

RESTRICTED - Not to be referred outside the General Accounting Office except on the basis of specific approval by the Office of Congressional Relations.

REPORT BY THE  
**Comptroller General**  
OF THE UNITED STATES

**Are Federal Programs Adequate  
To Deal With Arson Problems?**

Senator Charles H. Percy, as Ranking Minority Member of the Permanent Subcommittee on Investigations, asked GAO to assess Federal programs dealing with the arson problem in the United States.

This is one of three GAO reports responding to Senator Percy's request and provides information on:

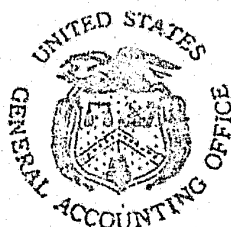
- Research and development of arson detection techniques and equipment.
- Training of arson investigators and prosecutors.
- Programs and funding for State and local arson investigators and prosecutors.

**NCJRS**

**OCT 13 1978**

**ACQUISITIONS**

48818



PSAD-78-88  
APRIL 24, 1978

BLANK



COMPTROLLER GENERAL OF THE UNITED STATES  
WASHINGTON, D.C. 20540

B-171019

The Honorable Charles H. Percy  
Ranking Minority Member  
Permanent Subcommittee  
on Investigations  
Committee on Governmental Affairs  
United States Senate

Dear Senator Percy:

On August 2, 1977, you asked us to assess the adequacy of current Federal programs dealing with the detection, investigation, and prosecution of arson offenses. It was agreed that we would respond to your request in three separate reports.

This report pertains to the following areas of your request:

- Research and development of arson detection techniques and equipment.
- Training of arson investigators and prosecutors.
- Programs and funding for State and local arson investigators and prosecutors.

Your office agreed that our review would include only Federal programs funding State and local investigators and prosecutors where such programs are specifically directed at the arson problem.

We made our review primarily at the National Fire Prevention and Control Administration, Department of Commerce, Washington, D.C. We interviewed agency officials and reviewed records on Federal arson prevention and control plans and programs. We also obtained information at the Fire Research Center, Department of Commerce, Gaithersburg, Maryland; the Law Enforcement Assistance Administration and the Federal Bureau of Investigation, Department of Justice; and the Bureau of Alcohol, Tobacco and Firearms, Treasury Department; all in Washington, D.C.

Our review showed that only one Federal program is directed at the areas specified in your request. This

B-171019

program is the Fire Administration's training course for arson investigators which is scheduled to begin in April 1978. The Fire Administration also plans to develop an arson detection training program for fire service personnel and an arson prosecutor training program for State and local public attorneys.

BACKGROUND

Arson is the act of burning property for an improper purpose. It is difficult to prove arson because evidence is usually destroyed in the fire and, normally, there are no witnesses.

The extent of the arson problem is not known and reliable statistics are not available. However, the Insurance Information Institute estimated national arson-related property losses in 1975 at over \$1.4 billion, while the Insurance Service Office estimated the national arson-related fire losses at over \$4 billion. The National Fire Prevention and Control Administration and the American Insurance Association recognize the need for better data on the arson problem and are currently improving the data.

The socioeconomic factors which motivate arsonists contribute to the complexity of the problem. Such motives include profit, revenge, spite, jealousy, vandalism, crime concealment, intimidation, and pyromania.

The National Fire Prevention and Control Administration, created by the Federal Fire Prevention and Control Act of 1974 (15 U.S.C. 2201 et seq. (1976)), has emerged as the Federal focal point for providing arson intervention programs to States and local communities. The Fire Administration's role in the arson area is to reduce arson through education, training, research, public information, and data collection and analysis.

The Law Enforcement Assistance Administration has no program directed at the arson problem; however, at the time of our review, it was making plans to study what its role should be. This agency awards grants to State and local governments for activities decided on by the grantees, including arson-related activities.

