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**DIRECTOR OF CENTRAL INTELLIGENCE**

Committee on Export Control  
A Subcommittee of the Technology Transfer Intelligence Committee

EXCON-C-017  
5 January 1983

MEMORANDUM FOR: Mr. David Gries  
NIO/EA

SUBJECT: Trends in High Technology Exports to the PRC: 1979-1982

Attached is the report you requested on December 10, 1982. Considerable effort was expended by members of the TTIC Secretariat in acquiring and evaluating the data on the exports of high technology to the PRC. Time did not permit us to coordinate this paper with either the members of TTIC/EXCON or elements in the Department of State and the Department of Commerce which supplied the data. We believe, however, that the data is qualitatively good enough to support the broad trends that are depicted in the report.

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Chairman

Attachment:  
A/S

Not referred to DOC. Waiver applies.

State Dept. review completed

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TRENDS IN HIGH TECHNOLOGY EXPORTS TO THE PRC: 1979 - 1982

CONCLUSION

The number of approved US high technology export transactions has more than doubled from 1979 through 1982. The number of approved US COCOM cases for the PRC increased four and a half times between 1979 and 1982. Since October, 1981, there has been a significant number of license applications for the export of munitions list commodities to the PRC; prior to October, 1981, there were no applications.

INTRODUCTION

Trend data are not readily accessible on the quantity and types of US high technologies which are being exported to the PRC. The trends included in this paper were derived from data of varying quality that exists in the Department of Commerce and the Department of State. Data were obtained from the Office of Export Administration, Department of Commerce, on those US exports which required review according to the Export Administration Regulations (EAR). Data on US and non US exports to the PRC that required COCOM review was obtained from EWT/EB, Department of State. Finally, data was obtained from the Office of Munitions Control, Department of State, on technologies exported to the PRC that required review based on the International Traffic in Arms Regulations (ITAR).

The data and observations are presented in three sections, (1) US EAR Cases, (2) COCOM Cases, and (3) US ITAR Cases. While the data suggest that in

recent years there has been a significant overall increase in the number of US technology exports to the PRC, one must exercise caution in interpreting yearly changes due to the variability in the quality of the data. We believe, however, that the general observations provided in this paper are valid.

