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Inquiry Into Conditions And Need  
For Improvements At The  
Arctic Test Center,  
Fort Greely, Alaska B-171730

Department of the Army

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BY THE COMPTROLLER GENERAL  
OF THE UNITED STATES

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MARCH 14, 1972



COMPTROLLER GENERAL OF THE UNITED STATES  
WASHINGTON, D.C. 20548

B-171730

a) Dear Senator Proxmire:

R This is our report in response to your request of January 8, 1971, that the General Accounting Office inquire into statements made by 21 scientific and engineering assistants (SEAs) concerning conditions and the need for improvements at the Arctic Test Center (ATC), Fort Greely, Alaska. (See *D.01738* app. I.)

SEAs contended that (1) personnel responsible for managing and doing the testing were not technically competent, (2) testing and reporting results were unacceptable, (3) SEAs were not utilized effectively, and (4) more accurate and economical methods could be used to accomplish arctic testing.

2 Our inquiries generally corroborated the alleged conditions. The Army recognized that improvements were needed. *20* It appears that the Army is taking initial corrective actions. We believe, however, that in some instances additional steps may be needed.

### INTRODUCTION

SEAs are enlisted personnel with education and experience in scientific and engineering fields. Appendix II shows the distribution among Army organizations of 1,696 SEA personnel authorized in November 1970.

ATC is one of 15 test centers under jurisdiction of the U.S. Army Test and Evaluation Command (TECOM), Aberdeen, Maryland. As an element of the U.S. Army Materiel Command (AMC), TECOM is responsible for evaluation of Army materiel. ATC evaluates suitability for use in an arctic environment. Fort Greely is operated by the U.S. Army Alaska Command (USARAL).

c2 The Inspector General (IG) of AMC investigated this matter, and, on April 29, 1971, the Deputy Assistant Secretary of the Army (Research and Development) submitted to Senator Mike Gravel a summary of the findings. (See app. III.) Also the Army Audit Agency (AAA), as part of an Army-wide review of suitability testing, inquired into this matter. In addition to making independent inquiries, we considered the summary of the IG's investigation and the information obtained by AAA.

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A draft report was provided with your agreement to the Secretary of Defense on November 4, 1971. Comments were furnished on December 17, 1971, by the Deputy Assistant Secretary of the Army (Research and Development). Our findings and proposals for improvement, the Army's comments and actions, and unresolved matters are discussed in the following sections of this report.

CONTENTION THAT PERSONNEL RESPONSIBLE  
FOR MANAGING AND DOING THE TESTING  
NOT TECHNICALLY COMPETENT

According to SEAs (1) test personnel had insufficient scientific and engineering backgrounds and (2) continuity was disrupted by the Army's military personnel rotation policy.

We confirmed that most test personnel were not technically trained or experienced in military testing or in related scientific and engineering fields and that key personnel rotation during the test season disrupted the continuity of some test projects. ATC acknowledged that most test officers did not have technical educations or experiences and that it was taking steps to improve the competence of test personnel and to provide for better continuity of operations.

In our draft report we proposed that:

- The Army identify and direct actions to ensure that (1) technically qualified personnel are assigned to the Army's arctic and other test programs and (2) assignments of technical personnel start before test seasons begin and not terminate until test projects are completed.

The Army concurred in our proposal concerning assignment of technically qualified personnel and identified additional actions taken to upgrade the quality of test officers. The Army stated that, as a partial solution of the problem of turnover of technical personnel during the limited season for arctic testing, some adjustments in rotation of key personnel could be accomplished.

CONTENTION THAT TESTING AND REPORTING  
RESULTS NOT ACCEPTABLE

According to SEAs (1) test plans did not identify the data needed or how they were to be collected, (2) meaningless criteria were used for evaluating hardware suitability, and

(3) test data used to support report conclusions were inaccurate.

On the basis of the findings of AAA and IG and our limited examination, we believe that ATC's testing and reporting practices have not been fully adequate. The specific test projects cited by SEAs did not result in decisions to deploy unsuitable hardware because the use of test vehicles was questioned by ATC for other reasons. We believe, however, that the practices, if continued, could contribute to impaired combat readiness and could increase hardware acquisition costs.

