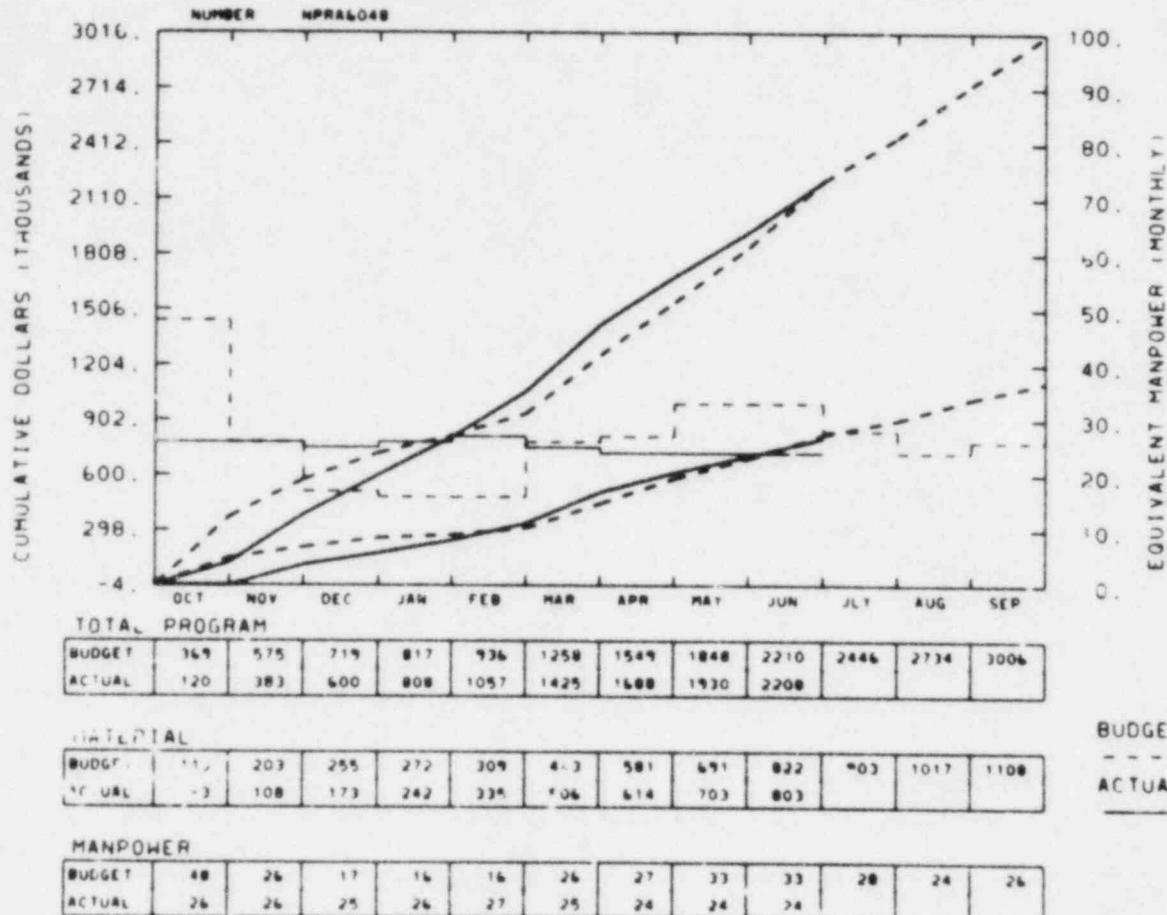
BUDGET	113	108	112	117	110	113	106	115	119	115	104	98
ACTUAL	112	106	116	125	115	115	107	110	92	115	104	98

BUDGET

ACTUAL

The underrun is due to (a) changes in programmatic requirements eliminating the need for the pulse neutron analyzer (PNA) for Experiment L9-4, (b) manpower being spent on the F2 fuel bundle task delaying activity on some non-F2 fuel bundle tasks, and (c) increased software efficiencies in automated data qualification (ADQ) resulting in lower expenditures than originally anticipated. Change Control Board (CCB) forms are being prepared to reflect the adjustment of these items.

EG&G IDAHO INC.
EXPERIMENTAL PROGRAM - 51

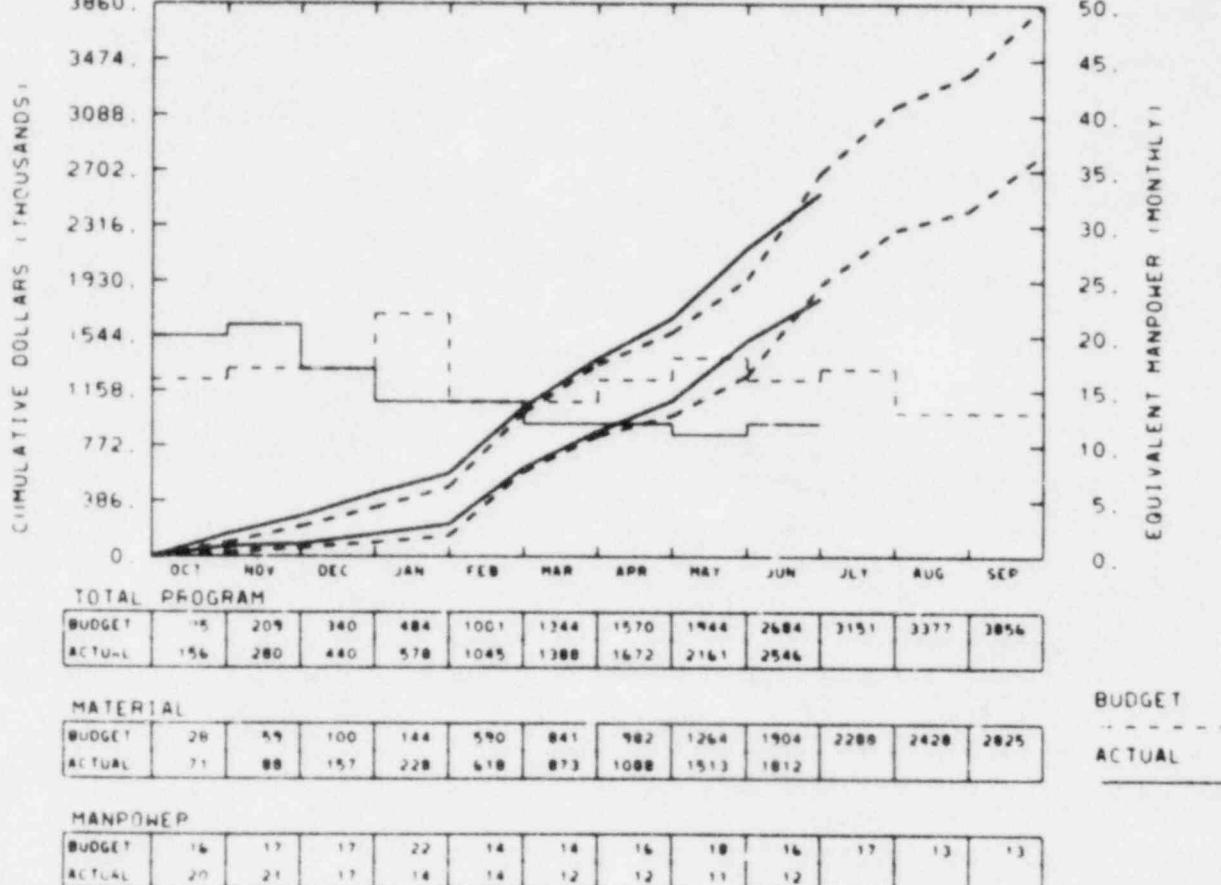


There is no significant variance at this level of control. Lower level summary cost account (SCA) variations indicate a current and potential small year-end underrun in SCA 5114, a current overrun in SCA 5115 which is being effectively managed and will be on budget at year end, and a current overrun on SCA 5116 which is being worked with the intent of returning to budget at year end. SCA 5117 is on budget, when recent CCB adjustments are accounted for, and year-end budget and cost are expected to agree. Present expectations are that the A6048 year-end costs will be at or slightly below budget.

EG&G IDAHO INC.

FUEL - 52

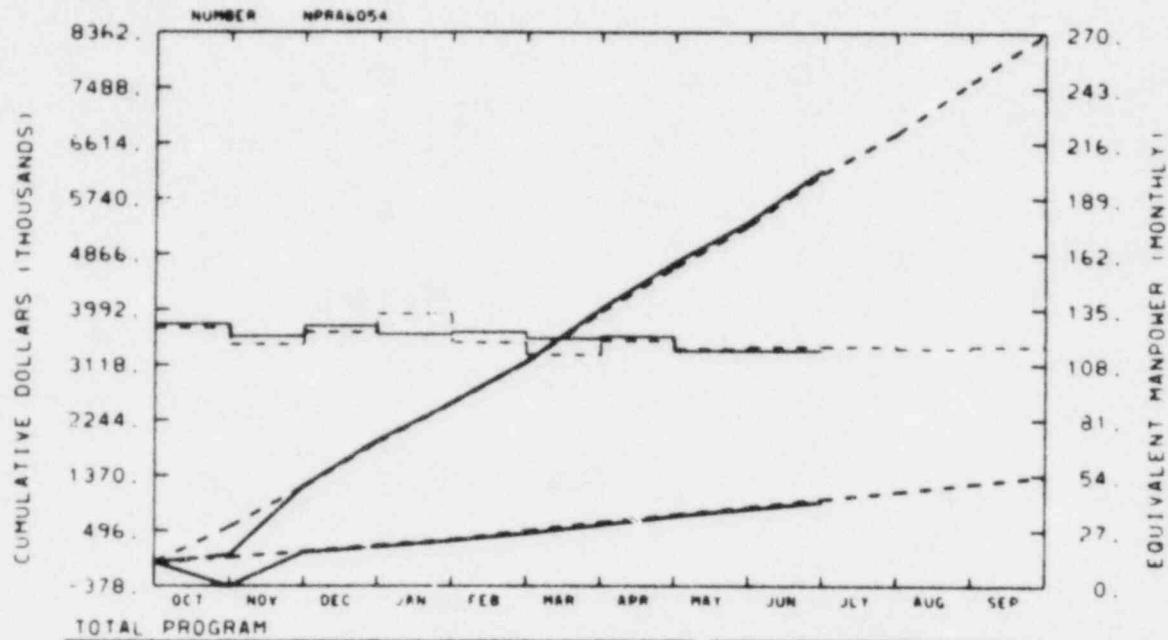
NUMBER NPA6052



The underrun is due to (a) unavailability of key manpower for fuel rod laser profilometry conceptual design; (b) less-than-planned manpower support for fuel requalification; and (c) reluctance to incur costs for fuel rod defect scanner decontamination, repair, and upgrade until decisions on the location of fuel examination are made. A CCB has been prepared to revise the cost and schedule estimates appropriately.

EG&G IDAHO INC.

OPERATIONS - 57



MATERIAL

BUDGET	80	169	267	356	493	632	750	868	996	1110	1237	1360
ACTUAL	177	56	243	339	187	591	731	845	952			

MANPOWER

BUDGET	126	118	124	133	119	113	120	116	117	117	116	117
ACTUAL	128	122	127	123	124	121	122	115	115			

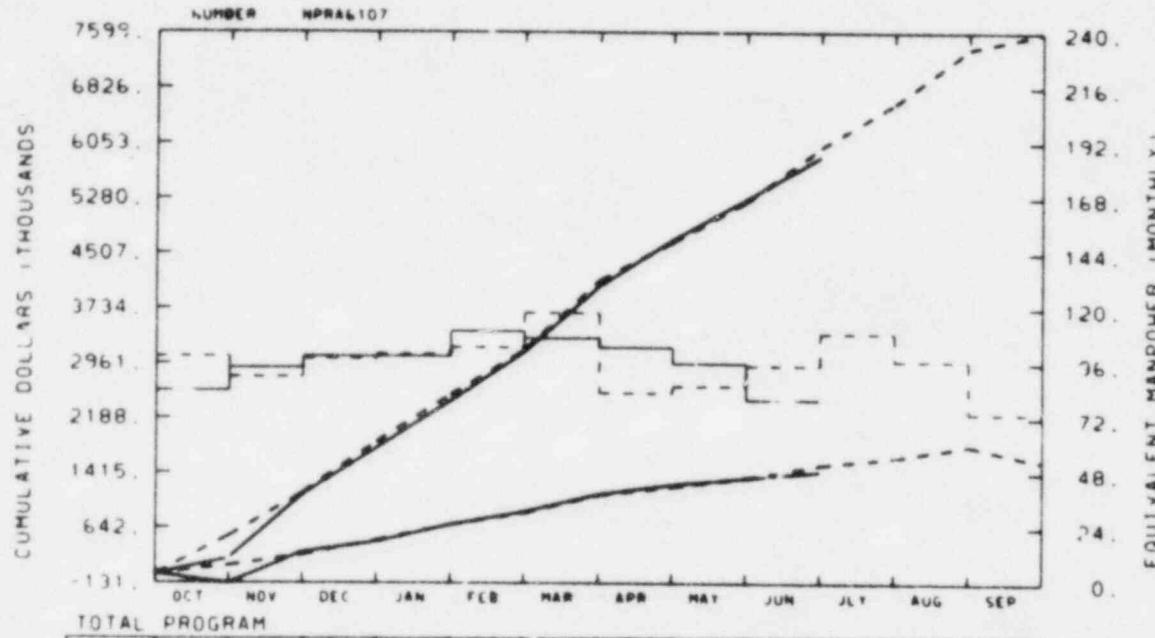
BUDGET

ACTUAL

No significant variance is anticipated by fiscal year end. Refer to the lower level cost graphs for further detailed variance comments.

EG&G IDAHO INC.

TECH SUPPORT - 54



MATERIAL

BUDGET	113	263	468	688	849	1104	1216	1349	1528	1631	1801	1574
ACTUAL	130	301	448	686	870	1116	1251	1384	1436			

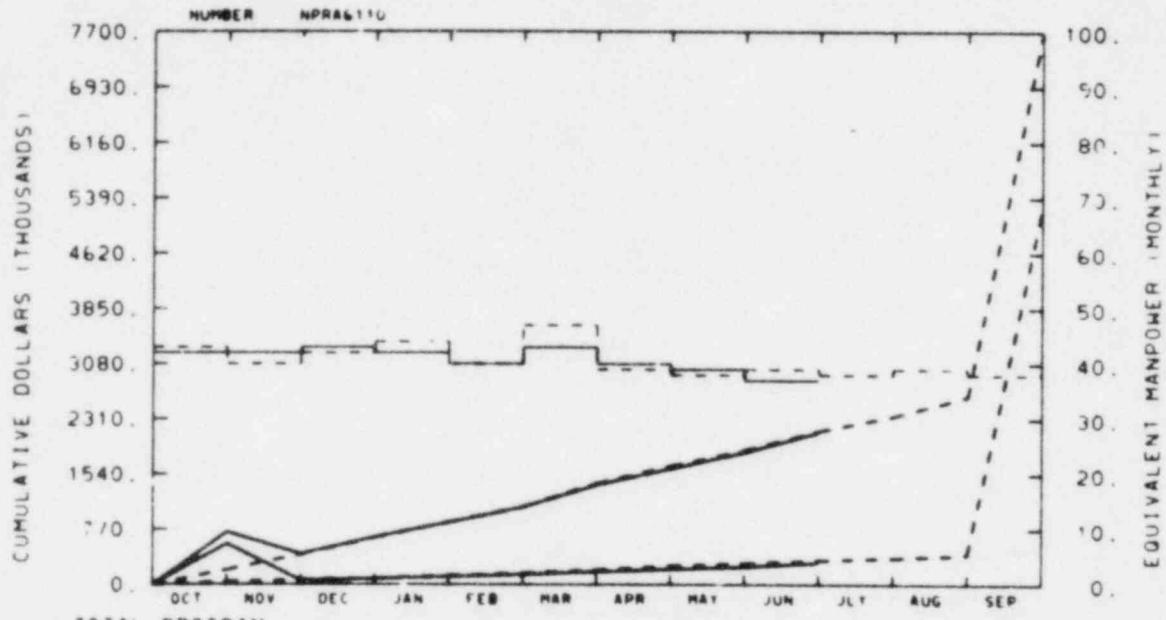
MANPOWER

BUDGET	99	90	98	100	103	108	93	86	95	109	97	74
ACTUAL	94	94	99	99	116	107	103	96	100			

BUDGET-----ACTUAL

No significant variance. Refer to the lower level cost graphs for a more detailed variance review.

EG&G IDAHO INC.
COMMON SUPPORT - 56



MATERIAL

	BUDGET	ACTUAL										
	41	67	92	126	163	210	265	311	344	377	420	5276

MANPOWER

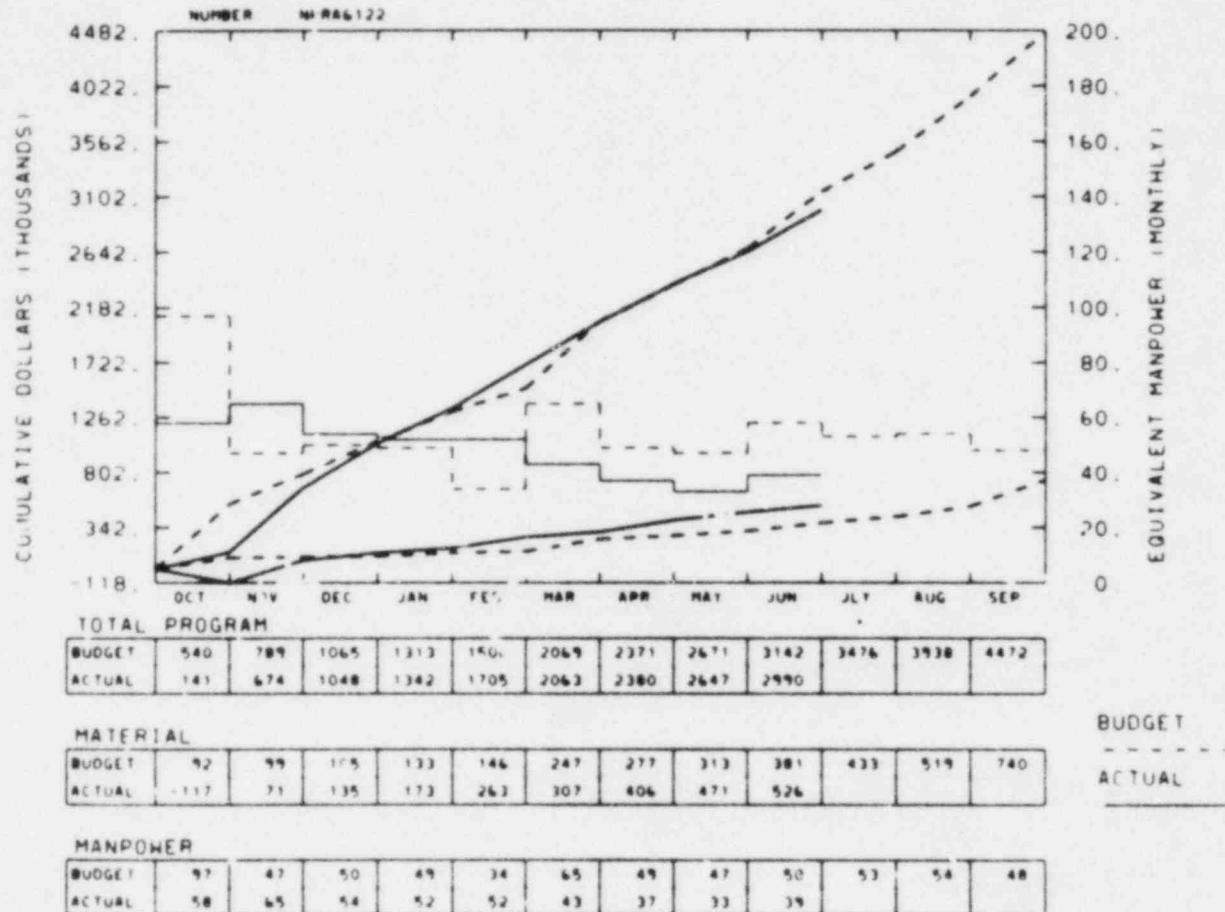
	BUDGET	ACTUAL										
	43	40	42	44	40	47	39	38	39	38	39	38

