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REPORT TO THE CONGRESS

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Observations On The Administration By The Office Of Civil Defense Of Research Study Contracts Awarded To Hudson Institute, Inc. B-133209

Department of the Army



BY THE COMPTROLLER GENERAL
OF THE UNITED STATES

MARCH 25, 1968

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

B-133209

To the President of the Senate and the
Speaker of the House of Representatives

The General Accounting Office has made a review of the administration by the Office of Civil Defense, Department of the Army, of three research study contracts awarded to Hudson Institute, Inc., Croton-on-Hudson, New York. Hudson Institute is a private nonprofit corporation engaged in research, study, and analysis relating to national security and international order. The accompanying report presents our findings and the corrective actions being taken by the Office of Civil Defense.

The three research study contracts selected for review, totaling about \$600,000, were awarded for the purpose of obtaining--through independent research--well reasoned and useful information on complex civil defense matters. The estimated cost to the Government of Hudson's professional effort in the development of information and reports under the three contracts ranged from about \$45,000 to about \$52,000 per man-year. We found, through examination of Office of Civil Defense records and discussions with responsible personnel, that seven of the 11 study reports submitted by the Hudson Institute under the three contracts were considered either to be less useful than had been expected or to require major revision. For example:

- A study report "On the Rating of Blast Shelters" was criticized by the Director, Systems Evaluation Division, as adding nothing to the state of the art; i.e., it added no new thoughts and failed to provide any information not previously known.
- A study report on "A New Look at the Design of Low-Budget Civil Defense Systems" was returned by the then Director, Systems Evaluation Division, to Hudson Institute for major revision because, among other things, it appeared to be "a rehash of old, if not tired, ideas."

- A study report on "Deferred-Cost CD Options for Nuclear Crises" was criticized by the technical monitor, an operations research analyst, as not having sufficient depth to warrant general distribution.

Although we recognize that contracting for studies of this type is relatively new and involves uncommon questions, we believe that the Office of Civil Defense can improve its administration of such contracts, and thereby obtain study reports that will furnish the information sought. The improvements which we consider necessary consist of:

- Closer monitoring of studies and more specific statements of the scope of work to be performed, to provide the contractor with a better understanding of what the Office of Civil Defense wants.
- More frequent, more timely, and more complete progress reports to provide the Office of Civil Defense with better information on the contractor's progress.
- Written documentation of understandings reached with the contractor to provide a reference for use in determining whether the contractor has complied with requests and to provide a better basis for supporting the disbursement of public funds.

The Office of Civil Defense has taken steps to improve its procedures in all the above areas. We plan to look into these improved procedures at a later date to evaluate their effectiveness in helping the Office of Civil Defense secure more useful research studies.

We are reporting the results of our review to the Congress because they illustrate the need for exercising careful control over contractors engaged to make independent research studies so as to provide greater assurance that the reports obtained are truly useful.

B-133209

Copies of this report are being sent to the Director, Bureau of the Budget; the Secretary of Defense; and the Secretary of the Army.

A handwritten signature in cursive script, reading "James B. Stewart". The signature is written in black ink and is positioned above the printed name and title.

Comptroller General
of the United States

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OBSERVATIONS ON THE ADMINISTRATION
BY THE OFFICE OF CIVIL DEFENSE
OF RESEARCH STUDY CONTRACTS AWARDED TO

HUDSON INSTITUTE, INC.

DEPARTMENT OF THE ARMY

INTRODUCTION

The General Accounting Office has reviewed the policies and procedures followed by the Office of Civil Defense (OCD), Department of the Army, in administering research study contracts awarded to Hudson Institute, Inc. Our review was made pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), the Accounting and Auditing Act of 1950 (31 U.S.C. 67), and the authority of the Comptroller General to examine contractors' records under contract clauses required to be incorporated in negotiated contracts of the military departments, as provided for in the United States Code (10 U.S.C. 2313(b)).

The OCD has obligated about \$69.5 million during the 6 years since its inception for research which was performed by about 120 different organizations. One of these organizations--Hudson Institute, Inc., Croton-on-Hudson, New York--which, like a number of other organizations, is commonly referred to as a "think factory," had been awarded eight contracts from fiscal year 1962 through fiscal year 1966, totaling about \$1.7 million. As a "think factory" Hudson undertakes studies of difficult problems with staffs of trained researchers and provides reports designed to aid the recipient in making complex decisions.

The contracts awarded to Hudson were selected for review because of congressional interest in the Department of Defense's extensive use of "think factories" and because a survey made by the General Accounting Office had indicated that Hudson was a significant contributor of think-factory-type reports to OCD. The congressional interest was expressed in April 1965 by the Committee on Armed Services,

House of Representatives, in connection with the authorization of the 1966 defense procurement and research and development appropriations (H. Rept. 271, 89th Cong., 1st sess., p. 35).

In our review we inquired into the circumstances surrounding the administration of three of the eight contracts awarded to Hudson Institute and the way studies which OCD had contracted for were affected by its policies and procedures. The three contracts totaled about \$600,000. According to officials of OCD, the practices followed in administering these three contracts were essentially the same as those followed for all its contracts for research studies. During our review we examined agency records pertaining to the three contracts and interviewed responsible officials of the OCD. In addition, we visited the Hudson Institute, examined its records, and interviewed its personnel with respect to these three contracts. We did not undertake an evaluation of the total research program at either OCD or Hudson Institute.

The principal management officials of the Department of Defense and the Department of the Army responsible for the administration of activities discussed in this report are listed in appendix I.

BACKGROUND

OFFICE OF CIVIL DEFENSE

The Office of Civil Defense, headed by a Director who is under the direction and control of the Secretary of the Army, was established by the Secretary of Defense on August 31, 1961, as a result of Executive Order 10952, dated July 20, 1961. Its predecessor organization was the Office of Civil and Defense Mobilization.

OCD's fields of responsibility include developing and executing programs for (1) shelters, (2) protection against the results of chemical, biological, or radiological warfare, (3) emergency communication systems, and (4) emergency assistance to local and State governments.

