

U.S. Department of Energy  
Washington, D.C.

*Replaced  
by  
DOE 1430.1D*

ORDER

DOE 1430.2B

2-25-93

SUBJECT: SCIENTIFIC AND TECHNICAL INFORMATION MANAGEMENT PROGRAM

1. PURPOSE. To establish implementation procedures for the Department of Energy's (DOE) scientific and technical information (STI) management policy as set forth in DOE 1430.1C. Scientific and technical information is an integral component of the Department's Information Resources Management (IRM) program.
2. CANCELLATION. DOE 1430.2A, SCIENTIFIC AND TECHNICAL INFORMATION PROGRAM, of 12-14-87.
3. APPLICATION TO CONTRACTS. The provisions of this Order apply to all Departmental Elements and to contractors to the extent implemented under a contract or other agreement. A covered contractor is a seller of supplies or services involving the creation of scientific and technical information under a procurement contract, grant, cooperative agreement, or interagency agreement. The term "contract" does not include small purchases (see Title 48, Code of Federal Regulations (CFR), 13.101).
4. EXCLUSION. The Energy Information Administration and the Naval Nuclear Propulsion Program's facilities and activities under Executive Order 12344 and Public Law (P.L.) 98-525 are excluded from the provisions of this Order.
5. REFERENCES.
  - a. DOE 1000.2B, DEPARTMENT SEAL AND FLAG, of 5-18-92, which sets forth the policies governing the use of the official seal and distinguishing flag of the Department of Energy as described in 10 CFR 1002.
  - b. DOE 1240.2B, UNCLASSIFIED VISITS AND ASSIGNMENTS BY FOREIGN NATIONALS, of 8-21-92, which establishes authorities, responsibilities, and policies, and prescribes administrative procedures for visits and assignments by foreign nationals to DOE facilities for purposes involving unclassified matter.
  - c. DOE 1332.1A, UNIFORM REPORTING SYSTEM, of 10-15-85, which establishes a uniform reporting system for contracts, loans, and loan guarantees, and provides implementing instructions, procedures, and formats.

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All Departmental Elements

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Information

- d. DOE 1332.2, UNIFORM REPORTING SYSTEM FOR FEDERAL ASSISTANCE (GRANTS AND COOPERATIVE AGREEMENTS), of 10-31-83, which establishes the DOE uniform reporting system for Federal assistance and provides implementing instructions, procedures, and formats to be used for all grants and cooperative agreements awarded by the Department.
- e. DOE 1340.1B, MANAGEMENT OF PUBLIC COMMUNICATIONS PUBLICATIONS AND SCIENTIFIC, TECHNICAL, AND ENGINEERING PUBLICATIONS, of 1-7-93, which prescribes policies, standards, and procedures for managing DOE public communications publications effectively and management of printing processes for all DOE reproduction requirements.
- f. DOE 1350.1, AUDIOVISUAL AND EXHIBITS MANAGEMENT, of 10-28-81, which provides policy and procedures for the management and control of all audiovisual productions and exhibits developed and/or used for public dissemination of information.
- g. DOE 1360.4B, SCIENTIFIC AND TECHNICAL COMPUTER SOFTWARE, of 12-31-91, which prescribes Department of Energy policies and procedures pertaining to the management and control of scientific and technical computer software which has been developed with DOE funds.
- h. DOE 1430.1C, MANAGEMENT OF SCIENTIFIC AND TECHNICAL INFORMATION, of 2-27-92, which defines the policies, objectives, and responsibilities for management of the Department of Energy's scientific and technical information component of its IRM program.
- i. DOE 1430.3A, POLICY FOR THE DISSEMINATION OF AND ACCESS TO DEPARTMENTAL UNCLASSIFIED SCIENTIFIC AND TECHNICAL INFORMATION, of 2-27-92, which establishes a framework for policy development concerning the dissemination of and access to all unclassified scientific and technical information developed for or on behalf of DOE.
- j. DOE 5000.2B, MULTIPROGRAM LABORATORY APPRAISALS, of 4-9-92, which establishes policy and objectives for performing appraisals of the DOE multiprogram laboratories.
- k. DOE 5610.2, CONTROL OF WEAPON DATA, of 8-1-80, which establishes the procedures for controlling weapon data.
- l. DOE 5630.8A, SAFEGUARDING OF NAVAL NUCLEAR PROPULSION INFORMATION, of 7-31-90, which promulgates the official definition of naval nuclear propulsion information (NNPI), outlines disclosure policies and general safeguarding requirements for such information, and establishes requirements for disposal of material which contains NNPI.

- m. DOE 5639.7, OPERATIONS SECURITY PROGRAM, of 4-30-92, which provides policy for facilities engaged in activities that affect classified and unclassified information protective measures.
- n. DOE 5635.1A, CONTROL OF CLASSIFIED DOCUMENTS AND INFORMATION, of 2-12-88, which provides guidance on safeguarding and controlling classified documents and information and implements the requirements of Executive Order 12065 and the Atomic Energy Act of 1954, as amended.
- o. DOE 5650.2B, IDENTIFICATION OF CLASSIFIED INFORMATION, of 12-31-91, which specifies responsibilities, authorities, policies, and procedures for the management of the Department of Energy program to identify classified information, documents, or material.
- p. DOE 5650.3A, IDENTIFICATION OF UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION, of 6-8-92, which establishes policies and procedures for identifying Unclassified Controlled Nuclear Information (UCNI) and for reviewing and marking documents and material containing UCNI.
- q. DOE 5700.6C, QUALITY ASSURANCE, of 8-21-91, which establishes quality assurance requirements for the Department of Energy.
- r. DOE 5700.7C, WORK AUTHORIZATION SYSTEM, of 5-18-92, which establishes a work authorization and control process for work performed by designated management and operating (M&O) contractors.
- s. DOE 5800.1A, RESEARCH AND DEVELOPMENT LABORATORY TECHNOLOGY TRANSFER PROGRAM, of 5-18-92, which establishes policy and responsibilities for the management of the Department's research and development laboratory technology transfer program.
- t. American National Standards Institute (ANSI) standards, which establish standards for scientific and technical reports:
  - (1) ANSI Standard ANSI/NISO Z39.14-1979 (R1987), "Writing Abstracts;"
  - (2) ANSI Standard ANSI/NISO Z39.16-1979 (R1987), "Preparation of Scientific Papers for Written or Oral Presentation;"
  - (3) ANSI Standard ANSI/NISO Z39.18-1987, "Scientific and Technical Reports - Organization, Preparation, and Production;"
  - (4) ANSI Standard ANSI/NISO Z39.23-1990, "Standard Technical Report Number (STRN) Format, and Creation;" and
  - (5) ANSI Standard ANSI/NISO Z39.31-1976 (R1983), "Format for Scientific and Technical Translations."

- u. Atomic Energy Act of 1954, as amended, 42 United States Code (U.S.C.) 2011-2296, which establishes procedures for controlling atomic energy information.
- v. DOE/Office of Scientific and Technical Information (OSTI)--3679 (Rev.75), "Standard Distribution for Classified Scientific and Technical Reports," of 2-91.
- w. DOE/OSTI-4500--R75, "Program Distribution for Unclassified Scientific and Technical Reports," of 8-89.
- x. Executive Order 12356, "National Security Information," of 4-2-82, 3 CFR 166 (1983), which provides requirements for classifying information.
- y. "Government Printing and Binding Regulations," Joint Committee on Printing, Congress of the United States, No. 26, of 2-90, which establishes policies for the production and free distribution of Government printing.
- z. Military (MIL) Specification, MIL-C-9877B, "Aperture Cards," of 5-8-64, which provides procedures for mounting microfilm images of engineering documents prepared by the Department of Defense or contractors.
- aa. MIL-C-9949, "Copy Cards," of 11-1-62, which provides specifications for copy cards to be used to reproduce microfilm images from aperture cards.
- bb. Office of Management and Budget (OMB) Circular A-130, "Management of Federal Information Resources," of 12-24-85, which provides a general policy framework for managing Federal information resources.
- cc. Procurement Assistance Data System (PADS), the Department's system for collecting, assembling, organizing, and presenting acquisition data, which provides a uniform mechanism to store and retrieve acquisition data for use by senior Federal executive agencies, OMB, and the general public. The system interfaces with DOE and the Federal Procurement Data System and the Federal Assistance Award Data System.
- dd. PADS Standard Report No. 634, which provides documentation of the receipt of research and development deliverables by the Office of Scientific and Technical Information (AD-21). The report is used by procurement offices to obtain AD-21 clearance for contract closeouts.
- ee. Public Law 96-480, Stevenson-Wydler Technology Innovation Act of 1980, which made technology transfer a mission of Federal labs and required labs to establish an Office of Research and Technology Applications (ORTA).

- ff. Public Law 96-517, Bayh-Dole Act of 1980, which permitted small business and nonprofit organizations to retain patents in inventions developed with Federal assistance and authorized Federal agencies to grant licenses to Federal technology.
- gg. Public Law 97-219, Small Business Innovation Development Act of 1982. Amends the Small Business Act (15 U.S.C. 638) to strengthen the role of the small, innovative firms in Federally funded research and development, and to utilize Federal research and development as a base for technological innovation to meet agency needs and to contribute to the growth and strength of the Nation's economy.
- hh. Public Law 98-620, Trademark Clarification Act of 1984, which amends the Bayh-Dole Act of 1980 and allows nonprofit contractors operating Government-owned laboratories to retain patents in inventions developed with Federal assistance.
- ii. Public Law 101-189, National Competitiveness Technology Transfer Act of 1989, which requires that technology transfer be made a mission assignment for DOE Government-owned contractor-operated laboratories and authorizes DOE laboratories to use Cooperative Research and Development Agreements (CRADAs) for technology transfer activities.
- jj. Public Law 102-486, The Energy Policy Act of 1992, which enacts the National Energy Strategy and expands the Secretary of Energy's authority to include research, development and demonstration, and commercial application programs under the provisions of the Stevenson-Wydler Act.
- kk. Title 10 CFR 600, Department of Energy Financial Assistance Rules, of 10-5-82, as amended, which establishes policies and procedures for awarding and administering DOE grants and cooperative agreements.
- ll. Title 10 CFR 605, Application and Guide for the Special Research Grant Program, of 10-85, which provides guidance for the preparation of grant applications submitted to DOE pursuant to the Office of Energy Research Special Research Grant Program.
- mm. Title 10 CFR 810, Unclassified Assistance to Foreign Atomic Energy Activities, which limits the type of nuclear energy information that may be provided to foreign countries.
- nn. Title 48 CFR Chapter 1, "Federal Acquisition Regulation (FAR)," Part 27, "Patents, Data, and Copyrights," of 3-26-84, as amended, which is the uniform, Governmentwide regulation concerning acquisition.
- oo. Title 48 CFR 917, Department of Energy Acquisition Regulations (DEAR), which implements and supplements the Federal Acquisition Regulation (FAR) in relation to Department procedures.

6. DEFINITIONS. See Attachment 2 of DOE 1430.1C.

7. POLICY.

- a. Scientific and technical information used, developed, or cumulated in work supported by DOE or during work carried out for others at DOE facilities (unless otherwise specified in the agreement under which non-DOE work is performed) shall be reported to the Office of Scientific and Technical Information (AD-21), Office of Information Resources Management (AD-20), for inclusion in DOE's information systems; and, as security, patent, contractual, and other DOE policy considerations permit, shall be made available to the scientific, technical, academic, and industrial communities and to the public through approved channels.
- b. Because the scientific and technical information program is a basic and integral part of DOE's research and development program, research and development projects are not considered complete until the scientific and technical information (unlimited, unclassified, sensitive, and classified) generated by the project is recorded, documented, and provided to AD-21.
- c. Intelligence information will be processed in accordance with procedures approved by the Director of Intelligence (IN-1). The performing organizations shall coordinate their activities with AD-21, through the appropriate Technical Information Officers, or Technical Information Representatives, to maximize the utilization of scientific and technical information resources throughout DOE, to promote economy and effectiveness, and to avoid duplication of services.

8. RESPONSIBILITIES. Responsibilities for STI management within DOE are outlined in DOE 1430.1C. The following chapters represent the implementation procedures of this Order to comply with the policies and responsibilities that are identified in DOE 1430.1C.

BY ORDER OF THE SECRETARY OF ENERGY:



LINDA G. SYE  
Acting Director of Administration  
and Management

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## CHAPTER I

### GENERAL

#### 1. BACKGROUND.

- a. Scientific and technical information (STI) is a basic and integral part of all of DOE's programmatic efforts. As such, the Department has a responsibility to ensure that this information resource is effectively managed, disseminated, and preserved. To support these goals, the Department's STI management program consists of two parts:
  - (1) A decentralized activity responsible for effective technical data and information resources management residing with each Departmental Element; and
  - (2) A centralized activity administered by the Office of Administration and Management, AD-1, through AD-21, which has been established to collect, process, control, disseminate, and provide historical referencing of DOE's STI products.
- b. The two parts of DOE's STI management program must be integrated to optimize the Department's information resources. This Order provides information regarding the Department's program-based mechanisms for STI management and oversight responsibilities, and detailed guidance for implementing DOE's centralized STI activities.

#### 2. OFFICE OF SCIENTIFIC AND TECHNICAL INFORMATION (AD-21).

- a. The Office of Scientific and Technical Information coordinates policies and provides direction for the Department's scientific and technical information program. AD-21 furnishes a centralized base of support to assist Departmental Elements in managing their scientific and technical information including information and data (as allowed by the terms of the agreement) resulting from technology transfer activities.
- b. AD-21 maintains:
  - (1) A DOE facility for the collection, control, processing, announcement, dissemination, and historical referencing of scientific and technical information resulting from DOE's programmatic activities;
  - (2) A computerized system that lists and describes approved ongoing work;
  - (3) A system to ensure that required scientific and technical information is received at AD-21;

- (4) Mechanisms for both the electronic and printed announcement of scientific and technical information and for administering foreign information exchange agreements in support of program offices; and
  - (5) Provides a variety of scientific and technical information support services to Departmental Elements.
- c. Scientific and technical support services include:
- (1) Design and development of specialized information systems in support of program specific objectives as well as Departmental and national energy goals;
  - (2) Linkage and referral of Departmental Elements to the most appropriate sources of information, knowledge and expertise;
  - (3) Computer generated and managed STI-related bibliographic data bases, publications, thesauri, authorities, and distribution programs;
  - (4) Assistance in interpreting and implementing STI policy;
  - (5) Assessment of STI collections, user needs, delivery mechanisms, and management processes; and
  - (6) Planning, implementation, and evaluation of STI management systems, networks, and programs.

### 3. APPOINTMENT OF A TECHNICAL INFORMATION OFFICIAL.

- a. Each Departmental Element shall have a Technical Information Official to serve as the central point of coordination between the appointing organization and other Departmental Elements and AD-21 on matters pertaining to DOE's scientific and technical information program. Such coordination will involve all provisions of DOE 1430.1C and DOE 1360.4B, including the development, implementation, and evaluation of policy, program, and DOE Field Office reviews, and AD-21 receipt of scientific and technical information deliverables acquired or produced by DOE, DOE M&O contractors, and direct procurements, and financial assistance instruments.
- b. Headquarters technical information personnel will be referred to as Technical Information Representatives (TIR) and DOE Field Office personnel will be referred to as Technical Information Officers (TIO) (see Attachment I-1 for TIR and TIO roles).

### 4. CHARACTERISTICS OF DOE SCIENTIFIC AND TECHNICAL INFORMATION.

- a. Scientific and technical information is knowledge or information (unlimited, unclassified, sensitive, and classified) derived from activities supported in whole or in part by DOE or during work carried out for others at DOE-funded facilities. This includes

information of potential value to others which provide interim or final results of projects; regulatory, environmental, engineering, energy use, social and economic projections, studies, analyses, or monitoring; scientific inquiry into phenomena or technology; basic and applied research; technological demonstration; and compliance and regulatory studies and reporting.

- b. Scientific and technical information, depending on the source, may be subject to invention disclosure, patenting, copyright, or other protection. In addition, the Government may have limited rights in this information under the Bayh-Dole Act, or according to the terms of the agreement under which it was generated or brought into DOE. This information may be found in technical reports, journal articles, reprints, theses or dissertations, scientific/technical conference proceedings, regulatory documents, translations, engineering drawings, scientific/technical computer software, computer output, scientific/technical audiovisual or multimedia presentations. It is recorded, spoken, or represented in any medium for storage or communication and may be contained in scientific and technical computer software with scientific or technical application.

#### 5. SUBMITTING DOE SCIENTIFIC AND TECHNICAL INFORMATION.

- a. Scientific and technical information developed as a result of work supported by the Department, acquired or carried out for others at DOE facilities, or carried out under subcontract, unless otherwise specified in the agreement under which the work is performed (any exclusions should be coordinated with AD-21), shall be reported promptly and fully in accordance with the policy established in DOE 1430.1C, to the Department's Office of Scientific and Technical Information, P.O. Box 62, Oak Ridge, TN 37831, for inclusion in DOE's information systems. (Scientific and technical information resulting from work supported by the Department which is submitted to the Nuclear Regulatory Commission (NRC) in support of the Advanced Light Water Reactor Design Certification Program and docketed by NRC, thereby making it publicly available and archived through their licensing information management system, need not be submitted to AD-21). As security, patent, contractual, technology transfer, and other DOE policy considerations permit, this information shall be made available to the scientific, technical, and industrial communities, and to public and foreign entities through appropriate channels.
- b. Because the management of scientific and technical information is a basic and integral part of DOE's programmatic responsibilities, projects cannot be closed out until the scientific and technical information (unlimited, unclassified, sensitive, and classified) is recorded, documented, and, as appropriate, provided to AD-21 for processing. Technical data qualifying as proprietary, draft, or information that is not disseminated beyond the organization ("internal information"), should not be forwarded to AD-21 unless it is required to facilitate the understanding of the work

performed under DOE sponsorship. CRADA generated information, protected under the terms of the National Competitiveness Technology Transfer Act of 1989, information protected under the terms of the Small Business Innovation Development Act (P.L. 97-219), and other technology transfer related information should, when forwarded to AD-21, be appropriately identified to protect it from premature or unauthorized disclosure.

