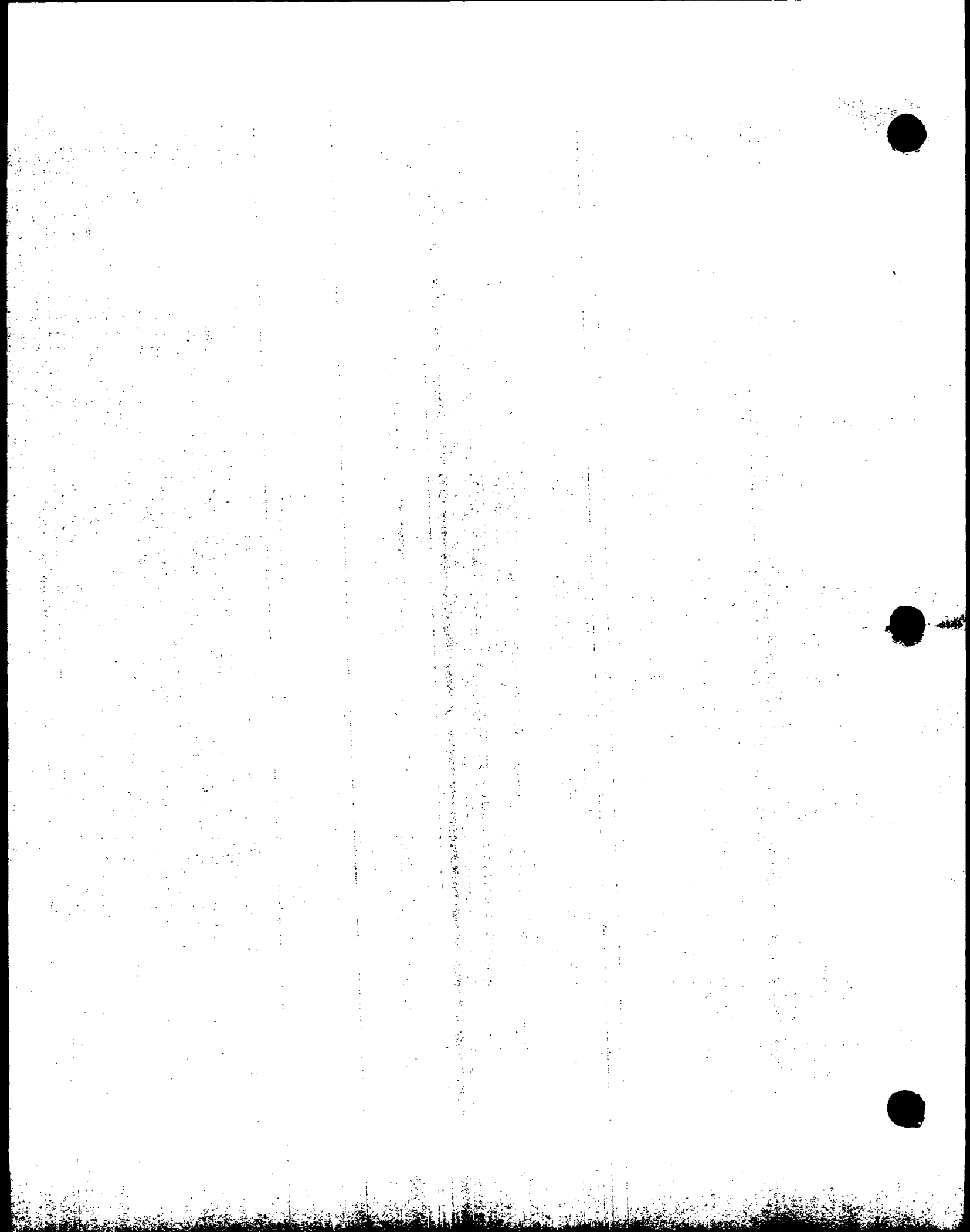**&EPA**

User's Guide For the TOSS/MOSES Contracts

Technical Operational Support Services (TOSS)
and
Mission Oriented Systems Engineering Support (MOSES)

 # 25/2404/

SECTION IV

MOSES CONTRACT

User's Guide for the MOSES Contract

Mission Oriented Systems Engineering Support (MOSES)

NOTES

1. BACKGROUND AND STRUCTURE OF MOSES CONTRACT

The Mission Oriented Systems Engineering Support (MOSES) contract was awarded to Science Applications International Corporation (SAIC). The SAIC contract team includes six subcontractors.