The OCD has a research program under which studies are made in four major program areas: Shelter Research, Support Systems Research, Postattack Research, and Systems Evaluation. This program is under the direction of the Assistant Director of Civil Defense (Research). According to OCD Research Guidance No. 200, dated July 10, 1962, OCD's research mission is to furnish the necessary base of factual data and methods for the development of plans, operations, facilities, and equipment for current and future civil defense programs.

The objectives of OCD's research program, as stated in Research Guidance No. 200, are to (1) increase the economy of hardware and operations, (2) increase the effectiveness of systems, individually and as an integrated civil defense capability, (3) increase the reliability of performance of man and machine in saving lives and in coping with the postattack environment, (4) improve the state of readiness as an integrated defense system, and (5) improve the basis for planning, decisions on future programs, and operational decision-making.

Funds obligated under the program through fiscal year 1966 amounted to about \$58.8 million. An additional \$10.7 million was obligated during fiscal year 1967. Since its establishment in 1961, OCD has contracted with 120

different organizations under its research program. During fiscal year 1967, 72 organizations were involved in the program.

From its inception through fiscal year 1966, OCD awarded under its research program seven cost-plus-a-fixed-fee (CPFF) contracts to Hudson. An eighth CPFF contract was awarded to Hudson in January 1965 for a study not under OCD's research program. According to OCD, 25 reports were submitted by Hudson under the terms of these eight contracts. The eight contracts are summarized below.

<u>Contract number</u>	<u>Effective date</u>	<u>Amount</u>	<u>Type or subject of study</u>
OCD-OS-62-18	11-21-61	\$ 503,286	Strategic analysis
OCD-OS-62-218	6- 5-62	238,576	Postattack long-term environment analysis
OCD-OS-63-122	5-21-63	139,650	Systems analysis
OCD-PS-64-116	4-24-64	225,000	Strategic analysis
OCD-PS-65-51	1-29-65	75,000	Increased readiness system
OCD-PS-65-64	4- 7-65	164,985	Development of social-economic recovery models and postattack long-term environment analysis
OCD-PS-65-73	6-21-65	149,650	Strategic analysis
OCD-PS-66-30	1-28-66	<u>225,000</u>	Strategic and systems analysis
		<u>\$1,721,147</u>	

The three contracts we selected for review are contracts 64-116, 65-73, and 66-30. These three contracts, with a total estimated cost and fee of about \$600,000, were under the technical monitorship of the Research Directorate's Systems Evaluation Division. Under the three contracts, Hudson submitted 11 study reports and two specifically requested reports to OCD. Two additional studies were in process at the time we completed our review. The following table summarizes the reports by contract as of January 4, 1967.

<u>Contract</u>	<u>Study reports submitted</u>	<u>Special request reports</u>	<u>Studies in process</u>
64-116	4		
65-73	3		
66-30	<u>4</u>	<u>2</u>	<u>2</u>
	<u>11</u>	<u>2</u>	<u>2</u>

The estimated cost to OCD of 1 man-year of professional research effort under the three contracts ranged from about \$45,000 for the initial contract--64-116, April 1964--to about \$52,000 for the last contract--66-30, January 1966.

HUDSON INSTITUTE, INC.

The Hudson Institute, Inc., is a private nonprofit corporation created in July 1961 for the purposes of engaging in research, study, and analysis related to national security and international order. It was organized by Herman Kahn, a former member of The RAND Corporation's research staff and the author of a number of books and articles on civil defense and related matters. Several of OCD's awards to Hudson were made because OCD wished to obtain the expertise of Mr. Kahn.

Hudson is identified by the National Science Foundation as a Federal contract research center. The Foundation defines these centers as research and development organizations, exclusively or substantially financed by the Government, that in most instances were established to meet a particular Government need and are administered on a contractual basis by various types of organizations. In addition to contracts with the Office of Civil Defense, Hudson has had contracts with the Advanced Research Projects Agency of the Department of Defense, the United States Air Force, the Office of Emergency Planning, the United States Arms Control and Disarmament Agency, and the Department of Health, Education, and Welfare. The contracts received by Hudson from its inception through fiscal year 1966 are summarized on the following page.

<u>Sponsor</u>	<u>Amount</u> <u>(in thousands)</u>
Office of Civil Defense	\$1,721
Other Government agencies	3,433
Non-Government organizations	<u>587</u>
Total	<u>\$5,741</u>

OCD is responsible for administering contracts it awards to Hudson, and the Defense Contract Audit Agency is responsible for auditing these contracts.

FINDINGS

NEED FOR IMPROVEMENT IN ADMINISTRATION OF STUDY CONTRACTS

OCD's objective in awarding study contracts was to obtain well reasoned and useful information that would enhance its ability to deal effectively with complex civil defense matters. However, according to OCD records and discussions with OCD personnel, this objective was not fully met by seven of the 11 reports submitted under three contracts awarded to Hudson during fiscal years 1964 to 1966, inclusive. We found that these seven reports were considered by OCD either to be less useful than had been expected or to require major revision.

Although we recognize that contracting for studies of this type is relatively new and involves uncommon questions, we believe that OCD can improve the implementation of its procedures for the administration of such contracts and that such improvement will result in a greater likelihood of obtaining reports that will provide the useful information it seeks. The improvements which we considered to be needed involved clearer statements of the objectives of the studies, more effective monitoring of studies in progress, and written records of agreements with contractor personnel.

OCD's research program was intended to provide it with useful information

The Office of Civil Defense has, for the most part, followed the practice of contracting for the research work it needs for making decisions regarding civil defense programs and policy. The research studies so prepared are frequently of the "think factory" type. The reports received on the results of such research efforts are generally published and distributed to other interested Government agencies and contractors and normally are available to the general public.

The objectives of OCD's research program are set forth in an instruction to its personnel entitled Research Guidance No. 200. In this instruction, OCD states that its

research program "must furnish the necessary base of factual data as well as methods for development of plans, operations, facilities and equipment needed for current and future civil defense action programs." The instruction also indicates that factual data and the methods for implementing future civil defense programs are to be primarily obtained through research and development performed by contractors. From this instruction, it is evident that OCD intended to obtain studies that would be both well reasoned and useful and would provide OCD with the information it needed to plan future civil defense programs.