6. TECHNOLOGY TRANSFER ROLE.

- a. Within the Department of Energy, technology transfer is a key initiative in achieving the Nation's energy, environmental, economic, and national security goals. Effective management of the Department's STI is fundamental to effective technology transfer, as well as, fostering success of the National Energy Strategy.
- b. To achieve these goals, AD-21 will protect information that can be used to enhance U.S. competitiveness or national security to the extent permitted by U.S. law, Executive order, or other binding agreements. For example, certain types of technology transfer related information are exempt from requests under the Freedom of Information Act as provided for in the National Competitiveness Technology Transfer Act of 1989. Categories of technology transfer-related information include, but are not limited to, CRADAs, Small Business Innovation Research (SBIR) contracts, and patents.
- c. Basic research and other unrestricted information will be disseminated to the widest extent possible to promote access to the information by the private sector. AD-21 will work in conjunction with the Science and Technology Advisor and Director of Technology Utilization in the development of technology transfer and utilization policies. (See SEN-30A-92, STAYING THE COURSE FOR TECHNOLOGY TRANSFER AT THE DEPARTMENT OF ENERGY, and SEN-33-91, DEPARTMENTAL MANAGEMENT OF SCIENCE AND TECHNOLOGY, for additional information.)

7. PUBLIC INFORMATION. All non-scientific and technical documents printed with DOE funds and distributed to an audience outside the Federal Government (including contractors involved in the work reported in the document) or scientific and technical documents distributed outside the program-approved official distribution (see DOE 1430.1C) are subject to review and registration as described in DOE 1340.1B and OMB Circular A-130.

8. SCIENTIFIC AND TECHNICAL COMPUTER SOFTWARE.

- a. Scientific and technical computer software developed with DOE funding, in whole or in part, may have value to others beyond those originating the software. Therefore, it is to the Department's benefit to collect, announce, and distribute DOE-sponsored scientific and technical software that has

scientific, technical, and technological applications to minimize duplicative software development, and to permit DOE to carry out its technology transfer and technology security responsibilities. In addition, software developed by the Department of Energy or its contractors in conjunction with non-Federal partners as part of technology transfer agreements may be subject to restrictions as to distribution and/or licensing.

- b. Contractor produced software may be subject to restrictions as to distribution and/or licensing under the Bayh-Dole Act or other appropriate authority. Such software, e.g., developed through CRADAs is within the scope of this program and is protected in accordance with applicable statutes. Accordingly, AD-21 has established, in conjunction with Heads of Departmental Elements, the Energy Science and Technology Software Center, a centralized activity for managing DOE's scientific and technical computer software. The policy and implementing procedures are contained in DOE 1360.4B.
9. TERMINATION OF MAJOR PROJECTS. To ensure appropriate disposition of scientific and technical information, all major project closeout teams should include representatives from the Department's scientific and technical information program. This includes a TIO working in coordination with the TIR from the affected Departmental Element, and/or a representative from AD-21.

ROLE OF DOE FIELD TECHNICAL INFORMATION OFFICERS AND  
HEADQUARTERS TECHNICAL INFORMATION REPRESENTATIVES IN THE  
DEPARTMENT'S SCIENTIFIC AND TECHNICAL INFORMATION ACTIVITIES

DESCRIPTION OF ROLES

Each Departmental Element participates in the program through the appointment of an individual who acts as its representative with AD-21 and others on scientific and technical information matters. In the field, the individuals are referred to as TIOs and at Headquarters they are TIRs. These representatives provide a conduit for information exchange to aid in scientific and technical information policy development, coordination, and implementation.

Since each site organizes, staffs, and assigns duties to its TIO/TIR differently, the following are generic roles of the TIO/TIR as they relate to the primary objectives of the centralized program:

1. Coordinating, Establishing, and Communicating Policies and Standards for Scientific and Technical Information.
  - a. Solicit organizational (and contractor, if appropriate) views and comments on proposed scientific and technical policies, standards, and guidelines.
  - b. Share scientific and technical information-related views with management, the central program, and other Departmental Elements.
  - c. Participate in regularly scheduled Departmental scientific and technical information meetings and provide and/or present topics when appropriate.
  - d. Recommend the need for, and provide comments on, proposed Departmental scientific and technical information policies.
  - e. Conduct scientific and technical information reviews within the respective Departmental Elements (and contractors, if appropriate) to ensure input to and compliance with, Departmental scientific and technical information policies and procedures.
  - f. Ensure that Departmental scientific and technical information policies and guidelines are implemented in all organizations within their area of responsibility. Applicable Orders include this Order, DOE 1360.4B, DOE 1430.1C, and DOE 1430.3A.
  - g. Serve on Departmental and local ad hoc committees on scientific and technical information issues.
  - h. Represent their organizations' positions and "official" office posture on policies, issues, and activities covering scientific and technical information.



- i. Participate in development of life-cycle scientific and technical information management plans and procedures in coordination with the appropriate PSO, DOE Field Office, power marketing administrations, energy technology contractors, and DOE contractor technical information program managers.
  - j. Coordinate technology transfer issues with the appropriate technology transfer staff within the Departmental Element.
- 2. Providing Effective Access to Scientific and Technical Information.
  - a. Assure that organizations under their cognizance provide information to, and make effective use of, the products and services available through DOE's central resources coordinated by AD-21.
  - b. Continually analyze and identify any new sources of needed scientific and technical information and report their existence to AD-21.
  - c. Assess and communicate their organizations' scientific and technical information needs and act as contact point for addressing any associated budgetary matters.
- 3. Providing Advice and Assistance for Scientific and Technical Information Planning, Development, and Implementation of Scientific and Technical Information Program Activities.
  - a. Provide or seek advice on any proposed scientific and technical information system or product contemplated by the organization.
  - b. Educate respective organizations about DOE's scientific and technical information program, products, and services available from the centralized program at AD-21.
  - c. Maintain an awareness, through interactions with AD-21 and other TIOs/TIRs, of other scientific and technical information activities in the Department.
- 4. Participating in External AD-21 Activities.
  - a. Provide AD-21 with their organizations' views on scientific and technical information issues for discussion with other Government agencies and U.S. industry.
  - b. Participate in the scientific and technical information standard-setting bodies.
  - c. Provide AD-21 information relative to specific sites and organizations to apply in overall external coordination activities.

## CHAPTER II

### MANAGEMENT SYSTEMS FOR CONTROLLING SCIENTIFIC AND TECHNICAL INFORMATION

1. TECHNICAL INFORMATION MONITORING SYSTEM (TIMS). The Technical Information Monitoring System is a computerized tracking system developed in conjunction with TIOs and TIRs and maintained by AD-21 to assist contracting officers and program managers in ensuring that technical information resulting from DOE expenditures is reported to AD-21 for appropriate DOE and public availability. Reporting deficiencies are identified by comparing the information contained in the Procurement and Assistance Data System (PADS) with the information received at AD-21. These data are also used by AD-21 to grant clearance for closeout of contracts and financial assistance awards. Contract administrators may obtain remote access to these files in order to assist them in monitoring their awards.
  - a. Procurement Request Originators.
    - (1) The individual(s) responsible for initiating a requirement on DOE F 4200.33, "Procurement Request - Authorization," or other individual(s), as designated by the cognizant head of the Headquarters or field element, shall bring to the attention of the cognizant contracting officer the following:
      - (a) each procurement requiring the application of this Order;
      - (b) requirements for flowdown or provisions of this Order to any subcontract or subaward; and
      - (c) identification of the paragraphs of other portions of this Order which the awardee, or, if different, a subawardee, is to comply.
    - (2) Procurement request originators are responsible for stipulating the type, frequency, and content of reports to be produced under each procurement and financial assistance action. These reporting requirements are specified in DOE F 1332.1, "Reporting Requirements Checklist," (Attachment II-1) or EIA-459A, "Federal Assistance Reporting Checklist," (to be used in lieu of DOE F 1332.1 for financial assistance actions (see Attachment II-2)) and must accompany the procurement package. At a minimum, all covered awards require a DOE F 1430.22 (formerly DOE F 538), "Notice of Energy RD&D Project" (Attachment II-3), and a final report or publication of the results in the scientific literature, as specified by the cognizant program manager. The Department's reporting requirements for grants are covered in 10 CFR 600 with the exception of special research contracts which are contained in the Department of Energy's Acquisition Regulations, part 917, while reporting requirements for special research grants are contained in 10 CFR 605.
  - b. Contracting Officers. Based on advice received from the procurement request originator or other designated individual, the contracting officer shall apply applicable provisions of this

Order to awards falling within its scope. For awards other than management and operating contracts, this shall be incorporated or referenced using explicit language in a contractual publication, usually bilateral. Each contracting officer awarding contracts, entering into agreements, or providing financial assistance awards that will generate scientific, technical, or engineering information appropriate for submission to AD-21 shall ensure that a completed DOE F 1332.1 or EIA-459A (depending upon the action) is transmitted to AD-21 to be incorporated into the TIMS.

- c. Delinquent Reports. Periodically, AD-21 prepares lists of reports contracted for, but not received by, AD-21. A report is considered delinquent if it has not been received by AD-21 within 3 months of the final day of the reporting period (e.g., a quarterly report for the period ending 6-92 is delinquent if it has not been received by the end of 9-92). These lists are forwarded to the awarding organization for followup and remedial action.

- d. Contract Closeout or Termination.

- (1) Before a contract or financial assistance instrument with specified STI deliverables can be closed out, AD-21 or Departmental Elements authorized by AD-21, must certify that all reporting requirements, as established by the cognizant Departmental Element, have been satisfactorily met. When required deliverables have not been received, AD-21 will request the awarding office to secure the deliverable or to document with a copy to AD-21 why it is not in the best interest of the Government to secure the deliverable as required in DOE 1430.1C. If there are any deviations in the reporting requirements, the Departmental Element will notify AD-21.
- (2) Awarding offices should obtain the AD-21 certification using the automated certification procedures developed by AD-21 in conjunction with PR-142. To receive the certification, offices should query the Procurement Assistance Data System data base for a particular record; if AD-21 certification date is present, request the Standard Report No. 634 for that award. The report provides documentation of the Office of Scientific and Technical Information certification and should be made a permanent part of the award file.

- 2. CRADA INFORMATION MANAGEMENT SYSTEM. In order to provide information on the status of Cooperative Research and Development Agreements' (CRADA) activity within the Department and provide management information in support of congressional reporting requirements established in P.L. 101-189, AD-21 maintains a centralized CRADA data base.

- a. Content. The data base includes factual data and abstracts on DOE CRADAs as authorized by P.L. 95-502 and P.L. 101-189. The file is available to authorized Departmental representatives.

- b. Reporting Requirements. Information specified on the Notice of JWS/CRADA Action Checklist and an abstract suitable for public release are required to be reported to AD-21 by the DOE Field Offices, Energy Technology Centers, or Area Offices for each approved CRADA. Cognizant Departmental Elements should ensure that CRADAs sponsored by the respective Program Secretarial Officers are appropriately represented in the system. For additional information contact AD-21.
3. RESEARCH-IN-PROGRESS DATA BASE. In order to establish a base of information of research work in progress and of ongoing development projects, AD-21 has developed and maintains a Research-in-Progress data base. This data base serves as a means to keep DOE researchers and program managers informed of ongoing research, to avoid duplication of effort, to ensure effectiveness of DOE's R&D investment, to assist program activities, and to meet Department objectives for technology transfer. Selected information from this data base is made available to the public as one means of sharing information on DOE's programs and projects.
- a. Content. The data base contains descriptions of ongoing research, development, and demonstration projects sponsored by DOE or work conducted for others at DOE facilities. This file can be searched on the AD-21 interactive search system, the Integrated Technical Information System (ITIS). Information regarding the projects can be retrieved by conducting searches on any searchable data element such as principal investigator, contractor, contract number, or subject.
  - b. Research-in-Progress Reporting Requirements.
    - (1) DOE Sites.
      - (a) DOE-operated sites that conduct research and development activities, e.g., Energy Technology Centers, Power Marketing Administrations, and field elements, shall submit their new Research-in-Progress data using either DOE F 1430.22, "Notice of Energy RD&D Projects" (Attachment II-3), or other appropriate media as arranged with the AD-21 Research-in-Progress program manager. (Projects to be reported include both DOE-sponsored research and research funded outside DOE but conducted at DOE supported facilities (unless otherwise specified in the contract); exceptions should be coordinated with AD-21). Submission of this information to AD-21 should be coordinated with the TIO within the performing organization.
      - (b) Cognizant Departmental Elements must ensure that the Research-in-Progress data are kept up-to-date throughout the life of the project. DOE-operated

research and development organizations are required to respond to Research-in-Progress verification requests from AD-21.

- (2) Contractors. Reporting requirements for the Research-in-Progress data base vary according to the following categories. Contracting offices are responsible for ensuring that contracts and financial assistance instruments contain instructions consistent with the following:
- (a) Contractors and Financial Assistance Recipients. In accordance with the guidelines established by the cognizant Departmental Element, performing organizations conducting research under this category are responsible for completing DOE F 1430.22, "Notice of Energy RD&D Project" (Attachment II-3), and forwarding it to the Office of Scientific and Technical Information (AD-21), P.O. Box 62, Oak Ridge, TN 37831, within 30 days after a project has been funded. This information should be kept current by providing AD-21 with periodic updates, as appropriate (usually annual updates are necessary). Performing organizations conducting research under this category are responsible for responding to Research-in-Progress verification requests, forwarded by AD-21, at the request of the contracting officer.
- (b) Management and Operating (M&O) Contractors.
- 1 Managers of DOE Field Offices shall ensure contractors performing research or development projects under DOE 5700.7C use the procedures identified therein for their annual budget submissions. Copies of DOE F 5700.2 (Attachment II-4) and revised copies of DOE F 5120.1, "Field Work Proposal," after approval by the DOE Program Office sponsor, shall be provided to AD-21. When work is authorized by procedures other than those in DOE 5700.7C, submission of other appropriate media which ensures that AD-21 receives the required data elements shall be arranged with the AD-21 Research-in-Progress program manager. The data are used by AD-21 to create records for inclusion in the Research-in-Progress data base. As research or development project data are modified or updated by the contractor, the revised data shall be submitted to AD-21.
  - 2 Research-in-Progress information shall also be provided on DOE-funded projects reported through other mechanisms than DOE 5700.7C (such as laboratory-directed research and development)

and on non-DOE funded research (such as Work For Others) under DOE 4300.2B, unless otherwise specified by the contract agreement/Memorandum of Understanding, etc. Data elements to be provided to AD-21 are consistent with the type of information provided in field work proposals and work authorizations. Information should include the following elements: the submitting organization number; project title; name of principal or senior investigator; contract or grant number; contractor name; performing organization including department or division; the DOE sponsoring office and technical monitor or manager; budget and reporting code if applicable; funding for overall project and for current fiscal year; term of project; and project summary.

- (c) Other Contractors. Contractors performing research and development not covered by DOE 1332.1A, 1332.2, 4300.2B, or 5700.7C shall submit a DOE F 1430.22 (Attachment II-3) for unclassified and nonsensitive projects. The cognizant awarding office will specify which projects qualify for exclusion.

c. Availability of Research-in-Progress Data.

- (1) Different levels of access to information are maintained by AD-21. The Research-in-Progress data base is available to DOE through the Integrated Technical Information System (ITIS). DOE contractors may also access a version of the data base through ITIS.
- (2) Research-in-Progress information is available to others through the Department of Commerce, National Technical Information Service (NTIS), on commercial systems or through exchange agreements. This data base can serve as a tool for non-DOE organizations identifying technology transfer opportunities. However, DOE projects which generate scientific and technical information subject to distribution limitations will not be made available to non-DOE users if such limitations are so noted on the submission forms (DOE F 1430.22 or DOE F 5700.2).
- (3) Upon request, AD-21 will produce summary publications from the Research-in-Progress data base. These publications are coordinated with the cognizant program managers or DOE Field Office representatives.

# REPORTING REQUIREMENTS CHECKLIST

DOE F 1332.1  
(04-89)  
All other editions  
obsolete

## U.S. DEPARTMENT OF ENERGY REPORTING REQUIREMENTS CHECKLIST

1. PROGRAM/PROJECT TITLE <b>Recovering Uranium from Coal In-Situ</b>		2. IDENTIFICATION NUMBER <b>ACIO-92BR71240</b>	
3. PARTICIPANT NAME AND ADDRESS <b>Envirotech, Inc., Philadelphia, PA 21010</b>			
4. PLANNING AND REPORTING REQUIREMENTS			
A. General Management		Frequency	
<input checked="" type="checkbox"/> Management Plan		Y, X	
<input checked="" type="checkbox"/> Status Report			
<input type="checkbox"/> Summary Report			
B. Schedule/Labor/Cost		Frequency	
<input checked="" type="checkbox"/> Milestone Schedule/Plan		O, Y	
<input type="checkbox"/> Labor Plan			
<input type="checkbox"/> Facilities Capital Cost of Money Factors			
<input type="checkbox"/> Computation			
<input type="checkbox"/> Contract Facilities Capital and Cost of Money			
<input type="checkbox"/> Cost Plan			
<input type="checkbox"/> Milestone Schedule/Status			
<input type="checkbox"/> Labor Management Report			
<input type="checkbox"/> Cost Management Report			
C. Exception Reports			
<input type="checkbox"/> Conference Record			
<input type="checkbox"/> Hot Line Report			
D. Performance Measurement			
<input type="checkbox"/> Management Control System Description			
<input type="checkbox"/> WBS Dictionary			
<input type="checkbox"/> Index			
<input type="checkbox"/> Element Definition			
<input type="checkbox"/> Cost Performance Reports			
<input type="checkbox"/> Format 1 - WBS			
<input type="checkbox"/> Format 2 - Function			
<input type="checkbox"/> Format 3 - Baseline			
E. Financial Incentives		Frequency	
<input checked="" type="checkbox"/> Statement of Income and Expense		O	
<input type="checkbox"/> Balance Sheet			
<input type="checkbox"/> Cash Flow Statement		A	
<input checked="" type="checkbox"/> Statement of Changes in Financial Position			
<input type="checkbox"/> Loan Drawdown Report		Y	
<input checked="" type="checkbox"/> Operating Budget			
<input type="checkbox"/> Supplementary Information			
F. Technical			
<input checked="" type="checkbox"/> Notice of Energy RD&D Project (Required with any of the following)		O, Y	
<input type="checkbox"/> Technical Progress Report			
<input type="checkbox"/> Draft for Review		Y	
<input checked="" type="checkbox"/> Final for Approval			
<input type="checkbox"/> Topical Report		F	
<input checked="" type="checkbox"/> Final Technical Report			
<input type="checkbox"/> Draft for Review			
<input type="checkbox"/> Final for Approval			
<input type="checkbox"/> Software			
<input type="checkbox"/> Other (Specify) _____			
5. FREQUENCY CODES			
A - As Required		M - Monthly	S - Semi-Annually
C - Change to Contractual Agreement		O - Once After Award	X - With Proposal/Bid/Application or with Significant Changes
F - Final (end of effort)		Q - Quarterly	Y - Yearly or Upon Renewal of Contractual Agreement
6. SPECIAL INSTRUCTIONS (ATTACHMENTS)			
<input type="checkbox"/> Report Distribution List/Addressees		<input type="checkbox"/> Analysis Thresholds	
<input type="checkbox"/> Reporting Elements		<input type="checkbox"/> Work Breakdown Structure	
<input type="checkbox"/> Due Dates		<input type="checkbox"/> Other	
7. PREPARED BY (SIGNATURE AND DATE) <b>W. D. Smith 2/14/92</b>		8. REVIEWED BY (SIGNATURE AND DATE) <b>R. A. Evans 9/15/92</b>	

## REPORTING REQUIREMENTS CHECKLIST

### PURPOSE

The checklist identifies and communicates additional reporting requirements which are not otherwise set forth in DOE contractual agreement. It will be included as part of the contractual agreements. The checklist will be completed for each contract or financial incentives agreement. If necessary, special instructions may be appended to modify the checklist to adapt it to specific situations.