The Army recognized the need for improvements and was establishing procedures to improve test data collection and reporting at ATC and at the 14 other TECOM test centers. We believe that the success of these procedures requires improvements in test personnel competence as previously discussed.

CONTENTION THAT SCIENTIFIC AND ENGINEERING ASSISTANTS NOT EFFECTIVELY UTILIZED

SEAs stated that (1) there were considerably more SEAs than needed to do the work at ATC and, consequently, they were utilized as clerks, drivers, and duty soldiers and (2) such nontechnical work details took priority over testing activities.

We found that in February 1971 the number of SEAs was excessive in relation to the work load. ATC attributed the excess and poor utilization primarily to uncontrolled reductions in the number of test projects and to the limited and unpredictable test season. The Army authorization provided for the reduction in the number of SEAs from 29 to 14. This action appears to deal with the immediate problem of personnel excesses resulting from unanticipated reductions in work loads.

Concerning the underlying need for reasonably stable work load estimates to permit appropriate assignment of personnel, AMC instructed its developing commands to coordinate their testing requirements with TECOM to improve utilization of test resources. This appears to be an appropriate initial step toward resolving the underlying problem.

ATC acknowledged that SEAs were interrupted for work details but contended that such interruptions had no adverse effect on test projects. We did not note any material adverse effect in the cases cited by SEAs, but the absence of technically trained personnel from their test projects for

even a short period could impair the timeliness or quality of testing. Consequently we believe that the Army should consider rescheduling military training and other soldier duties from the testing season to periods when testing and reporting are not in progress.

In our draft report we proposed that:

--TECOM direct ATC and other test centers, as appropriate, to more positively implement Army guidance on minimizing interruption of specialized duties of personnel engaged in research and engineering projects. We suggested that ATC study and report to TECOM on the feasibility of scheduling SEAs for military training and housekeeping tasks during periods when testing is not in progress.

The Army concurred in our suggestion. The Army stated that new guidance would place mission-related tasks and extra duties in proper perspective to preclude recurrence of the situation reported by GAO.

CONTENTION THAT MORE ACCURATE AND ECONOMICAL  
ARCTIC TESTING METHODS BE USED

SEAs suggested that, to accomplish arctic testing more accurately and at less cost, there be (1) increased reliance on cold chambers at locations more accessible than Alaska and (2) increased use of temporary personnel to do the arctic testing and data collection.

We believe that the suggestions made by SEAs merit consideration. Our discussions with ATC officials indicate that increased utilization of controlled-climate facilities would result in earlier disclosure and correction of hardware deficiencies and thereby minimize test failures and retesting in remote, natural environments.

In our draft report we proposed that:

--TECOM (1) establish procedures to ensure that required cold-chamber testing is done in the continental United States before items are sent to the arctic for testing and (2) analyze the question of whether the assignment of more temporary duty personnel to perform arctic testing would reduce the number of permanent personnel required and assist in balancing personnel assignments with work load requirements.

The Army stated that cold-chamber testing was performed prior to sending items to the arctic whenever possible and contended that the existing policies and practices were adequate. In view of comments by ATC officials concerning the need for more cold-chamber testing prior to arrival in the arctic, we believe that the Army should look into the situation at ATC and other natural environment test centers to see if the implementation of these policies can be improved.

The Army stated that TECOM continually was reviewing the assignment of temporary personnel on the basis of the analysis of the work load and the nature of the items programmed for arctic testing. Meaningful analysis, in our opinion, depends on the success of AMC's efforts to accurately estimate the arctic testing work load.

POTENTIAL ECONOMY OF ALTERNATIVE LOCATION  
AND SUPPORT METHOD FOR ARCTIC TESTING

A TECOM study group reported in November 1970 that, to prepare for a contingency that USARAL would not continue to operate Fort Greely because of anticipated manpower cuts, ATC could be relocated to Fort Wainwright, Alaska, or jurisdiction over Fort Greely could be transferred from USARAL to TECOM. According to the report, the relocation would result in savings of about \$1.9 million in the first year and \$3 million annually in later years and the jurisdiction change would result in annual savings of about \$2.2 million.