BUDGET

ACTUAL

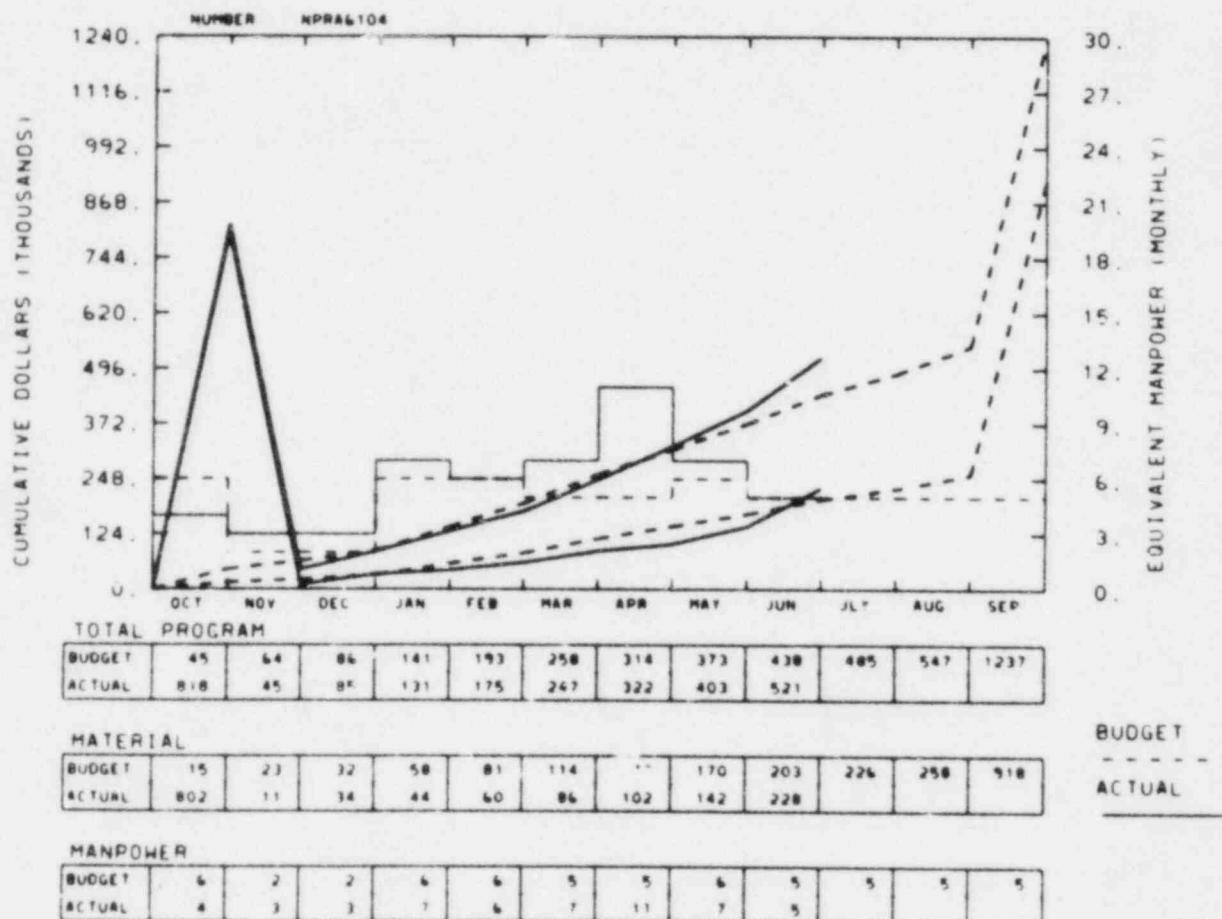
No significant variance.

ES&G IDAHO INC.
CORE & SAFETY SUPPORT - 55



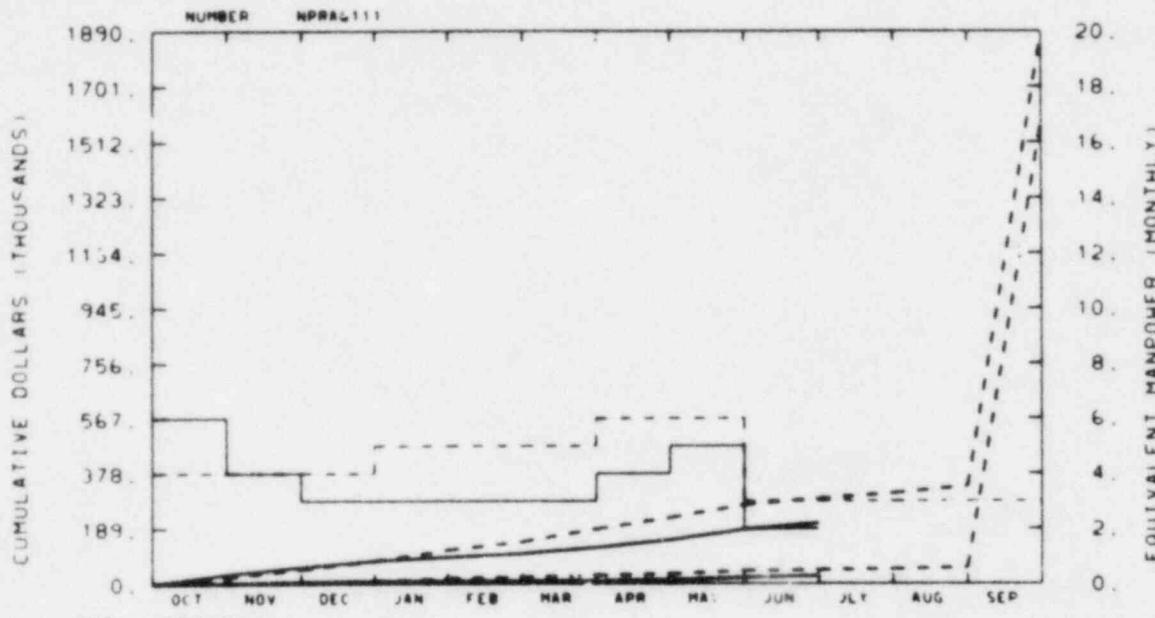
Manpower budget for computer code configuration management system will not be expended in FY-1982. CCB action is in progress to return \$120K to Management Reserve.

EG&G IDAHO INC.
GERMAN FUNDS - SG



The overrun is from early completion of work scope in the areas of labor and materials in the F2 fuel bundle instrument temperature compensation account. The budget and schedule will be modified to reflect the early accomplishment of this work scope.

EG&G IDAHO INC.
JAPANESE FUNDS - 5J



MATERIAL

BUDGET	3	*	9	20	24	30	35	45	48	52	56	1584
ACTUAL	3	7	11	11	11	11	15	22	28			

MANPOWER

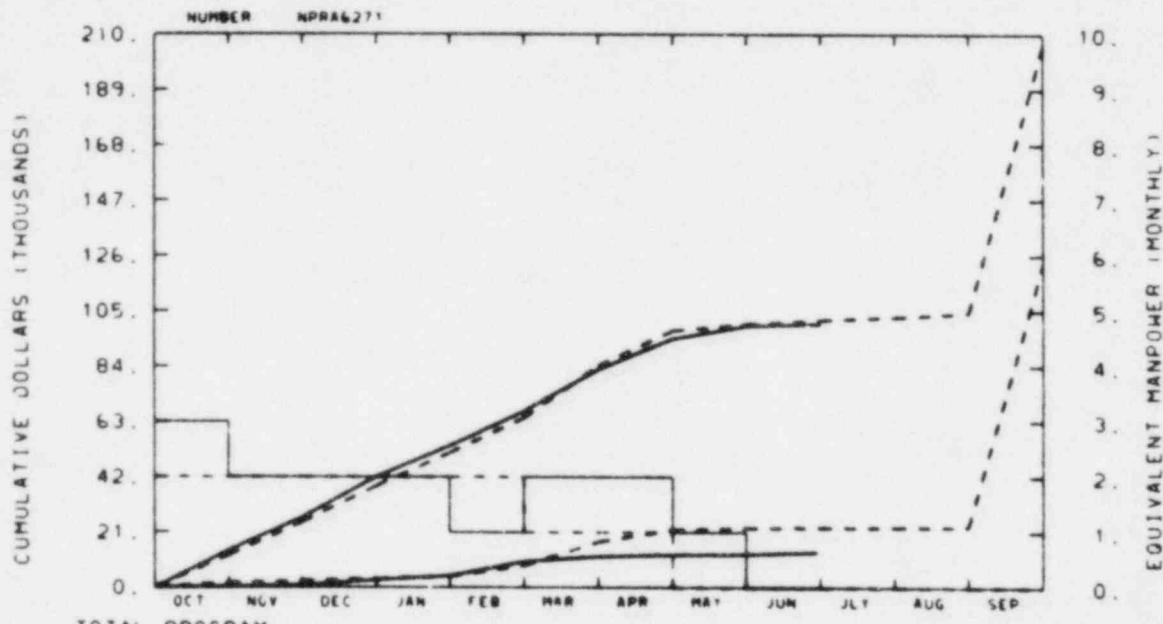
BUDGET	4	4	4	5	5	5	6	6	3	3	3	3
ACTUAL	6	4	3	3	3	-	4	5	2			

BUDGET

ACTUAL

The testing portion of the postcritical heat flux (post-CHF) task was delayed (which consequently delayed the analysis work that was budgeted) due to higher priority work at the LOFT Test Support Facility (LTSF). A management review of the post-CHF task has indicated budget and schedule adjustment requirements which will be submitted for CCB action.

EG&G IDAHO INC.
NETHERLANDS FUNDS - 5N



MATERIAL

	1	2	3	4	5	6	7	8	9	10	11	12
BUDGET	2	3	3	4	8	17	22	23	23	23	23	123
ACTUAL	0	1	3	4	10	12	12	13	14			

MANPOWER

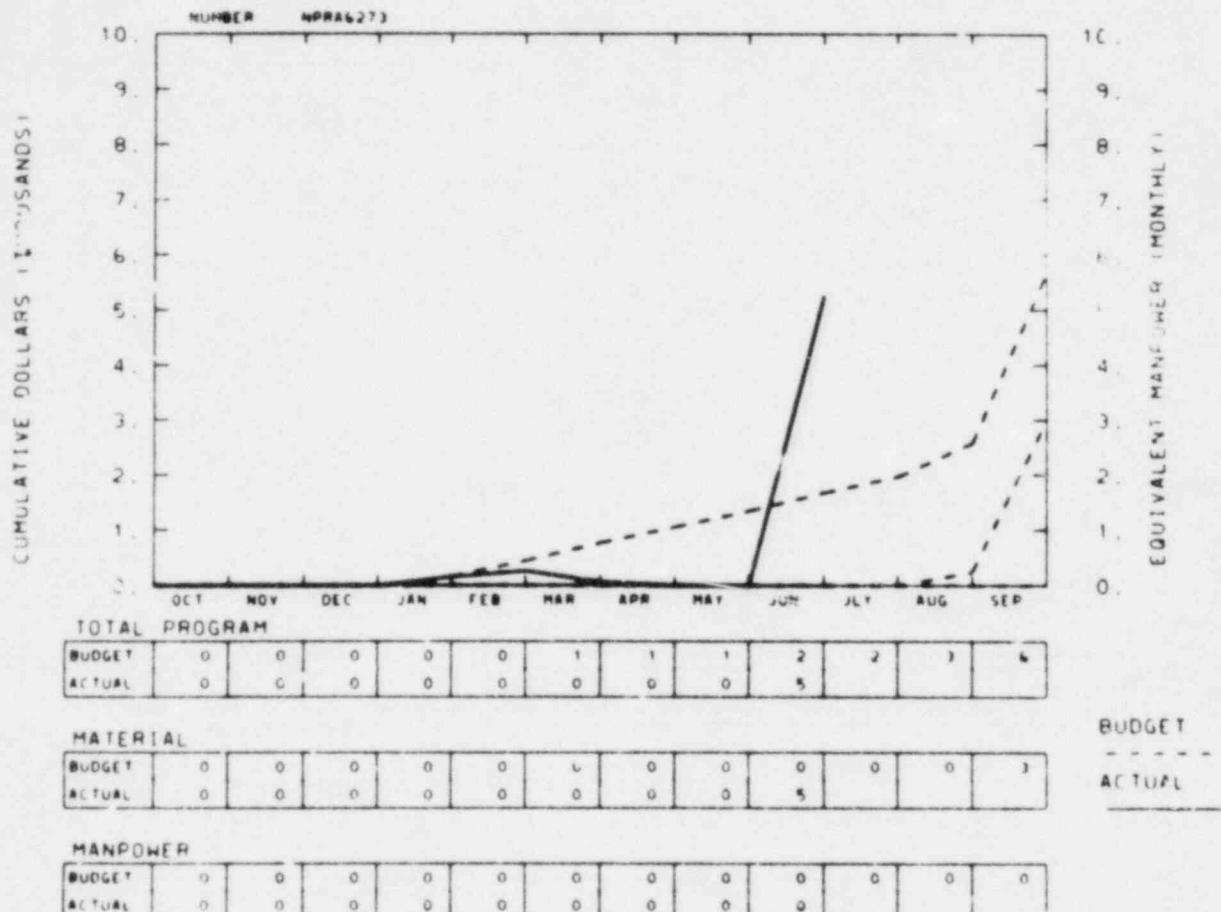
	1	2	3	4	5	6	7	8	9	10	11	12
BUDGET	2	2	2	2	2	1	1	0	0	0	0	0
ACTUAL	3	2	2	2	1	2	2	1	0			

BUDGET

ACTUAL

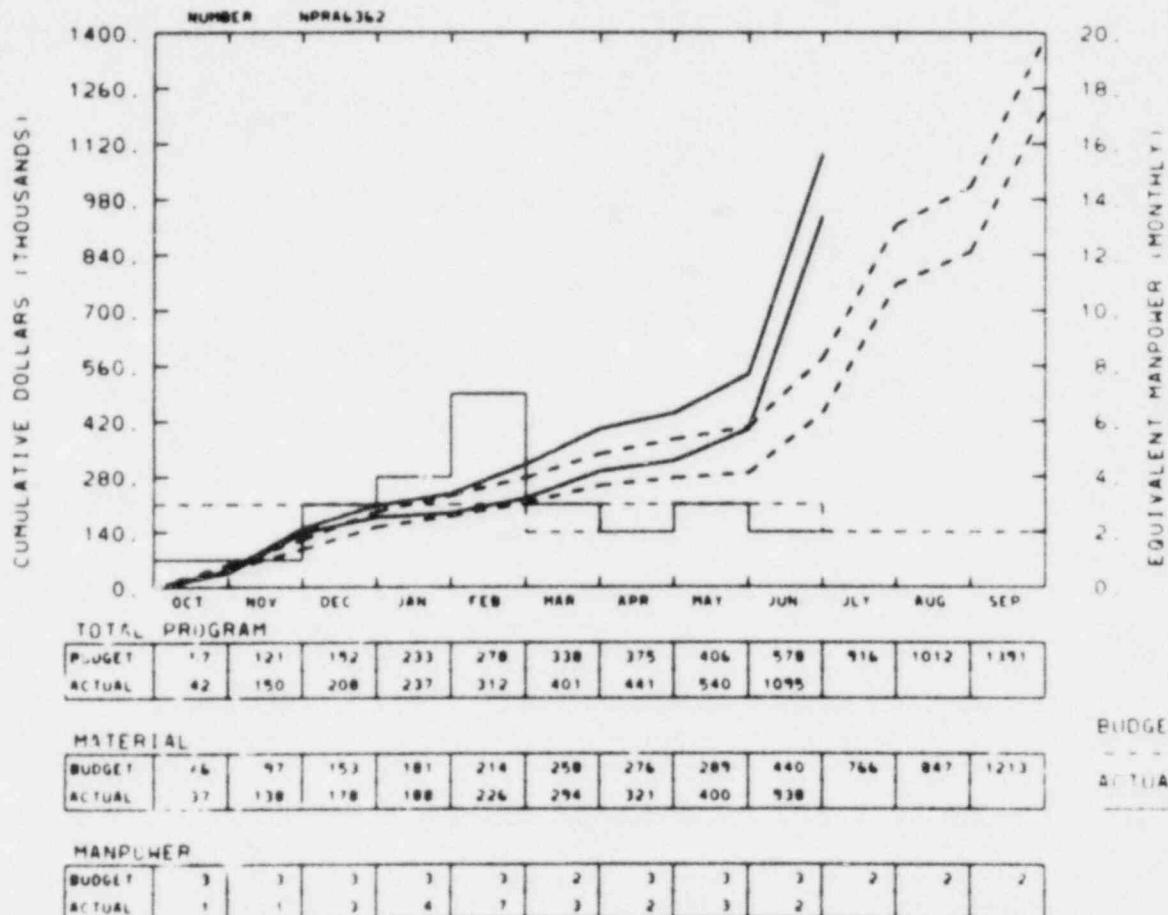
No significant variance.

EG&G IDAHO INC.
AUSTRIAN FUNDS - 5A



This account was used in June for Nuclear Regulatory Commission (NRC) travel to Europe, including Austria, in support of the NRC-LOFT team annual information exchange. No overrun is anticipated, as these funds were being held for this trip.