### INSTRUCTIONS

- |  |   |
|--|---|
| <p>Item 1. Enter the title of the project as indicated in the procurement request, contract, interagency agreement, initiating memorandum, or official award, as appropriate.</p> <p>Item 2. Enter the identification number of the procurement request, contract award, or financial incentives agreement, as appropriate.</p> <p>Item 3. Enter the name and address of the participant.</p> <p>Item 4. Check spaces to indicate plans and reports selected. For each reporting requirement selected, indicate the frequency of delivery using one of the frequency codes from Item 5. The addressees to whom reports will be sent and the total number of copies required will be referenced in an attached coded distribution list.</p> | <p>Note: Frequency codes represent specific reporting frequencies for each selected report. The frequencies are recommended in the solicitation and negotiated prior to award. The number of copies required and the addressees are similarly finalized prior to award.</p> <p>Item 5. This item lists the possible frequency codes to be applied in the selection of reporting requirements.</p> <p>Item 6. Attach special instructions as necessary. Check the appropriate box(es).</p> <p>Item 7. Signature of person preparing checklist and the date prepared.</p> <p>Item 8. Signature of person reviewing the checklist and date reviewed.</p> |
|--|---|



FEDERAL ASSISTANCE REPORTING CHECKLIST

U.S. DEPARTMENT OF ENERGY			
FEDERAL ASSISTANCE REPORTING CHECKLIST			
FORM EIA-498A (1982)		FORM APPROVED OMB NO. 1805-0127	
1. Identification Number: DE-FC09-92ER00001		2. Program/Project Title: Study of CO <sub>2</sub> Levels in the Stratosphere	
3. Recipient: University of Hawaii			
4. Reporting Requirements:			
PROGRAM/PROJECT MANAGEMENT REPORTING		Frequency	No. of Copies
<input checked="" type="checkbox"/> Federal Assistance Milestone Plan (Form EIA-459B) (cy attached)		0	2
<input type="checkbox"/> Federal Assistance Budget Information Form			
<input type="checkbox"/> Federal Assistance Management Summary Report			
<input type="checkbox"/> Federal Assistance Program/Project Status Report			
<input checked="" type="checkbox"/> Financial Status Report, OMB Form 269 (cy attached)		Q	2
TECHNICAL INFORMATION REPORTING			
<input checked="" type="checkbox"/> Notice of Energy RDBD		Y	2
<input type="checkbox"/> Technical Progress Report			
<input type="checkbox"/> Topical Report			
<input checked="" type="checkbox"/> Final Technical Report		F	2
Addressees			
Box 5			
Box 5			
Box 5			
Box 5			
FREQUENCY CODES AND DUE DATES:			
A - As Necessary; within 5 calendar days after events.			
F - Final; 90 calendar days after the performance of the effort ends.			
Q - Quarterly; within 30 days after end of calendar quarter or portion thereof.			
O - One time after project starts; within 30 days after award.			
X - Required with proposals or with the application or with significant planning changes.			
Y - Yearly; 30 days after the end of program year. (Financial Status Reports 90 days).			
S - Semiannually; within 30 days after end of program fiscal half year.			
5. Special Instructions:			
6. Prepared by: (Signature and Date) <i>Joseph Weston</i> Joseph Weston 7/8/92		7. Reviewed by: (Signature and Date) <i>Patricia Shelton</i> Patricia Shelton 7/8/92	

### FEDERAL ASSISTANCE REPORTING CHECKLIST

#### PURPOSE

This form serves to identify plans and reports selected by DOE as reporting requirements for the Federal Assistance Program/Project.

#### INSTRUCTIONS

- Item 1 — Enter the program /project identification number as it appears in the official award.
- Item 2 — Enter the program/project description as it appears in the official award.
- Item 3 — Enter the name of the recipient.

- Item 4 — Check spaces to indicate plans and reports selected. For each report checked, indicate frequency of delivery in column provided using one of the frequency of delivery codes as shown, as well as the number of copies requested and to whom they should be sent.

Federal Assistance Milestone Plan — presents, with the accompanying Milestone Log, a schedule of the planned activity.

Federal Assistance Budget Information Form — presents the planned costs.

Federal Assistance Management Summary Report — registers planned progress and costs to actual progress and costs in a capsulized format.

Federal Assistance Program/Project Status Report — periodically reports project status, explains variances and problems, and discusses any other areas of concern or achievements.

Financial Status Report, OMB Form 269 — presents the status of funds committed to the project.

Notice of energy R&D Project — provides information on unclassified DOE R&D Project for dissemination to the scientific, technical, and industrial communities and to the public. Also provides information to the Smithsonian Information Exchange and to the DOE Technical Information Center.

Technical Progress Report — periodically reports progress and/or results of DOE supported R&D and scientific projects covering a specific reporting period.

Topical Report — presents the technical results of work performed on a specific phase of a project.

Final Technical Report — presents a technical accounting of the total work performed on a project.

Frequency Codes - Each code represents a specific reporting frequency (such as Quarterly). These time periods are suggested in the program announcement and negotiated at the time of the award.

- Item 5 — Identify any special reporting requirements or instructions not identified in Item 4. (Use additional sheets as necessary.).
- Item 6 — Signature of person preparing the checklist and the date prepared. Preparation is by person responsible for program solicitation.
- Item 7 — Signature of the person reviewing the checklist and date reviewed.

NOTICE OF ENERGY RD&D PROJECT

DOE F 1430.22  
(04-91)  
All other editions  
are obsolete  
(Replaces DOE F 538)

OMB Control No.  
1910-1400  
Burden Disclosure  
Statement on Back

**U.S. DEPARTMENT OF ENERGY  
NOTICE OF ENERGY RD&D PROJECT**

1. DOE CONTRACT OR GRANT NUMBER AC05-91FE12345
- ☒ New contract    ☐ Continuation/Revision
2. A. NAME OF PERFORMING ORGANIZATION Smith Laboratory
- B. Department or Division Turbine Engineering
- C. Street Address 2345 Main Street
- City Knoxville State Tennessee Zip 37919
- D. Type of Performing Organization (circle only one two-letter code)
- |   |   |
|---|---|
| CU—College, university, or trade school   | NP—Foundation or laboratory not operated for profit |
| EG—Electric or gas utility  | ST—Regional, state, or local government facility    |
| FF—Federally funded RD&D centers<br>or laboratory operated for<br>agency of US government | TA—Trade or professional organization               |
| IN—Private industry   | US—Federal Agency                                   |
|   | XX—Other  |
3. PRINCIPAL OR SENIOR INVESTIGATOR
- A. Last Smith First James MI H.
- B. Phone: Commercial \_\_\_\_\_ FTS \_\_\_\_\_
4. DOE SPONSORING OFFICE OR DIVISION DOE Oak Ridge Field Office, ABC Division
5. TITLE OF PROJECT Minimum Temperature Rankine Cycle
6. DESCRIPTIVE SUMMARY (limit to 200 words)
- This is an investigation into varying chamber size, piston stroke, and conductive material with different gas mixtures to achieve cycling at low hot and cold end temperature differentials. A rapid cold and conductive mechanism is being developed.

7. RESPONDENT INFORMATION. List name and address of person filling out this form. Give telephone number and extension where person can be reached. Record the date this form was completed or updated. This information will not be published.
- Last Smith First James MI H.
- Address 2345 Main Street
- City Knoxville State Tennessee Zip 37919
- Phone (615) 574-1385 Date 12/30/92

**INSTRUCTIONS**  
**NOTICE OF ENERGY RD&D PROJECT**

**Notice**

If in the past six months you have completed a Statement of Work (SOW) or brief project description for DOE, complete only the additional data elements on this form and send it and a copy of the completed SOW or description to U.S. Department of Energy, Office of Scientific and Technical Information, Post Office Box 62, Oak Ridge, TN 37831.

**1. CONTRACT OR GRANT NUMBER**

The DOE contract or GRANT number under which the work is being performed. Check correct block for new contract or revision/continuation of prior contract.

**2. A. NAME OF PERFORMING ORGANIZATION**

Provide company or institution name of the organization doing the work.

**B. DEPARTMENT OR DIVISION**

List the department or division of the performing organization.

**C. MAILING ADDRESS**

Provide the complete mailing address.

**D. TYPE OF PERFORMING ORGANIZATION (circle only one two-letter code)**

CU EG FF IN NP ST TA US XX

**3. PRINCIPAL OR SENIOR INVESTIGATOR**

**A. Name of person chiefly responsible for the performance of the project.**

**B. Give telephone number, including area code, and if you have an FTS number, please include it.**

**4. DOE SPONSORING OFFICE OR DIVISION**

List the DOE organization that is funding the work.

**5. TITLE OF PROJECT**

Be as specific as possible. Use words that are descriptive of the work done.

**6. DESCRIPTIVE SUMMARY**

Include objectives, approach, and expected results. Quantify where possible.

**7. RESPONDENT INFORMATION**

List name and address of person filling out this form. Give telephone number and extension where person can be reached. Record the date this form was completed or updated. This information will not be published.

**OMB Disclosure Statement**

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Office of Information Resources Management Policy, Plans, and Oversight, AD-241.2 - GTN, Paperwork Reduction Project, (1910-1400), U. S. Department of Energy, 1000 Independence Avenue, S.W., Washington, DC 20585; and to the Office of Management and Budget (OMB), Paperwork Reduction Project, (1910-1400), Washington, DC 20503.

MANAGEMENT AND OPERATING (M&O) CONTRACT WORK AUTHORIZATION

DOE F 5700.2  
102-901  
Replaces DOE F 5120.2  
All other editions are obsolete

**U.S. DEPARTMENT OF ENERGY**  
**Management & Operating (M&O) Contract Work Authorization**

**WORK AUTHORIZATION**

1. INITIATOR: John F. Clarke ER-50 353-3347  
NAME & SIGNATURE ORGANIZATION CODE TELEPHONE NO.

2. PROJECT TITLE: Magnetic Fusion Energy

3. RESPONSIBLE ASSISTANT SECRETARY: Director of Energy Research

4. RESPONSIBLE OPERATIONS OFFICE: DOE San Francisco Field Office

5. M&O CONTRACTOR NAME: University of California - LLNL

6. WORK AUTHORIZATION NO.: AT/00001/SF/50 7. REVISION: 00

8. FUNDS HEREBY AUTHORIZED

B&R No. \$000

AT / — / — 52,949

— / — / — —

— / — / — —

— / — / — —

9. PERFORMANCE PERIOD COVERED BY  
FUNDS FROM: 10-92 TO: 09-93

10. WORK START DATE: 10-01-92

11. EXPECTED COMPLETION DATE: 9-30-93

12. FUTURE FUNDING  
PLANNED (\$000): N/A

13. WORK AUTHORIZED: (Brief description, schedule, results or products and reporting requirements, and any shifting of funds permitted within the work authorization):

14. WORK AUTHORIZATION OFFICIAL: John F. Clarke 2/5/92  
NAME & SIGNATURE DATE

15. OPERATIONS OFFICE OFFICIAL: Jim K. Hartman 2/20/92

16. M&O CONTRACTOR OFFICIAL: — —

INSTRUCTIONS FOR DOE F 5700.2, "WORK AUTHORIZATION"

A. The DOE F 5700.2 authorizes the performance of work by a specific M&O contractor.

Item 1. Enter the name, signature, organization code, and telephone number of individual initiating the authorization.

Item 2. When the work authorized relates to a specific project, enter the title of the project.

Item 3. Enter the title of the Assistant Secretary responsible for the authorized work.

Item 4. Enter the title of the Operations Office responsible for the authorized work.

Item 5. Enter the name of the M&O contractor responsible for the authorized work.

Item 6. Each work authorization number will remain the same for the life of the work assignment. Each number shall conform to the following alphanumeric format:

--/-----/--/--

AA/11111/AA/11

a. The first two positions: The first two letters of the B&R code.

b. The next two positions: The next two digits of the B&R code.

c. The next two positions: A two digit sequential number for each authorization (01 to 99).

d. The next one position: The last digit of the fiscal year to which the authorization applies.

e. The next two positions: The operations office alpha code.

f. The next two positions: The M&O contractor numeric code.

Item 7. If the initial authorization is changed, enter the appropriate revision number.

Item 8. Enter the amount of funds authorized under each B&R code.

Item 9. Use a two digit numeric format (MO-DA-YR) to indicate the performance period of the authorization; for example, 10-01-85  
TO: 09-30-86.

Item 10. Enter the estimated work start date; for example  
09-25-86.

Item 11. Enter the estimated work completion date; for example  
09-05-86.

Item 12. Enter the estimated funding which will be required above the funds provided in the work authorization.

Item 13. Enter a brief description of work authorized, schedule, results or products, and reporting requirements.

Item 14. Enter the name and signature of the work authorizing official, and the date of his/her signature.

Item 15. Enter the name and signature of the operations official, and the date of his/her signature.

Item 16. Enter the name and signature of the M&O official, and the date of his/her signature.

### CHAPTER III

#### SCIENTIFIC AND TECHNICAL INFORMATION MANAGEMENT EVALUATION PROGRAM

1. DESCRIPTION.

- a. The scientific and technical information management evaluation program serves two functions. The most important is to provide a forum for the discussion and evaluation of DOE and contractor performance in managing the STI funded by or through DOE. This information exchange process should supplement formal and informal office visits, scheduled group meetings, and routine written and verbal communications among organizations involved in STI management. The second function is to document performance in managing STI.
- b. The criteria outlined in paragraph 4, below, provides guidance for Departmental Elements in meeting their responsibilities for contractor oversight in DOE 1430.1C and DOE 5000.2B. Requirements for performance under DOE 1360.4B are contained in that Order. Because of the changing nature of submission requirements, form changes, etc., a separate "Guidelines for Contractor Appraisals" memorandum is available from AD-21 which contains a recommended checklist for conducting an appraisal with specific coverage of forms, submission processes, clearance procedures, and other process-oriented functions that contribute to efficiency and effectiveness.

2. SCIENTIFIC AND TECHNICAL INFORMATION MANAGEMENT EVALUATION RESPONSIBILITIES. Departmental Elements with responsibilities for overseeing DOE and contractor performance for STI management can use the guidelines in this chapter for reference in establishing management goals or reaching conclusions concerning STI performance. Among the organizations that should use these guidelines are Program Secretarial Officers when evaluating performance of DOE Field and Site Offices, DOE's Technical Information Officers and Technical Information Representatives when evaluating performance of contractors or their respective Departmental Elements, and field program officials when evaluating contractor program performance during contractor self assessment reviews, functional appraisals, and award fee or other periodic contractor appraisals.

3. AD-21 INFORMATION EXCHANGE AND REVIEW RESPONSIBILITIES. AD-21 will maintain a program of open communication, cooperation, coordination, and service to other Departmental Elements in providing guidance and assistance for the operation and implementation of the Scientific and Technical Information Evaluation Management Program. AD-21 is authorized to perform periodic reviews of Departmental Elements performance in managing their STI responsibilities with the review focused on sharing specific items of interest to the Departmental Elements and on increasing the effectiveness and economy of DOE's management of STI.

4. CONTRACTOR STI MANAGEMENT APPRAISALS. Contractor STI management appraisals provide an opportunity to formally assess performance in meeting DOE's goals for managing STI as a DOE resource. The evaluation, which is the responsibility of the awarding DOE office, should have two principal components as described in paragraphs 4a and b, below. Persons conducting the appraisals should be familiar with the programmatic goals of the contractor; with the mission, objectives, and services of DOE's centralized information management program; and with the requirements of DOE 1360.4B, DOE 5000.2B, this Order, and other Orders as listed in Attachment 1 of DOE 1430.1C, as appropriate. A recommended evaluation checklist is contained in the "Guidelines for Contractor Appraisals" available from AD-21.
  - a. Program-Based Scientific and Technical Information Management Performance.
    - (1) Effectiveness in the management of scientific and technical data and information resulting from DOE-authorized work depends on applying "life cycle STI management" principles to the information so that STI is treated as a resource that is managed in a similar manner as an organization's financial and human resources.
      - (a) "Life cycle information management" is defined as the concept that information is created, passes through various stages of use and dissemination, and ultimately reaches a stage of final disposition. Application of the concept requires that goals and procedures should be developed to optimize the value of information through each stage of the "life cycle" including definition, creation, use, dissemination, storage for access, and final retention of the information.
      - (b) STI products, such as data bases, reports, environmental analyses, conference presentations, scientific/technical audiovisual, multimedia presentations, etc., would all have their own life cycle determinations focused on the value of the information developed. Central to determining the value of the information are specific considerations to what extent the information contributes to DOE program goals, and DOE policy goals such as increasing the knowledge base of scientific and technical disciplines, improving U.S. competitiveness, improving science and math education, promoting energy efficiency, etc.
    - (2) The criteria for successful performance are the existence and successful implementation of organization policies and procedures designed to treat scientific and technical information as an organization resource based on "life cycle" principles. This includes organizational-wide planning, budgeting, staffing, training, and oversight of



scientific and technical information development and use. Effective internal policies and processes should include adherence to DOE policies covering data rights; sensitive information controls; computer security; software management; and records management. Evidence of these procedures includes STI management plans and budgets; processes to generate and transfer usable electronic formats; user (audience) requirements assessments; procedures to minimize duplication of existing information; and coordination with AD-21 when information projects are started or closed out.