In another instruction--Research Guidance No. 203--OCD gave its personnel criteria for use in judging whether the report submitted at the conclusion of a study did provide well-reasoned and useful information.

This instruction states:

"The sort of questions that should be asked are: To what extent does the substance of the report achieve the stated objectives? Are the stated assumptions explicit and are they pertinent? Are important assumptions not made explicit nor even identified? Are the conclusions adequately supported by the research results? Are any limitations explicitly stated? Is the report well organized, unambiguous, complete, readable? If matters of policy are discussed, is the discussion factual and complete, and is the interpretation accurate?"

The former Director of the Systems Evaluation Division, Research, advised us that, in evaluating a contractor's performance, OCD research personnel should consider whether the quality of the work is such that it changes the reader's mind or reinforces his thinking.

Some reports were of limited usefulness
or required extensive revision

We found that the Office of Civil Defense considered that seven of the 11 reports submitted by Hudson either

were less useful than had been expected or required major revision before OCD would accept them.

Brief comments made by certain OCD officials on some of the seven reports follow.

1. The present Director, Systems Evaluation Division, criticized one report and declined to have it published on the basis that it added nothing to the state of the art; i.e., it added no new thoughts and failed to provide any information not previously known.
2. According to the previous Director, Systems Evaluation Division, another report was returned for major revision because, among other things, it appeared to be "a rehash of old, if not tired, ideas."
3. In another case, an operations research analyst, assigned as the technical monitor for this study, stated that, according to Hudson, the goal of the report was to show the importance of peacetime preparations for the management of crisis programs. The official's comment on this was "Such a goal has long been achieved."
4. The same operations research analyst also stated that another report was not considered to have sufficient depth to warrant unlimited distribution. This means that distribution was not to be made outside the Department of Defense without OCD approval.

After revisions were made, three of the seven reports were published and distributed within OCD and to other agencies and private groups known to have an interest in civil defense and related matters. Three of the remaining four reports were limited to distribution within OCD. OCD informed us that the fact that a report is not cleared for general publication does not limit its value to OCD but rather that this represents a judgment by the cognizant element of OCD that the report is not appropriate for general release. The responsible OCD official advised us in

these three cases that general distribution was not authorized because the reports were considered lacking in depth or sufficient value to warrant the loading of bookshelves. The one remaining report was not accepted as a final report but only as a "working paper."

Further details on the seven reports considered less than satisfactory by OCD are set forth in appendix II. The evaluations given therein were obtained from records of OCD and discussions with its personnel.

We were unable to determine the costs of the seven reports from the records of the Hudson Institute. Hudson's records showed that costs were accumulated only on a contract basis. Consequently, the costs of any of the several reports prepared under each contract could not be identified. We were advised by Hudson's Director of Civil Defense Studies that the studies involved the efforts of many individuals and that it would be impossible to determine the actual time spent by each individual who participated in a particular study. The three contracts had a total estimated cost and fee of about \$600,000; the cost incurred by the Government for the seven reports was some portion of the \$600,000, plus some portion of the \$139,650 estimated cost and fee for contract 63-122 under which some work leading to the disapproved report--HI-389-RR; "On the Rating of Blast Shelters"--was begun.

Need for improved implementation
of OCD's procedures

Contracting for studies of complex matters involves unique problems for Government procurement personnel. In essence, when the Government awards study contracts of the "think factory" type, it is purchasing the time and expertise of the contractor's researchers for the study of particular problems. It is difficult to make the terms of such contracts as specific as may be done for procurement of other services or of supplies. For instance, when a contract is awarded for the purchase of specific objects like aircraft, typewriters, erasers, etc., it is possible to define with considerable precision what is to be furnished the Government. If the item is too experimental to have its final configuration accurately described, the desired performance characteristics can be specified, such as, fly to 70,000 feet, attain speeds of 1,100 miles per hour, etc. In brief, the end product can be described with enough exactness to permit the Government to place considerable reliance on this description as a means of ensuring that it will get a satisfactory product.

Where a research study of this type is involved, the desired end product is not so susceptible to exact description. To be sure, the Government expects a report on the results of the study, but what that report will include, what insights and original thinking will be included, cannot be specified at the outset. The problem then is how to ensure that the researchers will direct their best efforts and use their ingenuity to the fullest in researching, analyzing, and commenting upon the problem given to them to consider under the contract terms.

From our analysis of OCD's procedures for the administration of such contracts, we concluded that its procedures were soundly conceived and should have been effective for the management of contracts of this type. However, we found that, although the procedures themselves seemed sound, the implementation of the procedures was inadequate for the contracts we examined.

Because the subject matter of these studies is intangible, it is difficult to identify all the causes of the less-than-fully-satisfactory reports OCD received from Hudson. However, we observed several practices being followed by OCD which seemed to weaken its control over such studies and to increase the likelihood of receiving unresponsive studies.

1. The scope of the work as defined in the contracts was very broad and permitted a great deal of leeway.
2. OCD did not follow its own monitoring procedures during the course of the studies.
3. OCD's agreements with the contractor were not all put into writing.

Our observations on each of these three areas are described below.

Need for more specific descriptions
of the scope of the studies to be made

The Armed Services Procurement Regulation (ASPR), under which these contracts were negotiated, requires that the agency ensure that there is a common understanding of the work to be done. In this respect, ASPR paragraphs 4106.3 and 4106.4 place responsibility on both contracting officers and technical personnel for making certain that prospective contractors fully understand the requirements.

It appeared to us that the scope of the work as set forth in the three contracts between OCD and Hudson was too broad to provide assurance that the studies would be in areas of direct interest to OCD. In this respect, the scope of work for these contracts consisted of brief statements describing in general terms the subject to be studied. For the last of the three contracts--66-30--OCD used a somewhat different format under which it broke down the studies required under the contract into three tasks. However, these tasks also were described briefly and in general terms. For example, following is a statement of the scope of work for one of the tasks to be performed under contract 66-30:

"Scope of work: The objectives of this work unit are to evaluate emerging world situations, prognosticate their possible developments and major trends over the next decade, and then determine their implications on the selection of various alternative Civil Defense programs. The analysis of requirements for phasing Civil Defense measures into a damage-limiting defense posture and the interaction of Civil Defense with other elements of this posture, particularly the force structure, will be investigated. The general major elements of strategy to be considered include: geopolitics, economics, national resources, and technology."