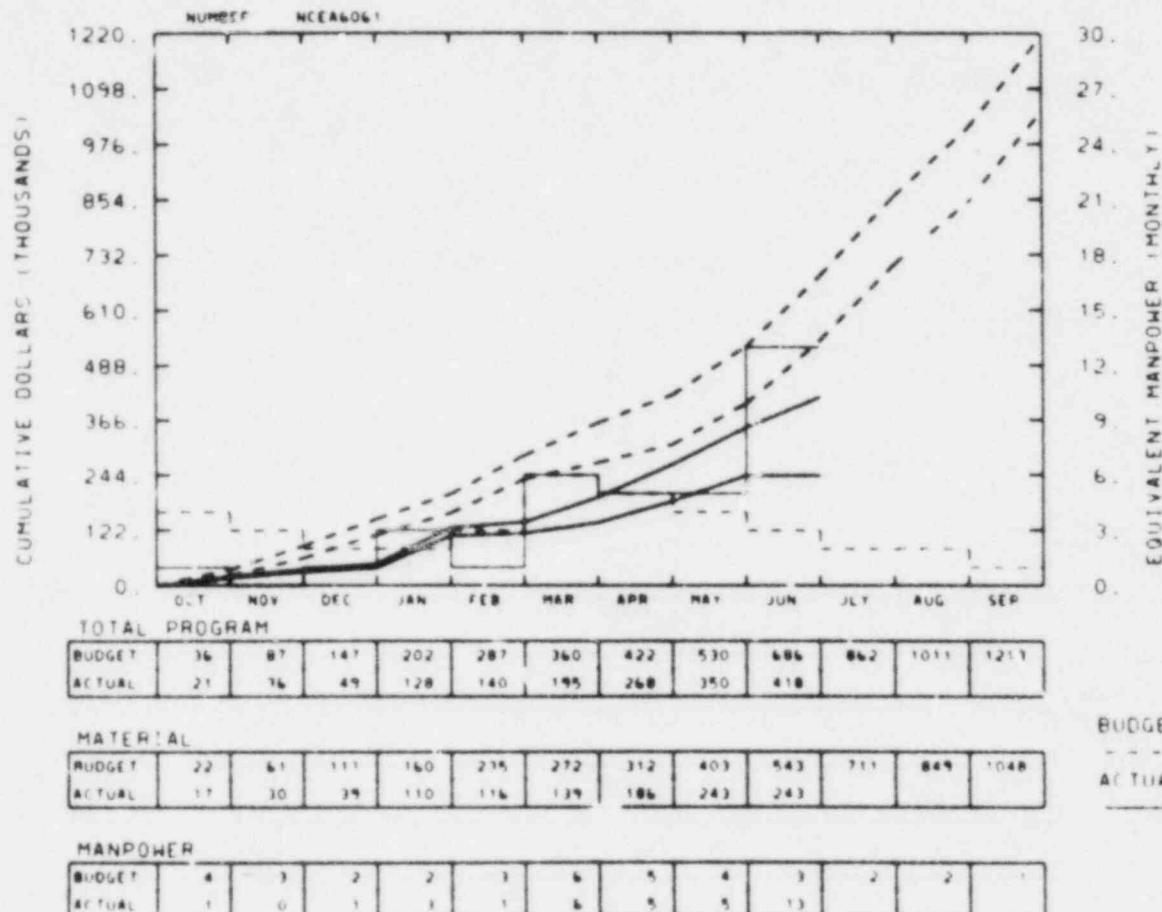
EG&G IDAHO INC.
FRENCH FUNDS - SF



The variance is due primarily to (a) early payments or accruals of the F2 fuel bundle instrumentation subcontract to Kaman Services (K6364), (b) delayed payments or accruals of the F2 fuel bundle design and assembly subcontract to Exxon Nuclear Company (K106), and (c) the Kaman subcontract contains components that are both operating (French funds) and LOFT capital equipment funds. The Kaman estimates were spread through June and July, while the payments and/or accruals were costed in June. The contract must be costed before the cost transfer can be prepared (scheduled for July business). The Exxon contracts have fluctuated slightly on a monthly basis, but are tracking with annual estimates and no problems are anticipated.

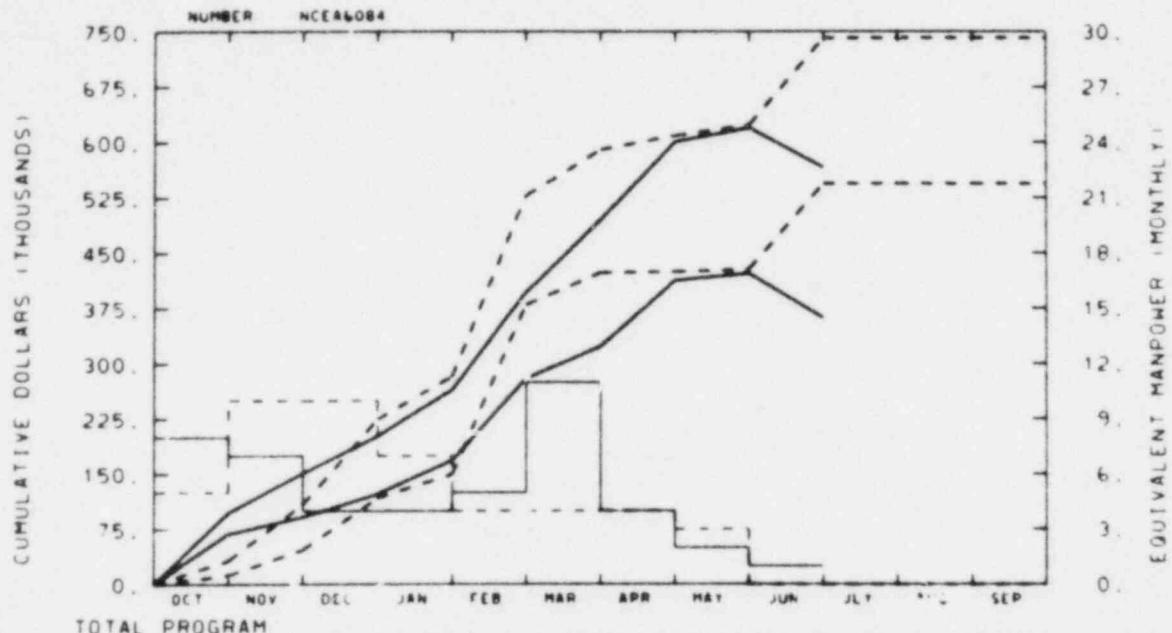
EG&G IDAHO INC.

MEASUREMENTS CAP EQUIPMENT - 9RL



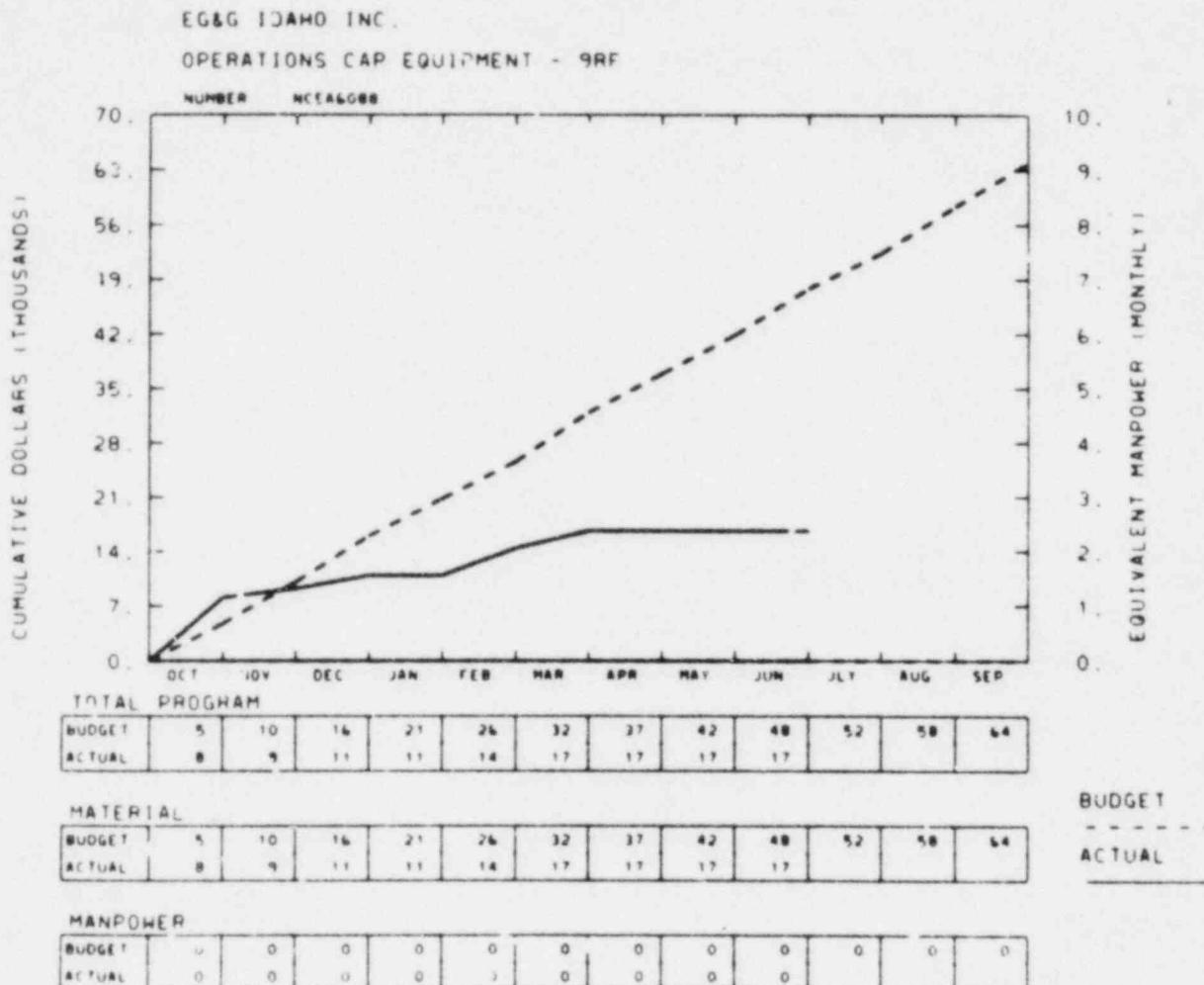
The underrun is due to rescheduling receipt of F2 fuel bundle equipment to July, August, and September. A change control document has been prepared to realign the F2 fuel bundle task scope and the timing of the arrival of the equipment.

EG&G IDAHO INC.
TECH SUPPORT CAP EQUIPMENT - 9RT



MATERIAL												
MANPOWER												
<hr/>												BUDGET
<hr/>												ACTUAL
<hr/>												BUDGET
<hr/>												ACTUAL
<hr/>												

The underrun is due to (a) reversing an accrual for materials received, but rejected by Quality, and (b) the current test schedule does not facilitate the starting and completion of some items. A change control document will be prepared to reflect the material delays and redirection of certain tasks.

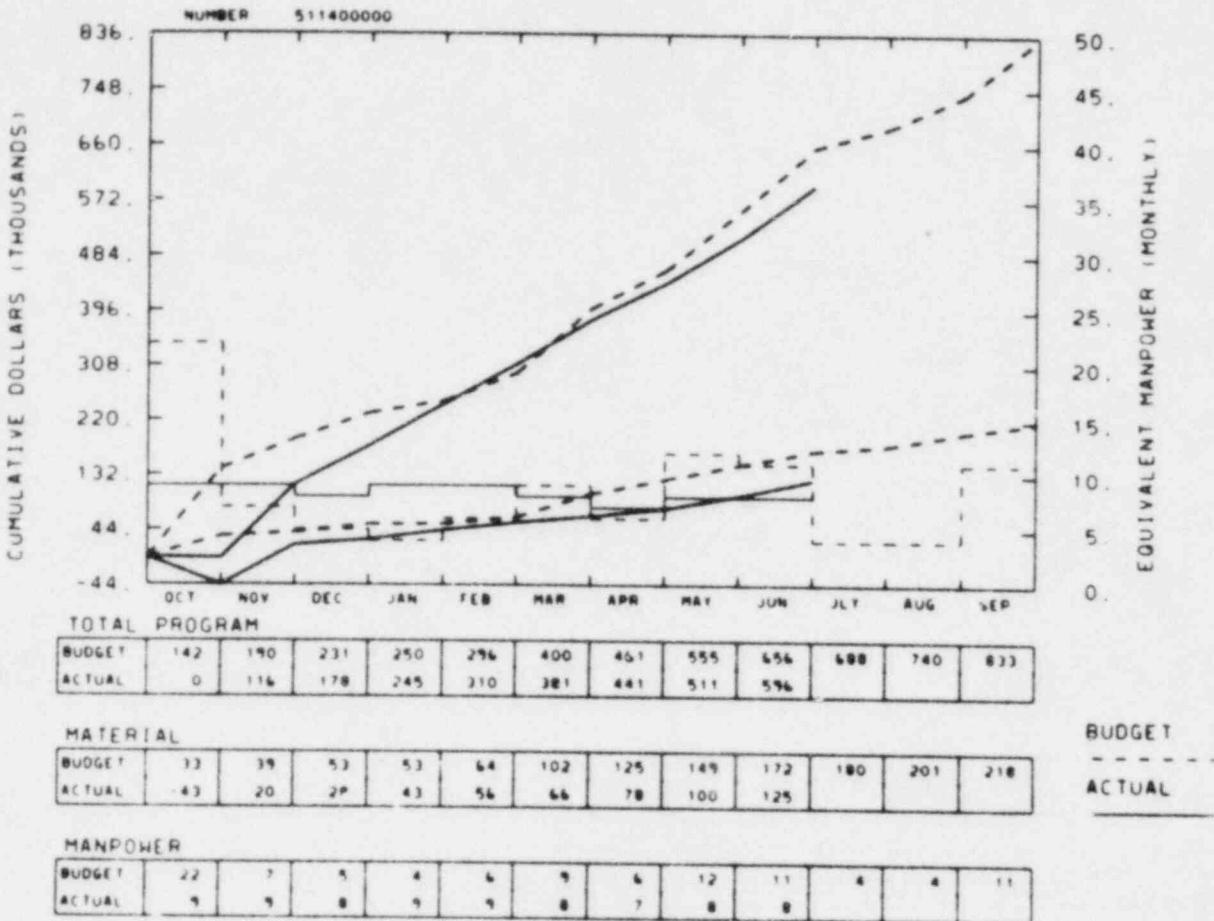


Capital equipment is being used on an "as required" basis. To date the requirements are lower than expected. The unused dollars will be carried over into FY-1983 to cover any capital equipment purchased during FY-1983.

Summary Cost Accounts

5NXX--NRC Summary Cost Accounts

EG&G IDAHO INC.
CODE APPLICATIONS



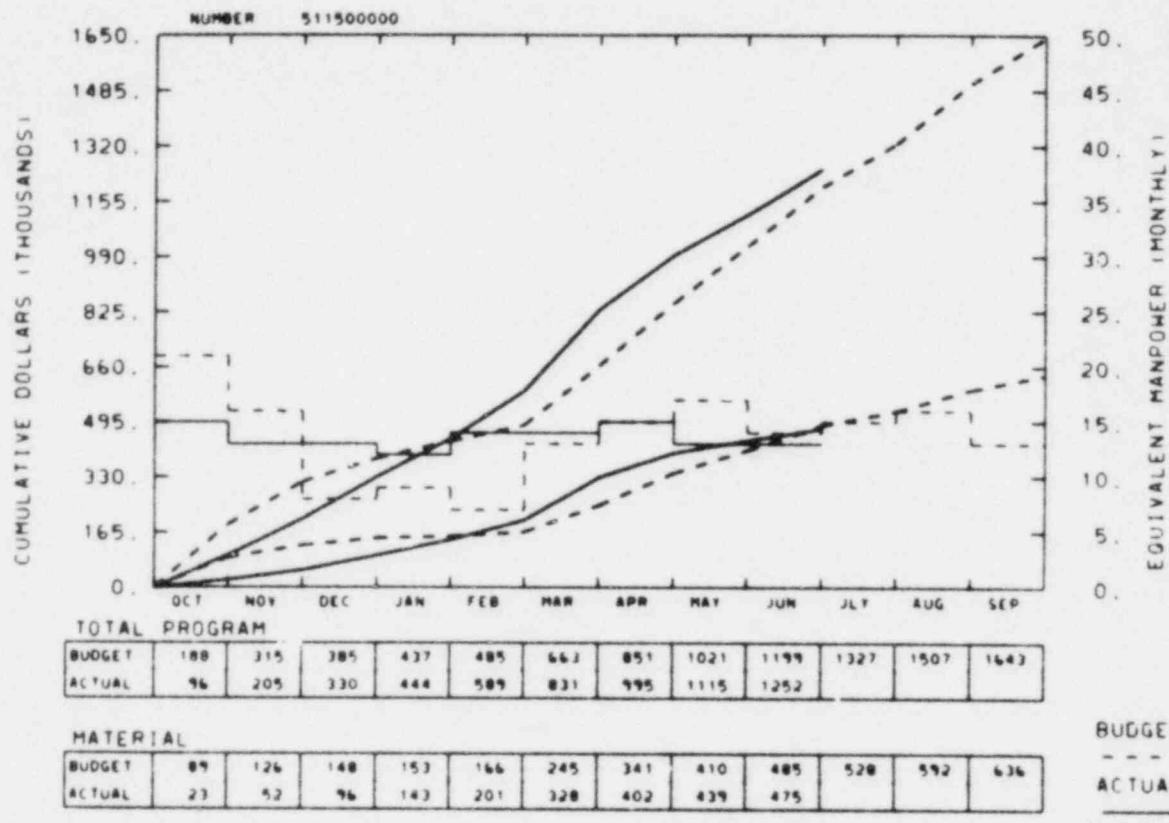
1. Variance:

	<u>Budget</u>	<u>Actual</u>	<u>Variance</u>	<u>%</u>
Monthly manpower (on graph)	78	60	18	23
Material dollars YTD (in thousands)	172	125	47	27
Total dollars YTD (in thousands)	656	596	60	9

2. Description of Problem/Cause: The total year-to-date (YTD) manpower budget is slightly below projected (3%). The difference between actual and budgeted manpower is primarily due to the manpower loading in the last 4 months of the fiscal year. (This loading sequence will be investigated.) Material dollars are currently underspent by 27%. the material dollar spending rate (computer), however, has increased and should be close to the projected value by year end.

3. Description of Solution: Year-end projections are expected to be very close to budget. Therefore, no action is required at this time.

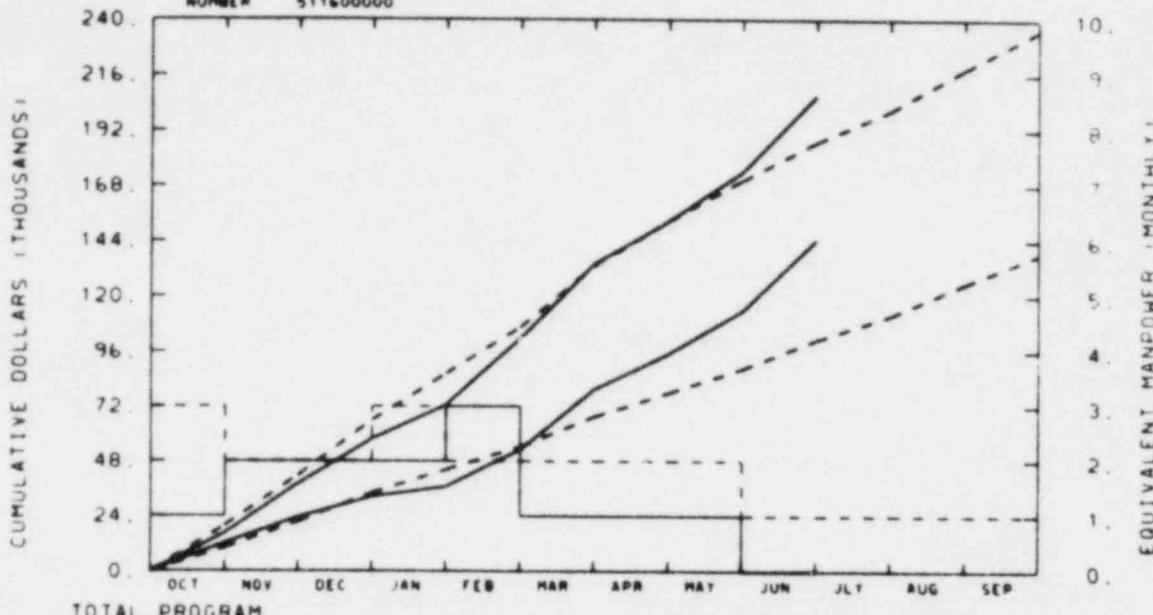
EG&G IDAHO INC.
EXPERIMENTAL EVALUATION



\$41K of the \$94K deficit at the end of May was recovered in June. The budget recovery procedures continue to be effective and have reduced the deficit from \$168K at the end of March to \$53K at the end of June. These recovery procedures will continue for the remainder of FY-1982. The expectation is that the deficit will be eliminated by mid-August.