#### US EAR CASES

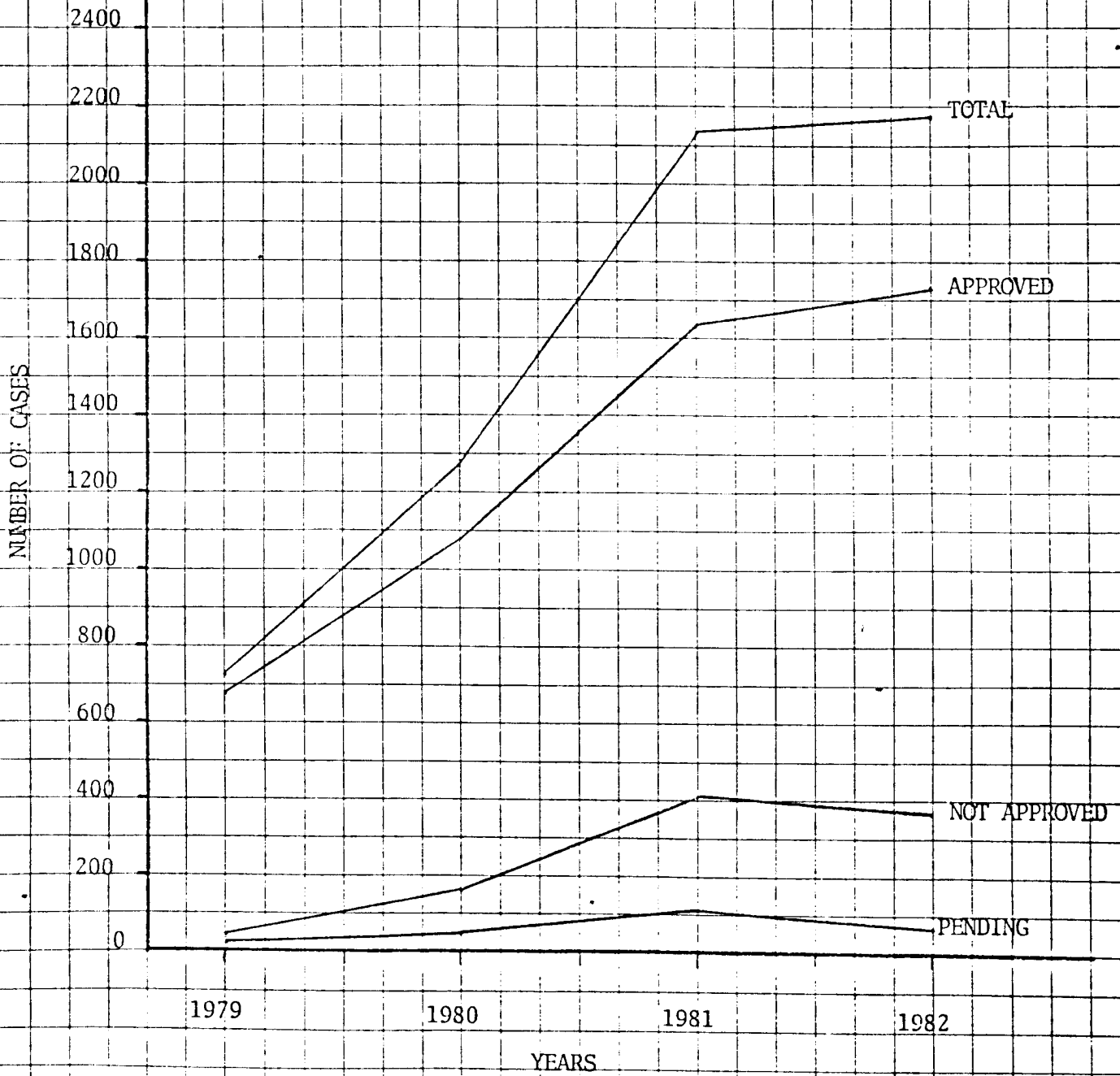
US EAR cases are those domestic export transactions subject to review and authorization by the Department of Commerce as prescribed by the Export Administration Act. The following figure (Figure 1) shows the number of US technology export cases for the PRC which were approved from 1979 through 1982.

There has been a sharp increase (more than 300 percent) in the total number of US technology export cases to the PRC from 1979 (661 cases) to 1981 (2141 cases). The total number of cases increased only slightly from 1981 to 1982.

The number of US high technology export cases which were approved for the PRC has more than doubled since 1979. Nearly 80 percent of the US cases were approved which were submitted to COCOM in both 1981 and 1982. Note should be made of the fact that a certain amount of technology is transferred when a commodity is authorized for export, i.e., maintenance, repair, and operational information.

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US HIGH TECHNOLOGY EXPORTS  
TO THE PRC: 1979-1982



Data source. Data was supplied by the Office of Export Administration, Department of Commerce.

In 1981 and 1982 the number of cases which were not approved, that is, rejected or returned without action, was about 400 or about 17 percent of the total number of cases for each of the two years. From 1981 to 1982 there was a slight decrease in the number of cases which were not approved.

A relatively small number of cases are pending at the end of each year; usually, they are acted on in the following year.

The dollar value (see Table 1) of the US technologies exported to the PRC has remained relatively stable from 1979 through 1982. The data in Table 1 shows that there has been a steady increase in the value of exports in the category of electronic and precision instruments. This category includes computers and related equipment. Other commodities of relatively high value include nonmilitary aircraft engines, electronic test equipment, recording/reproducing equipment, and lasers/laser systems.