AMC told us that it was holding the report pending further developments on the contingency that USARAL would not continue to operate Fort Greely. We are not in a position to endorse the TECOM alternatives or to comment on the validity of the estimated savings. In view of the significant potential savings, however, we believe that the alternative location and the method of supporting arctic testing should be considered.

In our draft report we proposed that:

- The Army call for a review of the alternatives proposed by the TECOM study group in order to determine the most effective and economical location and method of supporting arctic testing.

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In commenting on this proposal, the Army stated that its present position was to support the operation and maintenance of the Fort Greely complex and not to change the location and support method for arctic testing. The Army said that periodic reviews of alternatives considered the impact on the wartime mission of USARAL.

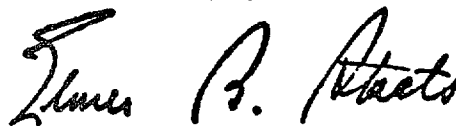
We do not question that impact on the wartime mission of USARAL should be considered in the Army's decision to continue Fort Greely as an active installation. We believe, however, that an installation's operation and maintenance should be structured in the most economical manner.

We discussed this matter with the Army in January 1972, and it informed us that studies in process were expected to result in manpower reductions and savings at Fort Greely comparable to those reported by the TECOM study group. We plan to follow up on the Army's actions to determine whether reasonable consideration is being given to achieving economies in arctic testing.

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63 We believe that officials of the Department of Defense are affected by and interested in the contents of this report. Other members and committees of the Congress have expressed interest in the effectiveness of military test and evaluation. We are therefore asking for your agreement to our making further distribution of this report.

Sincerely yours,



Comptroller General  
of the United States

U The Honorable William Proxmire  
R United States Senate

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## United States Senate

COMMITTEE ON APPROPRIATIONS

WASHINGTON, D.C. 20510

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January 8, 1971

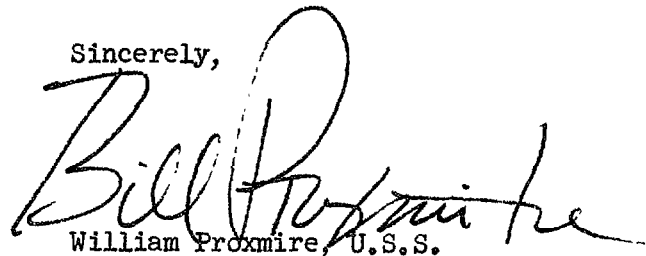
Honorable Elmer Staats  
Comptroller General  
General Accounting Office  
Washington, D. C.

Dear Mr. Staats:

The enclosed letters and information was sent to me by the men of the U.S. Army Arctic Test Center at Fort Greely, Alaska.

I think they raise very important questions and I would like to ask you and your highly competent staff to look into the matter to see what can be done about it.

Sincerely,



William Proxmire, U.S.S.

WP:ss

Enclosures

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APPENDIX II

DEPARTMENT OF THE ARMY  
 DISTRIBUTION OF SCIENTIFIC AND ENGINEERING ASSISTANTS  
 AS OF NOVEMBER 30, 1970

<u>TECOM</u>	<u>Autho- rized</u>	<u>AMC</u>	<u>Autho- rized</u>	<u>Army Commands</u>	<u>Autho- rized</u>
Arctic Test Center	29	Army Test and Evalua- tion Command	399	Army Materiel Com- mand	921
Tropic Test Center	7	Army Electronics Com- mand	110	U.S. Army, Alaska	13
Airborne Electronics and Special Warfare Board	8	Army Missile Command	45	U.S. Army, Europe	60
Armor Engineering Board	28	Army Tank-Automotive Command	8	U.S. Army, Vietnam	15
Field Artillery Board	3	Army Munitions Command	194	U.S. Continental Army Command	87
Aviation Test Board	12	Army Aviation Systems Command	7	Strategic Communica- tions Command	80
Infantry Board	13	Army Weapons Command	3	Office of the Sur- geon General	221
General Equipment Test Activity	50	Army Mobility Equipment Command	10	Corps of Engineers	129
White Sands Missile Range	88	Headquarters, Army Materiel Command	145	Combat Development Command	43
Yuma Proving Ground	42			Other commands and agencies	127
Electronics Proving Ground	37				
Aberdeen Proving Ground	58				
Air Defense Board	<u>24</u>				
Total	<u>399</u>		<u>921</u>		<u>1,696</u>