- (3) Information such as administrative, unverified data, research and technical notebooks, etc., generated in the process of creating an STI product should be maintained as a distinct record series or combined as a project file. In either case, the retention disposition is scheduled in accordance with DOE 1324.2A.

- b. STI Organization Performance. An important part of an STI appraisal is an evaluation of contractor organizations that provide STI services and ensure STI is made accessible for wider use through AD-21. The criteria for successful performance of STI services in the publishing and library areas and coordination with AD-21 are development of cost-effective services based on users requirements; adherence to DOE policies governing sensitive information control and intellectual property rights; provision of STI products to AD-21 for appropriate dissemination and retention; appropriate use of AD-21 products and services; and performance of delegated responsibilities as part of an organizational-wide STI management framework.

## 5. CONDUCT OF APPRAISALS.

- a. Frequency. Necessity for and frequency of appraisals are decided by the appropriate DOE management officials responsible for the STI activities of their performing organizations and determined by the amount of STI contracted for, prior performance experience and appraisal results, and the interval since the last appraisal. Appraisals should include an onsite visit whenever possible. New performing organizations should receive an STI management orientation as early as practical by STI personnel representing the cognizant Departmental Element (AD-21 will assist when requested). For management and operating contractors, an initial appraisal should be conducted within 1 year of the contract award date.
- b. Scheduling Appraisals.
  - (1) The cognizant awarding office is responsible for scheduling and conducting the appraisal. AD-21 shall be notified about the intent to conduct an appraisal at least 45 days prior to the time of the scheduled appraisal. The awarding office shall coordinate participation by AD-21, special topics to

be covered, current issues, and special data needs with AD-21 before contacting the organization to be appraised. The organization to be appraised shall be notified of the intended appraisal at least 30 days in advance.

- (2) The appraisal process should include the use of the "Guidelines for Contractor STI Organization Appraisals" prepared by AD-21 and furnished to awarding offices as the planning document in preparing for the appraisal. This information can be modified based on local conditions and discussions with AD-21 during planning for the appraisal. It is up to the awarding office whether to require a written response to the final criteria. Any response shall be forwarded to:

Assistant Director for Program Management  
U.S. Department of Energy  
Office of Scientific and Technical Information  
P.O. Box 62  
Oak Ridge, TN 37831  
Phone: (615) 576-1194

- c. Final Report. A final report of the appraisal results should be issued to the performing organization within 60 calendar days following the appraisal. The appraiser should discuss facts and findings with the performing organization during the closeout session to ensure accuracy and a mutual understanding of the conclusions to be included in the final report.
- d. Report Structure. The report should be concise and prepared so that it can be used as a future reference for followup. Appraisal conclusions and recommendations included in the report must be fully described and explained. The following is a description of the type of information a report should contain and an outline of how the major segments of the report should be structured.
  - (1) Introduction and Scope. Include pertinent names, dates, places, and other background information as necessary. Such background should include the date of the previous appraisal and any open or unresolved issues resulting from the previous appraisal.
  - (2) Observations and Comments. Identify specific areas, either positive or negative, that deserve recognition or action. Give supporting information from which the evaluation was made.
  - (3) Recommendations. Itemize specific suggestions for improvement. Ensure that the previous sections of the report contain adequate supporting data for the recommendations.
  - (4) Summary Evaluation. Make an overall evaluation in terms of

excellent, satisfactory, marginal, or unsatisfactory. This summary evaluation must be supported by specific items in the "Recommendations" section.

- e. Distribution of the Appraisal Report. Copies of the report shall be sent by the cognizant awarding office to the performing organization, the applicable Headquarters program organization(s), if deemed appropriate, and AD-21.
  - f. Request for Performing Organization Response. The performing organization should be given 30 calendar days, following receipt of the report, to respond to the recommendations. The performing organization shall be required to describe how it plans to implement the recommendations, if appropriate, or its rationale for not concurring with the recommendations.
6. FOLLOWUP. A copy of the report shall be furnished to AD-21 at the address given in paragraph 5b(2), above. When feasible, initial followup by the awarding office on recommendations resulting from the technical information appraisal should occur within 6 months after the final appraisal report has been transmitted to the performing organization. Records of followup actions should be maintained, and the recommendations should be considered open items until satisfactory corrective action has been taken or until alternatives have been agreed upon. The next appraisal of the performing organization should include a review of any open recommendations that were not satisfactorily addressed by the contractor.

## CHAPTER IV

### SUBMISSION OF SCIENTIFIC AND TECHNICAL INFORMATION

1. SCIENTIFIC AND TECHNICAL INFORMATION DOCUMENTS. Scientific and technical information may be reported in a variety of forms including: journal articles; reports; books; computer media; scientific/technical audio-visual or multimedia; and presentations at professional or scientific/technical conferences. Publication of articles in professional or technical society journals is encouraged. Documents that relate to activities involving protected intellectual property, copyrighted software, Protected CRADA Information, or other information with distribution release restrictions will receive appropriate protection by AD-21.
2. TYPES OF REPORTS. Basically, there are three types of scientific and technical reports:
  - a. Progress Reports (or Interim Reports) are reports that summarize ongoing work performed during a specific reporting period. A progress report is required on most projects at least once during the fiscal year and may be required more frequently.
  - b. Topical Reports are comprehensive statements of the technical results of work performed on a specific task or phase of a contract. They also can be detailed descriptions of scientific or technological advances.
  - c. Final Reports are required for all completed research and development contracts, agreements, or financial assistance awards. These reports are technical accountings of the total work performed under the contract. They are comprehensive descriptions of the results achieved, which include tabulations of data, figures, photographs, and bibliographic citations in support of the investigations undertaken. Where applicable, they summarize all previous topical and progress reports. In some instances (e.g., university research), a summary of work covering the entire contract or grant period with open literature publications resulting from it identified as products may be accepted as a final report.
3. OFFICIAL REPORTS.
  - a. Preparation. Occasionally, a contractor is requested to prepare or assist with the preparation of a report that will be published by DOE Headquarters or field elements. Such reports will be printed by Headquarters, AD-21, or the U.S. Government Printing Office. The Headquarters report number code will be used (see Attachment IV-4, paragraph 6) and controlled by the Chief of Printing Operations (AD-631). Departmental Elements are responsible for ensuring that all required clearances (classification, patent, and sensitivity reviews) are obtained.

- b. Approval. In the event that the contractor is requested to deliver a reproducible master for printing to a Headquarters or field element, required approval from the responsible DOE Field Office must be obtained. Copies of the report, with a completed DOE F 1332.15, "Recommendations for the Announcement and Distribution of Department of Energy (DOE) Scientific and Technical Information (STI)," (Attachment IV-1) must be sent by the printing organization to AD-21.
4. PUBLIC INFORMATION PRODUCTS. Public information products are those non-scientific and non-technical documents, regardless of content, that are produced with DOE funds and distributed to an audience outside the Federal Government. Such documents should not be sent to AD-21. These documents must be submitted for review to the Director of Public Information (PA-1) prior to such distribution. This is accomplished by completing DOE F 1340.3, "Public Communications Publications Procurement Proposal," or DOE F 1340.3, "Request for Public Communications Publication Approval," as appropriate, and forwarding the document to PA-1 if DOE originated, or to the cognizant DOE Field Office, if contractor originated.
5. ENGINEERING MATERIALS. Engineering materials (i.e., drawings, specifications, diagrams, and parts lists) are key information-transfer documents. Copies of such materials that have a utility beyond a specific site or that have been, or will be, disseminated beyond a specific site should be provided to AD-21. The type of material and the frequency of reporting should be stipulated in DOE F 1332.1 (see Attachment II-1) or in the contract.
  - a. Office of Scientific and Technical Information Requirements. Engineering materials that are to be provided to AD-21 should be assembled into packages. The packages should include a title and abstract plus any other information necessary to catalog and announce the material. If the contractor has facilities for producing aperture cards, two sets of the cards should be sent. If paper copy of the drawings is sent, the contractor needs to provide only one set. The packages will be processed in accordance with required restrictions, and priced and announced in appropriate DOE data bases, abstract journals, and other publications and made available in aperture card form.
  - b. Aperture Card Content and Quality. Content and quality of the film in the aperture card is the responsibility of the performing organizations and should meet military specifications ("Aperture Cards," MIL-C-9877B and/or "Copy Cards," MIL-C-9949). Report numbers for the packages will be assigned by AD-21.
6. TECHNICAL CONFERENCE REPORTING. Scientific or technical conferences, domestic or foreign, involving participation by DOE personnel, contractors or financial assistance recipients or for which DOE financial support is requested, are to be reported to AD-21 at the earliest possible time. Those reporting such conferences should complete the form entitled, "Information to be Announced in Energy Conferences and Symposia," (Attachment IV-2) which is included in the publication

"Energy Conferences and Symposia." Additional forms are available from the Information Exchange and Standardization Division, AD-21. Copies of conference proceedings of DOE-sponsored conferences or meetings or copies of papers presented by DOE or DOE contractor personnel should be provided to AD-21. To ensure timeliness of DOE data bases and publications, preprints of conference papers should be provided to AD-21 whenever possible.

7. "WORK FOR OTHERS" PERFORMED AT DEPARTMENT OF ENERGY SITES.

- a. Unless otherwise specified in the agreement under which non-DOE work is performed (see DOE 4300.2B), the technical information generated under such agreements should also be transmitted to AD-21 using DOE F 1332.15 (Attachment IV-1).
- b. To ensure adequate coordination of DOE activities, unless otherwise specified in the agreement under which the non-DOE work is funded, Research-in-Progress information shall be submitted to AD-21 in accordance with provisions contained in Chapter II.
- c. To ensure proper handling of this information, performing organizations shall conduct classification, patent, and sensitivity reviews in accordance with funding agency and DOE guidelines, and other statutes, laws, regulations, Executive orders and international agreements, as appropriate, prior to submitting the information to AD-21.

8. GENERATED INFORMATION UNDER COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS (CRADA). The Government has unlimited rights in all generated information except as specified in the CRADA. Upon request of the contracting officer, reports and abstracts (initial abstract and final report, as a minimum) produced under the CRADA shall be transmitted to AD-21 using DOE F 1332.15 (Attachment IV-1). Software produced under a CRADA should be submitted to ESTSC in accordance with DOE 1360.4B. Unless marked as "Protected CRADA Information" (see paragraph 9a below) or with any other controlled access limitation as identified in chapter VI, submitted reports and abstracts will be announced and distributed to the public.

9. PROTECTABLE INFORMATION. There are several categories of protectable information including proprietary, small business innovative research, CRADA, and other information that AD-21 statutorily withholds from public disclosure for a specified time. Only CRADA and other protectable information will be addressed, in a general way, in this section. These and the remaining categories are specifically addressed in the section on Controlled Access Scientific and Technical Information Products in Chapter VI.

- a. Protected CRADA Information. To ensure proper handling of Protected CRADA Information, the participants and/or the contractor should identify any reports containing information protectable under the terms of the CRADA. Reports and software containing Protected CRADA Information should be appropriately marked with a

restrictive legend (see page VI-6, paragraph 2a(7), for legend) identifying the agreed to period of withholding from public disclosure as authorized by P.L. 101-189, not to exceed 5 years, and submitted to AD-21. During the withholding period, such information will be available from AD-21 for DOE use, only, as expressly provided in the CRADA or mutually agreed by the parties in advance.

- b. Other Protectable Information. The Energy Policy Act of 1992 (P.L. 102-486) has expanded the Secretary of Energy's authority to protect information produced under research development, demonstration, and commercial application activities in accordance with section 12(c)(7) of the Stevenson-Wydler Act of 1980. Once DOE guidelines have been issued, it is anticipated that information produced within the scope of the Act will receive the same protection from public disclosure as "Proprietary" or "Protected CRADA Information." AD-21 will make such "Protected Information" available for authorized DOE use, only, as expressly provided in those agreements.
10. REVIEW OF DRAFT REPORTS. Contracts may specify that draft copies of scientific, technical, and engineering reports be submitted to the cognizant program manager for review and approval. The number of copies to be submitted will be specified in the contract. Each draft copy must be clearly labeled "Draft" on the cover; the label should be affixed in such a manner that it can be removed if the report is accepted as is. The cognizant program manager should review the report as quickly as possible to ensure timely dissemination. When required in the contract, a designated DOE patent counsel must review and clear all S&T reports before they are released for reproduction and distribution. Appropriate classification and sensitive information reviews shall also be obtained.
11. CONTENT OF REPORTS. See Attachment IV-3.
12. REPORT FORMAT. See Attachment IV-4.
13. PATENT REVIEW. To prevent disclosure of information that would adversely affect the patent interests of the Department or the performing organization, the performing organization must obtain patent clearance by the responsible DOE patent counsel before releasing any information product to the public. The performing organization must use DOE F 1332.15 (Attachment IV-1) when transmitting reports to AD-21. The responsible DOE patent counsel, contractor, or the DOE contract administrator will notify AD-21 of patent clearance.
14. NEW TECHNOLOGY ASSESSMENT. As required by P.L. 96-480, as amended by P.L. 101-189, the Office of Research and Technology Applications (ORTA) in DOE research and development laboratories shall prepare, on a timely basis, application assessments for selected research and development projects that may have potential commercial applications. The assessment is to be submitted to AD-21 (only after patent and other reviews). AD-21 will maintain the assessments, as the new technology from DOE data base, for access by DOE, its contractors and other Government agencies. Annual updating of assessment information, especially technology and software licensing opportunities, is recommended.

15. CLASSIFICATION AND CONTROLLED ACCESS INFORMATION REVIEWS. To prevent the release of information that would adversely affect the national security, organizational units generating scientific and technical reports in any classified, potentially classified, or controlled access areas shall provide the necessary mechanisms to effect appropriate classification (or sensitivity) review and release.
16. COPYRIGHTING OF DEPARTMENT OF ENERGY SCIENTIFIC AND TECHNICAL INFORMATION. The Assistant General Counsel for Intellectual Property, as represented by the cognizant patent office, is responsible for all copyright matters. Specific guidelines are outlined for M&O contracts in the applicable contract clauses. For those contracts which include a technology transfer clause implementing P.L. 101-189, refer to the contract clause "Rights in Data-Technology Transfer Activities." For M&O contracts which include this clause, specific approval is required for a contractor to assert copyright in all technical data and computer software regardless of which DOE program office provides funding. Because AD-21 is responsible for the processing, management, and dissemination of DOE's scientific and technical information, the contractor shall furnish to AD-21 a copy of data for which permission was granted to assert copyright and an abstract of the data suitable for dissemination purposes. Refer to Acquisition Letter 88-1, "Rights in Technical Data-Facilities"; or Acquisition Letter 91-7, "Patents, Data, and Copyrights," as appropriate, for specific terms and conditions.
17. COMPUTER MEDIA. Scientific and technical information contained on computer media (e.g., magnetic tapes, CD-ROM, floppy disks, etc.) are subject to the requirements outlined in DOE 1360.4B.



**RECOMMENDATIONS FOR ANNOUNCEMENT AND DISTRIBUTION OF  
DEPARTMENT OF ENERGY (DOE) SCIENTIFIC AND  
TECHNICAL INFORMATION (STI)**

DOE F 1332.15  
(03-93)  
Combines previous  
version of DOE  
F 1332.15 and 16.  
All other editions are  
obsolete.

**U. S. DEPARTMENT OF ENERGY  
RECOMMENDATIONS FOR THE ANNOUNCEMENT AND DISTRIBUTION  
OF DEPARTMENT OF ENERGY (DOE) SCIENTIFIC AND TECHNICAL INFORMATION (STI)**  
(See instructions on reverse side. Use plain bond paper if additional space is needed for explanations.)

OMB Control No.  
1810-1400  
OMB Burden  
Disclosure  
Statement on  
reverse side

**PART I (DOE, DOE Contractors, Grantees, and Awardees complete)**

<b>A. Product/Report Data</b>	
1. (Award) Contract No. AC01-92CE-13579	
2. Title Improved Sterling Engine Design, Annual Report for 1992	
3. Product/Report Description	
<input checked="" type="checkbox"/> a. Report (Complete all that apply)	
(1) <input type="checkbox"/> Print <input checked="" type="checkbox"/> Nonprint (specify)	
(2) <input type="checkbox"/> Quarterly <input type="checkbox"/> Semiannual <input checked="" type="checkbox"/> Annual <input type="checkbox"/> Final	
<input type="checkbox"/> Topical <input type="checkbox"/> Phase I <input type="checkbox"/> Phase II	
<input type="checkbox"/> Other (specify)	
Dates covered 1-2-92 thru 12-31-92	
<input type="checkbox"/> b. Conference/Meeting/Presentation (Complete all that apply)	
(1) <input type="checkbox"/> Print <input type="checkbox"/> Nonprint (specify)	
<input type="checkbox"/> Published proceedings	
<input type="checkbox"/> Other (specify)	
(2) Conference Title (no abbreviations)	
Location (city/state/country)	
Date(s) (m/d/y) / / thru (m/d/y) / /	
Sponsor	
<b>B. Patent Information</b>	
Yes No	
<input type="checkbox"/> <input checked="" type="checkbox"/> Is any new equipment, process, or material disclosed?	
If yes, identify page numbers	
<input type="checkbox"/> <input checked="" type="checkbox"/> Has an invention disclosure been submitted?	
If yes, identify the disclosure number and to whom it was submitted. Disclosure number	
Submitted to	
<input type="checkbox"/> <input checked="" type="checkbox"/> Are there patent-related objections to the release of this STI product? If so, state the objections.	
<b>C. Contact</b> (Person knowledgeable of content)	
Name James W. Wilson	
Phone 615-938-2720	
Position Project Manager	
Organization NREL	

**PART II (DOE/DOE Contractors complete/or as instructed by DOE contracting officer)**

<b>A. DOE Identifiers</b>	
1. Product/Report Nos. DOE/CE/13579--1	
2. Funding Office(s) (NOTE: Essential data) CE	
<b>B. Copies for Transmittal to AD-21 (OSTI)</b> (STI must be of sufficient quality for microfilming/copying.)	
<input type="checkbox"/> 1. One for classified processing	
<input type="checkbox"/> 2. (number) for standard classified distribution	
<input checked="" type="checkbox"/> 3. Two unclassified for processing	
<input type="checkbox"/> 4. (number) for program unclassified distribution	
<input type="checkbox"/> 5. UC/C Category UC-336	
<input type="checkbox"/> 6. Additional instructions/explanations	
<input type="checkbox"/> 2. Classified (Standard Announcement only)	
<input type="checkbox"/> 3. Special Handling (Legal basis must be noted below.)	
<input type="checkbox"/> a. Unclassified Controlled Nuclear Information (UCNI)	
<input type="checkbox"/> b. Export Control/TAR/EAR	
<input type="checkbox"/> c. Temporary hold pending patent review	
<input type="checkbox"/> d. Translations of copyrighted material	
<input type="checkbox"/> e. Small Business Innovation Research (SBIR)	
<input type="checkbox"/> f. Commercializable information	
<input type="checkbox"/> (1) Proprietary	
<input type="checkbox"/> (2) Protected CRADA information	
Release date / /	
<input type="checkbox"/> (3) Other (explain)	
<input type="checkbox"/> 4. Program Directed Special Handling (copy attached)	
<b>D. Releasing Official</b>	
A. Patent Clearance ("X" one)	
<input type="checkbox"/> Has been submitted for DOE patent clearance	
<input checked="" type="checkbox"/> DOE patent clearance has been granted	
B. Released by	
(Name) Hugh P. Wilson	
(Signature)	
(Phone) 615-457-3029	
(Date) 9/15/92	

(Do not identify Sigma categories for Nuclear Weapons Data reports, and do not provide additional instructions that are inconsistent with C below.)