TABLE 1

VALUE OF US TECHNOLOGIES EXPORTED TO THE PRC: 1979 - 1982

(\$M)

	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
Transportation Equipment	360.5	212.4	267.2	291.6
Electronic and Precision Instruments	86.6	102.1	153.2	144.9
General Industrial Equipment	1.9	38.7	7.8	7.8
Metal Working Machinery	7.3	3.2	1.3	9.1
Chemicals, Metalloids, Petroleum Products	1.2	0.1	15.9	0.04
Chemical and Petroleum Equipment	0.6	6.1	0.2	0
Electrical and Power Generation Equipment	0	0.2	0.5	0.02
Metals, Minerals, and Their Manufacturing	0.01	0.01	0.03	0.2
Miscellaneous Total	<u>0.2</u> 458.3	<u>26.6</u> 389.4	<u>21.9</u> 468.0	<u>1.0</u> 454.7

Data source. Data was provided by the Office of Export Administration,  
Department of Commerce.

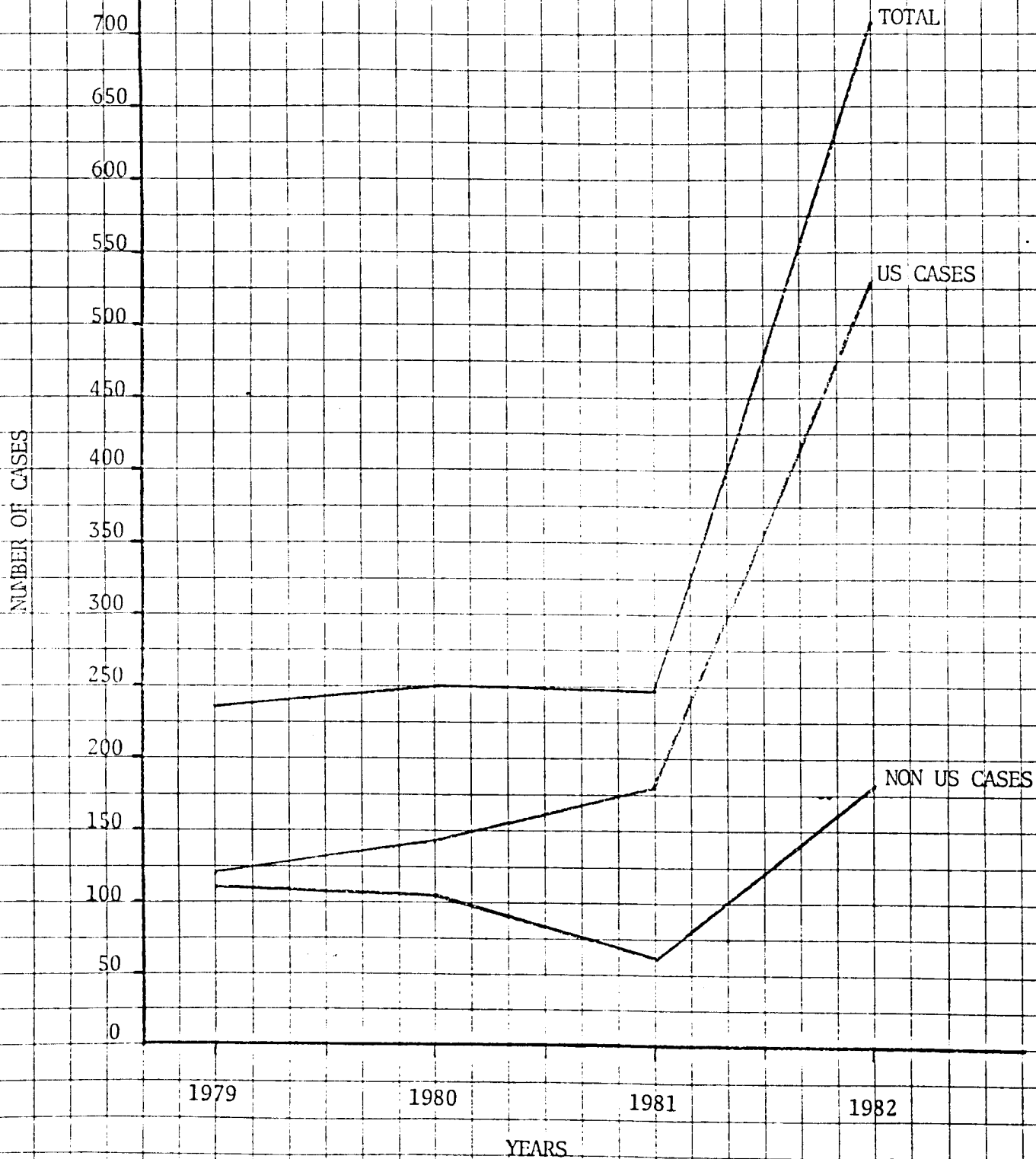
COCOM CASES

COCOM cases are those which are submitted to the Coordinating Committee in Paris for international review under agreements with the West European allies and Japan. This review is based upon a special list of controlled commodities formulated to cover items of strategic and security concern. The data in Figure 2 shows the trends in US and non US technology export cases which deal with exports to the PRC via COCOM from 1979 through 1982. The total number of COCOM cases for the PRC in 1982 (i.e., 714) was three times greater than the number in 1979 (i.e., 234).

The number of approved US COCOM cases for the PRC increased from 122 in 1979 to 531 in 1982 -- an increase of four and a half times. The percentage of US COCOM cases for the PRC increased from 52 percent of the total number of cases in 1979 to 74 percent of the total number of cases in 1982. In 1982, Japan, UK, and West Germany accounted for 23 percent of the number of cases.

High cost US commodities approved by COCOM for export to the PRC include electronic computers and related equipment, electronic manufacturing equipment and related test equipment, electronic components, integrated circuits, and a computerized location system.

US and NON US HIGH TECHNOLOGY EXPORTS  