Two of the three contracts also required that Hudson's studies be made in accordance with the proposals it submitted for OCD's use in considering the award of the contracts to Hudson. Since these proposals were not more specific than the contracts, this requirement did little to provide assurance that the work to be performed would provide information of direct interest to OCD.

Our review of the OCD files relating to the contracts did not reveal any additional documentation supplementing the scope of the work which would clarify what specifically were its objectives or would show that a mutual understanding had been reached on the work to be done.

That lack of specificity in the scope of such contracts led to undesirable results is illustrated by the following incident related to contract 64-116:

Hudson's initial progress report for contract 64-116, which was submitted after two thirds of the planned research effort had been expended, described several studies that Hudson was making under the contract. The information contained in the progress report prompted the OCD technical monitor to ask Hudson to explain how these studies fitted into the contract's scope of work or concerned the subject to be studied under this contract, viz., the analysis of the strategic environment. The Deputy Assistant Director of Civil Defense (Research) informed us that he

subsequently criticized Hudson for making the studies but that it could be rationalized that the studies fit under the contract scope, and the studies were therefore accepted.

Need for improved surveillance
over performance of the studies

OCD's instruction to its employees--Research Guidance No. 202 dated August 1, 1962--stated that its technical monitors were expected to maintain substantially up-to-date information on the progress, difficulties, and interim results of the research contracts assigned to them. Two principal ways of performing such monitorship are:

1. Discussing the job with the personnel assigned to it by the contractor.
2. Obtaining and analyzing reports from the contractor regarding the progress it is making.

With regard to discussing the work with assigned contractor personnel, OCD's Research Guidance No. 202 required the monitor to hold three formal conferences with the contractor:

1. An initiation conference preferably at OCD to be held as soon as possible after the contract award to ensure the contractor's understanding of the scope and emphasis of the research.
2. A second conference usually at the contractor's location at 25 percent completion of the planned study to evaluate the contractor's progress. At this point, the contractor is expected to have developed a detailed research plan.
3. A final conference, preferably at OCD, to review the quality of work and usefulness of the research results. This conference is to be held no later than upon completion of 80 percent of the planned effort.

To guide the monitors, Research Guidance No. 202 provided an agenda of the subjects to be considered at the conferences. Essentially, the agenda included those matters which concerned the relevancy, usefulness, and quality of the research, such as, project objective and scope, desired emphasis, relationship to previous or on-going work, assumptions and methodology, and time-phasing or work plans.

We found no evidence in OCD's records that any of the required formal conferences had been held for contracts 64-116, 65-73, and 66-30. We noted that an initiation conference had been planned for contract 64-116; however, we found no record of a meeting although the former Director of the Systems Evaluation Division expressed his belief that one had been held. OCD research personnel stated that the other required conferences on the three contracts we reviewed were not held.

We found also that few visits had been made to Hudson during the course of the work under the three contracts. In all, we found evidence of six visits, only three for the express purpose of monitoring the contractor's work. Furthermore, the technical monitor for contracts 64-116 and 65-73 did not visit the contractor during performance of the studies required under these contracts. Under contract 66-30, one such visit was made by the technical monitor.

All three of the contracts included in our review required quarterly progress reports from Hudson during the performance of its studies. Our review of the progress reports submitted by Hudson and discussions with OCD officials indicated that the reports were not as informative as OCD needed to keep abreast of Hudson's progress and that in some cases the progress reports were not submitted until most of the research time OCD had contracted for had been spent.

With regard to the content of the progress reports, OCD's former Director of the Systems Evaluation Division advised us that well-prepared progress reports should contain information as to what has been studied, what has been accomplished to date, what time has been spent on the study, and who has been working on the study.

Our examination of Hudson's progress reports showed that, generally, the reports described the studies Hudson was making but provided very little information on what Hudson had done and what had been accomplished during the reporting periods. Furthermore, the progress reports did not show how much time Hudson had spent on the studies, individually or in total, or the amount of time Hudson planned to spend on the studies to complete them. Accordingly, the progress reports did not provide sufficient information to permit an evaluation of Hudson's progress.

To illustrate, Hudson reported the following information on what it had done in the strategic analysis study resulting in Hudson's report, HI-776-RR--"Passive Defense in Future Nuclear Wars"--which the monitor considered to be of limited value to OCD.

1. In the initial progress report dated February 25, 1966, for contract 66-30, Hudson reported:

"In this area we have begun to build some scenarios of alternative postattack worlds and their implications for civil defense systems with and without a tension mobilization base. ***"

2. In its second progress report dated June 13, 1966, Hudson only advised that it was "currently engaged in preparing studies on the following subjects," and for the above study reported:

"(b) A study of the impact of a number of hypothetical nuclear wars and extreme crisis short of war upon the future of international relations. The study will address the questions, 'In what major way will the world be changed as a result of a nuclear attack and how do CD systems influence this change?' ***."

3. Hudson's third progress report was included in a letter, dated September 30, 1966, transmitting a draft report to OCD. In it Hudson stated that

other draft reports would be forthcoming in 4 or 5 weeks, and for the above study reported:

"*** have been developing some war-outbreak scenarios to study some of the strategic implications of defensive systems and their potential important influence on the future styles of nuclear diplomacy."

Our review of these reports showed that they furnished little information on Hudson's progress. The Assistant Director of Civil Defense (Research) advised us that progress reports submitted by contractors are generally not well prepared and therefore are not too useful.

We also found that some of the progress reports were submitted so late that it would have been difficult to change the direction of the work even if the information provided had indicated that such a change was warranted. For example, the first progress report on contract 64-116 was submitted approximately 7 months after the contractor was authorized to start work under the contract and after two thirds of the research work originally estimated under the contract had been completed. Under the second contract, the first progress report was submitted approximately 5 months after the contractor was authorized to start work and after three quarters of the work estimated for the contract had been completed.