B-171019

The Bureau of Alcohol, Tobacco and Firearms has no programs for training arson investigators and prosecutors, or researching arson detection techniques and equipment. As part of the overall training of its agents, however, instruction covers fire-bombing methods, bomb scene searches and investigations, and recognizing incendiary devices. Also, laboratory analysis is performed to identify fire accelerants.

The Fire Research Center, as authorized by the Federal Fire Prevention and Control Act of 1974, has been studying the psychological motivations of fire setters and is conducting one arson-related research program--a survey of laboratory methodology in analyzing fire accelerants.

Within the Federal Bureau of Investigation, arson investigation is not a high priority. Only a few arson investigations have been conducted, and the Bureau believes that a training program for arson investigators is not justified because of the small number of such cases within its jurisdiction.

#### FEDERAL RESEARCH AND TRAINING PROGRAMS

A number of plans have been formulated to meet needs in the areas of research into arson detection techniques and equipment and training for arson investigation, detection, and prosecution; however, only one program--a training course for arson investigators--has been developed.

In a series of seminars in early 1976, 36 experts identified and ranked nine arson areas needing Federal intervention. The results were published by the Fire Administration in its September 1976 report "Arson: America's Malignant Crime." The areas are summarized in appendix I.

Two of the nine areas were arson detection, investigation, and prosecutor training (fourth highest ranking) and research and development on tools for arson investigations (eighth highest ranking). Details on Federal efforts directed at these two areas are presented in the following sections and are tabulated in appendix II.

Research into arson detection techniques and equipment

Fire service personnel need equipment that is better suited for detecting arson at the fire scene. A federally sponsored study identified research needs which the Fire Administration is attempting to follow up; however, there is still no Federal program for research on arson detection techniques and equipment.

In addition to the Fire Administration's report identifying research needs in arson detection equipment, the Fire Research Center prepared a report in 1976 which identified the evaluation of arson detection equipment used in the field as a desirable program. Research needs for arson detection equipment were further identified in a 1976 report prepared for the Law Enforcement Assistance Administration. This study was made to assess the arson problem and determine whether there were technical solutions to alleviate it. One conclusion was that a more sensitive and reliable vapor detector and a smoke and soot analyzer are needed. The vapor device would detect residues of such fire accelerants as gasoline. The smoke and soot device would detect the presence of fire accelerants through analysis of these fire byproducts.

As part of its fiscal year 1979 arson effort, the Fire Administration had planned to identify the needs of users for arson detection techniques and equipment. We were told that equipment being used in arson detection work was not designed for such use. By assessing existing devices and the state of the art, the Fire Administration would develop the needed characteristics, for example, sensitivity, portability, and cost, of an arson detection device and the techniques for using it. Fire Administration officials told us that this planned program was eliminated for budgetary reasons.

Arson investigator training course

The Fire Administration, in conjunction with the Lincoln Land Community College, recently developed an arson investigator training course. By 1982 the Fire Administration plans to have given the course to 4,000 investigators. The Lincoln Land Community College was granted \$69,400 to develop this course for increasing

B-171019

the levels of proficiency in fire and arson investigations. The course is based on material from related Federal agency programs, elements of various State and local training programs, and advice solicited from investigators who were asked to review course plans. The course will be given to students beginning in April 1978, after pilot testing by the Fire Administration. The Fire Administration plans to give the course to 200 investigators during fiscal year 1978 at an estimated cost of \$42,000, not including per diem and other expenses for the students. These will be the responsibility of the students' sponsoring organizations. This financing arrangement may have some adverse effect on getting students assigned to the course.

In addition to formal course instruction through the National Fire Academy, the course materials will be duplicated and distributed to 200 State and local entities for their training use at an estimated cost of \$29,000. There are some risks associated with this method of investigator training. The local entities have no obligation to teach the course, and there is no assurance that they have the required teachers or funds. No Federal funds are to be provided.