TO THE PRC VIA COCOM: 1979-1982



Data source: 1982 data obtained from the Department of Commerce COCOM data base;  
1979-81 data obtained from individual case log sheets in EWT/EB,  
Department of State.



The value of the COCOM approved cases to the PRC is shown in Table 2 below.

TABLE 2

VALUE OF COCOM CASES TO THE PRC

(\$M)

	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
US	484.5	34.5	37.0	88.9
NON US				
Germany	12.2	5.4	12.1	25.9
Japan	21.2	61.0 <sup>2/</sup>	99.5 <sup>3/</sup>	15.8
UK	4.0	3.2	0.5	26.4
France	47.0	19.4	0.2	12.4
Other <sup>1/</sup>	2.5	0.5	0.1	4.2
Subtotal	<u>86.9</u>	<u>89.5</u>	<u>112.4</u>	<u>84.7</u>
TOTAL	571.4	124.0	149.4	173.6

<sup>1/</sup> Belgium, Canada, Netherlands, Denmark, and Norway.

<sup>2/</sup> Includes \$43.2M for a computer system for the Shanghai, Baoshan General Iron and Steel Works.

<sup>3/</sup> Includes \$46.4M for a color TV assembly plant, \$13.1M for measurement equipment, and \$24.2M for a digital measuring system.

Data source. Data for 1982 provided by the Department of Commerce; data for 1979-81 obtained from individual case log sheets in EWT/EB, Department of State.

The total value of COCOM cases to the PRC was \$571.4M in 1979 and \$173.6M in 1982. The US accounted for \$484.5M in 1979 and \$88.9M in 1982. The high figure for 1979 includes \$221M for six Boeing Aircraft and \$220M for avionic equipment.

More complete data available for 1982 (see Table 3) shows that COCOM approved 447 US cases out of a total of 531 US cases which were originally submitted. In comparison with other countries, the US had a significantly smaller percentage than other countries of COCOM cases "In Process." Of the cases "In Process," the US had 15%; Japan had 46%; the UK had 38%; and West Germany had 32%. This suggests that US cases are processed at a faster rate than are cases from Japan, UK, and West Germany. This may be due to the recognition by other COCOM countries that the US cases have been extensively reviewed by the USG before they are submitted to COCOM.