EG&G IDAHO INC.
EXPERIMENTAL PROGRAM SUPPORT

NUMBER 511600000



TOTAL PROGRAM

	BUDGET	ACTUAL										
	20	16	42	38	66	58	86	73	107	102	122	134

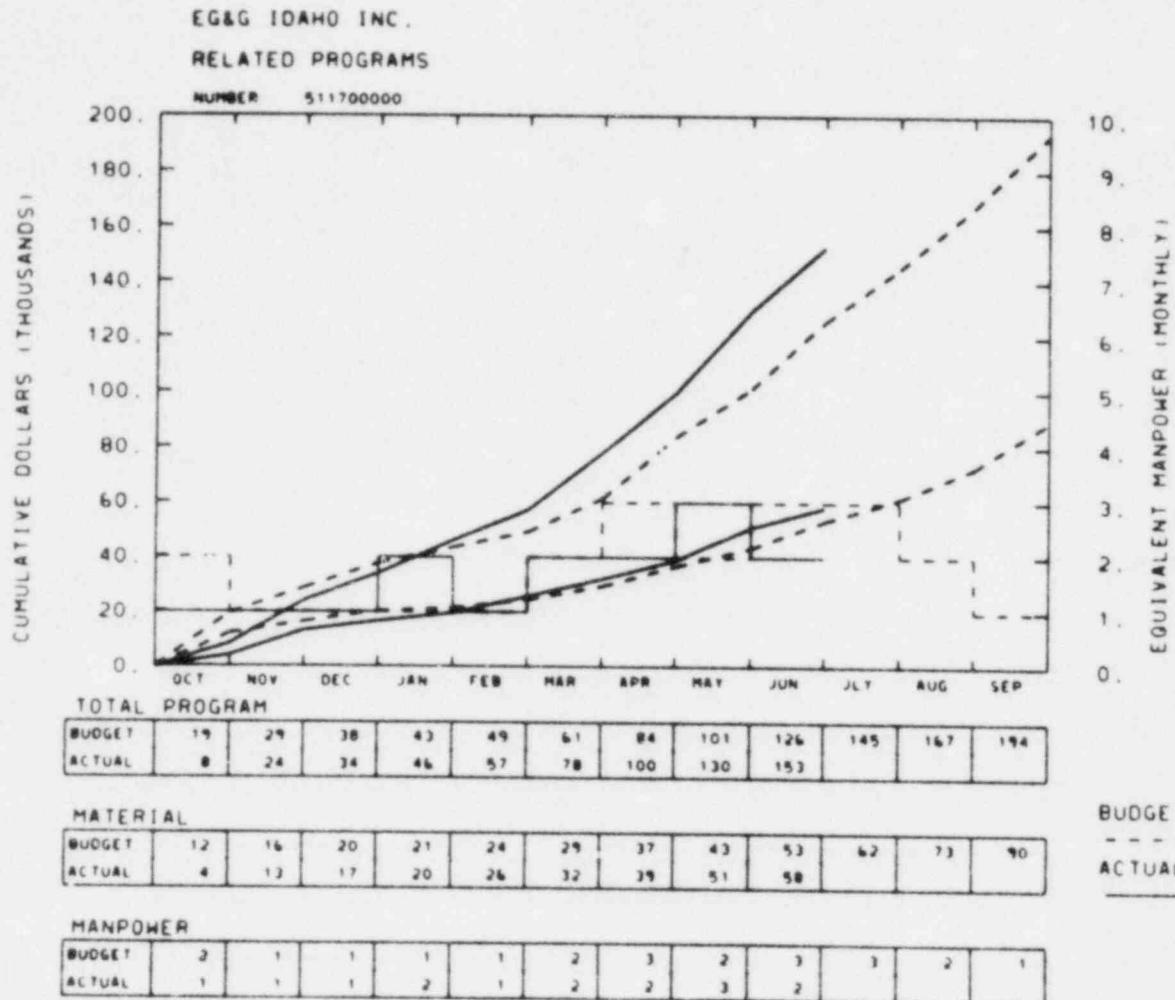
MATERIAL

	BUDGET	ACTUAL										
	10	12	21	23	34	32	44	37	54	53	68	80

MANPOWER

	BUDGET	ACTUAL										
	3	1	2	2	2	2	3	2	2	1	2	1

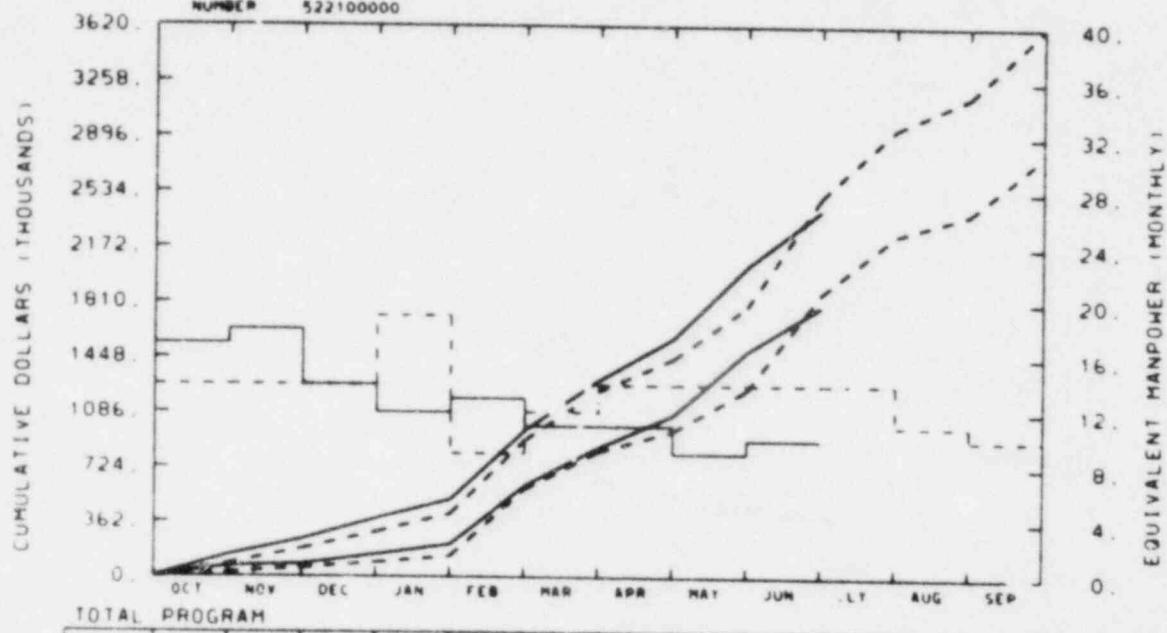
Expenditures exceeded budget during June due primarily to (a) extra costs incurred for graphic arts and photo services associated with preparation of presentations for the annual LOFT team visits to Europe and Asia (\$9.9K), and (b) an accrual payment of \$7K to the University of Central Florida for support to the LOFT heat transfer work. The year-to-date monthly average cost has been \$23K, and with only \$28K remaining in the annual budget, stringent measures will be instituted to minimize remaining FY-1982 costs.



\$24K was taken out of the budget in preparation for the IFA-511 nuclear/electric rod comparison task to be transferred by CCB from the LOFT Program to the LWR Fuels Research Division. The transfer was not approved at the CCB meeting. Due to this late decision, the \$24K had not been put back in the budget shown here, which is why the task is shown over budget. Adjustments should be in the July budget plots.

EG&G IDAHO INC.
FUEL DESIGN, FAB & ASSY

NUMBER 522100000



TOTAL PROGRAM

	BUDGET	185	184	294	416	902	1228	1439	1786	2504	2952	3163	3620
	ACTUAL	142	247	384	509	966	1297	1575	2050	2419			

MATERIAL

	BUDGET	26	56	95	135	578	828	966	1239	1873	2255	2393	2787
	ACTUAL	68	84	147	214	601	855	1070	1492	1790			

BUDGET

ACTUAL

MANPOWER

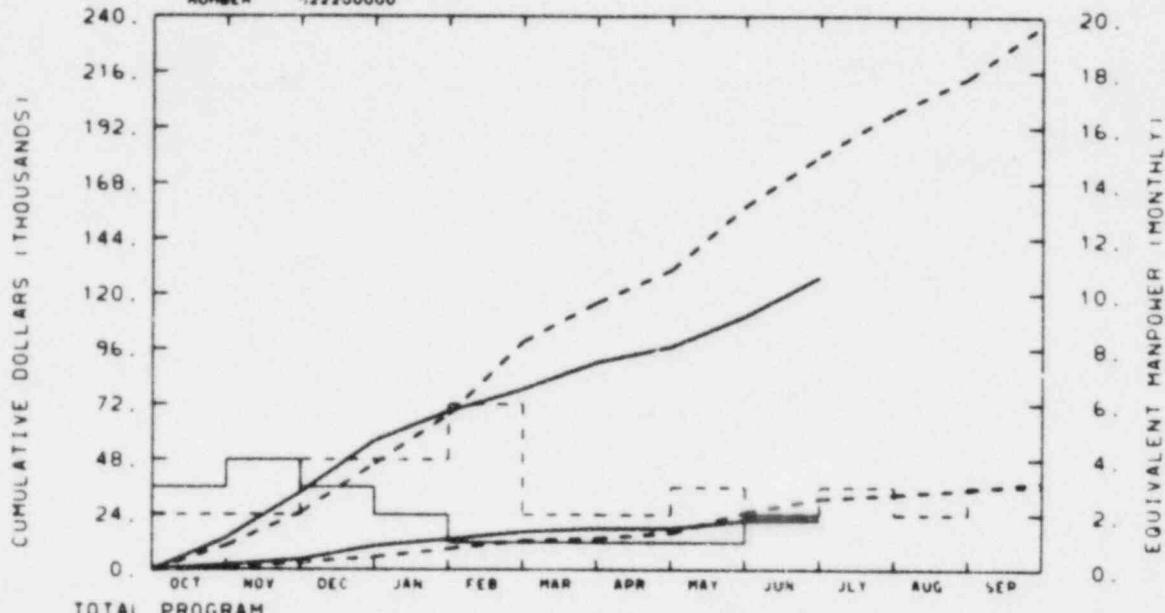
	BUDGET	14	14	14	14	9	12	14	14	14	14	11	10
	ACTUAL	17	18	14	12	13	11	11	9	10			

No significant variance. There is no anticipated significant variance by year end.

EG&G IDAHO INC.

FUEL EXAM

NUMBER 522200000



MATERIAL

BUDGET	1	3	6	9	13	14	16	25	31	33	35	38
ACTUAL	2	5	10	13	17	18	18	22	22	31	35	38

MANPOWER

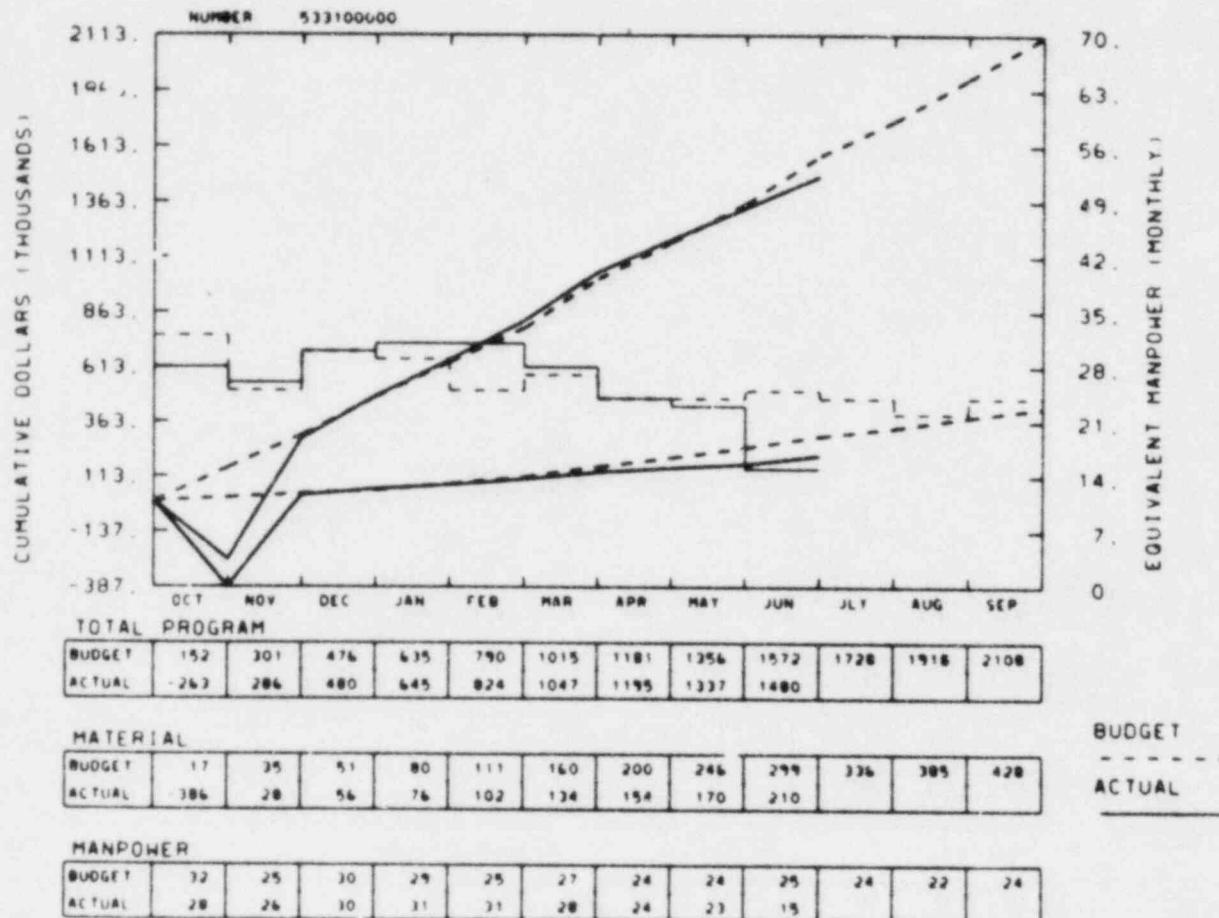
BUDGET	2	2	4	4	6	2	2	7	2	3	2	3
ACTUAL	3	4	3	2	1	1	1	1	2	3	2	3

BUDGET

ACTUAL

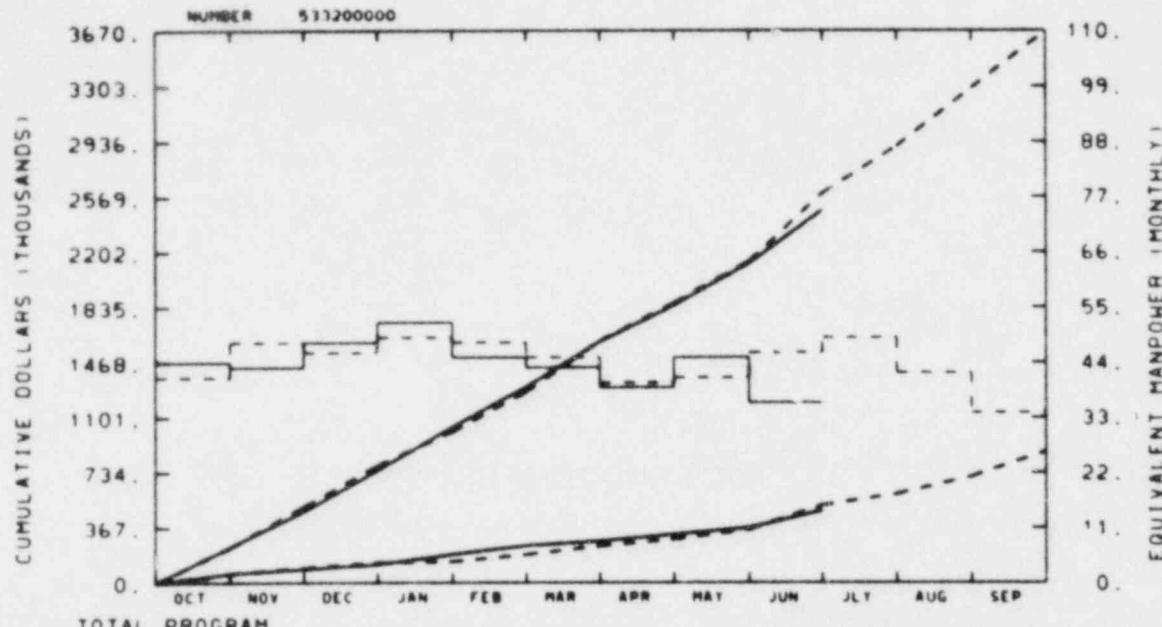
Cost underrun is due to (a) unavailability of key manpower for fuel rod laser profilometry conceptual design, (b) less-than-planned manpower support for fuel requalification, and (c) reluctance to incur costs for fuel rod defect scanner decontamination, repair, and upgrade until decisions on location of fuel examination are made. A CCB has been prepared to revise the cost and schedule estimates appropriately.

EG&G IDAHO INC.
EXPER MEAS ANALYSIS



Underrun will be returned to Management Reserve in budget scrub.

EG&G IDAHO INC.
EXPER MEAS APPLICATIONS



MATERIAL

	BUDGET	ACTUAL
	61	63
	101	92
	136	124
	143	151
	189	248
	246	278
	290	323
	355	368
	518	482
	591	
	708	
	875	

MANPOWER

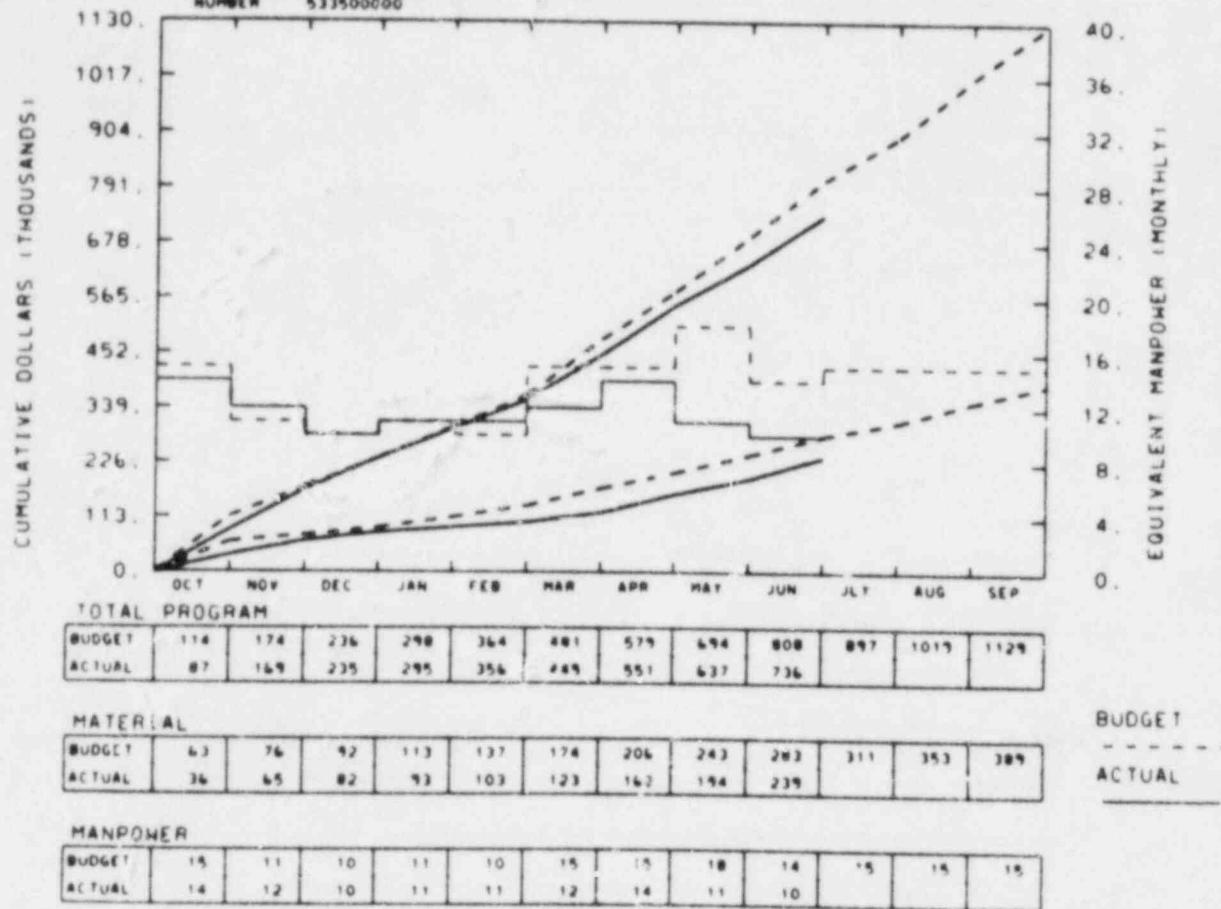
	BUDGET	ACTUAL
	41	48
	48	43
	46	48
	49	52
	48	45
	45	43
	40	39
	41	45
	46	36
	49	
	42	
	34	

Underrun is due to (a) changes in programmatic requirements have eliminated the need for the pulse neutron analyzer for Experiment L9-4, and (b) manpower is being spent on the F2 fuel bundle task and is delaying activity on some other work. CCBs have been input to reallocate and return funds to the Management Reserve and to reduce scope.