The Fire Administration does not yet have a formal method to measure the effectiveness of its Fire Academy courses, but it is developing evaluation methods for all its programs. For the investigator training course, initial evaluation will be based on student feedback through course critiques. After the first year of the course, the Academy plans to recall about 50 "trained" investigators to reevaluate and update the course content.

#### Plans for arson detection training

Presently, there is no training program for fire service personnel in arson detection; however, the Fire Administration plans to develop such a course to begin in mid-1978.

Fire service personnel, being first on the fire scene, should know what to look for in a fire of suspicious origin. The Fire Administration is planning a training course (24 hours of instruction) to train instructors who will then teach fire service personnel the procedures to follow when arson is suspected. Much of the course content will come

B-171019

from the arson investigator training course prepared by the Lincoln Land Community College. Plans are to have the course ready by July 1978 to be given over a 6-month period to 250 local fire service instructors in 10 regional areas. According to present plans, these instructors should give the course to about 100,000 firefighters over the next 5 years.

There are no plans to fund the instruction at the local level. Such an incentive might be helpful to insure wide dissemination of the course, particularly to the volunteer firefighters who make up the greater portion of the Nation's firefighting force.

#### Prosecutor training

There is no Federal program for training public attorneys at the State and local level to prosecute arson cases. The Fire Administration believes such training is needed, and a program is planned for development during fiscal year 1979. The Fire Administration is considering establishing formal training seminars to be conducted through an educational institution.

Law Enforcement Assistance Administration representatives told us that they rely on State and local governmental units to identify their needs. They said that no requests have been received for funds to train public attorneys in prosecuting arson cases.

#### FEDERAL PROGRAMS AND FUNDING FOR STATE AND LOCAL INVESTIGATORS AND PROSECUTORS

We found no Federal program specifically directed at funding State and local arson investigators and prosecutors. The Law Enforcement Assistance Administration's grants to State and local governments, in some cases, include funds for arson-related purposes, such as equipment, laboratory analysis support, and training of investigators. In most cases these grants are multipurpose and the portion to be used for arson-related activities cannot be identified from the agency's records. During fiscal years 1975-77, the Law Enforcement Assistance Administration records showed that it awarded 25 such multipurpose grants amounting to \$2.6 million. In addition to the multipurpose grants, it awarded 49 grants amounting to \$1.7 million in



B-171019

fiscal years 1975-77 which were to be used solely for arson-related activities. (See app. III.)

During our review we noted that Federal agencies were funding other arson efforts, such as development of a model arson law, development of a method for predicting fires, and various studies of the arson problem. This information gives additional perspective to the Federal role in combating arson, and we have listed these activities in appendix IV.

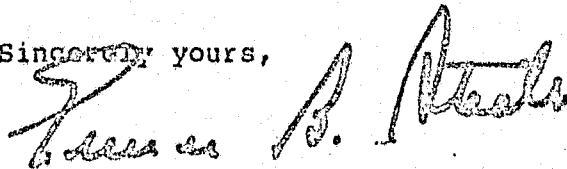
Because only one Federal program has been developed in the research and training areas mentioned in your request-- a course for arson investigators--and the course has not yet been made available to local investigators, a good basis does not exist to judge the effectiveness of the course. Generally, Federal resources devoted to research, training, and funding of State and local investigators and prosecutors are small.

There has been no Federal commitment for a coordinated and concerted effort at helping State and local communities deal with the arson problem through research or training and funding for State and local investigators and prosecutors. We believe this is due partly to the (1) lack of good data on the extent of the arson problem and (2) need for a better definition of the roles and responsibilities of the various public and private organizations concerned.

At your request, we did not take the additional time to obtain written agency comments. The matters covered in the report, however, were discussed with Fire Administration officials and their comments are incorporated where appropriate.

Because you plan hearings on the arson problem and will release this report at the hearings, we do not plan to further distribute it until that time or until you publicly announce its contents.