**C. Recommendation** ("X" at least one)

☒ 1. Program/Standard Announcement/Distribution  
(Available to U.S. and foreign public)

## INSTRUCTIONS

**Purpose:** This form provides the Office of Scientific and Technical Information (OSTI), AD-21, the data elements required to accurately process and/or announce and disseminate the result of work funded by the U.S. Department of Energy (DOE) or performed in DOE facilities.

**When to use:** Submit this form with each Scientific and Technical Information (STI) product/report title. When submitting electronically, include all relevant data elements, and prior to submission contact AD-21 at 615-576-1261.

**1. DOE and DOE Contractors:** Complete the entire form and submit with the STI product to AD-21 (OSTI) for processing in accordance with the requirements of DOE 1430.1C and 1430.2B. Reporting that may be required under the terms of the contract but is not appropriate for transmittal to AD-21 includes such things as contract proposals, funding status, routine construction or inventory reports, etc. (Call 615-576-1261 for further clarification.) Submit to:

U.S. Department of Energy  
Office of Scientific and Technical Information (AD-21)  
175 Oak Ridge Turnpike (for shipments)  
P.O. Box 62 (for mail)  
Oak Ridge, TN 37831

**2. Financial Assistance Recipients:** Normally, only Part I is to be completed. When completed, forward the form along with the STI product/report to the DOE Contracting Officer who will complete Part II and submit the package to AD-21. However, the DOE Contracting Officer may require the awardee to complete portions of Part II and also may require that the form and product/report be forwarded directly to AD-21. Check your specific requirements.

### PART I

#### A. Product/Report Data

**1. Contract (Award) No.** Insert the DOE award or contract number(s) under which the work was funded.

**2. Title.** Provide the title exactly as on the product itself.

**3.a., 3.b. and, 3.d.** Self-explanatory.

**3.c. Software.** STI software must be submitted to the Energy Science and Technology Software Center (ESTSC). To obtain required forms and instructions, contact ESTSC at 615-576-2606.

**B. Patent Information.** Self-explanatory.

**C. Contact.** Self-explanatory.

### PART II

#### A. DOE Identifiers

**1. Product/Report Number.** This is a unique identifier. A complete and accurate number is essential. AD-21 has approved identifiers for use by most DOE offices and Management and Operating (M&O) Contractors (see examples below). For others, use DOE/ and the final seven characters from the applicable contract or grant number. A slash mark must separate the letters from the number. Complete the number with dashes followed by a sequential number for each product/report generated under the contract. For example, the first product/report number generated under contract number DE-AC03-79NE01834 should have the number DOE/NE/01834--1. The following are examples of format for multivolumes, parts, or revisions.

DOE/NE/01834--1-Vol. 1  
DOE/NE/01834--1-Pt. 1  
DOE/NE/01834--1-Rev. 1

Product/Report numbers are to be structured exactly as specified in these instructions. Any modification must be approved by AD-21. The following are examples of approved identifiers.

Product Producer	Approved Sequential Identifier
Headquarters DOE	DOE/NE--193
DOE Field Offices	DOE/OR--759
Major Project Offices	DOE/LLW--198
M&O Contractors	ANL/TM--482

For work performed for other agencies, the funding agency may assign their product/report number. If so, provide their number.

**2. Funding Office.** This information is essential. Insert the name, symbol, or B&R code of the DOE office providing support/funding. For projects funded by more than one office, indicate all sources of DOE funding. For work for others, indicate funding agency.

#### B. Copies for Transmittal to AD-21 (OSTI)

All STI products must be in a form that can serve as the record copy and be of sufficient quality for successful reproduction (optical scanning, microfiche, and other media). For nonprint media, refer questions to AD-21 at 615-576-1268.

**1. and 3.** For printed products, one copy must be original ribbon or offset and be completely legible according to DOE 1430.2B. A high-contrast photocopy is acceptable as a second reproducible copy.

**2. and 4.** When submitting print copies for distribution by AD-21, forward the number of copies specified in DOE/OSTI--3679-Rev. 75 or DOE/OSTI--4500.

**5. UC/C Category** This code identifies the appropriate distribution of the product/report. Provide the appropriate unclassified code from DOE/OSTI--4500 or classified code from DOE/OSTI--3679-Rev.75. For copies of these documents contact AD-21 at 615-576-8401.

**6.** Provide sufficient instructions for AD-21 to accurately process, announce, or distribute the STI product. Include complete funding information when requesting services. Use this block to note when mailing labels are included.

#### C. Recommendation

DOE is obligated to make available the results from federally funded work to the widest extent possible. AD-21 makes distribution of STI products on behalf of DOE strictly in accordance with existing laws, regulations, and/or written DOE Program Office guidance. Recommendations to restrict access to STI products must have a legal basis or be accompanied by written programmatic guidance. Questions concerning current laws and guidance may be referred to AD-21 at 615-576-1268.

**1. Program/Standard Announcement/Distribution.** The unrestricted, unlimited distribution of the product includes abstracting in *Energy Research Abstracts (ERA)*, DOE distribution to appropriate addressees listed in DOE/OSTI--4500, to those Government Printing Office (GPO) Depository Libraries maintaining energy collections, and to the National Technical Information Service (NTIS) for sale to the U.S. and foreign public.

**2. Classified.** STI products will be announced by AD-21 in accordance with DOE/OSTI--3679-Rev. 75.

**3. Special Handling.** The specific legal basis for restricting access must be checked. All STI products will be announced/distributed strictly in accordance with existing laws, regulations, or official guidance.

CRADAs—STI products generated under Cooperative Research and Development Agreements (CRADAs) under the National Competitiveness and Technology Transfer Act of 1989. Please include the estimated release date for the STI product in accordance with the terms of the agreement.

**4. Program Directed.** A copy of the specific guidance (or if the guidance is lengthy, a reference will be acceptable) must be attached.

#### D. Releasing Official

The appropriate official differs based on the source of STI, the contracting instrument, and the internal organizational responsibilities. Do not forward this form to AD-21 until after appropriate review and release.

#### OMB BURDEN DISCLOSURE STATEMENT

Public reporting burden for this collection of information is estimated to average 5 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Information Resources Management, AD-244-GTN, Paperwork Reduction Project (1910-1400), U.S. Department of Energy, Washington, DC 20585; and to the Office of Management and Budget (OMB), Paperwork Reduction Project (1910-1400), Washington, DC 20503.

INFORMATION TO BE ANNOUNCED IN  
ENERGY CONFERENCES AND SYMPOSIA

INFORMATION TO BE ANNOUNCED IN ENERGY CONFERENCES  
AND SYMPOSIA

Full Title of Meeting 10th international symposium on coal ash  
use and disposal

Location Orlando, Florida Date(s) Jan 18-21, 1993

Sponsor(s) American Coal Ash Association

Contact (Name & Address) American Coal Ash Association, 1913  
I Street, NW, Suite 600, Washington, DC 20006

(Phone Number) (202) 659-2303

Abstracts due July 1, 1992

Papers due Nov 15, 1992

Submit to American Coal Ash Association

Availability of Proceedings August 1993

DOE Participation (funding, Speaker  
speakers, panelists)

Submitted by John Robbins, ACAA

Information to be announced in *Energy Conferences and Symposia* must be received by OSTI at least 6 weeks before the 1st of the month in which the meeting is to be held due to requirements of our distribution schedule. Information received late will be added to OSTI's conference database, if appropriate, but will not be included in *Energy Conferences and Symposia*.

For information about *Energy Conferences and Symposia*, please contact Judith H. Osborne. (615) 576-3293 or Fax: (615) 576-2865.

### CONTENT OF REPORTS

1. Information to Include. A report would normally include the following:
  - a. An abstract of the report (an informative abstract with a 250 word maximum). For classified documents, the classification level and category of the title and abstract should be indicated. Also, the titles and abstracts for Unclassified Controlled Nuclear Information (UCNI) documents should be marked to indicate whether the abstract does or does not contain UCNI.
  - b. A statement of the project objectives.
  - c. A concise summary of the progress achieved toward the objectives.
  - d. A full account of the results of the work and the problems encountered.
  - e. Clear identification of all facts that have an impact, positive and negative, on the expectations for fully achieving program and/or project objectives on schedule, using the funds available.
  - f. Sufficient detail so that the work can be replicated by a knowledgeable person.
2. Information to Exclude. Scientific and technical reports shall not include:
  - a. Administrative, managerial, or fiscal information unsuitable for wide dissemination.
  - b. Proposals for further support. (Such proposals should be submitted separately to appropriate program officials.)
  - c. Complete codes for lengthy computer software. (These are more properly disseminated in computer readable form, see DOE 1360.4B.)
  - d. Reference(s) to classified (national security information, restricted data, formerly restricted data) reports in unclassified, unlimited, scientific and technical reports.

REPORT FORMAT

1. FRONT COVER OR TITLE PAGE. Either a self-cover (the same paper as the text) or a separate cover (of paper different from the text) is required. When self-covers are used, no title page is needed, but when separate covers are used, there should also be a title page. (Attachment IV-5, "Sample Cover," and Attachment IV-6, "Title Page or Self-Cover and Elements.") A self-cover and/or separate cover and title page shall include all the following elements: report number; distribution category; title; subtitle (if any); type of report and period covered; name(s) of author(s); date of report (day, month, and year); name(s) of funding/sponsoring agency or agencies (specify if work was performed as reimbursable work, Work For Others, jointly funded, etc.); contract number; work authorization number (M&O contractors); name, city, State, and ZIP code of contractor. Full agency identification must be included (except for reports sponsored by Defense Programs) as follows:

Example:      Prepared for  
                         U.S. Department of Energy  
                         Assistant Secretary \_\_\_\_\_  
                         Office of \_\_\_\_\_.

2. REPORT DOCUMENTATION PAGE (RDP). This is the first page of the technical report. The RDP describes the bibliographic portion of the document and contains an abstract and optional author selected keywords and are to be supplied at the author's discretion. This information is used in cataloging and announcing reports. Order copies of RDP Standard Form 298 (Rev.2-89) (Attachment IV-7) from:

GSA Furniture Commodities Center  
1941 Jefferson Davis Highway  
Crystal Mall, Building 4, Room 406  
Arlington, VA 22202

3. SPINE OR BACKSTRIP. When feasible, a report of 120 pages or more should have an imprinted spine. The spine copy should include only the report number, report title, and the words "U.S. Department of Energy" or name of contractor producing the report. Spine copy should not exceed 254 mm (10 inches) in length; the title may need to be condensed to fit on the spine. Width of the spine may be 64 mm (1/4 inch) for reports with 120 to 200 pages. Reports of more than 200 pages allow a wider spine and may use a two-line title.
4. USE OF THE DEPARTMENT SEAL.
  - a. Use of the Department of Energy seal, as a replica or reproduction on publications, is limited to the following:
    - (1) Official publications that represent the achievements or missions of DOE and are issued by and attributed to DOE.

- (2) Department publications or publications by others where the seals of several sponsoring or participating organizations are used as identification, such as multiagency/professional-society sponsored symposium proceedings.
- b. The Department of Energy seal, or its replica or reproduction, is not to be used on DOE contractor reports or on the publications of financial assistance recipients.
- c. Appropriate use of the seal on scientific and technical publications will be determined by the cognizant DOE organization in accordance with the guidelines contained in DOE 1000.2B.
5. SUPERSEDED INFORMATION. If a document supersedes a previously-issued report, a statement to that effect shall appear on the title page. The statement must identify the number of the superseded report, e.g., "This report supersedes report number DOE/FE--112."
6. REPORT NUMBERS. Every report should be assigned a standard report number composed of an approved report series (i.e., report code or report prefix), a group separator, and a report sequence number (i.e., report suffix). The report series should be approved by the Classification and Control Division, AD-21, before it is used. The report number should be included on the report. If two or more contractor sites are involved in preparation of the report, the number(s) assigned by each site (if known) should be included on the report. Following are procedures for providing a report number.
  - a. Technical Reports. A standard report number system that is based on American National Standards Institute ANSI/NISO Z39.23-1990, "Standard Technical Report Number (STRN) - Format and Creation," has been established for use in numbering DOE reports. This system is recognized by the Department of Commerce, National Technical Information Service, for cataloging DOE reports.
    - (1) DOE Program Office Reports. DOE organizations number their information products as follows:
      - (a) Use "DOE/" at the beginning of the report number.
      - (b) Add the two-letter code used to identify the Assistant Secretary under whose authority the program office operates (e.g., NE for the Assistant Secretary for Nuclear Energy).
      - (c) Complete the number with a double hyphen (--) or a single en dash and a report sequence number. Master lists of these report sequence numbers are maintained by the Chief of Printing Operations (AD-631).

Examples: DOE/NE--193  
DOE/FE--71  
DOE/CE--81

(2) DOE Field Element Reports. DOE field elements number their information products as follows:

- (a) Use "DOE/" at the beginning of the report number.
- (b) Add the two letters that identify the DOE field element responsible for the report (e.g., OR for Oak Ridge; SF for San Francisco; BP for Bonneville Power).
- (c) Complete the number with a double hyphen (--) or a single en dash and a report sequence number assigned by the TIO at the field element.

Examples: DOE/OR--756  
DOE/SF--1937  
DOE/BP--57

(3) Major Project Office Reports. DOE major project offices number their information products as follows:

- (a) Use "DOE/" at the beginning of the report number.
- (b) Add the two- or three-character identifier that is unique to the major project office (e.g., LLW for low level waste). These identifiers will be assigned upon request by the Classification and Control Division, AD-21.
- (c) Complete the number with a double hyphen (--) or a single en dash and a report sequence number that is maintained at the project office.

Example: DOE/LLW--176

(4) Contractor Reports. Major DOE laboratories and contractors that have been assigned codes approved by AD-21 shall use these approved codes. For contractors that do not have approved codes, contracting officers must provide instructions ensuring that contractors number information products as follows:

- (a) Use "DOE/" at the beginning of the report number.
- (b) Add the final seven characters (two letters and five digits) from the applicable contract or grant number and separate the letters from the digits with a virgule (/). The two alphabetic characters and the succeeding five-digit number must be extracted from the contract number in the fashion shown in the examples under subparagraph (c) below.

- (c) Complete the number with a double hyphen (--) or a single en dash followed by a sequential number for each report generated under the contract (do not use leading zeros). For new contracts, begin the sequential number with the single digit "1." For existing contracts, continue the sequence already established for the life of the contract. (Note that contract renewals or extensions do not change the two alphabetic characters or the five-digit number.)

Examples: Report numbers generated from the contract number DE-AC03-92NE01834 would be DOE/NE/01834--1, DOE/NE/01834--2, DOE/NE/01834--3, and so on.

- (d) Contract modification numbers (normally shown as .M001, .M002, and so forth), if any, that follow the basic five-digit number are NOT used in the report number.
- (e) Reports that are issued in more than one binding or are reissued as revisions or later editions are identified by adding the following suffixes to the basic number: Rev. (Revision); Vol. (Volume); Pt. (Part); Add. (Addendum); Ed. (Edition); Ex. Summ. (Executive Summary); and Suppl. (Supplement). Abbreviations for other terms should be requested from the Information Control and Accountability Branch, AD-21.

Examples: DOE/NE/01834--1-Rev.1  
DOE/NE/01834--1-Rev.2  
DOE/NE/01834--1-Pt.1  
DOE/NE/01834--1-Pt.2  
DOE/NE/01834--1-Suppl.1

- (f) Any modification in the report series, if essential, must be approved by the Classification and Control Division, AD-21. In addition, AD-21 should be notified of any modification to an already established report number.

b. Special Report Series.

- (1) Conference Proceedings. A special report series has been established for conference proceedings. Numbers in this series are assigned by AD-21 to all unclassified proceedings. DOE organizations and contractors, including those contractors who have their own unique report codes, should request appropriate numbers from the Information Exchange and Standardization Division, AD-21, before issuing conference proceedings. The following information should be



provided: the name of the conference; sponsor(s); the beginning and ending date(s) that the conference was or is to be held; and location (city, state, country).

If complete proceedings are issued in more than one binding or volume, the base number is modified as follows to reflect the number of volumes or parts:

Examples:   CONF-920620--Vol.1  
                  CONF-920620--Vol.2

- (2) Translations. Most organizations have an approved report series which is used for translations. If such a report series is not available, contact the Classification and Control Division, AD-21.

7. TITLE AND SUBTITLE. The following guidelines apply to the title and subtitle:

- a. Use a brief title that clearly describes the subject matter covered in the report. The title should be typed in upper case. The subtitle should be typed with the first letter of the first word and the first letter of all the proper nouns in upper case. Acronyms should be typed in upper case.
- b. When a report has more than one volume, repeat the primary title on each volume and use the subtitle to identify the specific subject of each volume.
- c. Show the type of report, if other than a topical report (e.g., annual report, progress report, final report, thesis) and the period covered, if appropriate, as part of the title or subtitle.
- d. Use a non-UCNI title and subtitle for a UCNI report when possible. Indicate whether the title does or does not contain UCNI.
- e. Use an unclassified title and subtitle for a classified report if the subject matter can be indicated clearly. The classification level and category, including "unclassified," must be indicated on all titles to classified documents in accordance with DOE 5635.1A.