EG&G IDAHO INC.

EXPER DATA

NUMBER 533500000



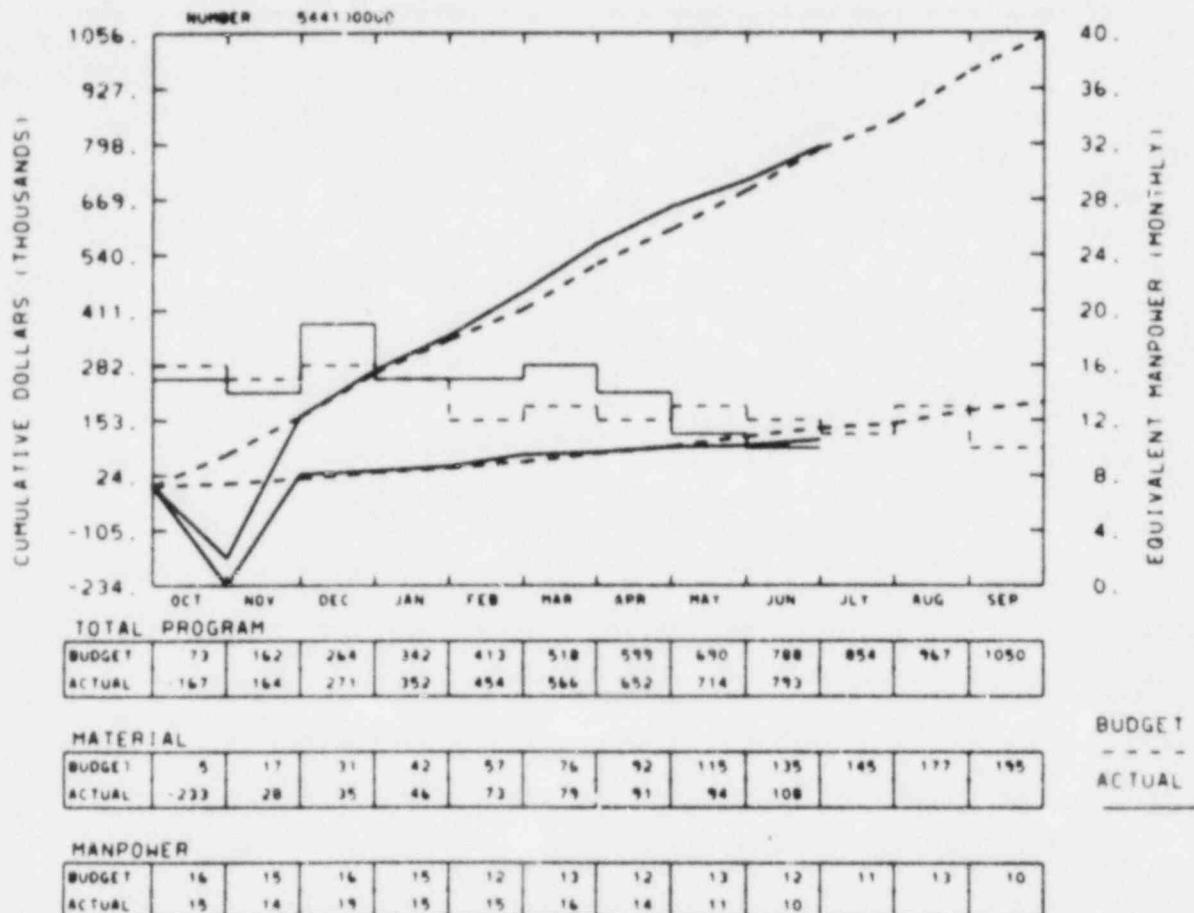
1. Variance:

	Budget	Actual	Variance	%
Monthly manpower (on graph)	14	10	4	29
Material dollars YTD (in thousands)	283	239	44	16
Total dollars YTD (in thousands)	808	736	72	9

2. Description of Problem/Cause: The data processing effort was less than expected due to increased software efficiencies, especially in the automated data qualification processing, which resulted in underruns in manpower and computer budgets.

3. Description of Solution: A CCB is in process to return the underrun to the Management Reserve.

EG&G IDAHO INC.
PROTECTION & CONTROL



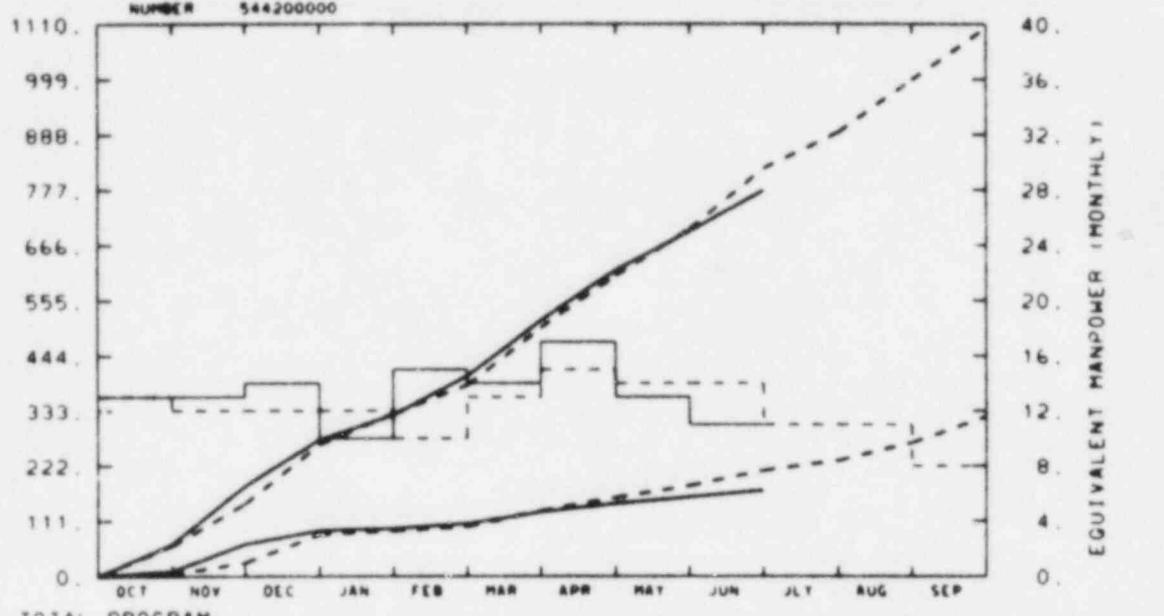
No significant variance.

EG&G IDAHO INC.

I & E

NUMBER 544200000

CUMULATIVE DOLLARS (THOUSANDS)



MATERIAL

BUDGET	5	27	84	91	100	132	158	182	213	233	264	321
ACTUAL	10	65	92	96	106	129	146	155	173			

MANPOWER

BUDGET	13	12	12	12	10	13	15	14	14	11	11	8
ACTUAL	13	13	14	10	15	14	17	13	11			

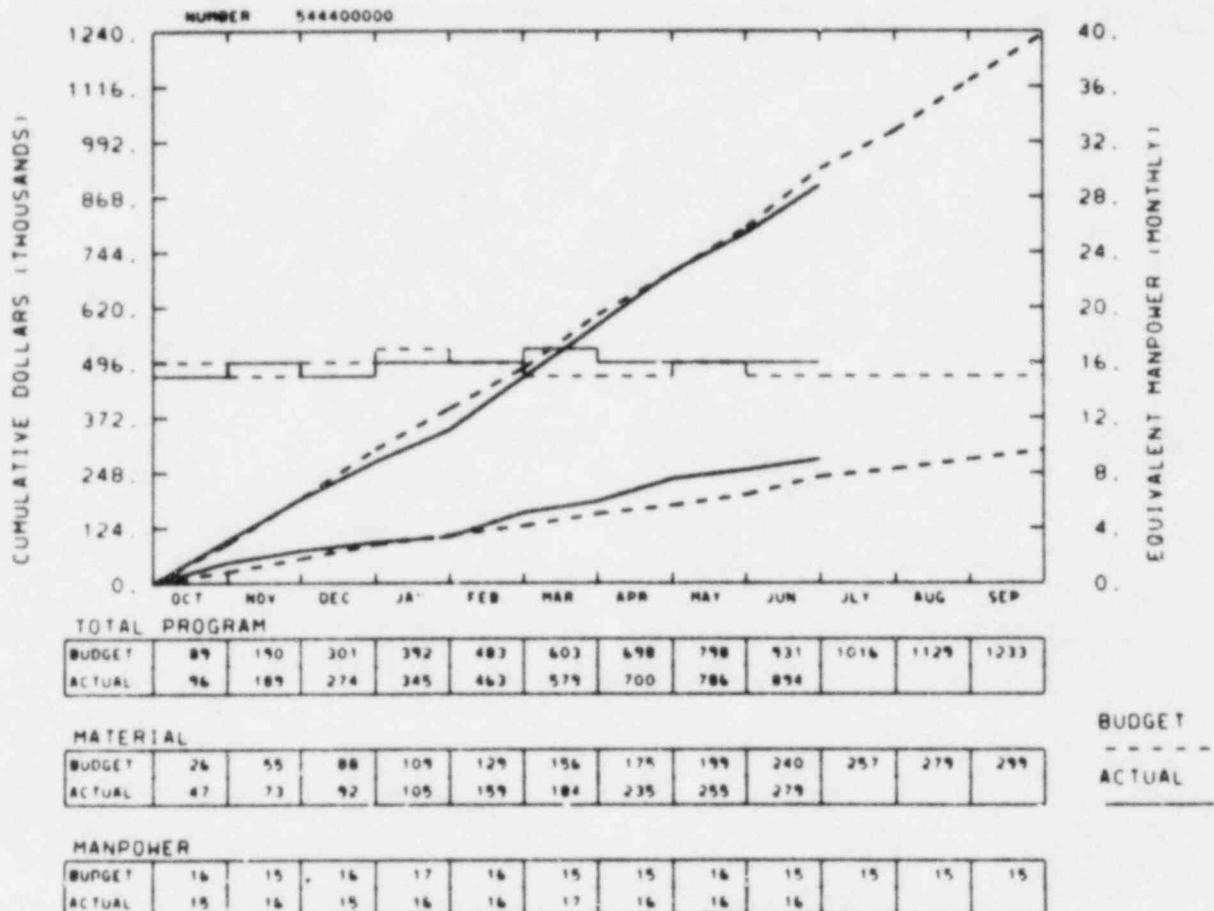
BUDGET

ACTUAL

Underrun is due to \$40K in outstanding requisitions which have not yet been costed. Adjustment in material accruals is in process.

EG&G IDAHO INC.

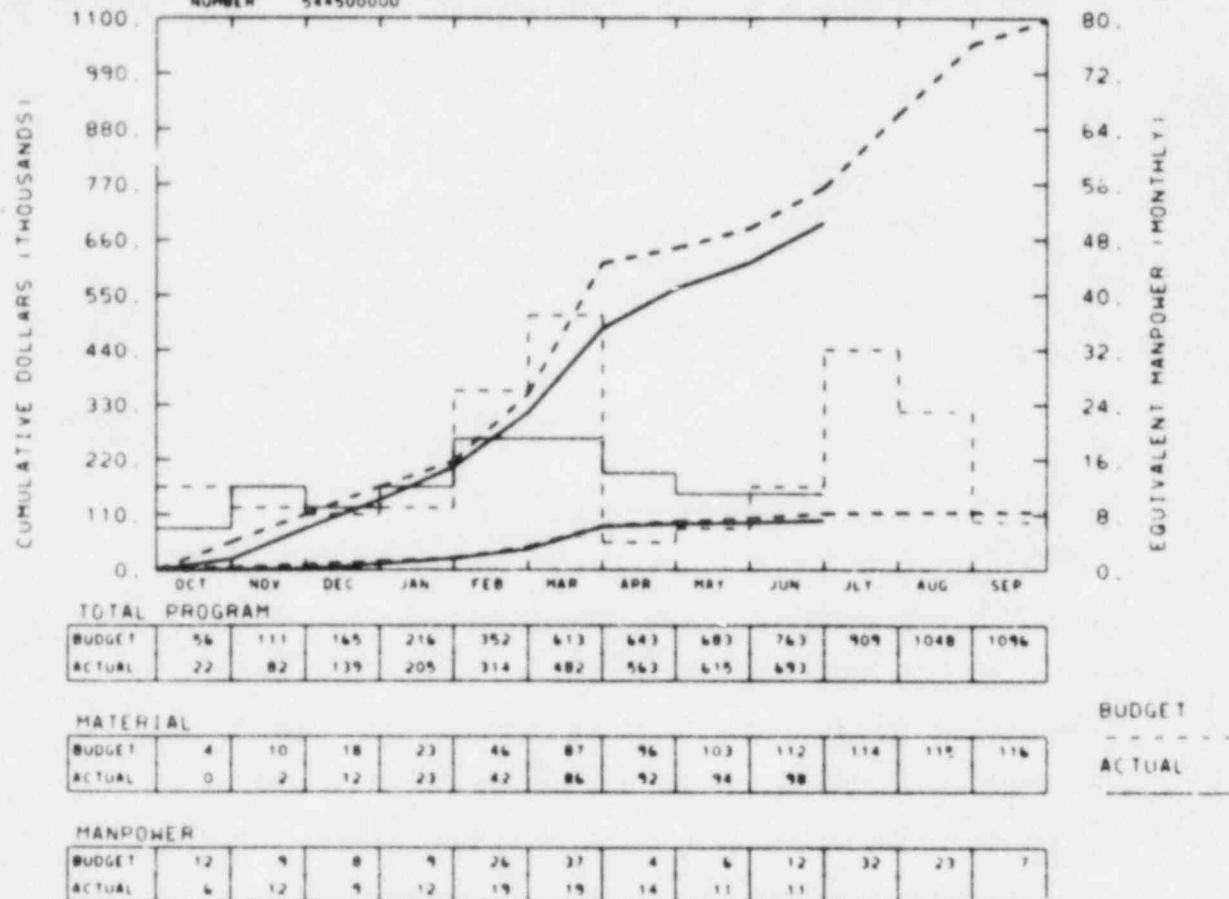
CDDCS



No significant variance. No significant problems are anticipated by fiscal year end.

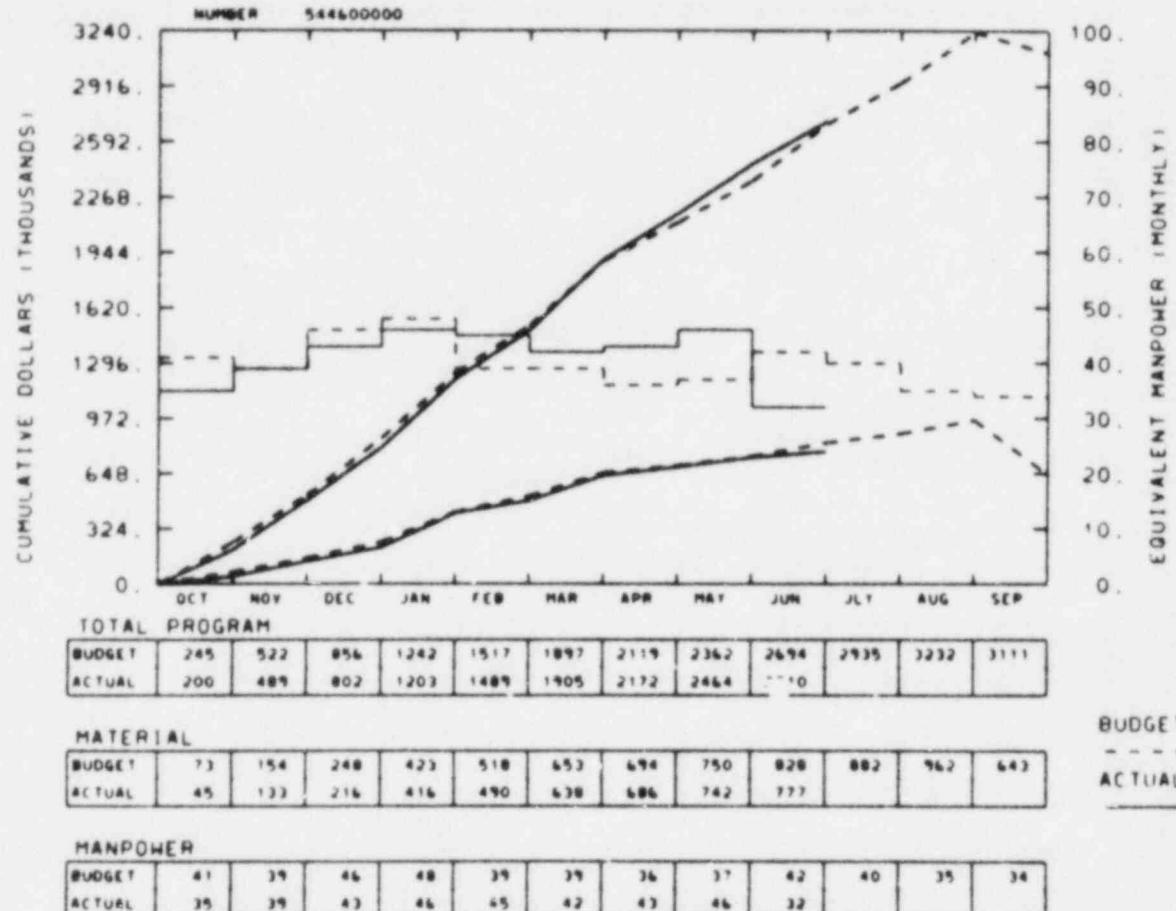
EG&G IDAHO INC.
PRIMARY SYS - TEST SUPPORT