In response to OCD's request, during the third contract, Hudson submitted the progress reports on a more timely basis; but, as previously indicated, their content was somewhat meager as a basis for judging the progress being made on the studies called for by the contract terms.

We believe that the procedures needed for effectively monitoring a contractor's work during the course of a study have been established by OCD. What is needed is the effective implementation of these procedures, as follows:

1. Establishment of the goals of the work at the outset of the study so that the technical monitor has an objective against which the contractor's work can be compared.

2. Close surveillance of the contractor's progress during the performance of the study to see that its efforts are directed to accomplishment of the agreed objectives.

Need for formal record
of agreements with contractor

It is well established that putting agreements in writing is well worth the effort required. Moreover, the ASPR in paragraph 1-308 requires a written record of such matters. Some of the advantages of written agreements are that:

1. Written agreements are less likely to result in misunderstandings than verbal agreements. If agreements are put into written form, there is greater likelihood that differences in understanding will come to light and be dealt with.
2. Details of written agreements are less easily forgotten than details of verbal agreements because the written record is available for reference.
3. Written agreements provide a basis for holding a contractor to performance in accordance with instructions and they facilitate appropriate legal action if the work performed was not in accordance with the instructions.

We found little evidence that agreements reached between OCD and Hudson had been put in written form. As previously indicated, fewer conferences and monitoring visits were made than were required by OCD's own guidelines. Even when meetings were held and trips were made, there were no written records of meetings or trip reports (except during the performance of contract 66-30 when written trip reports began to be submitted).

Had there been more written communications regarding OCD's instructions to, or agreements with, Hudson, deviations from the objectives sought by OCD might have been identified and changes made before the studies were concluded.

The Deputy Assistant Director of Civil Defense (Research) acknowledged that the assurance of mutual understandings is not achieved unless the understandings are recorded.

Agency action

During the course of our review, we discussed our observations with OCD. Matters discussed included the probable benefits of:

1. More specific contract statements of the scope of work to be performed and related data which would provide the contractor with a better understanding of what OCD wanted from its studies.
2. More frequent, more timely, and more complete progress reports to provide OCD with better information on the contractor's progress.
3. Closer monitoring of studies being made to ensure that contractors understand what OCD wants to obtain from each study.
4. Written documentation of understandings reached between OCD and its contractors to provide a reference for OCD to use in determining whether the contractors have complied with OCD requests and to provide a better basis for supporting the disbursement of public funds for such studies.

In general, OCD officials agreed that strengthening its procedures in these areas would be beneficial. They stated that, under earlier contracts, Hudson's work had been of a very high quality and that the three contracts we examined had not been monitored as carefully as they would have been had there been reason to believe that close surveillance was necessary.

Prior to the conclusion of our review, OCD was taking actions which appeared to correct many of the problems noted during our review. Several of the actions were taken in connection with amendments to contract 66-30, two of which authorized additional funds for continuation of the work. These actions:

1. Required Hudson to submit definitive work plans as a part of the proposal for the amendment.

2. Advised Hudson of plans to hold the three formal conferences required by OCD's monitoring procedures,
3. Added to the contract terms a requirement for more informative progress reports,
4. Required OCD technical personnel to take greater care to see that the contractor understands the scope of the work,
5. Required OCD technical personnel to document important agreements and decisions affecting the work.

The actions being taken appeared to deal with the problems we identified except for improving the statements of the scope of work to be performed. In this respect, the OCD officials acknowledged that the statements of the scope of work to be performed under the contracts were broad. However, OCD officials indicated that it was their view that this was unavoidable, considering the type of work being performed by Hudson. In explanation of OCD's view, the Assistant Director of Civil Defense (Research) stated that the scope of work delineates the areas in which the research is to be conducted and, because of the nature of research, it is impossible to specify exactly what is to be done and how much is to be done. Similarly, the former Director of the Systems Evaluation Division advised us that the proposals were intended to be general so as not to prejudge research results. He explained that the greater the degree of specific detail included in the proposals, the less chance there is that the research will be truly research.

We acknowledged that it is difficult to determine how specific the scope of work should be made for studies of the "think factory" type. If the statements are too specific, they may inhibit creativity and prevent the researcher from freely using his ingenuity in making his studies. If they are too general, the Government may be subjected to the risk of paying for a study which is totally or partially useless.

We advised OCD that it was our view that greater assurance that the Government will receive useful study reports could be achieved without shackling the ingenuity of the

researcher if work objectives were made more specific. We believe that, if greater care is given to spelling out the objectives of the work, a better understanding as to the needs of OCD can be communicated without limiting the contractor to specific ways of accomplishing the objectives. In other words, we believe that concentration should be placed on telling the contractor in specific terms what the agency hopes to learn from the study without telling the contractor how to make the study.

Comments of the Office of Civil Defense

A draft of this report was sent to the Secretary of Defense for comment. In that draft we stated our belief that clearer statements of the contract work objectives would help to ensure responsive studies without inhibiting creativity. We suggested, therefore, that OCD give further consideration to the use of more definitive scopes in its contracts that will clearly identify the objectives of the study the contractor is to make. We also suggested that the procedures applied to Hudson contract 66-30 be applied to other contracts for studies of this type.

In replying for the Secretary, the Acting Director of Civil Defense advised us that OCD recognized the benefits to be derived from our suggestions. We were further advised that OCD had taken the following actions with regard to our suggestions:

1. Published a report setting forth methodology for categorizing research aims and identifying specific definitive terms for use in stating contract work objectives.
2. Reemphasized to all project coordinators the requirements for carefully and completely defined tasks and specifications for proposed contracts.
3. Issued a manual prescribing uniform standards for monitoring all OCD contracts, including progress reporting, documentation of agreements with contractors, etc.

4. Updated and reissued OCD Research Guidance No. 202-- "Coordination of Contract Research," for use of OCD project officer personnel who monitor research contracts.

A copy of the Acting Director's letter is attached to this report as appendix III.