8. AUTHOR NAME. Authors' names shall be shown on self-covers and title pages unless impractical (e.g., annual reports that have many contributors). Authors' names shall be shown as follows: first name (or initial), middle name (or initial), and last name. In addition, list the affiliation of an author if that affiliation is with an organization other than the performing organization. Editors and compilers shall be identified as such preceding their names on the title page. In order that all contributors to a composite report receive reporting credit, each contractor must be identified by name and contract number on the cover or title page of the report.

9. PERFORMING ORGANIZATION NAME AND ADDRESS. The title page shall include the name and address (including ZIP code) to which further inquiries concerning the work reported should be directed. Show only the name, city, and State on the cover with no more than two levels of organizational hierarchy. The performing organization's name should not be more prominent than the sponsor's name or in a typeface larger than that used for the sponsor's name.
10. REPORT DATE(S). Show the basis for dating (e.g., date manuscript completed, date submitted to DOE for review, date published, date distributed) along with the date on the cover and title page; if included on the title page, this information can be omitted from the front cover. (If shown, the period covered by the work reported should be part of the title or subtitle, not the report date.) Reporting instructions conveyed to performing organizations, either by their contract administrators or by Headquarters Element, may specify a basis for dating. If no instructions were given, performing organizations are encouraged to use the publication date. More than one date, with the basis for each, can be shown, if desirable. Enter date(s) as follows: month, day, and year.

Examples: January 23, 1992

May 4, 1992  
Date Compiled

October 6, 1992  
Date Published

11. DISTRIBUTION CATEGORIES.
- a. The appropriate distribution category should be indicated on the report title page or self-cover of each report. The appropriate distribution category for unclassified documents may be found in the publication, DOE/OSTI--4500-Rev.75, "Program Distribution for Unclassified Scientific and Technical Reports," and for classified documents, in the publication, DOE/OSTI--3679-Rev.75 "Standard Distribution for Classified Scientific and Technical Reports." AD-21 maintains a distribution program in consultation with DOE program offices and publishes updated distribution categories in the publications noted above. Program offices are responsible for annual updating of designated categories.
- b. Any distribution of classified reports that is made by the performing organization must be indicated on a distribution page printed in the back of the report.
12. LEGAL DISCLAIMERS. A disclaimer may or may not be appropriate for DOE-generated reports. It is the responsibility of each DOE site to determine the appropriate notice for the publications it generates. Such decisions should be coordinated with the appropriate legal counsel. The following disclaimer must appear on the inside front cover of each report prepared under DOE sponsorship:

DISCLAIMER

"This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof."

13. STANDARD DISCLAIMER ON ENVIRONMENT, RESTORATION, WASTE MANAGEMENT, AND SAFETY AND HEALTH DOCUMENTS. The use of the standard disclaimer would be inappropriate for environmental technical reports and documents submitted to State and Federal agencies in compliance with regulations, consent Orders, compliance agreements, permit applications, etc.

14. AVAILABILITY AND NUMBER OF PAGES.

- a. Scientific and technical reports "INTENDED FOR PUBLIC RELEASE" should include the following on the inside front cover:

"This report has been reproduced from the best available copy. Available in paper copy and microfiche.

Number of pages in this report:

DOE and DOE contractors can obtain copies of this report from: Office of Scientific and Technical Information, P.O. Box 62, Oak Ridge, TN 37831. (615) 576-8401.

This report is publicly available from the Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. (703) 487-4650."

- b. Scientific and technical reports NOT INTENDED FOR PUBLIC RELEASE should include the following on the inside cover:

"This report has been reproduced from the best available copy. For availability contact: Office of Scientific and Technical Information, P.O. Box 62, Oak Ridge, TN 37831. (615) 576-8401."

- c. The price of each report is determined by the number of pages in the report. The most current prices for DOE customers are printed in the back of all DOE current awareness and announcement publications. NTIS prices are published annually and are available from NTIS.

- d. The number of pages to be listed in the availability statement are the total number of pages in the document.
15. ABSTRACTS. An abstract of not more than 250 words conforming to ANSI Z39.14, should precede the main body of each technical report. The abstract should be informative, that is, provide a brief, clear summary of the purpose, methods, results, and conclusions of the report, unless the nature of the report precludes such structure. In the case of comprehensive progress reports, preparers may wish to write a summary abstract and one abstract for each major division of the report. For classified documents, the classification level and category of the abstract should be indicated. Also, the abstracts for UCNI documents should be marked to indicate whether the abstract does or does not contain UCNI.
16. PAGINATION AND TABLE OF CONTENTS. The pages of each report should be numbered in sequence so that the page number on the last page reflects the number of pages in the report. It is permissible, however, for a small number of pages of front matter to be numbered with Roman numerals. When appropriate, each report should contain a table of contents to facilitate usage. Pagination for classified reports must be done in accordance with DOE 5635.1A. Blank pages should be numbered only for classified reports.

SAMPLE COVER

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DOE/ET/34202-73      Report  
number

ADVANCED GAS COOLED NUCLEAR REACTOR  
MATERIALS EVALUATION AND DEVELOPMENT  
PROGRAM

← Title

Progress Report for the Period April 1-June 30, 1992

← Type of report  
and period covered

By  
John Smith

← Author

October 1, 1992

← Date of report

Work Performed Under Contract No. AC02-76ET34202

← Contract number

General Electric Company  
Schenectady, New York

← Performing  
organization

TITLE PAGE OR SELF-COVER AND ELEMENTS

DOE/ET/34202-73 Distribution Category UC-S22	Report number and distribution category number
ADVANCED GAS COOLED NUCLEAR REACTOR MATERIALS EVALUATION AND DEVELOPMENT PROGRAM	Title
Progress Report for Period April 1-June 30, 1992	Type of report and period covered
By John Smith	Author(s)
October 1, 1992	Date of report
Work Performed Under Contract No. AC02-76ET34202	Contract number
B&R Code AG-25-15-00-0	Budget and reporting code, if known
Prepared for U.S. Department of Energy Assistant Secretary for Nuclear Energy	Assistant Secretary
Prepared by General Electric Company Advanced Energy Programs Department Schenectady, New York 12345	Performing organization

REPORT DOCUMENTATION PAGE

REPORT DOCUMENTATION PAGE			
<small>1. This report is the property of the U.S. Government and is loaned to your agency; it and its contents are not to be distributed outside your agency. 2. This report is to be maintained in the collection of information estimated to average 1 hour per response, including the time for reviewing the collection of information, and comments regarding its burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, U.S. General Accounting Office, Washington, D.C. 20540-6002, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, D.C. 20503.</small>			
1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE March 11, 1993	3. REPORT TYPE AND DATES COVERED Quarterly, Oct. 1, 1992 - Dec. 31, 1992	
4. TITLE AND SUBTITLE Two-stage, close coupled catalytic liquefaction of coal. Ninth quarterly report, October 1, 1992 - December 31, 1992		5. FUNDING NUMBERS AA 25 05 10	
6. AUTHOR(S) Comolli, A. G.; Johanson, E.S.; Panvelker, S.V.; Popper, G.A.			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Hydrocarbons Research, Inc. Overlook Center, Suite 400 Princeton, NJ 08540		8. PERFORMING ORGANIZATION REPORT NUMBER DOE/PC/88818-9	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) DOE Pittsburgh Energy Technology Center P.O. Box 10940 Pittsburgh, PA 15236-0940		10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES Work performed under DOE Contract Number FG22-90PC90290			
12a. DISTRIBUTION/AVAILABILITY STATEMENT DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED		12b. DISTRIBUTION CODE UC-108	
13. ABSTRACT (Maximum 200 words)  This quarterly report covers activities of the Two-Stage, Close-Coupled Catalytic Liquefaction of Coal program during the period October 1--December 31, 1990, at Hydrocarbon Research, Inc., in Lawrenceville and Princeton, New Jersey. This DOE contract period is from October 1, 1988 to September 30, 1991. The overall purpose of the program is to achieve higher yields of better quality transportation and turbine fuels and to lower the capital and production costs in order to make the products from direct coal liquefaction competitive with other fossil fuel products. The quarterly report covers work on microautoclave testing, process modelling, bench-scale Illinois No. 6 and New Mexico coals experimentation, technology assessment and scheduling. 7 figs., 25 tabs.			
14. SUBJECT TERMS  coal liquefaction, transportation fuels, turbine fuels, microautoclave, fuel performance testing, technology assessment		15. NUMBER OF PAGES	
		16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unlimited	18. SECURITY CLASSIFICATION OF THIS PAGE Unlimited	19. SECURITY CLASSIFICATION OF ABSTRACT Unlimited	20. LIMITATION OF ABSTRACT None

**GENERAL INSTRUCTIONS FOR COMPLETING SF 298**

The Report Documentation Page (RDP) is used in announcing and cataloging reports. It is important that this information be consistent with the rest of the report, particularly the cover and title page. Instructions for filling in each block of the form follow. It is important to *stay within the lines* to meet optical scanning requirements.

**Block 1. Agency Use Only (Leave blank).**

**Block 2. Report Date.** Full publication date including day, month, and year, if available (e.g. 1 Jan 88). Must cite at least the year.

**Block 3. Type of Report and Dates Covered.** State whether report is interim, final, etc. If applicable, enter inclusive report dates (e.g. 10 Jun 87 - 30 Jun 88).

**Block 4. Title and Subtitle.** A title is taken from the part of the report that provides the most meaningful and complete information. When a report is prepared in more than one volume, repeat the primary title, add volume number, and include subtitle for the specific volume. On classified documents enter the title classification in parentheses.

**Block 5. Funding Numbers.** To include contract and grant numbers; may include program element number(s), project number(s), task number(s), and work unit number(s). Use the following labels:

C - Contract	PR - Project
G - Grant	TA - Task
PE - Program Element	WU - Work Unit Accession No.

**Block 6. Author(s).** Name(s) of person(s) responsible for writing the report, performing the research, or credited with the content of the report. If editor or compiler, this should follow the name(s).

**Block 7. Performing Organization Name(s) and Address(es).** Self-explanatory.

**Block 8. Performing Organization Report Number.** Enter the unique alphanumeric report number(s) assigned by the organization performing the report.

**Block 9. Sponsoring/Monitoring Agency Name(s) and Address(es).** Self-explanatory.

**Block 10. Sponsoring/Monitoring Agency Report Number.** (If known)

**Block 11. Supplementary Notes.** Enter information not included elsewhere such as: Prepared in cooperation with...; Trans. of...; To be published in... When a report is revised, include a statement whether the new report supersedes or supplements the older report.

**Block 12a. Distribution/Availability Statement.** Denotes public availability or limitations. Cite any availability to the public. Enter additional limitations or special markings in all capitals (e.g. NOFORN, REL, ITAR).

**DOD** - See DoDD 5230 24, "Distribution Statements on Technical Documents."

**DOE** - See authorities.

**NASA** - See Handbook NHB 2200.2.

**NTIS** - Leave blank.

**Block 12b. Distribution Code.**

**DOD** - Leave blank.

**DOE** - Enter DOE distribution categories from the Standard Distribution for Unclassified Scientific and Technical Reports.

**NASA** - Leave blank.

**NTIS** - Leave blank.

**Block 13. Abstract.** Include a brief (Maximum 200 words) factual summary of the most significant information contained in the report.

**Block 14. Subject Terms.** Keywords or phrases identifying major subjects in the report.

**Block 15. Number of Pages.** Enter the total number of pages.

**Block 16. Price Code.** Enter appropriate price code (NTIS only).

**Blocks 17. - 19. Security Classifications.** Self-explanatory. Enter U.S. Security Classification in accordance with U.S. Security Regulations (i.e., UNCLASSIFIED). If form contains classified information, stamp classification on the top and bottom of the page.

**Block 20. Limitation of Abstract.** This block must be completed to assign a limitation to the abstract. Enter either UL (unlimited) or SAR (same as report). An entry in this block is necessary if the abstract is to be limited. If blank, the abstract is assumed to be unlimited.



## CHAPTER V

### SPECIFICATION FOR REPRODUCIBLE MASTER COPY OF REPORTS

#### 1. GUIDELINES FOR PREPARING THE REPRODUCIBLE MASTER COPY OF REPORTS.

- a. Departmental Elements. It is the responsibility of Departmental Elements to ensure that scientific and technical information products generated by performing organizations are of sufficient quality to meet their intended purpose. Many of the applicable guidelines concerning quality standards for scientific and technical information products are incorporated into this Order. General requirements concerning quality assurance are covered in DOE 5700.6C.
- b. Contractors. After any necessary program review has been completed, the contractor shall provide at least two copies of each project report to AD-21. (Send only one copy of classified documents.) One copy must be an original, reproducible master (camera-ready copy that can be used for photo-offset reproduction) suitable for printing, and the other must be a duplicate copy suitable for microfiche. Contractors desiring to use DOE F 1420.10 for aligning the reproducible master may request forms available through normal distribution channels. The use of DOE F 1420.10 must be coordinated with AD-631 for all Headquarters activities and AD-21 for all field activities.
- c. Copy Preparation for Printing or Microfiche. Production of good quality microfiche depends on the quality of the copy submitted to AD-21. Adherence to the following will ensure quality printed copies and microfiche copies of the document.
  - (1) Page Specifications. When DOE F 1420.10 is used, follow the instructions on its verso; otherwise, text should be prepared on good quality 216 by 279 mm (8 1/2 by 11-inch) white bond paper, single spaced, one side of the sheet only. Maximum image width is 178 mm (7 inches), and maximum image height is 178 by 254 mm (10 inches), including the page number.
  - (2) Typing. If impact printers are used, typewriter fonts or keys should be clean, and a good-quality film ribbon should be used. Type size should be no smaller than elite type that has been reduced by no more than 10 percent. Check to see that sharp, clear characters of dark, uniform density are being produced and that any corrections made are clean. Erasures are not acceptable. If it is necessary to use computer-generated pages, a carbon ribbon should be used and the material not excessively reduced. Since these reports are microfiched, print quality must be suitable to allow legible copy from fiche enlargement. If laser imaging devices are used, the image must be clear and sharp. Text

in standard elite or similar typefaces must have a resolution quality of 300 D.P.I. or more. When technical and scientific equations are included in text, a resolution quality of 1000 D.P.I. or more should be used, if available.

(3) Page Numbering.

- (a) Unclassified Reports. The title page should be numbered page "i" and be followed by other prefatory pages numbered with lower case Roman numerals (e.g., the table of contents on page ii). The main body of the report should begin with page 1, and all pages should be numbered consecutively throughout the report, including text, illustrations, pages with photographs, and fold-in pages. Blank pages are numbered only in classified reports. Pages will be printed front and back with odd numbered pages on the right and even numbered pages on the left. Do not place blank pages between chapters or sections. Each major section or part may start on a new page but not necessarily on a new odd page. Do not start renumbering with each new chapter. If possible, do not use chapter numbers as a prefix to folios (e.g., avoid I-1; use 1). Page numbers are centered at the bottom or top of each page.
- (b) Classified Reports. Pagination must be done in accordance with DOE 5635.1A.

- (4) Spacing. Single-space all text material. Leave vertical space above and below display material, e.g., headings, equations, and tabulations. Any handwritten symbols must be in black ink.
- (5) Photographs. Photographs included in the report should be supplied as continuous tone, black and white glossy prints. These require a screen in the printing process. To aid the printer in positioning such photographs, place an opaque overlay (made of a piece of black paper or rubylith) on the repro page exactly where the illustration will be positioned. The printer will place the photograph in this position. Any reduction of the photograph or crop marks must be indicated on the photograph. (Do not actually cut photographs.) Indicate the top of the photograph and write the figure number in the margin. Figure legends should be typed in the desired position on the repro page with the opaque overlay.
- (6) Line Drawings. Line drawings, such as schematics, diagrams, and graphs, must be drawn in black ink. Original illustrative material is desirable because image clarity and density may become unsuitable or distorted on copies. Drawings should be confined to unruled sheets no larger than 216 by

279 mm (8 1/2 by 11 inches). The maximum allowable image area is 178 by 254 mm (7 by 10 inches). When possible, use drawings smaller than full page size. Lettering may be added by typewriter or inserted by hand in black ink. If a good reproduction of graph paper is desired, use graph paper printed in black because other colors may not reproduce for printing. Do not use pencil shading. Do not use color coding because it may become indistinguishable during black and white printing. Various shapes and shading patterns may be used for coding to achieve the desired results.

- (7) Oversize Illustrations. When the use of oversize charts, graphs, maps, and other matter cannot be avoided, use a fold-in if the image area is no greater than 254 by 686 mm (10 inches in height and 27 inches wide). For microfiche production, however, the material will have to be micro-filmed in 216 by 279 mm (8 1/2 by 11-inch) sections. Larger pages may be reduced to a standard page size or fold-in page if the type size and symbols permit.
- (8) Organization of Report Package. Material should be double checked to ensure that each report is complete; that pages are numbered and in proper sequence; and that good reproducible covers, text pages, photographs, and line drawings are submitted. Ensure that all photographs and line drawings are integrated and numbered sequentially and that they correspond to the figure legends as referenced. Identify tabulations with a separate, sequential numbering system (e.g., Table 1, Table 2) that distinguishes the tables from other illustrations.
- (9) Quality of Originals. The report will be microfiched and may be printed by the photo-offset printing process; therefore, it is essential that good, clean, typed copy with no erasures, original line drawings, and good continuous tone, black and white glossy prints of photographs be provided.
- (10) Company Names and Logos. Company names, logos, or similar material may not be placed on camera-copy pages of the text.
- (11) Assistance. For assistance or guidance regarding the preparation of reproducible copy for printing and/or microfiching, please contact the Director, Scientific and Technical Information Services Division, Office of Scientific and Technical Information, P.O. Box 62, Oak Ridge, TN 37831 (Telephone (615) 576-1323). Headquarters organizations desiring assistance should call Chief of Printing Operations (AD-631) 202-586-4318.