NUMBER 544500000



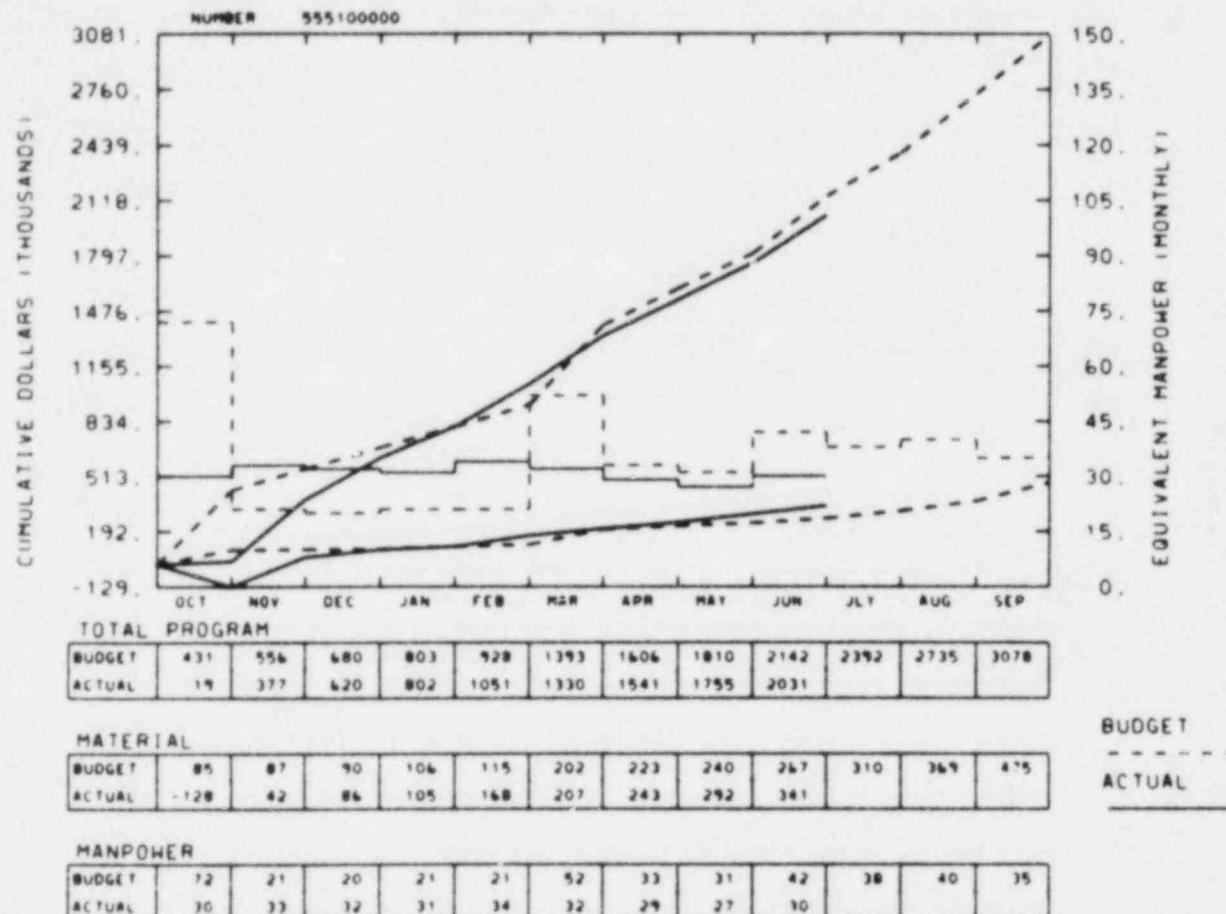
The underrun is a result of outstanding material commitments and schedule changes. A CCB is in process to adjust the cost underrun.

EG&G IDAHO INC.
PRIMARY SYS - PLANT SUPPORT



The cost graph indicates no significant variance; however, the graph includes the isotope detection system budget rescoping which is in process, but not approved.

EG&G IDAHO INC.
SAFETY & REACTOR SYS

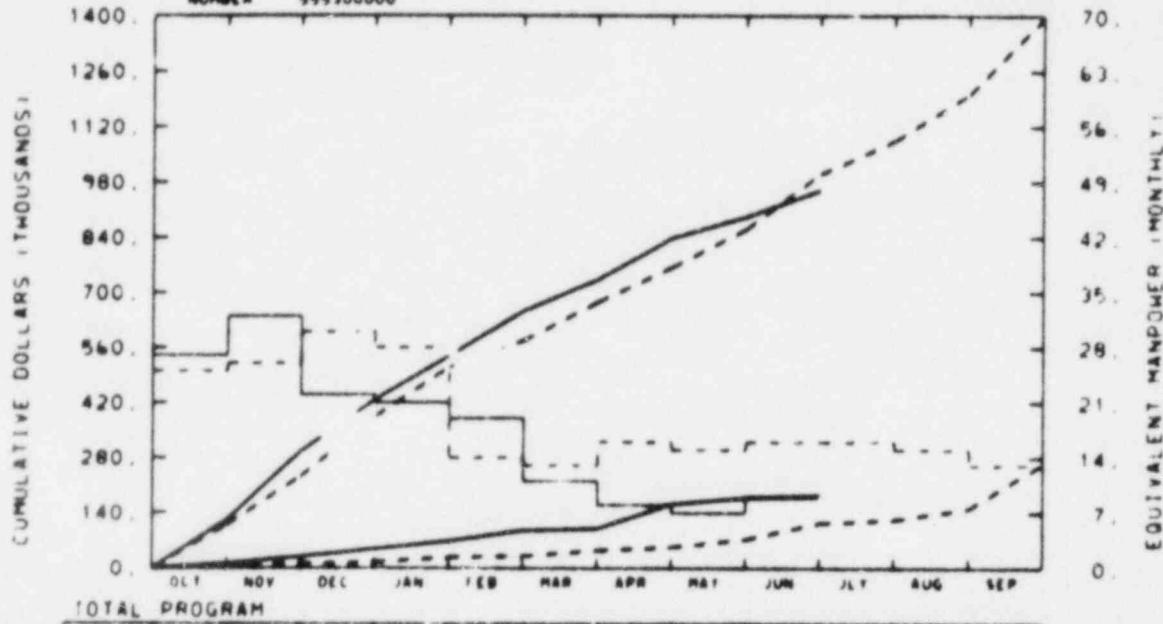


Manpower budget for computer code configuration management system will not be expended in FY-1982. A CCB is in process to return \$120K to the Management Reserve.

EG&G IDAHO INC.

FUEL HANDLING

NUMBER 555300000



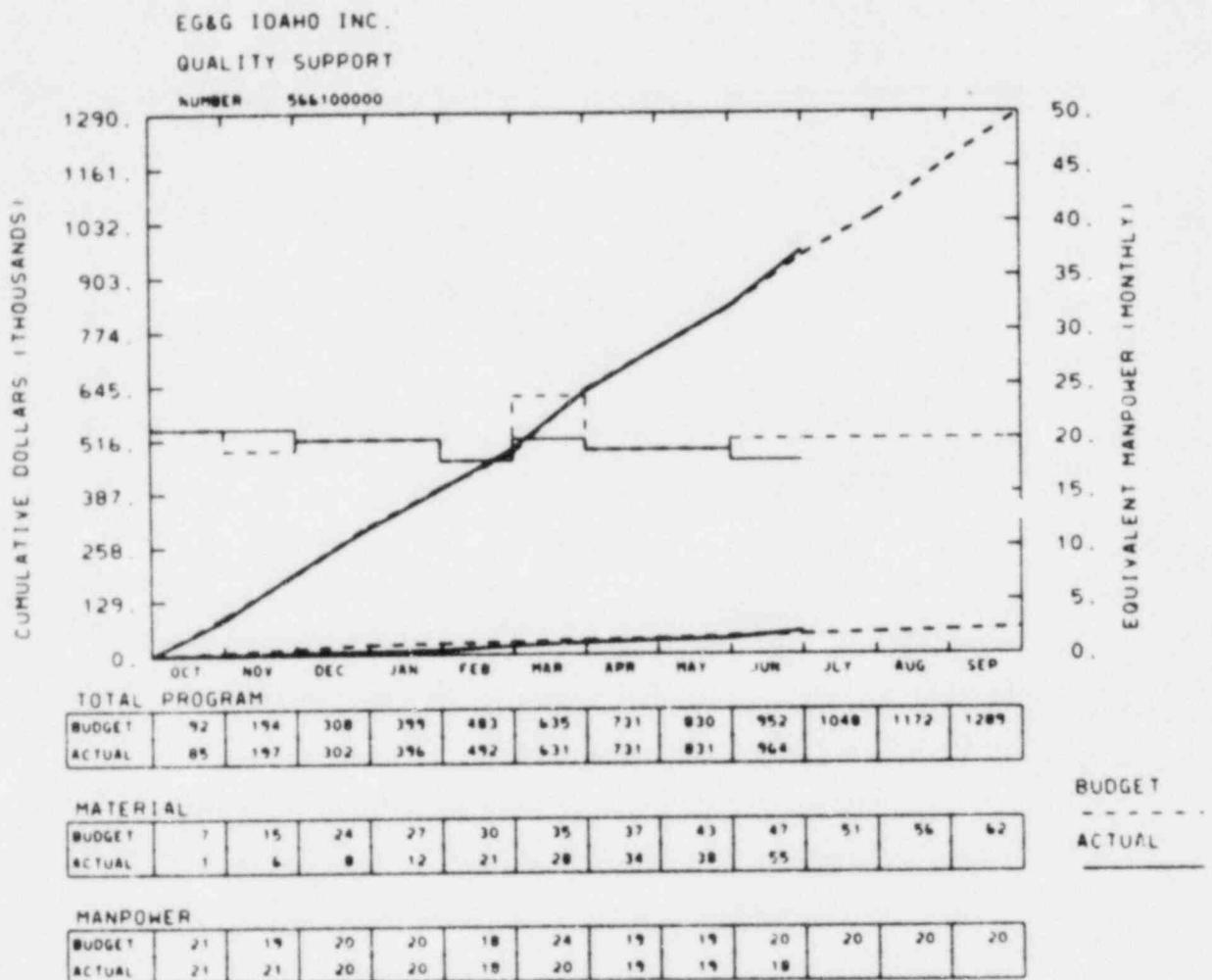
MATERIAL

	8	12	15	28	31	49	54	73	115	123	151	265
BUDGET	8	12	15	28	31	49	54	73	115	123	151	265
ACTUAL	12	30	49	68	95	100	163	179	185	123	151	265

MANPOWER

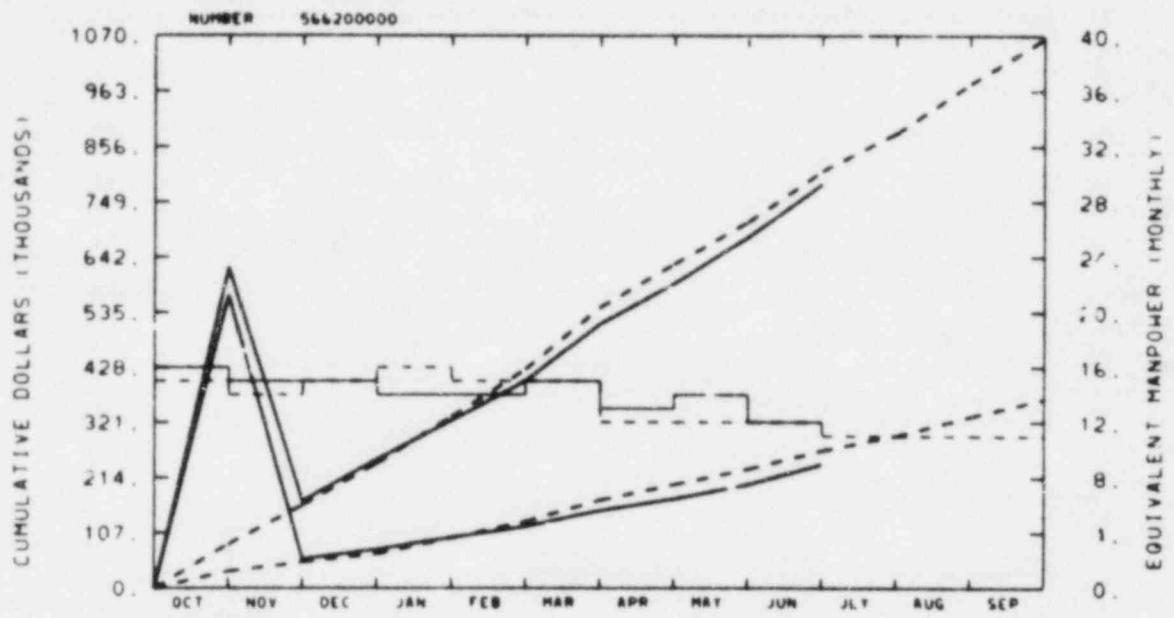
	25	26	30	38	44	53	56	75	116	116	115	113
BUDGET	25	26	30	38	44	53	56	75	116	116	115	113
ACTUAL	27	32	22	21	19	11	8	7	9	116	115	113

Adjustment of material and manpower costs is in progress. Resources will be realigned in current budget scrub.



No significant variance.

EG&G IDAHO INC.
PLANNING SUPPORT



MATERIAL

BUDGET	33	51	66	97	128	170	200	236	266	298	332	366
ACTUAL	568	56	75	98	119	150	172	200	239			

MANPOWER

BUDGET	15	14	15	16	15	15	12	12	12	11	11	11
ACTUAL	16	15	15	14	14	15	13	14	12			

BUDGET

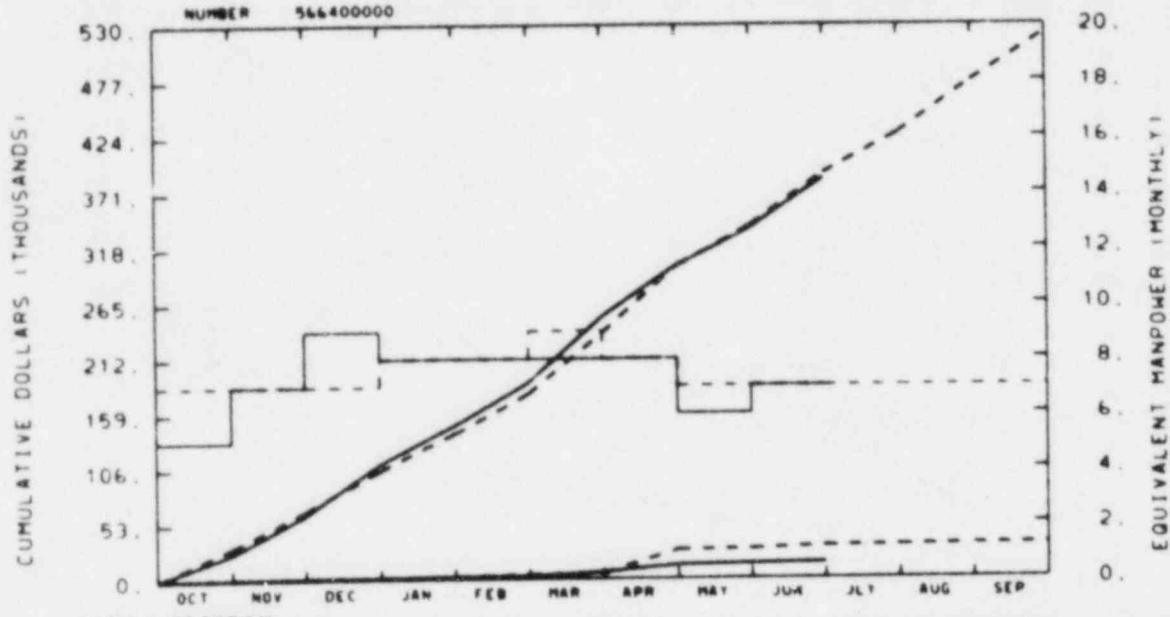
ACTUAL

No significant variance.

EG&G IDAHO INC.

SAFETY SUPPORT

NUMBER 566400000



TOTAL PROGRAM

BUDGET	31	66	105	140	178	236	301	339	389	426	476	522
ACTUAL	26	62	111	148	187	252	301	337	384			

MATERIAL

BUDGET	1	1	2	2	4	5	8	8	11	11	32	33
ACTUAL	1	1	2	3	3	6	13	14	15			

MANPOWER

BUDGET	7	7	7	8	8	9	8	7	7	7	7	7
ACTUAL	5	7	9	8	8	8	8	6	7			

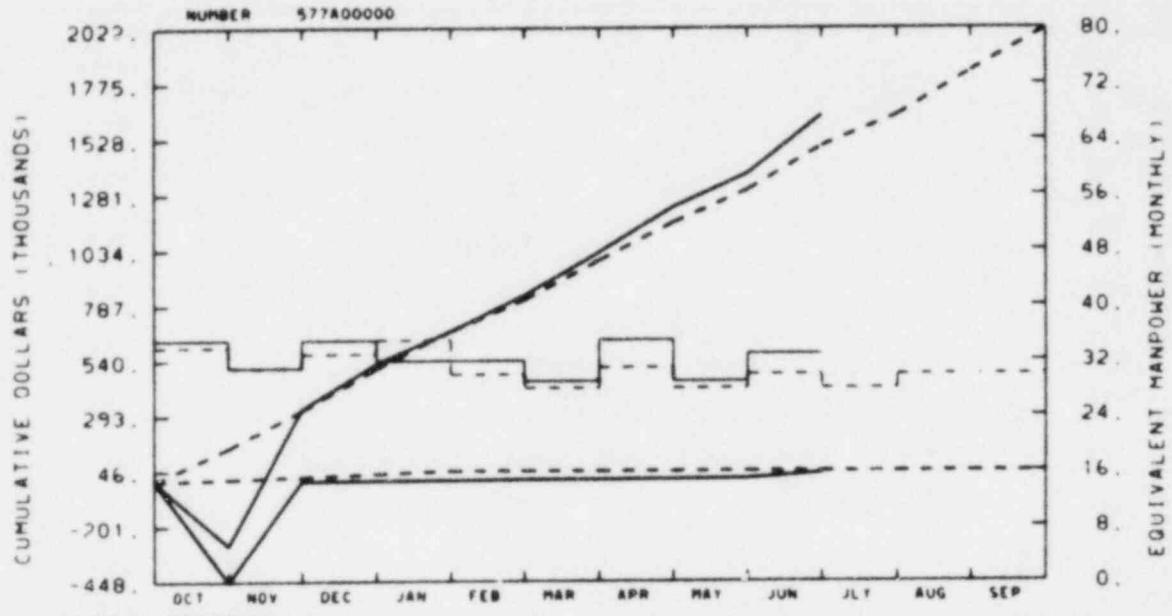
No significant variance.

BUDGET

ACTUAL

EG&G IDAHO INC.