Prime contractor: SAIC

Subcontractors:

- Computer Sciences Corporation

- Viar & Company

- Ogden/ERC Government Systems

- Marasco Newton Group, Ltd.

- Solutions by Design, Inc.

- VIGYAN, Inc.

The contract was awarded September 30, 1991 with seven year option periods. Although this contract was initiated by the Office of Information Resources Management (OIRM), it is an Agency-wide contract.

The following sections provide specific concepts as they relate to MOSES.

NOTES

MOSES CONTRACT
(contract #68-W1-0055)

Period of Performance: Sept. 30, 1991 - Dec. 30, 1998.

Value: $140,048,700.00.

MOSES Contract Management Officials:

Contracting Officer (CO)   Lawrence A. Schlosser
US EPA (PM-214 F)
Washington, DC 20460
Phone (202) 260-8508
Email: EPA 3518
FAX: (202) 260-5114

Contract Specialist   Pam Switzer

Project Officer (PO)   Virginia Coffey (MPES)
US EPA, OARM (PM-211M)
Washington, DC 20460
Phone: (202) 260-7868
Email: EPA3386
FAX: (202) 260-6156

Technical Manager   Barbara Jarvis (PSD)
US EPA, OARM (PM-218B)
Phone: (703) 883-8359
Email: EPA3766
FAX: (703) 734-5470

Award Fee Evaluation   Paige Peck
Coordinator

Contract Mgmt. Team   OIRM — Management Planning
and Evaluation Staff
US EPA (PM-211M)
Washington, DC 20460
Phone: (202) 260-2381
FAX: (202) 260-2393

2. SERVICES AVAILABLE UNDER THE MOSES CONTRACT

PURPOSE:

The purpose of the MOSES contract is to support the Agency's Information Resources Management (IRM) systems engineering mission. Through the MOSES contract, SAIC will provide the Agency with a Systems Development Center (SDC). The SDC shall:

- Introduce methodology and standards relevant to system development
- Research, test, and implement emerging software development and maintenance productivity tools
- Analyze, develop, program, implement, maintain, and retire ADP systems (Life Cycle Systems Support)
- Develop data base administration and user training
- Conduct specialized training
- Ensure system documentation
- Provide quality assurance in all areas
- Provide IRM technical libraries
- Promote data sharing among EPA program offices

Listed below are the key components in this contract.

SYSTEMS DEVELOPMENT CENTER:

While MOSES is the replacement for the current General Programming (GP) contract, it is very different in many areas. Based on the feedback provided to OIRM, the DOPOs requested a higher level of skill mix in systems planning, design, analysis, development, and implementation work. The result of this input is a contract that is based on the concept of a Systems Development Center (SDC) which performs all functions associated with systems life cycles and corollary work.

The SDC is intended to be EPA's Center of Excellence for Systems Engineering. The SDC will be a contractor managed facility, housing the MOSES' prime contractors and subcontractors. A small number of EPA staff will also be located at the SDC. They will provide contract and technical management oversight. The SDC will give EPA

a central locatic n for developing and coordinating the development of EPA information systems. All work performed under MOSES will be at the SDC except when justified within a specific delivery order.

DEVELOPMENT AND MAINTENANCE METHODOLOGY GROUP (DMMG):

Within the SDC is the Development and Maintenance Methodology Group (DMMG) who will provide the technical management and support services. The DMMG will be a core group of contractors within the SDC. The DMMG is intended to be a small group of highly-skilled and experienced managers and technical experts who are knowledgeable in systems and software engineering.

The EPA Technical Manager will be responsible for the oversight of the DMMG.

The DMMG will work within two phases of the life-cycle of a delivery order.

The first phase consists of the DMMG preparing the Project Plan in response to the DOPOs statement of work. The project plan is intended to be a product that has had more in-depth analysis based on the experts knowledge of life-cycle systems.

The second phase of the delivery order will provide project consultation, training, and project coordination.

The DMMG costs will be reflected in both phases of a delivery order. In the first phase, the Technical Manager will give the DOPO an estimate of the cost of funding the project plan and the DOPO will submit a PR.

In the second phase, the DMMG will be charged as a separate cost under a specific delivery order on the contract. For the second PR, the DMMG will be listed as a separate line item with all the charges under the delivery order.

·   Samples of both PRs are in Appendix B.