2. REPRODUCTION.

- a. When it is practical and efficient for technical reports to be reproduced by the originating installation, such reproduction should be in accordance with the Government Printing and Binding Regulations issued by the Joint Committee on Printing, DOE directives (e.g., DOE 1340.1B, DOE 1430.1C and this Order), and any predetermined distribution requirements. The originating installation may have the report duplicated or printed and then sent to AD-21 for distribution, or it can send two copies of a report to AD-21 for processing. In some cases, AD-21 will arrange for reproduction or printing at a charge to the funding program. All reports sent to AD-21, whether printed, reproduced, or repro master, must be accompanied by a completed DOE F 1332.15 and addressed as follows:
  - (1) For mail:

U.S. Department of Energy  
Office of Scientific and Technical  
Information  
P.O. Box 62  
Oak Ridge, TN 37831
  - (2) For motor freight:

U.S. Department of Energy  
Office of Scientific and Technical  
Information  
Building 1916-T-1  
175 Oak Ridge Turnpike  
Oak Ridge, TN 37830
- b. To avoid repetitive duplicating and printing efforts, performing organizations that produce copies of a report for their own use should provide sufficient copies to AD-21 to meet predetermined distribution requirements.
- c. Reproduction of classified reports must be done in accordance with DOE 5635.1A.

## CHAPTER VI

### ABSTRACTING, INDEXING, ANNOUNCING, DISTRIBUTION, AND SALE OF SCIENTIFIC AND TECHNICAL INFORMATION DOCUMENTS

#### 1. UNCLASSIFIED AND UNLIMITED SCIENTIFIC AND TECHNICAL INFORMATION.

- a. Abstracting, Indexing, and Announcing. Unclassified and unrestricted information received by AD-21 that has no dissemination limitations is cited in the Energy Science and Technology Data Base (EDB). Report information is announced in the monthly DOE publication, "Energy Research Abstracts (ERA)." All such newly created DOE reports shall be assigned Distribution Statement A (Attachment VI-1). Unclassified and unlimited information is announced to the public by the Department of Commerce, National Technical Information Service (NTIS), through the NTIS data base, Government Research Abstracts and Indexes (GRA&I). Both EDB and NTIS data bases are available through commercial systems. Recent reports are available to DOE and its contractors through the AD-21 online Integrated Technical Information System (ITIS).
- b. Distribution. To ensure efficient cost-effective distribution of DOE-developed scientific and technical information, distribution strategies will be developed by cognizant Departmental Elements in coordination with AD-21. These strategies describe the means through which Headquarters Elements use dissemination mechanisms to meet their official distribution requirements.
  - (1) Official Distribution. Official distribution is the total distribution of a scientific and technical document to recipients approved by the responsible program manager and coordinated with AD-21 as being within the programmatic interest of the originator. Programmatic funds will support official distribution activities; therefore, distribution should be consistent with overall programmatic objectives. Official distribution includes:
    - (a) Standard Distribution. The standard distribution system is the computer-based capability to distribute reports and other publications, and to produce mailing labels through a predetermined program distribution strategy developed in consultation with DOE program managers. Costs of standard distribution, including printing, are recovered from responsible DOE program offices. Distribution profiles for unclassified scientific and technical information are defined in DOE/OSTI--4500-R75.
    - (b) Profile Distribution. Profile distribution is the capability to identify special interest categories, as described in the Energy Science and Technology Data Base (EDB), at the request of DOE program offices and/or DOE contractor recipients. This capability can

reduce the number of documents routinely distributed through standard distribution. Costs of profile distribution, including printing, are recovered from either the responsible DOE program office or the recipient.

(c) Special Distribution. Special distribution is the capability to handle any special needs of DOE program offices.

(d) Site Distribution. When special circumstances dictate that distribution of scientific and technical information products from the originating site are necessary to serve a program's needs and are cost-effective, standard and on-demand distribution may be supplemented by site distribution. Such distribution shall be coordinated with AD-21 and be in accordance with the Government Printing and Binding Regulations issued by the Joint Committee on Printing, DOE directives, and distribution requirements as set forth in DOE/OSTI--4500-Rev.75. All types of distribution should be described in a distribution plan to be developed by the responsible DOE program organization in advance, whenever possible. Mailing lists maintained at AD-21 should be reviewed semiannually by the responsible program office.

(2) Request Services. On occasion, DOE and its contractors may need a document that was not received through systems described above. In such cases, DOE and DOE contractors and other Government agencies may purchase the desired publication(s) from AD-21. Industry and the public may purchase publications through the Department of Commerce, National Technical Information Service, which serves as the sales agent for DOE-generated information products. Microfiche or paper copy is available from both sources.

2. CONTROLLED ACCESS SCIENTIFIC AND TECHNICAL INFORMATION PRODUCTS. It is the policy of the Department (as stated in DOE 1430.3A) "to make available, freely, openly, and to the extent possible, unclassified scientific and technical information generated by, or under arrangement with, DOE. In particular cases where it is necessary to place controls on the availability of certain scientific and technical information, such controls must be in conformance with applicable statutes, laws, regulations, Executive orders, international agreements, directives, and Departmental policy." The appropriate category of controlled information and the appropriate distribution statement must be clearly indicated on the transmittal document, DOE F 1332.15, and the document copies, and will be handled by AD-21 in accordance with existing guidelines.

a. Types of Controlled Access Information.

(1) Unclassified Controlled Nuclear Information.

- (a) Section 148 of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2168), prohibits the unauthorized dissemination of unclassified information regarding atomic energy defense programs if the unauthorized dissemination of such information could reasonably be expected to result in significant adverse effect on the health and safety of the public or the common defense and security, by significantly increasing the likelihood of illegal production of nuclear weapons, or of theft, diversion, or sabotage of nuclear materials, equipment, or facilities.
- (b) Each document shall be clearly marked with Distribution Statement D (see Attachment VI-1). At least one copy of documents containing Unclassified Controlled Nuclear Information shall be provided to AD-21 with the appropriate limitation specified on the transmittal documents (e.g., DOE F 1332.15, Attachment IV-1). In addition, such documents shall be clearly marked in accordance with the procedures described in DOE 5650.3A.

(2) Export Controlled Information. Scientific and technical information products containing "technical data," as defined in and controlled by the International Traffic in Arms Regulations, the Export Administration Regulations, the Nuclear Nonproliferation Act, and the Atomic Energy Act of 1954, as amended, must be clearly identified on the document to ensure appropriate handling of such information by potential recipients. Such products, when designated as "Export Controlled Information," are given controlled distribution to prevent their unauthorized release to foreign countries, organizations, or individuals. In addition, at least one copy of such documents shall be provided to AD-21 with the appropriate distribution limitation specified on the transmittal documents (e.g., DOE F 1332.15, Attachment IV-1). In addition, such documents should be clearly marked in accordance with the following procedures.

- (a) The following statement should be clearly marked on the front cover of any scientific and technical information product containing export controlled information:

"EXPORT CONTROLLED INFORMATION"

This document contains technical data, the export of which is restricted by the Arms Export Control Act (22 U.S.C. 2751, et seq.), the Atomic Energy Act of 1954, as amended (42 U.S.C. 2077), or the Export Administration Act of 1979, as amended (50 U.S.C. 2401, et seq.). Violations of these laws may result in severe administrative, civil, or criminal penalties."

- (b) Documents containing export controlled information should be marked "EXPORT CONTROLLED INFORMATION" at the bottom of each interior page determined to include such information.
- (c) Documents containing export controlled information should be clearly marked on the cover and title page with Distribution Statement C (see Attachment VI-1).
- (3) Small Business Innovation Research (SBIR). The Small Business Innovation Development Act provides for contractor retention of rights in data generated in performance of a contract under the SBIR authority. In accordance with implementing regulations, the technical data generated under SBIR funding agreements may be protected for a period of 2 years from the completion of the project, unless written permission to disclose such data earlier is obtained from the contractor or grantee. At least one copy of SBIR documents should be provided to AD-21 with the appropriate limitation specified on the transmittal documents (e.g., DOE F 1332.15) (Attachment IV-1). In addition, documents should be clearly marked as containing SBIR proprietary information and carry Distribution Statement F (see Attachment VI-1).
- (4) Naval Nuclear Propulsion Information. Naval Nuclear Propulsion Information is controlled in accordance with P.L. 98-525 (42 U.S.C. 7158). Naval Nuclear Propulsion Information, unclassified or classified, shall not be released publicly or for dissemination to foreign governments, foreign nationals, or any individual or activity not engaged in work for the naval reactors program without the specific approval of the Deputy Assistant Secretary for Naval Reactors (NE-60).
- (5) Patent Sensitivity. Federal agencies are authorized to withhold from disclosure to the public information disclosing any invention in which the Federal Government may own a right, title, or interest, for a reasonable length of time in order for a patent application to be filed. At least one copy of patent sensitive documents shall be provided to AD-21 with the appropriate limitation specified



on the transmittal documents (e.g., DOE F 1332.15) (Attachment IV-1). The following statement in addition to distribution Statement B (see Attachment VI-1) should be clearly marked on the front cover of any scientific and technical information product containing potentially patentable information:

"PATENT CAUTION

This document may contain patentable subject matter protected from unauthorized disclosure under U.S. Patent Law (35 U.S.C. 205). No further dissemination without the approval of the Assistant General Counsel for Intellectual Property, U.S. Department of Energy."

For all scientific and technical information products provided to AD-21 with a patent caution, AD-21 should be notified as soon as a patent has been granted or denied. A new DOE F 1332.15 should be submitted if the patent caution may be removed, and the document may be re-announced as appropriate.

(6) Proprietary Data.

- (a) Proprietary data is defined as technical data which embodies trade secrets developed at private expense. Proprietary data which arise from DOE financial assistance agreements (cooperative agreements or grants) is controlled in accordance with 48 CFR 952.227 and 5 U.S.C. 552. Proprietary data which arise from DOE contracts involving "limited rights data" or "restricted computer software" are defined and controlled in accordance with FAR 52.227-14 and 5 U.S.C. 552.
- (b) Documents containing proprietary data arising from DOE contracts or financial assistance agreements shall be clearly marked on the cover and title page with the following legend and Distribution Statement B (see Attachment VI-1) (Note: Unless the proprietary data is essential to the understanding of technical data funded by DOE, it should not be included in reports submitted to AD-21):

"PROPRIETARY DATA

This technical data contains proprietary data furnished under contract no. \_\_\_\_\_ with the U.S. Department of Energy. Disclosure outside the Government is not authorized without prior approval of the originator, or in accordance with provisions of 48 CFR 952.227 and 5 U.S.C. 552."

(7) Protected CRADA Information.

- (a) Protected CRADA Information is information produced in the performance of a CRADA which is marked as being Protected CRADA Information by a party to the agreement and which would have been proprietary information had it been obtained from a non-Federal entity. To prevent disclosure of such information that is protectable under the terms of the CRADA, the parties should clearly mark any reports with a restrictive legend identifying the agreed to period of withholding from public disclosure.
- (b) STI products containing such information are to be submitted to AD-21 using DOE F 1332.15 with the below specified limitation clearly marked on the cover and title page of all media. The marking shall identify the CRADA under which the information was produced, the date the information was produced, and should indicate that such information shall not be made publicly available for a period of \_\_\_\_\_ [not to exceed 5 years] from the date Protected CRADA Information is produced. AD-21 will maintain the information for authorized DOE use in coordination with all appropriate parties. At the end of the withholding period, AD-21 will announce such information as authorized by P.L. 101-189. If it is essential for proprietary data or Protected CRADA Information to be included in a report, such data or information should not be included per se in the abstract, which should be suitable for publication.

"PROTECTED CRADA INFORMATION

This document contains Protected CRADA Information which was produced on \_\_\_\_\_ (date) under CRADA No. \_\_\_\_\_ and is not to be further disclosed for a period of \_\_\_\_\_ from the date it was produced except as expressly provided for in the CRADA."

- b. Abstracting, Indexing, and Announcing. Unclassified information products on which there are distribution controls are not publicly announced; however, they are included in the controlled access file maintained by AD-21. DOE organizations and contractors desiring access to these data should contact the Director, Information Analysis and Quality Assurance Division, Office of Scientific and Technical Information, P.O. Box 62, Oak Ridge, TN 37831.
- c. Distribution. Specialized distribution strategies will be implemented by AD-21 in coordination with the cognizant Headquarters Elements for distribution of controlled access

reports. As with distribution of unlimited reports, the sponsoring Headquarters Elements must provide financial support for those activities. AD-21 will then supply such reports, through the official distribution system, to authorized recipients. Distribution strategies shall be reviewed annually to ensure that only those with a need for the information are included in the distribution lists.

- d. Request Services. Organizations wishing to purchase specific controlled access information products must submit requests directly to AD-21. AD-21 will coordinate approval from the cognizant Departmental Elements and, when approved, will supply copies.

3. APPLIED TECHNOLOGY. For purposes of this Order, scientific and technical information products containing information related to engineering, development, design, construction, operation, or other activities pertaining to technology advances in particular projects or facilities on which major funding emphasis has been placed may be designated as "Applied Technology" by the cognizant Headquarters organization. Such products, when designated as "Applied Technology," are initially given controlled distribution in order to limit the information to domestic recipients, thereby retaining the foreign trade value of the information. This information is exchanged, on a "quid pro quo" basis, with nations having formal exchange agreements with the United States. To ensure that applied technology reports are treated appropriately by all recipients, the following statement shall be clearly marked on the front cover of any scientific and technical information product containing applied technology information. The appropriate NE official is indicated in subparagraphs 1 through 4 below.

"APPLIED TECHNOLOGY

Any further distribution by any holder of this document or data therein to third parties representing foreign interests, foreign governments, foreign companies, and foreign subsidiaries or foreign divisions of U.S. companies shall be approved by the (insert appropriate NE program office officials), U.S. Department of Energy. Further, foreign party release may require DOE approval pursuant to 10 CFR 810, and/or may be subject to section 127 of the Atomic Energy Act.

- 1 For reports emanating from the Reactor Systems, Development, and Technology Program, the label will read "Associate Deputy Assistant Secretary for Reactor Systems, Development, and Technology."
- 2 For reports emanating from the Reactor Deployment Program, the label will read "Associate Deputy Assistant Secretary for Reactor Deployment."

- 3 For reports emanating from the Space and Defense Power Systems Program, the label will read "Deputy Assistant Secretary for Space and Defense Power Systems."
    - 4 For reports emanating from the Naval Nuclear Propulsion Program, the label will read "Deputy Assistant Secretary for Naval Reactors."
  - a. The transmittal documents used to transfer the scientific and technical information products (e.g., DOE F 1332.15) must identify the product as containing "Applied Technology" information. In order to ensure that dissemination of applied technology information is not unduly restricted, the cognizant Headquarters Element is responsible for advising AD-21 as to when to remove the applied technology limitations from the documents. After such notification, the reports will be announced and made publicly available.
  - b. Applied technology reports, as defined by the Assistant Secretary for Nuclear Energy, NE-1, do not include base technology information. Base technology information is defined as information reporting on a fundamental knowledge of nuclear technology, but without any information related to the engineering, design, construction, or operation of particular projects requiring major funding. Base technology information is unlimited information and is not subject to distribution controls.
  - c. DOE laboratories, contractors, and subcontractors must relay external domestic and foreign requests for applied technology reports to AD-21 for disposition and demonstrate need to know. AD-21 will obtain NE program office approval for release of applied technology reports to any requester, foreign or domestic, not on the official applied technology list for that report. Distribution will be made by AD-21 only if the request is approved by NE. No other releases of applied technology reports and information are allowable.
4. CLASSIFIED SCIENTIFIC AND TECHNICAL INFORMATION.
  - a. Classified information is defined as that information the unauthorized disclosure of which would damage the national security interests of the United States. Such information includes weapon data design, production, or utilization of nuclear weapons and their components, production of special nuclear materials, naval nuclear propulsion information, foreign intelligence information, and other information of a military or national security significance. Specific classification, security and control guidelines and requirements, pursuant to the Atomic Energy Act of 1954, as amended, which relate to the control of Restricted Data, and Executive Order 12356, which relate to the control of National Security Information, are contained in DOE 5635.1A, CONTROL OF CLASSIFIED DOCUMENTS AND INFORMATION; DOE 5650.2B, IDENTIFICATION OF CLASSIFIED INFORMATION; DOE 5610.2,

CONTROL OF WEAPON DATA; DOE 5630.8A, SAFEGUARDING OF NAVAL NUCLEAR PROPULSION INFORMATION; DOE 5670.1A, MANAGEMENT AND CONTROL OF FOREIGN INTELLIGENCE; and DOE 5639.6, CLASSIFIED COMPUTER SECURITY PROGRAM.

- b. Heads of Departmental Elements are responsible for providing adequate training of staff to ensure appropriate review of technical information from a control standpoint and for ensuring that the appropriate dissemination and technical information control instructions are included in all direct procurement documents. Such instructions shall clearly require that all applicable technical information controls, as determined by the project officer, be imposed in the procurement document and as required, on the information products themselves. AD-21 manages classified scientific and technical information in accordance with the references cited above, and as recommended on the transmittal document (DOE F 1332.15).
- (1) Distribution Limitation Statements. Classified scientific and technical documents generated within the DOE should be clearly marked on the cover and title page with an appropriate distribution limitation statement as follows: This is to ensure that the recipient will subsequently handle and disseminate the documents in accordance with DOE Orders and other security requirements.
    - (a) For SECRET/RESTRICTED DATA Sigma 1, 2, 11, 12, and 13 documents use Distribution Statement G (Attachment VI-1).
    - (b) For All Sigma 3, 4, 5, 9, and 10 RESTRICTED DATA and CONFIDENTIAL/RESTRICTED DATA Sigma 1, 2, and 11 documents and all non-Sigma RESTRICTED DATA documents use Distribution Statement H (Attachment VI-1).
    - (c) For Sigma 3, 4, 5, 9, and 10 FORMERLY RESTRICTED DATA documents and all other FORMERLY RESTRICTED DATA and NATIONAL SECURITY INFORMATION documents use Distribution Statement F (Attachment VI-1).
  - (2) Abstracting, Indexing, and Announcing. All classified documents containing scientific and technical information that are received by AD-21 are abstracted and keyword-indexed and entered into a computer-searchable data base. Remote online access to the data base is provided to authorized users following need-to-know certification and clearance verification. The data base is used to create an announcement publication, "DEFENSE INFORMATION: Weapon Data Reports." Limitations on access to and announcement of the documents imposed by the originating organization or cognizant DOE program office are honored by AD-21.