LOFT OPERATIONS



MATERIAL

BUDGET	10	21	34	45	45	45	45	45	45	45	45	45
ACTUAL	-447	2	4	4	7	7	9	11	36			

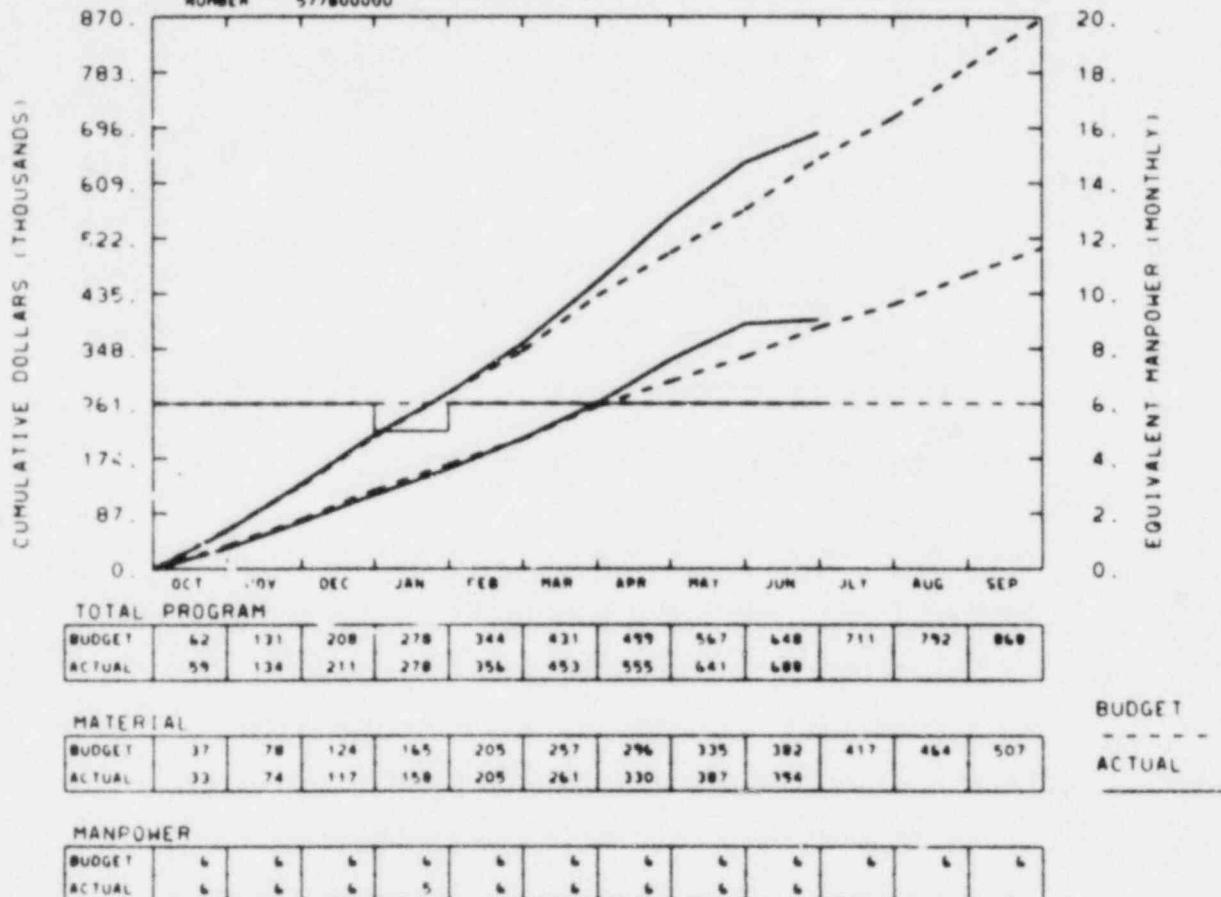
MANPOWER

BUDGET	34	31	33	35	30	28	31	28	30	28	30	30
ACTUAL	35	31	35	32	32	29	35	29	33			

No significant variance. No problem is anticipated by year end.

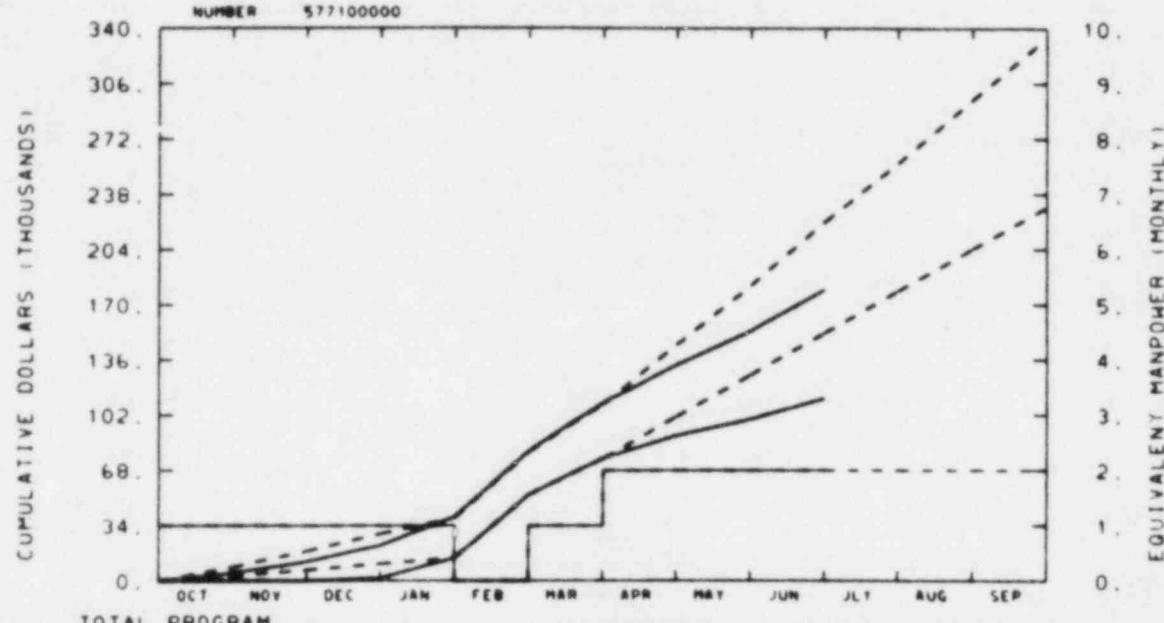
EG&G IDAHO INC.
LOFT OPERATIONS SUPPORT GROUP

NUMBER 577B00000



No significant variance. No problem is anticipated by year end.

EG&G IDAHO INC.
LOFT OPERATIONS SUPPORT TRAINING



TOTAL PROGRAM

BUDGET	9	18	22	35	75	105	145	182	221	257	296	336
ACTUAL	5	12	22	35	80	110	133	154	180	-	-	-

MATERIAL

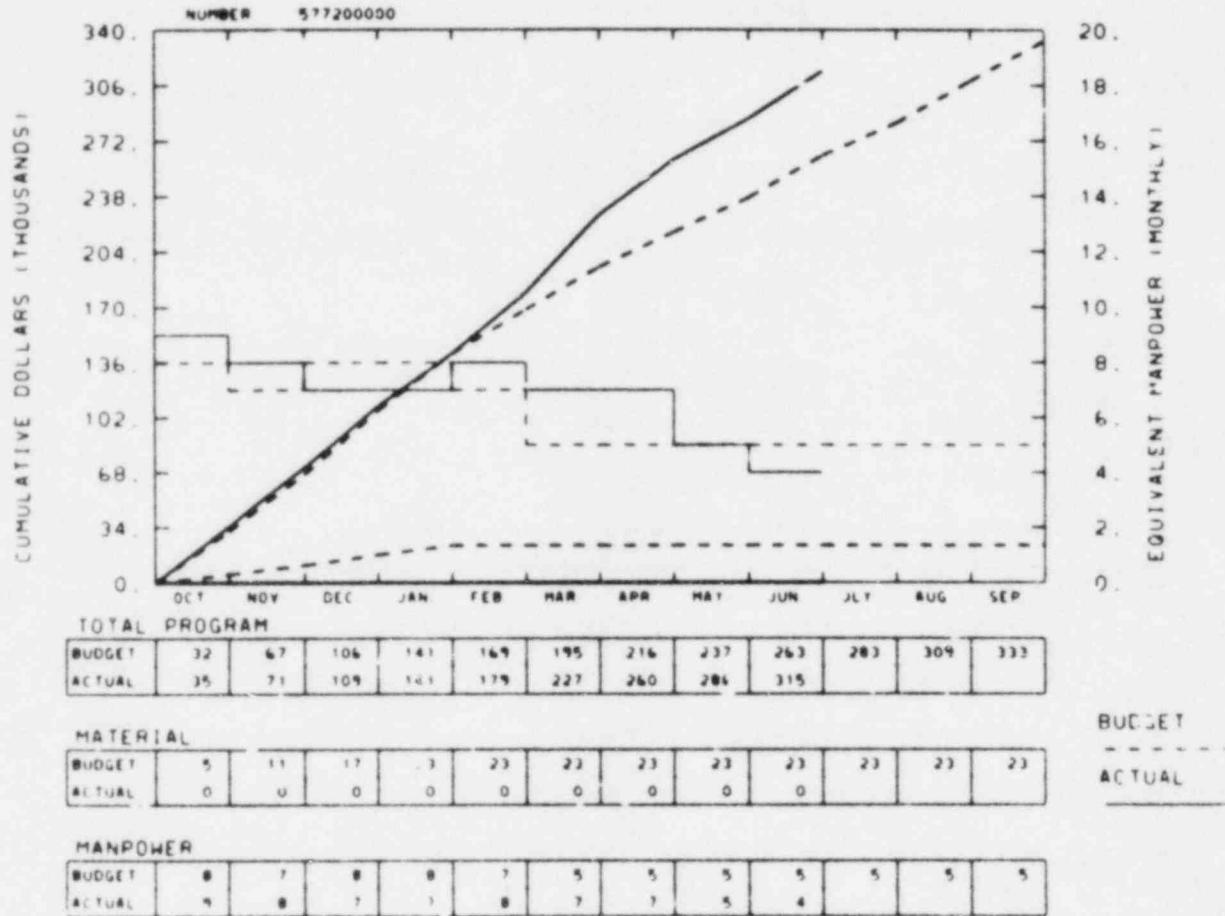
BUDGET	3	7	11	18	53	75	101	127	153	179	204	230
ACTUAL	0	0	2	14	53	75	89	100	112	-	-	-

MANPOWER

BUDGET	1	1	1	1	0	1	2	2	2	2	2	2
ACTUAL	1	1	1	1	0	1	2	2	2	2	2	2

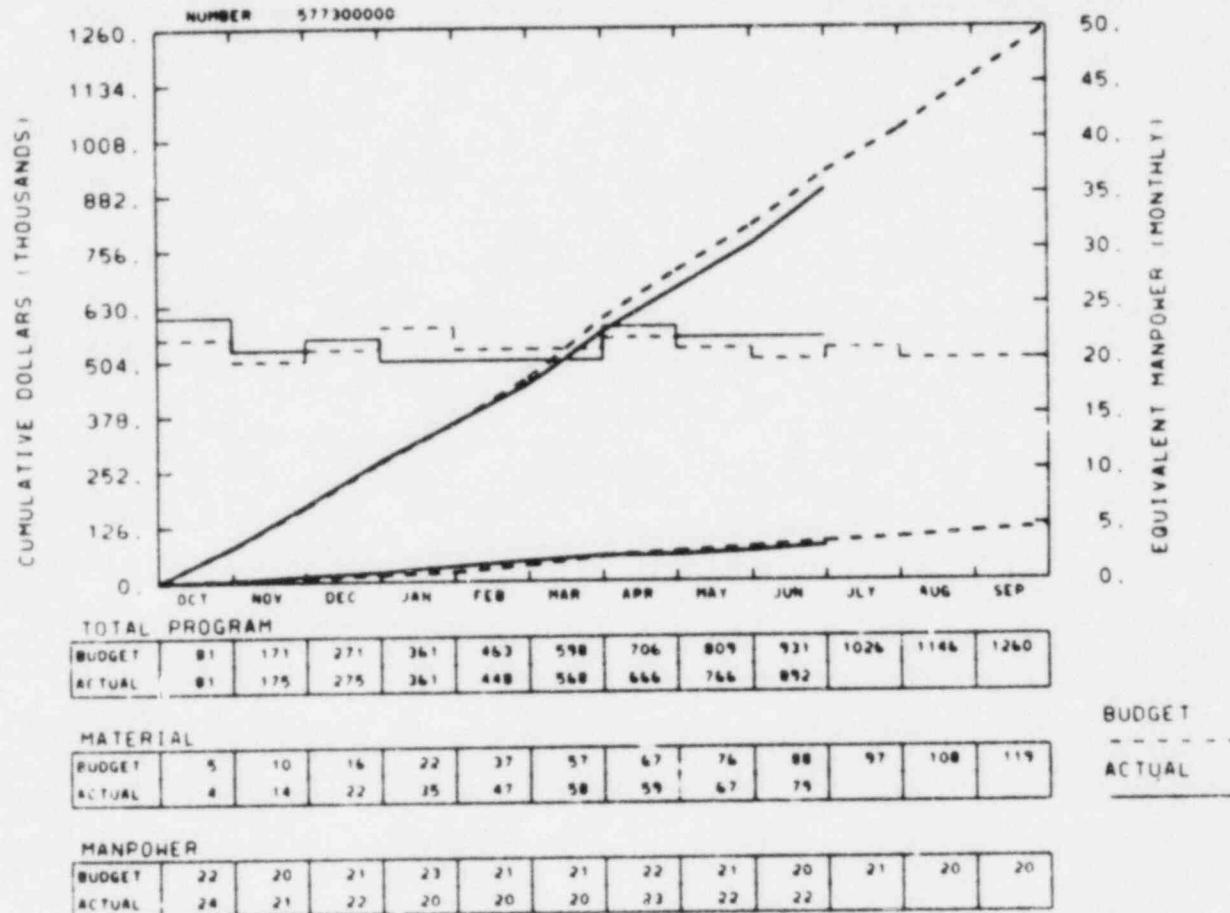
Underrun was caused by a delay in the ordering and receiving of material for the special training project (Plato). A portion of the material dollars will be carried over into FY-1983 to complete the project.

EG&G IDAHO INC.
LOFT TEST SECTION



Overrun is still caused by high labor costs, and corrective action is in process to alleviate the problem.

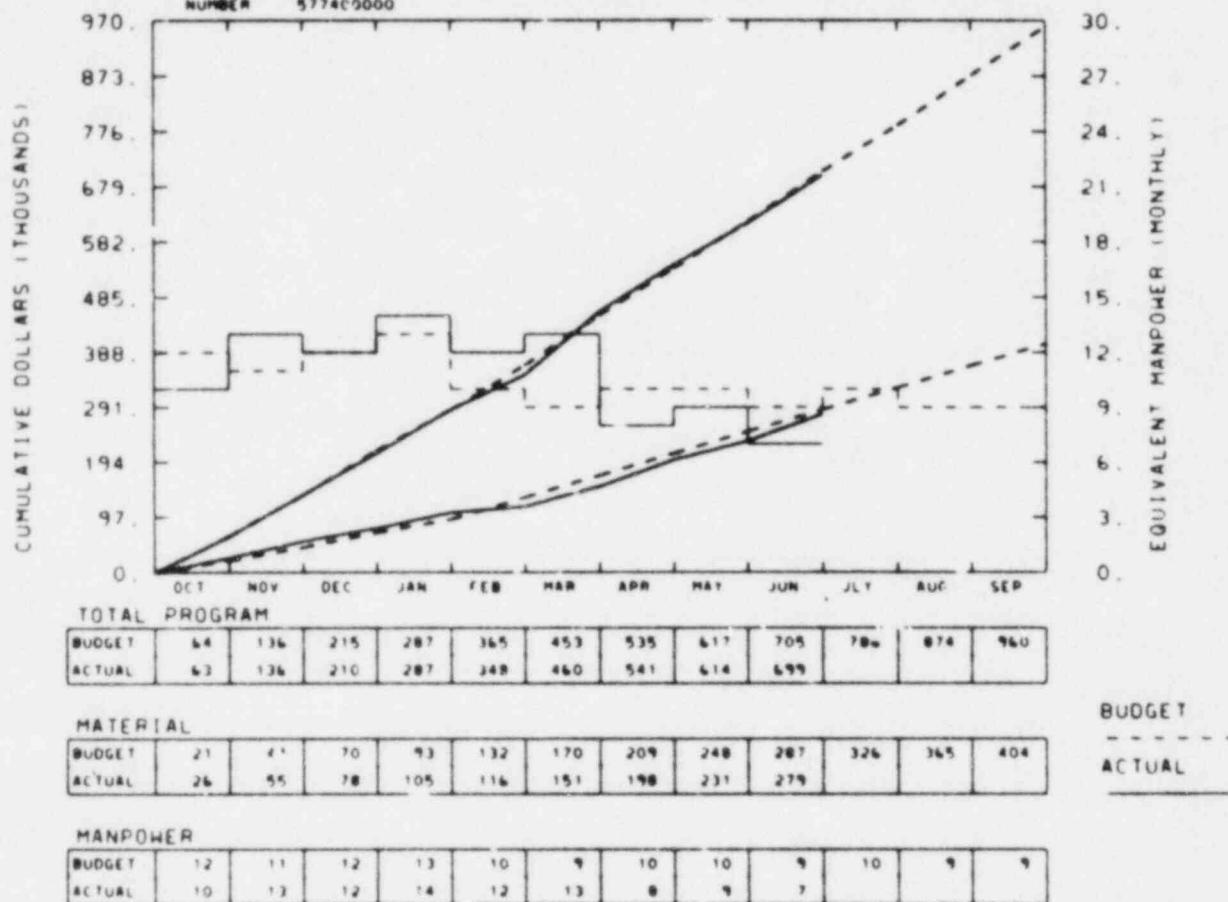
EG&G IDAHO INC.
LOFT DATA SECTION



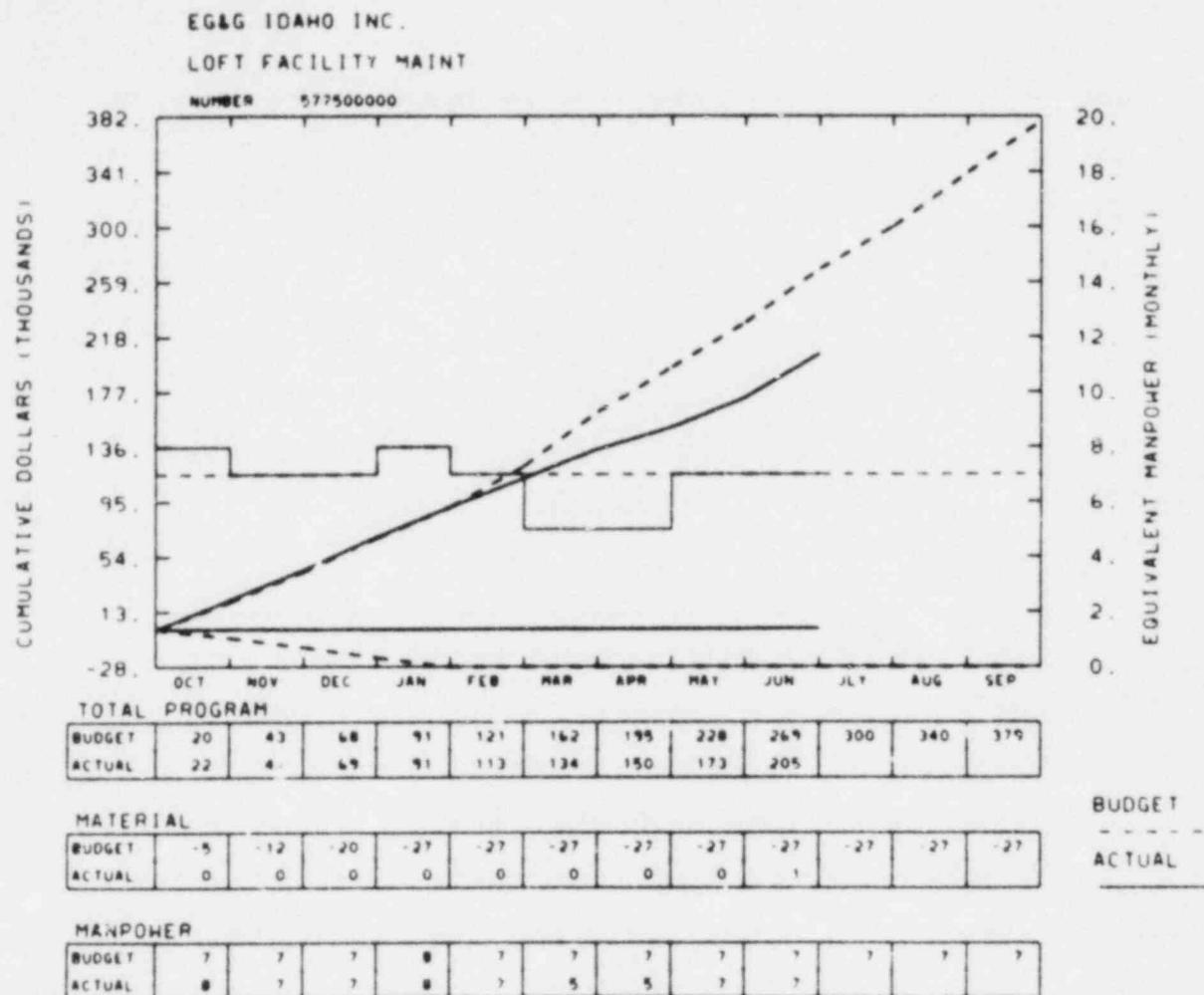
No significant variance. The year-to-date underrun is within 4% of the budgeted cost of work scheduled. No problems are anticipated by year end.