Sincerely yours,



Comptroller General  
of the United States

NINE NEED AREAS IDENTIFIED IN"ARSON: AMERICA'S MALIGNANT CRIME"

1. It is of primary importance to develop and define the responsibilities of the fire services, the law enforcement services, the legal system, insurance companies, and other public and private bodies who should be concerned with the arson problem.
2. There is a need to reclassify arson in crime reporting systems such as the Federal Bureau of Investigation's Uniform Crime Reports to reflect its true status as a major offense so that (a) reporting can be more complete and (b) people can be more aware of its impact.
3. There is a need to make the public, defined broadly to include both the public in general and those with professional interests, more aware of the consequences of arson and the need to do something about them.
4. There is a need to develop and apply training programs which are directly keyed to the job-related needs of professional investigators and of other categories of personnel such as firefighters, police officers, attorneys, prosecutors, judges, insurance adjusters, insurance underwriters, and insurance claims supervisors.
5. There is a need to develop and apply better reporting, data collection, and data analysis procedures on local, State, and national bases so that public and private agencies will have access to information they need for both their own activities and to enhance public understanding.
6. There is a need to promulgate and apply effective laws and regulations which are as uniform as possible among jurisdictions. This applies particularly to effective insurance regulations and practices which can discourage arson.
7. There is a need to identify and develop adequate sources of funding to combat arson.
8. There is a need to conduct research and development (a) to make available better and more useful tools for arson

APPENDIX I

APPENDIX I

investigation and (b) to provide a better understanding of social and behavioral phenomena associated with arson.

9. There is a need to develop a consistent, uniform terminology that can be applied to arson and incendiarism by all disciplines and in all sections of the United States.

APPENDIX II

Fiscal year	Total amount for arson programs (note a)	FEDERAL	
		Amount	Training investment
<b>National Fire Prevention and Control Administration:</b>			
1976-77	6220,200	562,200	Develop investigative training course
1978	317,300	3,000	To pilot test training course
		71,000	To conduct a investigative course--at
		25,000	To develop, distribute identification starting J
		99,000	
1979	105,000	42,000	To conduct a investigative course th
		30,000	To evaluate course and
		72,000	
<b>Fire Research Center:</b>			
1976-77	124,500	-	No
1978	92,000	-	No
1979	-	-	No
<b>Law Enforcement Assistance Administration:</b>			
1976-77	90,000	(b)	No
1978	10,000	-	(d)
1979	(d)	-	(d)
<b>Alcohol, Tobacco and Firearms:</b>			
1976-79	(e)	-	(f)

a/Total amount shown includes programs listed here and c  
 b/There are no programs for training investigators; how authorities were for this purpose and other crime inve  
 c/Funding for this program is included in the larger ar  
 d/No programs planned as of time of our review.  
 e/Cost not readily determinable.  
 f/No programs directed at these subjects; however, all incendiary device recognition, and bomb scene search performed to identify fire accelerants.

APPENDIX II

AND TRAINING PROGRAMS

<u>Training prosecutors</u> Program		<u>Research of detection</u> <u>techniques and equipment</u> Program	
<u>Amount</u>	<u>description</u>	<u>Amount</u>	<u>description</u>
	None		None
	None		None
\$10,000	To assist National College of District Attorneys in development of seminar-type training program.		None
1.			
<u>10,000</u>			
-	None	-	None
-	None	-	None
-	None	-	None
-	None	(c)	To assess the status of investigation equipment.
-	(d)	-	(d)
-	(d)	-	(d)
-	(f)	-	(f)

are listed in appendix IV.