The DMMG will provide the following services (under the supervision of the Technical Manager as DOPO of that specific Delivery Order):

- Professional Systems Engineering Environment direction and operating procedures
    Project estimation, planning and tracking
    Software quality assurance
    Configuration management (includes all project products, not just software)
    System Development Life Cycle Methodology
    System Development Support tools and techniques
    Project productivity and Quality Metrics
    Tracking documentation
- Project Consultation
    SDC Project Teams
    EPA (upon request of the Technical Manager)
- Training and Orientation of Work Force
- Application Development Technology Environment - hardware and software configuration of work stations
- Continuous Improvement (TQM); includes Project Information Tracking to Improve Project Estimation Capabilities
- Project Coordination - Similarities taken advantage of where appropriate
- Liaison with National Data Processing Division (NDPD)

NOTES

System Life-Cycle Services
Section 4.1

The contractor may be required to provide comprehensive system life-cycle services for the life of the system and, when required, shall use EPA approved project management and IRM methodology. Section 4.1 to 4.7 refer to the corresponding sections in the MOSES SOW. The following life-cycle services include, but are not limited to:

Planning:
• Benefit/Cost Analyses
• Concept Studies
• Needs Assessments
• Requirements Analyses
• Feasibility Studies
• Option Analyses
• Determination of Total Life-Cycle Costs

Analysis:
• Preparation of Logical Data Models
• Entity-Relationship Diagrams
• Functional Models
• Data Flow Diagrams
• Association Matrices
• Action Diagrams
• System Specifications and Requirements Documents

Design:
• Preparation of External Design Designs
• Internal Design Descriptions
• Preparation of Structure Charts
• Pseudocode
• Data Structure Diagrams
• Data Navigation Diagrams

Development:
• Install Hardware and Software
• Write Software
• Construct Databases
• Prepare Suites of Test Data
• Conduct Unit, Integration, and System Tests
• Prepare User and System Administration Manuals

Implementation:
• Move system into Full Production Status
• Install and Test Hardware and Software
• Load Databases
• Identify and Resolve System Problems
• Train Users for Use of System
• Conduct User Acceptance Testing

Systems Maintenace:
• Analyze and Resolve System problems
• Modify System to Accomodate changes in Environment and/or Statutory Requirements
• Support Users through Training and Consultation
• Control and Document Change to the System

Systems Retirement:
• Conduct Orderly Close-Out of System and Components
• Notify Users of Changes to Expect
• Archive All System Life-Cycle Products and Data

NOTES

Quality Assurance/Quality Control, Configuration Management, Data Administration, and Data Management Services
Section 4.2

Under this Section, the contractor shall be responsible for management and operation of the SDC and for coordination of all work conducted under this contract.

The contractor's responsiblities include, but are not limited to:
- Adherance to Quality Assurance Plans
- Maintaining an Awareness of the Efficiency and Cost Effectiveness of All Services Under this contract
- Maintaining the SDC as the EPA's "Center for Excellence for Systems Engineering"
- Devising and Implementing a Program to Provide Management Information on SDC Productivity and Product Quality
- Developing and Maintaining an "Institutional Memory" of EPA Information Systems and Programs
- Employing and Retaining a Development and Maintenance Methodology Group (DMMG) Managers
- Ensuring that DMMG Methodologies Comply with Guidelines and are Applied to All SDC Projects
- Project Management (Section 4.2.1)
- Configuration Management (Section 4.2.2)
- Information Systems Repository (Section 4.2.3)
- Documentation Services (Section 4.2.4)
- Training Services (Section 4.2.5 - see below)
- Data Management Services (Section 4.2.6)

Additional Ancillary Services Available
Sections 4.2, 4.3, 4.7

Additional ancillary services are available for support of other life-cycle activities. These include, but are not limited to:

Training Services (Section 4.2.5; also see Section 4.6.1.1)
• Hotline and User Support
• Maintenance Training
• CASE Training
• Quality Assurance Training

Access to Sepcialized Technical Skills (Section 4.3.1 and Section 4.5)
Ad Hoc Information Analysis and Reporting Support (Section 4.3.5)
• Comparison of Data from Different Data Bases
• Summarization of Raw Data
• Statistical Analysis of Data
• Presentation of Data in a Variety of Formats (i.e., graphs, reports, maps)

Office Automation and Records Management Support (Section 4.3.3)
• Records Management Consultation
• file Maintenance
• Managing, Maintaining, Cataloging, Retrieving, and Controlling Acquisition/Disposition of Records
• Automation of Office Functions
• Maintenance of Clearinghouses for Information on Special Subject Areas

Statistical Services (Section 4.3.4)
• Application of Mathematical, Statistical, and IRM-Related Skills