- (3) Standard Distribution. Official distribution by AD-21 of classified documents containing scientific and technical information is accomplished using the distribution strategy contained in DOE/OSTI--3679-Rev.75, "Standard Distribution for Classified Scientific and Technical Reports." When such distribution is planned, sufficient quantities of documents are to be provided to AD-21 to meet official distribution requirements.
- (4) Request Services. Requests for specific classified documents should be directed to the originating organization, the cognizant Departmental Element, or AD-21. Appropriate access authorization, demonstration of "need-to-know," and programmatic approval, when required, must accompany such requests.
- (5) Classification Change Notices. Classification change (including declassification) notices for technical documents should be sent to AD-21. In particular, notices of declassification shall be accompanied by instructions/ authority to publicly release or further control access to the document. The basis for control (statutory or otherwise) shall be identified. DOE F 1332.15 may be used for notification.

DISTRIBUTION LIMITATION STATEMENTS FOR USE ON SCIENTIFIC AND  
TECHNICAL INFORMATION DOCUMENTS

The distribution limitation statement assigned to a DOE document shall appear on each front cover and title page, and shall be displayed conspicuously so as to be readily recognized by recipients.

1. DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.
2. DISTRIBUTION STATEMENT B: Distribution authorized to U.S. Government agencies only; other requests shall be approved by the cognizant DOE Departmental Element.
3. DISTRIBUTION STATEMENT C: Distribution authorized to U.S. Government agencies and their contractors; other requests shall be approved by the cognizant DOE Departmental Element.
4. DISTRIBUTION STATEMENT D: Distribution authorized to the Department of Energy and DOE contractors only; other requests shall be approved by the cognizant DOE Departmental Element.
5. DISTRIBUTION STATEMENT E: Distribution authorized to the Department of Energy only; other requests shall be approved by the cognizant DOE Departmental Element.
6. DISTRIBUTION STATEMENT F: Further dissemination only as directed by the cognizant DOE Departmental Element; requester must possess appropriate security clearance, need-to-know, and facility approval by the DOE Office of Security Affairs for classified documents.
7. DISTRIBUTION STATEMENT G: Further dissemination only as directed by the DOE Office of Military Application; requester must possess final SECRET clearance, RD access authorization, need-to-know, and facility approval by the DOE Office of Security Affairs.
8. DISTRIBUTION STATEMENT H: Further dissemination only as directed by the cognizant DOE Departmental Element; requester must possess appropriate clearance, Restricted Data access authorization, need-to-know, and facility approval by the DOE Office of Security Affairs.

## CHAPTER VII

### EXCHANGE, DISSEMINATION, AND TRANSLATIONS OF SCIENTIFIC AND TECHNICAL INFORMATION WITH FOREIGN COUNTRIES

#### 1. FOREIGN EXCHANGE AND COOPERATION IN SCIENTIFIC AND TECHNICAL INFORMATION.

##### a. Policy.

- (1) It is the policy of DOE to optimize benefit to the U.S. in the exchange of energy information through bilateral and multilateral agreements. Energy information includes the full spectrum of written or otherwise recorded scientific and technical information including: summaries of Research-in-Progress; results of completed work (both published and unpublished); scientific and technical computer software; and numeric and factual data bases.
- (2) For AD-21 initiated bilateral and multilateral international exchange agreements negotiated on behalf of the Department, AD-21, in coordination with the Assistant Secretary for Domestic and International Energy Policy (EP-1) and the cognizant Program Secretarial Officers, negotiates and implements the formal bilateral and multilateral international energy information exchange agreements involving information made available by program offices for that purpose, and evaluates their effectiveness.
  - (a) The role of EP-1 is to ensure that all proposed agreements are in harmony with U.S. policy and with other international agreements to which DOE is part, to assist in the acquisition of foreign scientific and technological information, and to provide guidance in the exchange of information with sensitive countries.
  - (b) The Program Secretarial Officer's role in these information exchange agreements is one of establishing needs and ensuring reciprocity in the exchange of those information products of his or her office which he or she has made available to AD-21 for that purpose.
- (3) The Director, AD-21, in consultation with the Assistant Secretary, EP-1, and the relevant Program Secretarial Officer (e.g., EM-523, International Technology Exchange), develops, coordinates, and administers those agreements which are exclusively for the exchange of scientific and technical information. The Director, AD-21, reviews all other bilateral and multilateral agreements containing provisions for information exchange.



- b. Systems for Management of Information Exchange. Three separate systems are maintained for the exchange of scientific and technical information:
- (1) A broad U.S. energy information exchange in which AD-21 negotiates a program with an individual industrialized country for the exchange of energy information.
  - (2) An exchange in which information from DOE is most often identified at the contract, program, or task level by the cognizant program manager. This system has highly specific controls on the type and the quantity of energy information to be exchanged under conditions where complete identification of what is sent and what is received is maintained by AD-21 at the request of the Program Secretarial Officer.
  - (3) An exchange of information by a DOE facility or contractor with an international counterpart with minimum approval and documentation. Included in this system is the foreign dissemination authorized by the program managers through the Department's program distribution system. Copies of the information received through exchanges shall be promptly provided to AD-21 as required by DOE 5800.1A.
- c. Foreign Trip Reports. Foreign trip reports that include scientific and technical information or STI acquired during a foreign trip should be provided to AD-21. A DOE F 1332.15 should be attached to all reports submitted to AD-21.

## 2. DISSEMINATION OF SCIENTIFIC AND TECHNICAL INFORMATION TO FOREIGN COUNTRIES.

- a. Unclassified and Unlimited Information.
- (1) Published Literature and Preprints. Collegial exchange is encouraged; however, it is incumbent upon Departmental Elements and organizations exchanging information to ensure that internal guidelines are established to maximize reciprocity. Information received on a reciprocal basis from sources not routinely available through commercial sources should be provided to AD-21. When responding to foreign requests it is beneficial to include a reference to the Department of Commerce, National Technical Information Service, whose function is to sell reports and other publications of the U.S. Government and its contractors.
  - (2) Unusual Requests. Requests for information that are unusual in nature, e.g., a quantity of information encompassing collections of reports; comprehensive and detailed engineering or other design information; development information on major equipment; official correspondence from foreign governments, etc., should be referred in accordance with procedures established by the cognizant Departmental

Element to either the Departmental Element or to the Classification and Control Division, AD-21, for coordination with the proper organization.

- (3) Sensitive Countries. Requests for information from sensitive countries (see DOE 1240.2B) should be referred in accordance with procedures established by the cognizant Departmental Element to either the Departmental Element or to the Classification and Control Division, AD-21, for coordination with the proper organization. EP-70 should be consulted on all cases of information dissemination to sensitive countries.
  - b. Sensitive Information. Sensitive information shall not be sent to foreign countries unless the exchange of information is an implementation of a formal Government-to-Government agreement. Formal requests for sensitive DOE-funded scientific and technical information not covered by an existing Government-to-Government agreement should be referred, in accordance with procedures established by the cognizant Departmental Element, to either the cognizant Departmental Element or to the Classification and Control Division, AD-21, for subsequent coordination with EP-1 and the cognizant program organization. In accordance with DOE 5630.8A, naval nuclear propulsion information shall not be released to a foreign national, except pursuant to an approved Government-to-Government agreement for cooperation in the field of naval nuclear propulsion, executed in accordance with the Atomic Energy Act of 1954, as amended (Chapter VI).
  - c. Computer Software. Dissemination to foreign addresses of software developed with DOE funds is made by the Energy Science and Technology Software Center (ESTSC). Additionally, dissemination may be made by DOE-sponsored Specialized Information Analysis Centers (e.g., National Nuclear Data Center at Brookhaven National Laboratory, and Radiation Shielding Information Center at Oak Ridge National Laboratory) as governed by DOE 1360.4B. AD-21 will coordinate with the Office of Export Control and International Safeguards (AN-30), EP-70, and the cognizant DOE program organizations, as appropriate. All dissemination to sensitive countries must be approved in advance by EP-70 and AN-30 through AD-21 as described in DOE 1360.4B.
3. TRANSLATIONS. Translations often are needed by DOE and contractor organizations. AD-21 should be used as a centralized translation coordination point to reduce the possibility of creating duplicate translations.
- a. Translation Support. AD-21 provides the following services:
    - (1) Procurement of translations when funding is provided by the DOE program requesting the translation.

- (2) Request permission from publisher of original document to make the translation widely available.
  - (3) Copies of unlimited translations are deposited with the National Translations Center, The Library of Congress, Washington, DC 20540. The Center will advise DOE offices and contractors of the existence of translations upon request.
- b. Determining Whether a Document Has Been Translated. Persons trying to determine if a document has been translated should consult the National Translations Center. If the translation is not found and preparing a translation would represent a significant effort, the Information Exchange and Standardization Division, AD-21, will query, upon request, other Federal agencies that serve as a central source of information on translations regarding the status of the document.
- c. Front Cover and Title Page. In addition to the information required on the covers and title pages of scientific and technical reports, translations should include the following:
- (1) Whether the translation is complete or partial.
  - (2) If the original language document belongs to a series or is a part of a larger work (include the title of the series or larger work).
  - (3) The title in the original language (transliterated if necessary).
  - (4) In the case of a translation from a translation, the title in the original language should be included (transliterated if necessary).
  - (5) Translations of articles from periodicals should include the periodical title in the source language, the volume, issue, page numbers, and year of publication of the original article.
  - (6) Translations of conference papers should include the name, date(s), and place of the conference. If the translation is from published proceedings, the citation should be given.
  - (7) Translations of books should indicate the original language, title, publisher, date, edition number, if applicable, and city of publication of the original.

- (c) American National Standards Institute (ANSI), ANSI/NISO Z39.31-1976 (R1983), "Format for Scientific and Technical Translations," is recommended as a guide.

- d. Distribution. Translations will be distributed and made available in the same manner as scientific and technical reports, except for copyrighted books and complete journal issues. Translations of copyrighted books may not be distributed beyond DOE and its contractors unless permission to make such a translation available to a broader audience has been received. When such a translation is sent to AD-21, any information concerning permission to distribute should be attached. This also applies to cover-to-cover translations of periodical issues. AD-21 will limit the distribution of translations, as appropriate.

## CHAPTER VIII

### OPEN-LITERATURE PUBLICATION

1. GENERAL. The Department of Energy supports (by DOE or contractor employees and financial assistance recipients) the preparation and publication of journal articles; professional and reference books, including textbooks, monographs, and critical reviews; symposia proceedings on topics related to DOE interests; and technology transfer publications in order to help fulfill DOE responsibilities. As part of professional development or as required by DOE F 1332.1 or the contract, investigators write articles for journals, a chapter in a book, or a complete book, or serve as editor for a journal or book.
2. JOURNAL ARTICLES.
  - a. Preprints. Preprints of journal articles should be sent to AD-21 only when they are not accepted for journal publication. If a submitted article is not accepted for publication, assign the article a DOE report number and submit the article as a technical report to AD-21.
  - b. Copyright. When submitting a copyright transfer to a publisher, writers shall adhere to the following:
    - (1) DOE Authors. In submitting a manuscript to a publisher, DOE authors acting within their official capacity shall include the following statement (the same language must be used on the copyright transfer form if the publisher sends the author a transfer form):

"The submitted manuscript has been authored by a U.S. Government employee acting within his (her) official capacity. On advice from counsel, a transfer of copyright form cannot be executed."
    - (2) Contractor or Financial Assistance Recipient Authors. Contracting officers must ensure that Departmental contractors or financial assistance recipients publishing within their contract or financial assistance instruments shall not execute a copyright transfer form for their manuscripts without prior written authorization from the contracting officer. In submitting the manuscript to the publisher, the author must include the following statement (the same language shall be used on the copyright transfer form if the publisher sends the author a transfer form):

"The submitted manuscript has been authored by a contractor (grantee) of the U.S. Government under contract (grant) No. \_\_\_\_\_. Accordingly, the U.S. Government retains a non-exclusive, royalty-free license to publish or reproduce the published form of this contribution, or allow others to do so, for U.S. Government purposes."

- c. Credit Lines. All open literature publications (except work funded by the Office of the Assistant Secretary for Defense Programs, DP-1, and the Office of Intelligence, IN-1) shall carry a credit line showing the Department, funding organization, and the contract or financial assistance award number. Contracting officials are responsible for ensuring that credit lines are properly used. Such a requirement should be specified in the contracts for all direct procurements. Work funded by DP-1 shows only the credit to the Department and the contract number. The form and placement of the credit line may vary with the publisher. Model credit lines are shown in Attachment VIII-1, "Credit Lines for Open Literature Publication." The credit lines will be foot-noted with the author's name and institutional affiliation. Any deviations from these statements must be approved by the cognizant patent counsel.
  - d. Page and Reprint Charges. The Department, recognizing the importance of page charges in supporting professional journals, honors all reasonable page charges for not-for-profit journals, only. Contractors and financial assistance recipients shall budget for these expenses. DOE employees will initiate payment with a DOE F 4200.33, "Procurement Request Authorization," see Attachment VIII-2, (citing the funds of the author's program unit). An author can purchase up to 100 reprints with Department funds for professional use.
  - e. Reprints. AD-21 would like to receive single copies of journal reprints on an optional basis to aid AD-21 in quality control of the open Literature Acquisition program. DOE F 1332.15 is required and reprints can be sent in batches on a periodic basis, such as monthly. Reprints should be sent to (Chief, Energy Data Information Systems Branch).
- 3. PROFESSIONAL BOOKS AND TECHNOLOGY TRANSFER PUBLICATIONS. A unique distribution, i.e., nonstandard distribution list, will be used for many of these publications; however, AD-21 should always receive at least two copies of such publications.
  - 4. DOE-FUNDED JOURNALS AND NEWSLETTERS. The Director of Public Information (PA-1) reviews all requests for establishing or continuing publications of journals, magazines, newsletters, periodicals, and similar publications, as required by the Office of Management and Budget, Circular Number A-3, "Government Periodicals."

CREDIT LINES FOR OPEN LITERATURE PUBLICATIONS

1. MANAGEMENT AND OPERATING CONTRACTOR FACILITIES. "Operated for the U.S. Department of Energy by (contractor's name) under contract No. \_\_\_\_\_. This (article/chapter/investigation) was supported by the Assistant Secretary for Nuclear Energy, Office of Advanced Reactor Programs."
2. DOE ENERGY CENTERS AND LABORATORIES. "A U.S. Department of Energy facility. This (article/chapter/investigation) was supported by the Assistant Secretary for Fossil Energy, Office of Deputy Assistant Secretary for Coal Technology."
3. CONTRACTORS AND FINANCIAL ASSISTANCE RECIPIENTS. "Work supported by the U.S. Department of Energy, Assistant Secretary for Conservation and Renewable Energy, Office of Building Technologies, under contract (grant) No. \_\_\_\_\_."

DOE 1430.2B  
2-25-93

Attachment VIII-2  
Page VIII-5 (and VIII-6)

### PROCUREMENT REQUEST-AUTHORIZATION

DOE F 4200.33  
(07-90)  
(EFG 12-89)

U.S. Department of Energy  
Procurement Request-Authorization

Formerly PR-799A  
(Previous editions are obsolete)

1. To Awarding Office Oak Ridge Operations Procurement & Contract Division		3. PR Number 05.87MA- 11274*006	
		4. Change/Correction to a PR in Process <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
		5. If item 4 is Yes, Enter PR Correction Letter	
2. From Initiating Office Office of Scientific and Technical Information P.O. Box 62, Oak Ridge, TN 37831		6. <input checked="" type="checkbox"/> Acquisition <input type="checkbox"/> Assistance	
		7. Consistent with Principal Purpose of Program <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
8. Purpose of Acquisition (Check as many as apply) <input type="checkbox"/> Supplies <input type="checkbox"/> Research & Development <input type="checkbox"/> Construction <input type="checkbox"/> Advisory & Assistance Services <input type="checkbox"/> Architect/Engineer Services <input type="checkbox"/> Other (Requires Description) <input type="checkbox"/> Support Services		9. Description of Work/Purpose of Assistance Reference mou636-CS08 NTIS Miscellaneous Products & Services to Office of Scientific & Technical Information (OSTI). This modification provides additional funding by the government. Has List of Sources Been Attached? <input type="checkbox"/> Yes <input type="checkbox"/> No	
10. Name U.S. Department of Commerce		11. Address Office of Product Development	
10a. Division National Technical Info. Services		5285 Port Royal Road	
12. Product or Service Code For Acquisition Actions Only		Springfield, VA 22161	
13. CFDA Number For Assistance Actions Only:		Proposed Instrument: 14. Cooperative Agreement <input type="checkbox"/> 15. Grant <input type="checkbox"/>	
16. OSTI Deliverable For All Actions D-I-B	17. (Reserved) IV	18. Master BIN NA	19. Desired Award Date 9/30/86
20. Unsolicited Proposal Number	21. Project Number 71S51.16	G6	
22. Government Property N F - Furnished, P - Purchased, B - Both, N - Not Involved			

FINANCIAL DATA

23. Government Share 65,000	24. Awardee Share	25. Total 65,000
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FY FUNDS COMMITTED

26. Approp. Symbol	27. B&R Number	28. Dollar Amt.	29. Allotment	30. Object Class	31. AFP	32. CFA
89X0213.91	AD20000	65,000.00	TC-73-91	250	TCJA	

33. From Continuation Sheet	34. Project Period from 1-20-82 thru 9-30-91
35. Total Funds This PR: 42220.74 Are These Annual Funds? <input type="checkbox"/> Yes <input type="checkbox"/> No	36. For Assistance Actions Only: Budget Period from 9-30-86 thru 9-30-87

PROJECT MANAGER/INITIATOR

37. Name Director Bob Jones Tech. Info. Div.	38. Signature	39. Date	40. Office Code IS51
			41. FTS Telephone Number 626-1303

PROGRAM OFFICIALS

We hereby certify that if the funds cited are Annual Funds, this is an appropriate use of the Annual Funds.

42. Reviewing Official's Name Dep. Asst. Mgr. Ruby Carroll for Info. Svcs.	43. Signature	44. Date
45. Budget Official's Name David P. Smith Dir. Resource Management	46. Signature	47. Date

CERTIFYING OFFICIAL, I Herby certify that the funds cited in item 35 are available.

48. Name Alice Moore Management Analyst	49. Signature	50. Date
51. Initiating Office/Local Office Use		

Distribute 5 copies to: Contracting Office (White), Data Entry Control Point (Blue), Controller (Pink), Initiating Office (Green), and Office of Small and Disadvantaged Business (Goldendroot).

Contracting Office (White)