Funds provided to State and local ag.

ment listed in appendix IV.

aining in firebombing, ons. Also, laboratory analysis is

BLANK

LAW ENFORCEMENT ASSISTANCE ADMINISTRATIONGRANTS FOR ARSON-RELATED ACTIVITIES(AWARDED IN FISCAL YEARS 1975-77)(note a)

<u>Description</u>	<u>Number</u>	<u>Amount</u>
Grants which include arson-related activities	<u>25</u>	<u>\$2,620,619</u>
Grants solely for arson-related activities:		
Improve effectiveness of New York City's investigation of suspicious fires/arson	1	413,390
Establish unit within Bronx, New York, District Attorney's office for investigation and prosecution of arson	1	395,600
Expand New Jersey State police arson investigation unit	3	334,990
Purchase of instruments by State of Washington for use in arson project	1	71,715
Establish a specially equipped and staffed arson investigation unit in Yolo County, California	1	68,462
Establish photographic arson suspect identification system in California	1	59,400
Develop an arson information system by city and county of San Francisco	1	41,124
Operate mobile radio equipment by Ohio Arson Bureau	1	34,212
Other grants	<u>39</u>	<u>301,098</u>
Total	<u>49</u>	<u>\$1,720,071</u>
Total	<u>74</u>	<u>\$4,340,690</u>

a/Compiled from data provided by the Law Enforcement Assistance Administration which has not been verified by the General Accounting Office.

## APPENDIX IV

## APPENDIX IV

OTHER FEDERAL ARSON PROGRAMS

<u>Fiscal Year</u>	<u>Amount</u>	<u>Program description</u>
National Fire Prevention and Control Administration: 1976-77	\$ 10,000	To develop model arson law.
	30,000	To develop and print Fire Administration report--"Arson: America's Malignant Crime."
	70,000	To develop an arson information center.
	8,000	To develop an annotated bibliography of arson reference material.
	11,000	To develop a training course in juvenile fire setting.
	6,000	To study the nature and extent of incendiary fires in Boston.
	10,000	To develop intervention strategies for a Federal arson control program (Aerospace Corporation).
	<u>\$153,000</u>	
1978	\$ 6,000	To conduct 10 (3 day) advanced arson seminars.
	6,800	To study incendiary fires and develop a handbook for use by urban planners.
	200,000	To develop a software package that will predict area fires in inner-city neighborhoods and commercial establishments.
	5,500	To complete the annotated bibliography of arson reference material.
	<u>\$218,300</u>	
1979	\$ 10,000	To conduct 10 (2 day) seminars to promote the arson task force concept.
	10,000	To continue and expand the advanced arson seminar program.
	3,000	Undecided.
	(a)	To implement and evaluate fire/arson strategies in three major cities.
	<u>\$ 23,000</u>	