GIS Technical Support (Section 4.3.6)
• Application of EPA Approved GIS Software in System Development
• Design and Develop Customized GIS Algorithms

NOTES

- GIS Technical Advise
- Update Products and Data
- Provide GIS Workshop and conference Support

Meeting and Seminar Coordination (Section 4.7.3.6)
- Plan, Coordinate, Prepare Materials, and Provide On-Site Management of and Acquire Space for SDC Sponsored Meetings, Workshops, Seminars, JAD Sessions and User Group Meetings

SECTION V

DRAFT

MOSES DELIVERY ORDER LIFECYCLE

DOPOs have primary responsibilities for eight major phases of delivery order (DO) management under IDIQ/CPAF contracts in EPA as shown in Exhibit V-1:
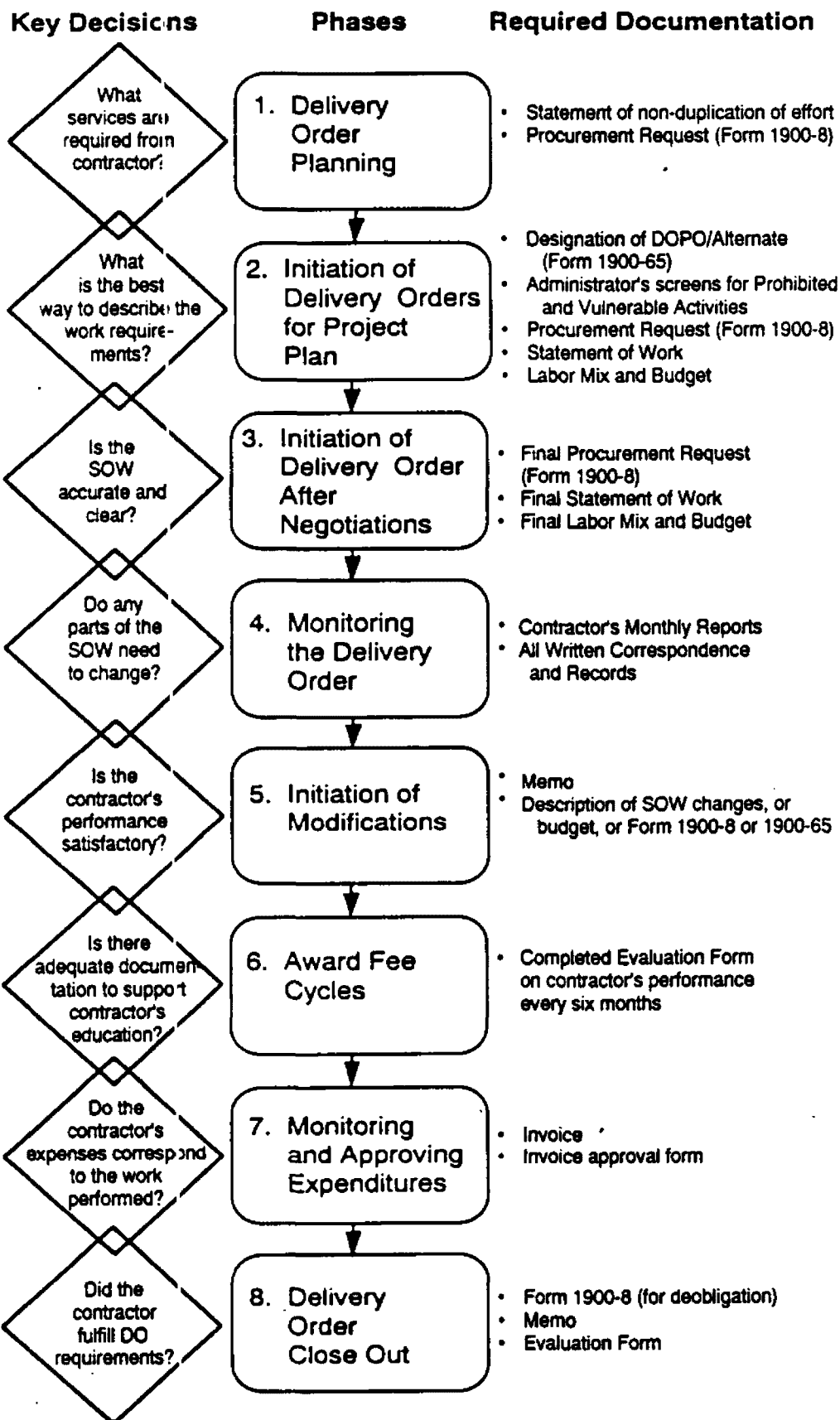
- Delivery Order Planning

- Initiation of Delivery Order for Project Plan

- Initiation of Delivery Order

- Monitoring the Delivery Order

- Initiation of Modifications

- Award Fee Cycles

- Monitoring and Approving Expenditures

- Delivery Order Close-Out.