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DEPARTMENT OF THE ARMY  
OFFICE OF THE ASSISTANT SECRETARY  
WASHINGTON, D.C. 20310

29 April 1971

Honorable Mike Gravel  
United States Senate

Dear Senator Gravel:

This is in reply to your inquiry in behalf of the Scientific and Engineering (S&E) enlisted personnel of the U.S. Army Arctic Test Center, Fort Greely, Alaska, who alleged improprieties and the improper use of their technical skills at that facility.

An investigation of the allegations submitted by the 21 S&E complainants has been conducted. A summary of our findings is inclosed for your convenience.

Overstaffing of S&E enlisted personnel surfaced as a major problem at the Arctic Test Center. As a consequence, the authorization for personnel possessing Scientific and Engineering degrees at the Arctic Test Center has been reduced to reflect valid requirements. Action has been initiated to correct all other findings which were substantiated.

Sincerely,

/s/ Charles L. Poor  
Deputy Assistant Secretary of the Army  
(Research and Development)

Incl  
a/s

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SUMMARY OF INVESTIGATION INTO ALLEGATIONS BY  
21 SCIENTIFIC AND ENGINEERING ASSISTANTS  
ASSIGNED TO THE U. S. ARMY ARCTIC  
TEST CENTER, FORT GREELY, ALASKA

1. Allegation. A test program (Arctic Trafficability Studies) was initiated in 1968 without a prepared test plan.

Response. No detailed summary of the Arctic Trafficability Studies project in the nature of a study or test plan was provided. However, the merits of the project research were not questioned by any of the witnesses and Headquarters, U. S. Army Test and Evaluation Command, Aberdeen Proving Ground, Aberdeen, Maryland, approved the Arctic Trafficability Studies on 23 October 1969.

2. Allegation. There was a lack of technical competence and instrumentation to investigate the mechanical properties of snow.

Response. The evidence indicated a lack of sufficient technically competent personnel to continue the project through its scheduled program of five years. However, despite some objectionable factors, the overall technical aspects of the initial study report appeared to be factual.

3. Allegation. Test reports contained fabricated and inaccurate test data.

Response. The fabrication of test data was not substantiated, but three instances of test data inaccuracies were disclosed. However, the inaccuracies were considered insignificant as these did not affect the substance and conclusions of the pertinent test reports. Three other allegations could not be substantiated due to lack of available supporting data. Six other allegations were found invalid, probably generated as a result of poor communication. One apparently malicious allegation accusing an individual of being intoxicated while collecting test data was not substantiated. The final claim regarding incomplete or improper statistical criteria for maintenance evaluations was substantiated on six test plans and reports.

4. Allegation. The accuracy limitations of the load cells and fifth wheels, instruments used in the Arctic Trafficability Studies, were not known.

Response. The investigation revealed that the load cells and fifth wheels were calibrated, but not certified in accordance with existing regulations. Thus, there could have been some degradation of measurement taken during the tests.

5. Allegation. Suggestions advanced or proposed by the S&E's were ignored, suppressed, or elicited censure.

Response. The allegation could not be substantiated. Four instances were cited in the complaint letters. Two of these, concerning installation of a flexible heater fuel line and heater failures, could not be resolved due to prior departure of knowledgeable personnel. Of the remaining two, the suggestion to improve the test for determining effectiveness of a vehicle's defrosting system, was accepted for further study; and the other, questioning the adequacy of front end and frame alignment procedures, was reviewed and found invalid.

6. Allegation. Faked tests were conducted for visiting generals and colonels.

Response. The allegation was not substantiated. One complainant stated that he used the term "faked tests" to mean demonstrations. He believed this was "fake testing" in that data was not gathered. Demonstrations were conducted and the observers of the demonstrations were properly informed as to their purpose.