Comments of the Director of Hudson Institute

In commenting upon a draft of this report, Mr. Herman Kahn, Director of Hudson Institute advised us that he was in agreement with many of our comments and suggestions on procedures for conducting research. He pointed out, however, that Hudson Institute considers the type of research it tries to do as somewhat different because it concentrates on major policy issues and emphasizes rather speculative areas of study.

Mr. Kahn further stated Hudson's view that a research organization performing research of the type described above must be allowed an unusual degree of freedom to develop its thinking as it goes along and that Hudson does not accept contracts unless such a scope is permitted. He further commented that, on such research, success should be judged on a "batting average" basis and if the average gets too high the work may not be imaginative or adventurous enough.

Mr. Kahn also commented that the objective of such work is to stimulate the imagination of people responsible for basic programs such as civil defense and that it is characteristic of this type of research that it can cause negative reactions on the part of persons concerned with the Government programs upon which they are commenting.

It is our view that the objective of those responsible for contracting for such research must be to obtain results that will bear on their problems without restricting the researcher from using his initiative and ingenuity to the fullest. Therefore, while we agree with Mr. Kahn that the researcher must have an unusual degree of freedom, we are also of the opinion that more care in setting the objectives of the research can improve the likelihood of an acceptable

product without unduly interfering with the researcher's freedom. The action taken by OCD would tend to indicate that that office shares our view.

Mr. Kahn's comments in their entirety are shown in appendix IV.

Conclusions

The measures being taken by OCD should, if properly carried out, help overcome the difficult problems that are inherent in contracting for research of the "think factory" type and should ensure more useful research studies. We plan to look into the effectiveness of the improved procedures at a later date.

APPENDIXES

PRINCIPAL MANAGEMENT OFFICIALS
OF THE
DEPARTMENT OF DEFENSE AND THE DEPARTMENT OF THE ARMY
RESPONSIBLE FOR ADMINISTRATION OF ACTIVITIES
DISCUSSED IN THIS REPORT

	Tenure of office	
	From	To
<u>DEPARTMENT OF DEFENSE</u>		
SECRETARY OF DEFENSE:		
Robert S. McNamara	Jan. 1961	Present
DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING:		
Dr. John S. Foster, Jr.	Oct. 1965	Present
Dr. Harold Brown	May 1961	Oct. 1965
<u>DEPARTMENT OF THE ARMY</u>		
SECRETARY OF THE ARMY:		
Stanley R. Resor	July 1965	Present
Stephen Ailes	Jan. 1964	July 1965
ASSISTANT SECRETARY OF THE ARMY (RESEARCH AND DEVELOPMENT):		
Dr. Russell D. O'Neal	Oct. 1966	Present
Willis M. Hawkins	Oct. 1963	June 1966
DIRECTOR OF CIVIL DEFENSE:		
Joseph Romm (acting)	Jan. 1967	Present
William P. Durkee	Apr. 1964	Dec. 1966
ASSISTANT DIRECTOR OF CIVIL DEFENSE (RESEARCH):		
Walmer E. Strobe	Oct. 1961	Present

SUMMARIES OF
EVALUATIONS OF SEVEN REPORTS
CONSIDERED LESS THAN SATISFACTORY
BY THE OFFICE OF CIVIL DEFENSE

The seven less-than-satisfactory reports and the contracts under which they were submitted are identified below together with a summarization of pertinent details.

<u>OCD action on</u> <u>reports submitted</u>	<u>Contract</u>			<u>Total</u>
	<u>64-116</u>	<u>65-73</u>	<u>66-30</u>	
Criticized and refused approval for publication as a final report:				
Hudson report HI-389-RR	-	1	-	1
Criticized and returned for major rewrite or revision:				
Hudson reports HI-478-RR and HI-486/3-RR	2	-	-	2
Considered to be less useful than expected:				
Hudson reports HI-612-RR, HI-614-RR, HI-775-RR, and HI-776-RR	<u>-</u>	<u>1</u>	<u>3</u>	<u>4</u>
Total	<u>2</u>	<u>2</u>	<u>3</u>	<u>7</u>

The details of OCD's views on the seven reports are as follows:

1. Report criticized and approval of its publication as a final report refused

a. HI-389-RR, "On the Rating of Blast Shelters," draft dated November 5, 1965

The draft of this report was submitted to OCD on November 26, 1965, in partial fulfillment of contract 65-73. The Director of OCD's Systems Evaluation Division, Research, criticized the report's technical discussion and did not approve it for publication. He advised us that the report indicated that the author did not have sufficient knowledge of the subject area. Also, he stated that he refused to approve the report for publication because it did not add anything to the state of the art. After discussing the matter with Hudson, OCD on November 1, 1966, decided that, in lieu of submitting the report as a final report under the contract, it should be issued as a working paper with distribution limited to OCD's Research Directorate.

2. Reports criticized and returned for major rewrite and revision

a. HI-478-RR, "A New Look at the Design of Low-Budget Civil Defense Systems," August 2, 1965

The draft of this report was submitted to OCD on March 11, 1965, in partial fulfillment of contract 64-116. On May 17, 1965, the Director of the Systems Evaluation Division advised Hudson that the report could not be published in its present form and would have to be rewritten if Hudson still believed it should be published. His principal criticisms included:

- (1) The report did not present a "new look" as apparently intended, but appeared to be "a rehash of old, if not tired, ideas."
- (2) The report presented unilateral arguments, whereas OCD expected research reports to analyze, synthesize, review, evaluate, and, if appropriate, reach conclusions.
- (3) Technical matters should be presented as conclusions based on identified evidence or postulates identified as such.
- (4) "Sensationalism *** is appropriate in muck-raking newspapers, pseudo-intellectual magazines, and SANE propaganda; it is not appropriate in research papers."

On July 22, 1965, OCD approved a revised draft dated July 12, 1965, for publication and unlimited distribution, subject to security clearance and the correction of a statement relating blast pressures to fallout casualties.

- b. HI-486/3-RR, "On the Design of Risk-Oriented, Low Cost Fallout Shelter Systems," dated March 7, 1967

The draft of this report was received by OCD on March 24, 1965, under contract 64-116. On May 20, 1965, the Director of the Systems Evaluation Division informed Hudson that the report could not be published in its present form and would require additional work and redrafting. He advised Hudson that the redrafting should be done in accordance with their previous discussions, and he returned a copy of the draft with representative comments for consideration in redrafting the report.