Exhibit V-1 indicates the **key decisions** to be made and the **primary documentation required** during each major phase from the initial planning and definition of work through closeout.

Effective planning is essential to successful performance of contract services and products. **Building the quality into the work from the initiation of the DO not only facilitates management and decision making throughout the DO lifecycle but also is in accord with EPA's emphasis on Total Quality Management.** The DOPO should clearly specify the work to be performed, define performance and quality standards to be met and communicate these expectations to the contractor.

NOTES

EXHIBIT V-1
DELIVERY ORDER LIFECYCLE   **DRAFT**

Key Decisions	Phases	Required Documentation
What services are required from contractor?	1. Delivery Order Planning	• Statement of non-duplication of effort • Procurement Request (Form 1900-8)
What is the best way to describe the work requirements?	2. Initiation of Delivery Orders for Project Plan	• Designation of DOPO/Alternate (Form 1900-65) • Administrator's screens for Prohibited and Vulnerable Activities • Procurement Request (Form 1900-8) • Statement of Work • Labor Mix and Budget
Is the SOW accurate and clear?	3. Initiation of Delivery Order After Negotiations	• Final Procurement Request (Form 1900-8) • Final Statement of Work • Final Labor Mix and Budget
Do any parts of the SOW need to change?	4. Monitoring the Delivery Order	• Contractor's Monthly Reports • All Written Correspondence and Records
Is the contractor's performance satisfactory?	5. Initiation of Modifications	• Memo • Description of SOW changes, or budget, or Form 1900-8 or 1900-65
Is there adequate documentation to support contractor's education?	6. Award Fee Cycles	• Completed Evaluation Form on contractor's performance every six months
Do the contractor's expenses correspond to the work performed?	7. Monitoring and Approving Expenditures	• Invoice • Invoice approval form
Did the contractor fulfill DO requirements?	8. Delivery Order Close Out	• Form 1900-8 (for deobligation) • Memo • Evaluation Form

DELIVERY ORDER LIFE-CYCLE PHASES

DRAFT

In the MOSES Delivery Order Life-Cycle, the following phases are comparable to the TOSS Delivery Order Life-Cycle:

- Phase 1: Delivery Order Planning

- Phase 4: Monitoring the Delivery Order

- Phase 5: Initiation of Modifications

- Phase 7: Monitoring and Approving Expenditures

- Phase 8: Delivery Order Close Out

Please use the TOSS User's Guide Section on Delivery Orders to follow the appropriate procedures for these phases.

The following tabulated sections in the TOSS contract section also apply to the MOSES contract:

- Contract Authorities - Section 1

- Appendix A - Contract Management Issues and Concerns (pgs A-1 - A-28)

NOTES

PHASE 1: DELIVERY ORDER PLANNING

DRAFT

See the TOSS User's Guide pages 23-29 under the Delivery Orders tab for the appropriate procedures for this phase.

PHASE 2: INITIATION OF DELIVERY ORDER FOR PROJECT PLAN

The following describes the processes for Statement of Work (SOW) and project plan development, review, and approval for projects to be undertaken in the Systems Development Center.

The contract vehicle establishing the SDC represents a new way of doing business (systems development and project management) within the Agency.

Statement of Work Acceptance Process

The process begins with the planning and development of a statement of work by the Client Office. The Program Systems Division (PSD) Desk Officers will provide coordination and assistance in developing SOWs to any office which needs assistance. This process will aid in rapid OIRM and PCMD review and approval.

Each SOW from the Client Office should be accompanied by a Procurement Request (PR) form covering the development of a project plan for the proposed project. The cost will be a predetermined charge which will be periodically adjusted as the contract progresses, based on actual project plan development cost experience.

All IRM related SOW's and PR's will be sent to OIRM Management Planning and Evaluation Staff (MPES). MPES will perform an intitial review andetermine the suitability of all proposed SOWs for the appropriate contract vehicle (i.e., MOSES, TOSS, etc.). This review should be completed with two days.