TABLE 3

NUMBER OF COCOM CASES APPROVED, IN PROCESS, OR WITHDRAWN IN 1982

	<u>Approved</u>	<u>In Process</u>	<u>Withdrawn</u>	<u>Total Cases</u>
US	447	81	3	531
JAPAN	34	30	1	65
UK	37	25	3	65
W. GER	23	11	0	34
OTHER <sup>1/</sup>	5	14	0	19
TOTAL	<u>546</u>	<u>161</u>	<u>7</u>	<u>714</u>

<sup>1/</sup> Includes cases from Belgium, Canada, Netherlands, France, Denmark, and Norway.

Data source. Office of Export Administration, Department of Commerce.

Examination of COCOM data provided by EWT/EB, Department of State, shows that from 1979 through 1981 the average time required for closing a case was about one month for both US and non US cases for the PRC. In 1982, the average time for processing US cases increased to about two months and for Japanese and British cases to about one and a half months. The remaining non US cases for 1982 required about one month for processing.

#### MUNITIONS CASES

Munitions cases are transactions involving arms or implements of war as defined by the ITAR and require export authorization by the Department of State under the Arms Export Control Act. The data in Table 4 below shows the number of applications received by the Office of Munitions Control, Department of State, during the period 1 October 1981 to 3 December 1982 for licenses to export US Munitions List commodities to the PRC.

TABLE 4

LICENSE APPLICATIONS FOR THE EXPORT OF MUNITIONS LIST COMMODITIES TO THE PRC

	<u>Approved</u>	<u>Approved With Conditions</u>	<u>Disapproved</u>	<u>Returned Without Action</u>	<u>Pending</u>	<u>Total</u>
<u>1981</u>						
July-Sept	0	0	0	0	0	0
Oct-Dec	23	2	3	11	1	40
<u>1982</u>						
Jan-Mar	16	8	4	8	8	44
Apr-June	15	3	3	3	6	30
July-Sept	15	5	4	8	17	49
Oct-Dec	5	3	0	0	21	29
Total	<u>74</u>	<u>21</u>	<u>14</u>	<u>30</u>	<u>53</u>	<u>192</u>

Data source. Office of Munitions Control, Bureau of Politico - Military Affairs, Department of State.

The first license application was received on 6 October 1981; there were 192 license applications in the last 15 months with a value of \$39M. Three applications received in June 1982 were valued at \$23M or 60 percent of the total value. Two of these applications were for the purchase of a Lear Jet airplane with modifications including the use of radar for earth resources mapping. The third application was for 15 sound ranging sets with radio data links for locating hostile artillery. All three applications are pending COCOM approval.

Of the total number (i.e., 192) of license applications, 81 were applications for technical data. Technical data can be sent free of charge for promotional purposes, exported as part of a license agreement, or sold. The remaining 111 license applications were for a variety of commodities including the following:

Approved

Telephone Equipment  
Sonar System  
Night Vision Scopes  
Fire Control System  
Aircraft Spare Parts

Disapproved

Electronic Equipment  
Torpedo Spare Parts  
Communications Equipment  
Speech & Voice Scramblers  
Gyroscopes

Of the license applications, 95 (or 49 percent) were approved or approved with conditions.

There were 44 license applications (or 23 percent of the total number of applications) disapproved or returned without action.

Presently, 53 license applications are pending. Two of these applications are for aircraft spare parts and image intensifiers. Most of the pending applications are for applications received in the last two quarters of 1982.

Since October 1981, the "time of action"--the difference between the date the license application was received and the action date--averaged 2.5 months. The "time of action" varied from one to 11 months.

The following figure (Figure 3) summarizes the data contained in Table 4. Care must be exercised in interpreting the trends since there has been munitions data available only since October 1981. The data show that, since the third quarter in 1981, there has been an apparent overall increase