On July 22, 1965, OCD approved a revised draft, dated June 11, 1965, for publication and

unlimited distribution, subject to security clearance and a minor change in terminology. However, in December 1965 the current Director of the Systems Evaluation Division reevaluated the report and advised Hudson that the report's distribution should be limited to those actively engaged in the specific aspect of civil defense research covered by the report.

Alluding to other criticisms he would take up in discussions with Hudson, he advised Hudson that many of the report's assumptions were either obvious or unproved and that the report's recommendations indicated that Hudson was unaware of OCD's present activities. After discussing the matter with Hudson, OCD on May 4, 1966, advised Hudson that the report was to be presented only as a working paper and was not to be distributed outside of OCD's Research Directorate.

OCD further stipulated that the cover and title page were to state that the paper could be expanded, modified, or withdrawn at any time and that the material was not to be quoted or used as a reference in publication.

Subsequently, on June 6, 1966, Hudson submitted a revised draft which was returned by OCD for further revision. Hudson again revised the report and submitted it on August 8, 1966. On August 30, 1966, OCD returned the report to Hudson for updating and rewriting. In January 1967 Hudson submitted a revised draft which OCD approved on March 3, 1967, for publication and unlimited distribution.

3. Reports considered by OCD to be less useful than expected

a. HI-612-RR, "Management Requirements for Crisis Civil Defense Programs," draft dated November 5, 1965

The draft of this report was submitted to OCD on November 16, 1965, under contract 65-73. OCD's review of the report was delayed by the retirement of the technical monitor for the contract. On June 6, 1966, the new technical monitor visited Hudson and returned a copy of the draft for refinement of the report. Hudson made some revisions in the report and was advised on November 1, 1966, that a letter approving the report for publication was in process. The technical monitor informed us that the report had been approved for unlimited distribution.

The monitor's comments on the report were contained in the copy returned to Hudson. He referred to the following statement in the report:

"The goal of this report is to show the importance of peacetime preparations for the management of crisis programs."

His criticism of the statement was:

"Such a goal has long been achieved."

The monitor had also commented in similar terms regarding statements in the report, pointing out the impending recognition of the difficulty of managing serious emergency programs, the desirability of the Federal Government's delegating emergency management responsibilities to State and local Governments and other organizations, and the ineffectiveness of conventional administration of crisis programs.

The technical monitor advised us that he considered the report superficial and not of much value. He stated that the report did not provide any new information for the professionals working in emergency-type operations since they were already knowledgeable with the management requirements discussed in the report. The report might have some value to new people or contractors in the field since it would alert them to the problems.

He further advised us that, although his opinion of the report was unfavorable, he had approved it because the report had already been paid for and one of OCD's research personnel who had reviewed the report had commented favorably on it. The others had not commented at all.

- b. HI-614-RR, "Deferred-Cost CD Options for Nuclear Crises," draft dated December 22, 1966

The draft of this report was submitted to OCD on September 30, 1966, in partial fulfillment of contract 66-30. On November 9, 1966, OCD's technical monitor for the contract returned the draft for revision. He furnished Hudson with his overall evaluation and detailed critical comments. The principal criticism in the monitor's evaluation is quoted below.

"The central theme of this work is that alternate survival options of varying response times can be a hedge against ambiguous attack warning. This is very sound and has been a keystone of military defense doctrine for many years. In developing the theme, however, the author tends to lose his reader with an overlong introduction, and some apparently unsupported guesses that serve only to distract from the excellence of the

original idea. Further, he does not appear to discover that the time-phased options should be progressive and inter-related in such way that each posture facilitates those that follow."

On December 27, 1966, Hudson submitted the revised report to OCD advising that, in revising the report, it had attempted to respond appropriately to the criticisms but had not attempted a major revision since it had only allowed 3 days for the revisions. Hudson further stated that it wanted to discuss the advisability of redoing the study in more detail.

Subsequently, on January 31, 1967, OCD approved the report for limited distribution, subject to the incorporation of two comments. The more significant comment concerned the monitor's principal criticism and stated that it was important for the several survival plans to be progressively compatible.

Distribution was limited to OCD with transmittal of the report outside the Department of Defense requiring approval from the Assistant Director of Civil Defense (Research). The monitor advised us that the study was not considered to be of sufficient depth to warrant unlimited distribution of the report. He further advised us that the report would be used as a staff paper in discussions by research personnel and that no definite plans for further study of the subject had been made.

- c. HI-775-RR, "CD Program Planning for Crisis: Some Environmental Considerations," draft dated November 21, 1966

The draft of this report was submitted to OCD in November 1966 under contract 66-30. OCD's technical monitor for the contract reviewed the report and commented that the report presented

some interesting considerations for civil defense but had no direct operational significance. The monitor stated that he might look at the report again at some later date since it concerned Rhode Island and OCD had conducted a civil defense study game at Providence, Rhode Island, in September 1966.

The monitor accepted the report as evidence of the contractor's performance of the contract and approved it for publication as a staff paper. Distribution was limited to OCD with release outside the Department of Defense requiring approval from the Assistant Director of Civil Defense (Research).

The monitor advised us that his approach was intended to preclude loading bookshelves with a report for which he saw no value and to provide an option for wider distribution in the future if the report is found to have value then. He further advised us that Hudson would not be requested to make any revisions, so as not to incur additional costs on a subject in which he saw no immediate significance.

d. HI-776-RR, "Passive Defense in Future Nuclear Wars," draft dated November 18, 1966

The draft of this report was submitted to OCD in November 1966 under contract 66-30. OCD's technical monitor for the contract reviewed the report and commented that its hypotheses stirred the imagination and for that it had value as a staff paper. He advised us that, while the report could stimulate thinking, it had no immediate value to OCD operations or research.