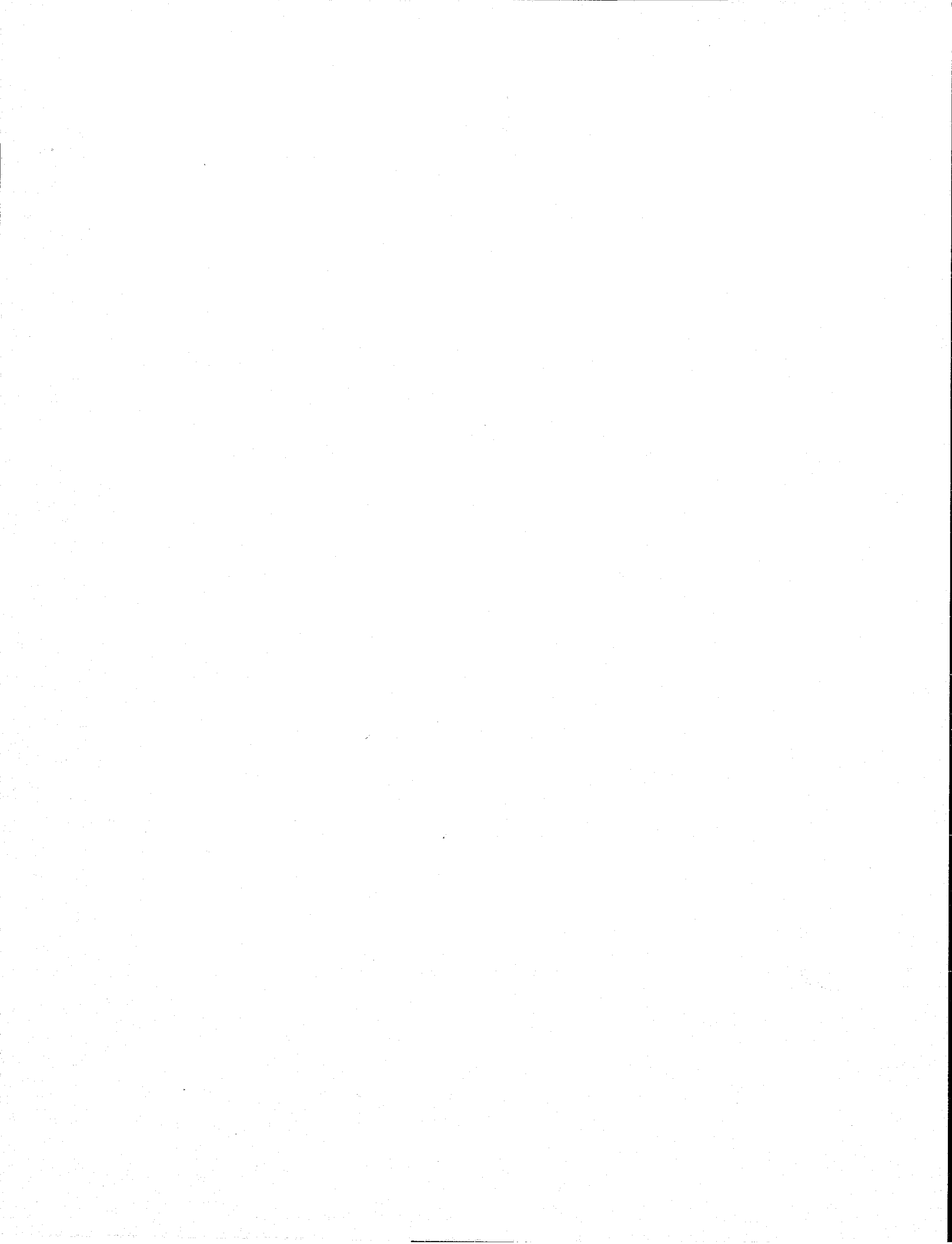
APPENDIX IV

APPENDIX IV

Fiscal Year	Amount	Program description
Fire Research Center:		
1976-77	\$64,000	To prepare an overview report on how the Center can fulfill its responsibilities in the attacks on arson.
	41,500	To study, analyze, and organize what is currently known about the psychology of arsonists.
	20,000	To survey laboratory techniques used in analyzing accelerants and to assess the need for the adoption of a standard method.
	<u>\$125,500</u>	
1978	\$ 52,000	To develop and publish an arson investigator handbook for easy reference.
	40,000	To continue study of psychology of arson resulting in a written theory of arson behavior.
	<u>\$ 92,000</u>	
1979		None.
Law Enforcement Assistance Administration:		
1976-77	\$ 90,000	To assess the problem of arson and determine whether there were technical solutions to help alleviate the problem.
1978	\$ 10,000	To research arson issues and determine the Law Enforcement Assistance Administration's role in arson. Future effort will depend upon the results of this program.
1979	\$ -	Pending results of fiscal year 1978 program.
Alcohol, Tobacco and Firearms:		
1976-79	\$ (b)	ATF laboratories, upon request, analyze evidence obtained from a fire to assist State and local investigation.
1977-78	\$ (b)	Philadelphia district office formed a group to assist local arson investigations.

a/Funding for this program is for fire prevention strategies including arson. Amount related to arson could not be identified.

b/Cost not readily available.



**END**