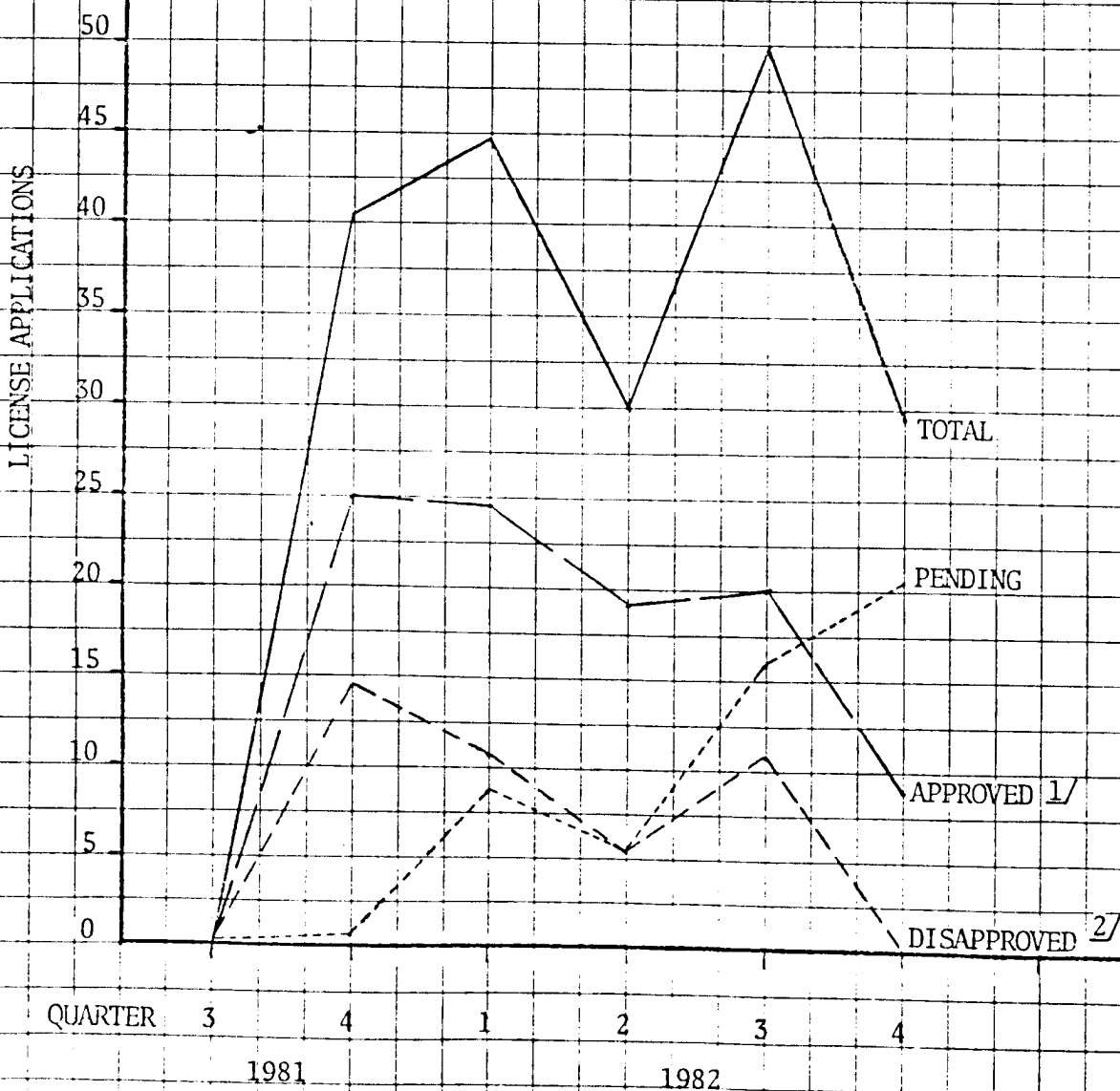
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in the number of license applications for Munitions List commodities. The drop in the total applications in the fourth quarter of 1982 may be due, in part, to the lack of data entries after 3 December 1982. The figure suggests that while the number of license approvals has decreased during the last six months of 1982 there has been an increase in the number of applications that are pending. The number of applications that were disapproved or returned without action has remained low in comparison to the total number of applications.

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HIGH TECHNOLOGY MUNITIONS EXPORTS:

OCT 81 - DEC 82



1/ License applications which are approved plus those that are approved with conditions.

2/ License applications which are disapproved plus those that are returned without action.