The monitor accepted the report as evidence of the contractor's performance of the contract and approved it for publication as a staff paper. Distribution was limited to OCD with release

outside the Department of Defense requiring approval from the Assistant Director of Civil Defense (Research). The monitor advised us that his approach was intended to preclude loading bookshelves with a report for which he saw no value and to provide an option for wider distribution in the future if the report is found to have value then. He also advised us that Hudson would not be requested to make any revisions, so as not to incur additional costs on a subject in which he saw no immediate significance.



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

NOV 22 1967

Mr. William A. Newman, Jr.
Director, Defense Division
U. S. General Accounting Office
Washington, D. C. 20548

Dear Mr. Newman:

On behalf of the Secretary of Defense, I am submitting the response to the draft report on the "Review of the Administration of Selected Contracts for Research Studies." (OSD Case #2661)

The Office of Civil Defense recognizes the benefits to be derived from the recommendations of the above draft report. The conclusions and recommendations are quoted below.

"We believe that the action taken by OCD with regard to contract 66-30 with Hudson Institute should strengthen the administrative procedures discussed in this report and enhance the probability of its receiving useful studies that are responsive to its needs. While the actions taken on this contract should result in significant improvements, we believe additional action is needed. We believe that clearer statements of the contract work objectives would help to ensure responsive studies without inhibiting creativity. Accordingly, we recommend that OCD give further consideration to the use of more definitive scopes in its contracts that will clearly identify the objectives of the studies the contractor is to make.

"We also recommend that the procedures applied to Hudson contract 66-30 be applied to other contracts for studies of this type."

With regard to these recommendations, OCD has taken the following actions:

1. To provide clearer statements of contract work objectives, OCD has published a report "Civil Defense Research Analysis," Attachment A, setting forth methodology for categorizing research aims and identifying

APPENDIX III

Page 2

specific, definitive terms for use in stating contract work objectives. In addition, OCD has formally reemphasized to all project coordinators the requirements for carefully and completely defined tasks and specifications for proposed contracts.

2. To improve and strengthen procedures for monitorship of contract work in process, OCD has issued Manual 4105.9 "Guidelines for Contracting Officer's Technical Representatives," Attachment B, prescribing uniform standards for monitoring all OCD contracts, including progress reporting, documentation of agreements with contractors, etc.

3. The improvements set forth above have been emphasized for application to all contract research by updating and reissuance on June 1, 1967, of OCD Research Guidance No. 202 "Coordination of Contract Research," Attachment C, for use of OCD project officer personnel monitoring research contracts.

With regard to the detailed findings of the report, it should be noted that:

1. Only three contracts of a total of eight contracts with Hudson were selected for detailed study. Comments were provided on only seven reports out of some 25 actually submitted by Hudson Institute under terms of these eight contracts.

2. The GAO comments on certain reports indicate "that the only value . . . is to stimulate thinking." This is in fact not a limited value to OCD, but the basic purpose of research undertaken by organizations such as Hudson Institute, not only for OCD but for any user of its research.

3. The fact that a report is not cleared for general publication does not limit its value to OCD, but rather is a judgment by the cognizant element of OCD that the research report is not appropriate for general release.

Sincerely,



Joseph Romm
Acting Director of Civil Defense

Attachments

GAO note: The three attachments to this letter have not been included in this appendix because of their length and because they are not essential to obtaining an understanding of the report and corrective actions being taken.

HUDSON INSTITUTE

QUAKER RIDGE ROAD, CROTON-ON-HUDSON, N. Y. 10520 CABLE ADDRESS HUDSON 914 RO 2-0700

October 6, 1967

Mr. William A. Newman, Jr.
Director
Defense Accounting and Auditing Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Newman:

Thank you for your letter of September 14th inviting our comments on your preliminary draft report on policies and procedures followed by the Office of Civil Defense in the award and administration of contracts for research studies.

We were impressed with the thoroughness of your study as evidenced in your report. I might add, also, parenthetically, that we were pleased and impressed that you were able to carry out such an extensive study of Hudson operations, in the course of conducting your study, without causing any noticeable interference to our on-going work. And I would like to thank your organization for the cooperative way that the study has been handled.

Since your report concerns, and is addressed to, the Office of Civil Defense, I am not really in a position to comment directly upon it. However, since you specifically asked for our views, I will tentatively make a few rather general comments on the basis of our experience.

We are, of course, in agreement with many of your comments and suggestions on procedures for conducting research. In fact, we might tend to agree with virtually all of your suggestions in relation to a large part of the research done by the Office of Civil Defense. We do feel, however, that the kind of research that our organization tries to do, which is a rather small and specialized part of the field of research studies, is somewhat different. Our primary focus, as you know, is on major policy issues, and we believe that our job is to emphasize rather speculative areas of study. We think that for this specialized type of research, the research organization doing the work must be allowed an unusual degree of freedom to develop its thinking as it goes along. (In fact, we are only willing to take contracts that provide such scope for what we believe to be necessary to good work of this kind.) We also believe, again for this specialized kind of research, that success should not be expected on every try. This kind of speculative research must be evaluated on the kind of "batting average" basis, and if the batting average gets too high, we believe that one should be suspicious that the work is not being imaginative and adventurous enough.

Mr. William A. Newman, Jr.

October 6, 1967

Since, as you noted, your report makes no judgment about the Hudson Institute documents discussed therein, quoting without endorsing the remarks of various individuals in the Office of Civil Defense, it probably would not be appropriate for me to discuss the substance of these reports or the comments upon them. However, I might, in passing, note two things. First, we feel that our most basic objective is "to stimulate the imagination" of people responsible for such basic programs as civil defense, and that if our reports accomplish this purpose, they have been valuable. (See underlined section of our enclosed brochure.) It is also characteristic of the kind of research that we are engaged in that it will cause negative reactions, in some cases, among the people concerned with the government programs upon which we are commenting. I believe that the careful way in which your report presented such comments showed a good appreciation of this problem.

Thank you again for the opportunity to comment on your report; if I can be of any further assistance please do not hesitate to let me know.

Sincerely yours,



Herman Kahn
Director

HK:HI

Enc. H.I. Brochure

GAO note: The enclosure to this letter has not been included in this appendix because it is not considered essential to obtaining an understanding of the letter or our report.