EG&G IDAHO INC.
LOFT MAINT ENGR & COORD

NUMBER 577409000

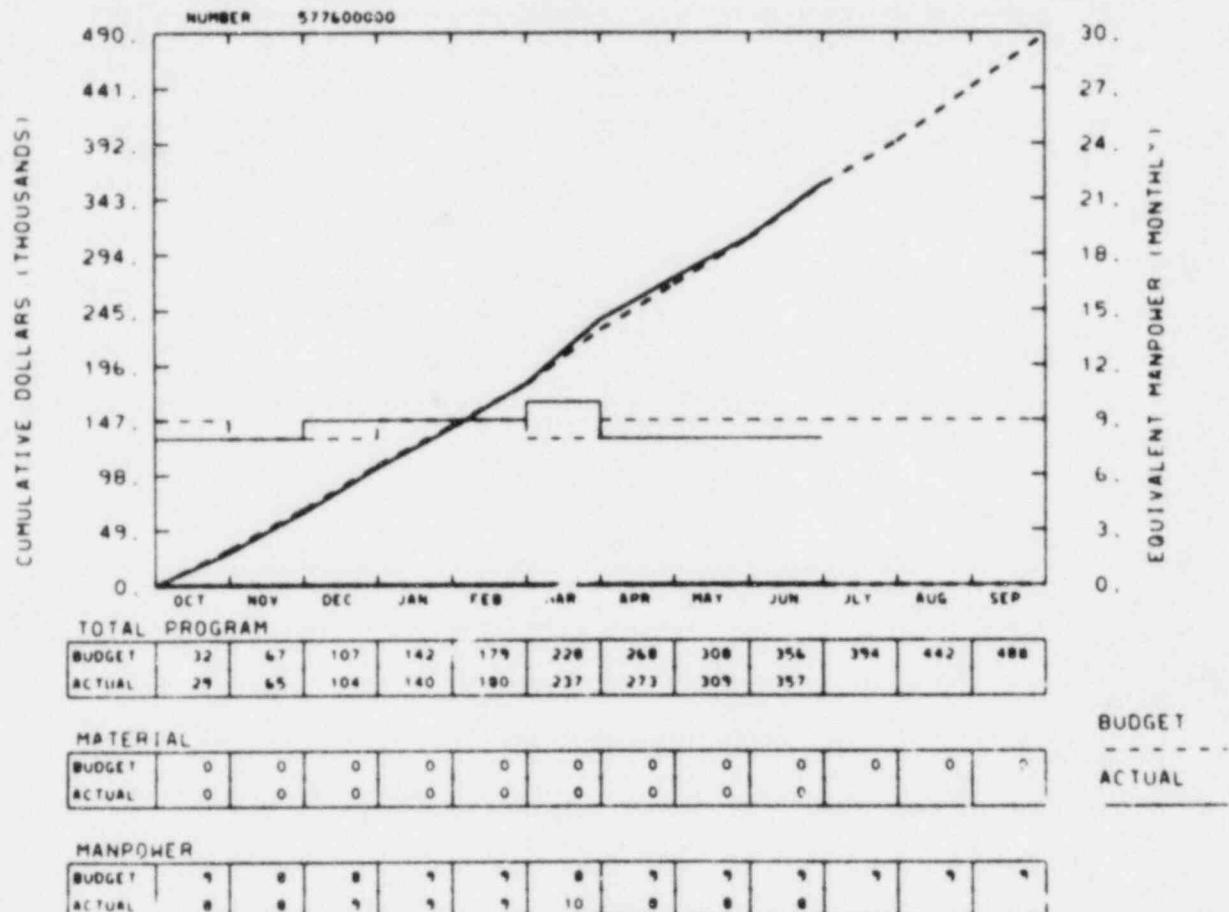


No significant variance.



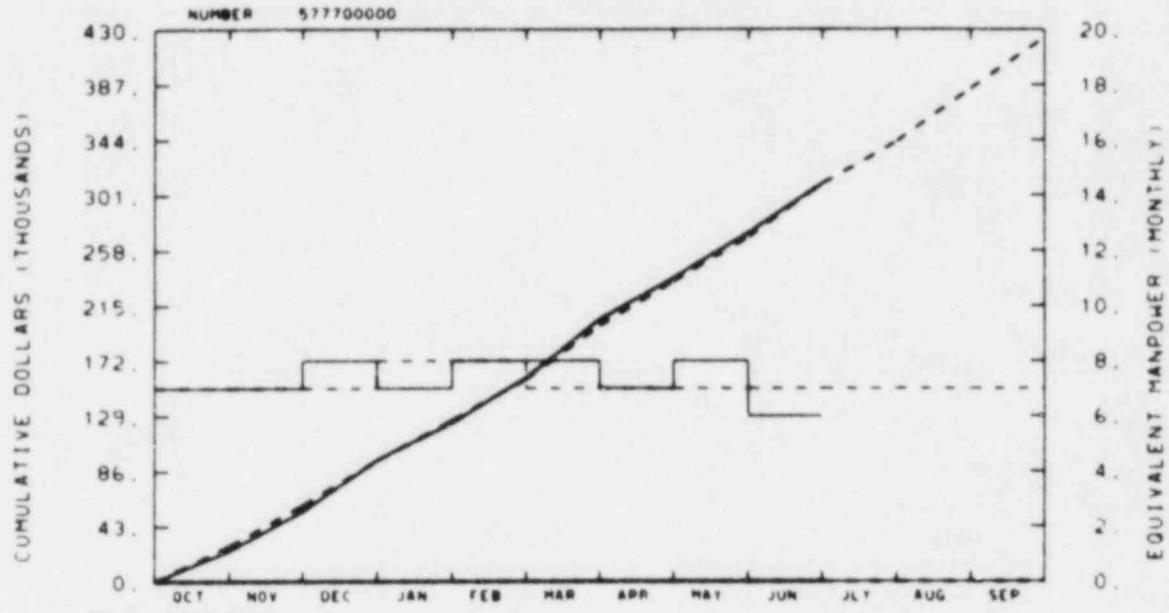
Lower than budgeted actual cost and an unusual amount of leave time continues to cause this underrun.

EG&G IDAHO INC.
LOFT MECHANICAL MAINT



No significant variance.

EG&G IDAHO INC.
LOFT ELECTRICAL MAINT



MATERIAL

BUDGET	0	0	0	0	0	0	0	0	0	0	0	0
ACTUAL	0	0	0	0	0	0	0	0	0	0	0	0

MANPOWER

BUDGET	7	7	7	8	8	7	7	7	7	7	7	7
ACTUAL	7	7	8	7	8	8	7	8	6	7	7	7

BUDGET

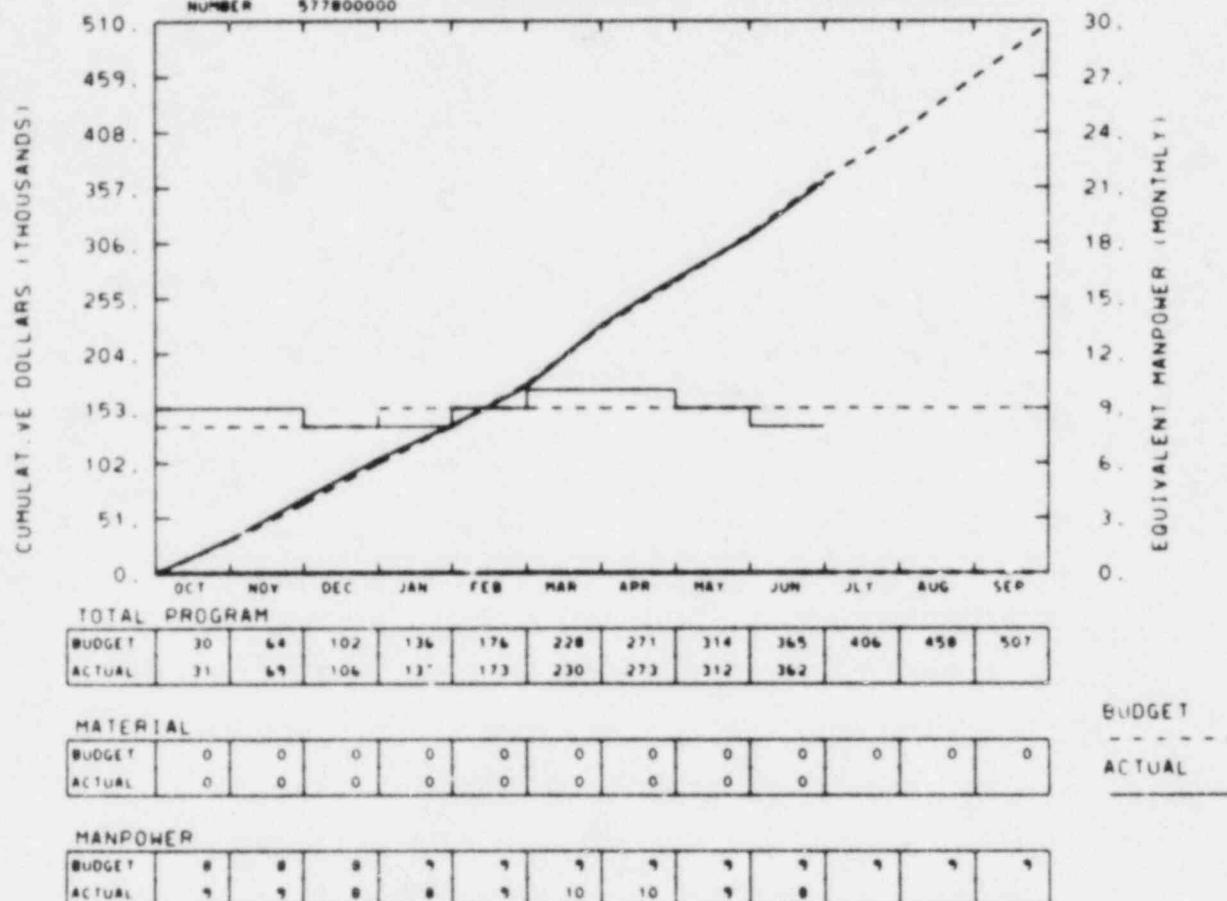
ACTUAL

No significant variance.

EG&G IDAHO INC.

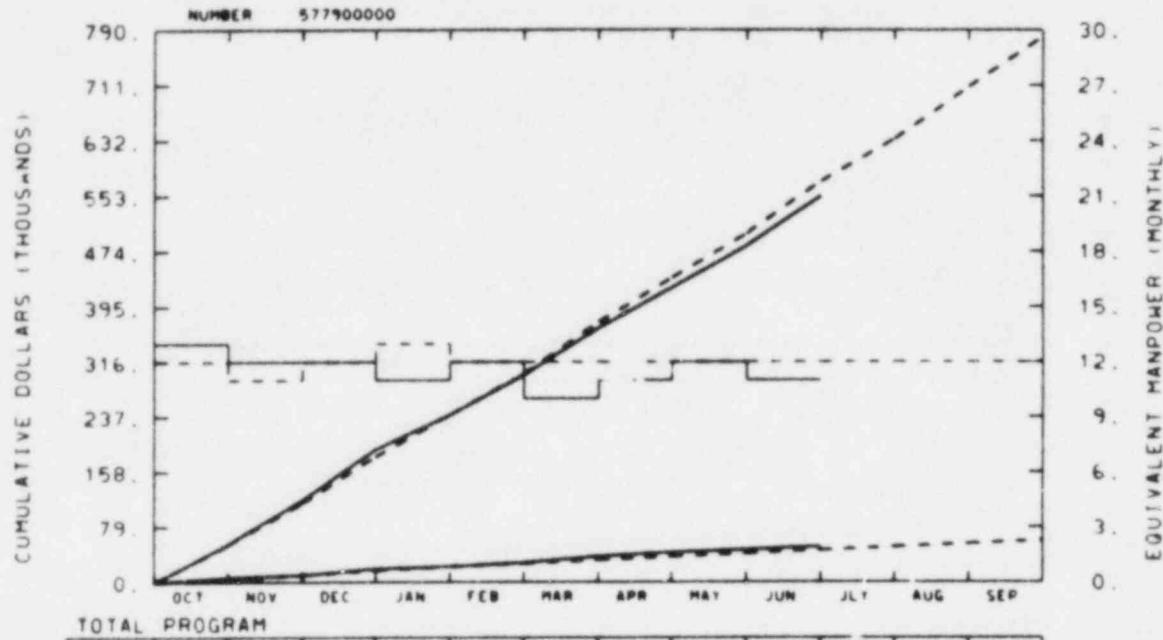
LOFT INSTRUMENT MAINT

NUMBER 577800000



No significant variance.

EG&G IDAHO INC.
LOFT SAFETY & ADMIN SUPPORT



MATERIAL

	BUDGET	ACTUAL
	5	7
	11	10
	17	20
	xx	23
	2*	28
	32	37
	37	43
	41	47
	46	51
	51	51
	55	55
	60	60

MANPOWER

	BUDGET	ACTUAL
	12	13
	11	12
	12	12
	13	11
	12	12
	12	10
	12	11
	12	12
	12	11
	12	12
	12	12

No significant variance. The year-to-date underrun is within 4% of the budgeted cost of work scheduled. No problems are anticipated by year end.

TABLE 1. PLANNED LOFT EXPERIMENT SEQUENCE

Test ID	Commitment Date	Description
CV leak test	07/09/81 ^a	Required test of containment leak integrity.
L6-7/L9-2	07/31/81 ^a	Simulated turbine trip multiple failure continuation of L6-7.
L5-1	10/26/81 ^a	Intermediate size break (accumulator line).
L8-2	11/16/81 ^a	Core uncover at high decay heat level.
Replace A2 with F1	11/19/81 through 01/29/82 ^a	F1 center fuel pressurized to 350 psig.
L9-3	04/07/82 ^a	Anticipated transient without scram (ATWS) loss of feedwater.
L6-6	04/21/82 ^a	Boron dilution from cold shutdown.
L2-5	06/16/82 ^a	200% cold leg break at 50 MW to produce the worst probable core thermal-hydraulic conditions, without fuel damage.
L6-8	10/21/82	Three anticipated transients.
L9-4	11/18/82	ATWS.
Replace F1 with F2	02/23/83	F2 fuel bundle pressurized.
L2-6	03/24/83	200% cold leg break double-ended at 50 MW.
Initiate cold shutdown	09/29/83	In standby--cold without core.

a. Completed.

TABLE 2. LOFT FY-1982 SUMMARY STATUS REPORT--NUCLEAR REGULATORY COMMISSION
(In Thousands of Dollars)

<u>WBS No.</u>	<u>189 No.</u>	<u>Q82-2-2</u>	<u>Approved CCBs</u>	<u>Q82-2-3 Current PMB^a</u>	<u>Current BAC^b</u>
RES-NRC:					
51XX	A6048	3,035	<20>	3,015	3,094
52XX	A6053	3,851	6	3,857	3,718
53XX	A6043	7,208	<305>	6,903	6,673
54XX	A6107	7,596	150	7,746	7,464
55XX	A6122	4,479	<6>	4,473	4,320
56XX	A6110	2,847	29	2,876	2,859
57XX	A6054	8,354	0	8,354	8,410
5XXX		37,370	<146>	37,224	36,538
Supplementary programs (LTSF)				2,003	1,922
Estimated carryover				4,913	<u>5,680</u>
Total RES-NRC funding (FY-1982)					44,140
RES Other:					
5H	A6384	100	0	100	100
5T	A6363	218	300	518	180
5K	6GE402	200	0	200	200
58	A6108	316	105	421	339
59	A6308	<u>516</u>	<u>220</u>	<u>736</u>	<u>486</u>
Total RES Other		1,350	625	1,975	1,305
Estimated carryover					<u>670</u>
Total funding					46,115

a. PMB--performance measurement baseline.

b. BAC--budget at completion.

TABLE 3. LOFT FUNDING SUMMARY FOR FY-1982
(In Thousands of Dollars)

Funds	<u>Current FIN Plan 8</u>	<u>Current Budget File (Q82-2-3)</u>
LOFT foreign funds	4,959	4,959 ^a
NRC RES-Operating funds	44,140	42,012
LTSF	--	<u>2,003</u>
Total	--	<u>44,015</u>
Total LOFT funding ^b	49,099 ^c	48,974

a. \$237K budgeted for FY-1983.

b. Excludes RES-Other, Capital Equipment, and Improved Licensing Criteria.

c. Includes GSO.

TABLE 4. LOFT FY-1982 SUMMARY BUDGET STATUS REPORT OF LOFT FOREIGN FUNDS
(In Thousands of Dollars)

<u>LOFT WBS</u>	<u>Form 189</u>	<u>Q82-2-2</u>	<u>Approved CL.I CCBs Through 05/14/82</u>	<u>Current PBM No. Q82-2-3^a</u>	<u>Actual Reserve</u>	<u>Total FY-82 Budget</u>	<u>Total Authorized Spending Limit</u>
5AXX	A6273	6	0	6	0	6	147
5FXX	A6362	1,085	0	1,085	347	1,044	2,000
5NXX	A6271	121	0	121	99	107	640
5GXX	A6104	650	0	650	629	609	6,260
5JXX	A6111	<u>512</u>	<u>0</u>	<u>512</u>	<u>1,511</u>	<u>371</u>	<u>7,000</u>
Total		2,374	0	2,374	2,586	2,137	16,047
Foreign management reserves							<u>2,586</u>
Total FY-1982 LOFT foreign fund work packages							2,137
Foreign funds spent through FY-1981							11,086
Foreign funds budgeted in FY-1983							<u>237</u>
Total foreign funds received to date							16,046

a. The current baseline covers FY-1982 and FY-1983. The FY-1983 portion of the designated work scope has been deducted from the Reserve.

TABLE 5. LOFT CAPITAL EQUIPMENT STATUS REPORT THROUGH JUNE 1982

Form 189	Title	Total Authorized ^a	Costs ^b				Uncommitted Uncosted Authorizations
			Prior Years	Current Month	Current Year	PO/WR Commitments	
A-6061 9RL	Experimental Measurements	1,970,121	508,739	68,329	418,209	89,146	954,027
A-6084 9RT	Integral System Design & Fabrication	1,543,341	801,678	<53,601>	565,825	71,589	104,249
2 A-6088 9RF	LOFT Operations	<u>67,227</u>	<u>3,375</u>	<u>-0-</u>	<u>16,673</u>	<u>9,295</u>	<u>37,884</u>
	Total NRC/LOFT	3,580,689	1,313,792	14,728	1,000,707	170,030	1,096,160

a. This amount will increase as closing costs are expected against items not presently included as FY-1982 authorized items.

b. Figures represent active items carried over from previous years plus new funded items for FY-1982.