7. Allegation. Work details (kitchen police, etc.) took precedence over test functions.

Response. Investigation revealed that work details did not take precedence over test functions. Soldiers were used on necessary details; however, test operations as a whole were not significantly affected.

8. Allegation. A remote test site at Butch Lake was constructed and was used only as a base camp for hunting expeditions.

Response. The allegation was not substantiated. Investigation revealed that the Butch Lake site was authorized and was constructed for the primary purpose of supporting test operations. It provided base support for the Arctic Trafficability Studies and maintenance and support services for test vehicle drivers using the 33 mile test road along which the camp site was located. Due to unanticipated cancellation of vehicle driver type tests in scheduled workload and inadequate snowfall during the 1969-70 winter season, personnel were encouraged to use the facility for hunting. This use was proper, provided recreation to military personnel, and when used provided some security from vandalism.

9. Allegation. Clean clothes, bedding, and time-off were denied for 30 days during the construction of the test site at Butch Lake.

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Response. Clean clothes and bedding were not denied the enlisted personnel while on detail at the Butch Lake Test Site. There was a laundry problem at Fort Greely, but this was resolved and was temporary in duration. The work detail, composed of nine enlisted personnel, at Butch Lake, was on a work schedule of ten days on-site and three days off at Fort Greely. However, as the work progress was unsatisfactory, the work schedule was extended for ten days without permitting a three day break period.

10. Allegation. The U. S. Army Arctic Test Center is not geared to properly use the technical abilities of S&E's.

Response. With the reduction in the test workload, the authorized number of S&E's was excessive. Action has been taken to reduce the authorization of S&E's from 29 to 14.

11. Allegation. A wasteful photographic mission was conducted.

Response. The allegation could not be substantiated. One S&E complained that a lieutenant, unidentified, with a biological science degree had ordered and executed an aerial photography mission which had a very high probability of being a waste of money. Verification of details was not possible as the test officer concerned had departed the station.

12. Allegation. Civilian employees, as supervisors, were interfering in promotions of S&E military personnel.

Response. The allegation was not substantiated. An S&E had complained that a civilian employee, his immediate supervisor, had held up his promotion unfairly. A review of the 201 military personnel folder belonging to the S&E concerned revealed that he was promoted eight days prior to the normal due date established by governing Army regulations.

13. Allegation. Poor morale among the S&E's.

Response. The allegation was substantiated. The basic problem was the excess number of S&E's available for the reduced test workload. This has now been corrected.

14. Allegation. Test officers and noncommissioned officers assigned to the U. S. Army Arctic Test Center have little or no technical background.

Response. A study of the educational backgrounds of the test personnel at USAATC disclosed less technical training than desirable for commissioned officers and noncommissioned

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officers. The test workload revealed that specific engineering education or experience was not an absolute requirement. Of 49 test projects assigned to USAATC for FY'69 through FY'71, only 14 included engineering requirements.

15. Allegation. Personnel and equipment were used for personal requirements.

Response. Five instances of the above were cited by the S&E's. It concerned the moving of a private snowmobile for an officer and noncommissioned officer. Although substantiated, no impropriety was revealed. The incident occurred during an off duty period and was accomplished voluntarily by all concerned. The second incident involved the repair of an officer's Cadillac, allegedly during duty hours, but could not be substantiated due to the prior departure of the complainant. The third incident involved the allegation of installing a fiberglass encased gas tank on an officer's private car which was denied by the accused and could not be resolved due to the prior departure of potentially knowledgeable witnesses. The last two involved the use of Arctic Test Center facilities as a garage by all assigned officers and enlisted personnel, including the Commanding Officer. This latter situation was based on the relaxed policy established by the Commanding Officer due to the lack of adequate repair facilities, Arctic winter conditions, and Fort Greely's isolation from normally available facilities. The Commanding Officer exceeded his authority and revoked the policy immediately upon being so informed.

16. Allegation. The Commanding Officer, U. S. Army Arctic Test Center, was aware of the S&E problem, but failed to respond.

Response. The Commanding Officer, U. S. Army Arctic Test Center, was made aware of the S&E problems concerning the low morale, overstaffing, and misutilization of S&E's as early as March 1969. He took some actions to resolve the problems but did not aggressively pursue their resolution.

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