All MOSES-SDC related SOWs will be scheduled for a facilitated review session which the DOPO will be requested to attend. The primary responsiblity for review of SOWs will rest with the EPA Technical Manager (TM). The faciliated review sessions will be established on a set bi-weekly schedule and when a SOW is received it will be scheduled for the next review session. If the next review session does not allow for two full work days from time of receipt, it will be scheduled for the following session.

During this time, OIRM will review the SOW for technical considerations, conformance to the contract SOW and criteria, and preparation of an estimate of project costs. Comments and other essential information will be discussed at the SOW review session. The DOPO will attend this session. These review sessions are intended to improve the SOW and ultimately help assure project quality and success. After review, the SOW will either be forwarded to the contractor for development of a project plan or returned to the DOPO for revisions. Depending on the nature and extent of revisions required, the SOW may need a second round of review.

All reviewers will review the SOW for clarity, and understandability. The TM and Project Officer will review the SOW for scope. The TM will also focus on the technical aspects and potential project risks.

In the past, the SOW review process took approximately three to four weeks for PCMD review and processing of the PR/SOW to the contractor. Under MOSES, it should be possible to begin project plan development for a project within one to two weeks, depending on the review comments and necessity for changes in the SOW. Actual project work could begin within one month.

All project plans will be developed through the Development, methodology, and Management Group (DMMG) under a "blanket" delivery order issued and managed by the TM (OIRM). The Client Office PR for project plan development will be used to assure consistency of project plans.

Two Procurement (PR) Forms

All proposed SDC SOWs will have two PRs prepared and submitted. Both may accompany the original proposed SOW but only one is initially required. This initial PR will cover the development of a project plan for the work indicated in the proposed SOW. Any excess funds will be returned to the Client Office or applied to the project. Any shortage of funds will be obtained from the next PR for the project. This PR will be necessary to begin work on the SOW project.

Project Flan Approval Process

This process begins with the delivery of the SOW to the contractor under the "blanket" delivery order for project plan

development managed by the TM. Typically the contractor will be given two weeks to complete a project plan. A project plan and budget estimate will be delivered at the end of this time.

Once the project plan is developed it will be sent to and reviewed simultaneously by the CO, PO, TM and DOPO (four copies). Typically this review would not take more then five to seven days.

A prenegotiation conference will be generally required between at least the CO and DOPO.

Based on the negotiations, the SOW may need revisions to incorporate essential elements in the project plan. For example, if the contractor's project plan has included some items that the government feels are critical to the project, then the SOW should be revised to reflect this. If the project plan is found to require significant modification by the CO, PO, TM, andor DOPO review, then a contractor revision of the project plan will be necessary and renegotiations may be needed. If no revisions are required, then the CO will issue a delivery order and work can begin.

Based on the negotiations, a final PR for the project will be needed from the Client Office before a delivery order can be processed.

Since projects may be incrementally funded, a PR based on prior Client Office or OIRM estimates could be used to fund identified, distinct portions of the project so that a delivery order can be processed and work can begin.

Another PR, funding the remaining portion of the project, could be developed without delaying project start-up. However, the base fees and award fees are determined based on negotiations for the total project and must be accounted for in each funding increment to the maximum negotiated for the project. In addition, Project Management (PMO) charges will be assignable to each project funding increment. PMO charges are also based on a percentage of the total project, exclusive of base and award fees.

PHASE 3: INITIATION OF DELIVERY ORDER AFTER NEGOTIATIONS

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The MOSES contract provides for advance negotiation of each delivery order before it is issued to the contractor. This permits extensive discussions of technical approach, key personnel, reporting requirements, etc., with the contractor before actually committing to have them perform with work. Cost can be fully estimated, enabling DOPO's to better plan their resource utilization.

Although MOSES is an Indefinite Quantity/Indefinite Delivery contract, each delivery order will be issued on a Cost Plus Award Fee basis. An estimated cost will be negotiated and set forth when the delivery order is issued. If the contractor cannot perform within the limits of the estimated cost, the cost can be increased, but the contractor must perform the remainder of the work without a corresponding increase in fee (profit). This should provide incentive not only to minimize costs, but also to ensure realistic estimates before work begins. This requires thorough, detailed Statements of Work (SOW's) which detail exactly what is needed.

Once a DOPO has drafted a SOW, it will be reviewed by the Technical Manager and others and discussed with the DOPO. In most cases, a Joint Application Development session will be held to allow for group discussion of all comments. After any final revisions, the SOW will be furnished to the contractor for preparation of a project plan, which includes both technical and cost proposals and outlines the contractor's intended approach to the project. The project plan must be thoroughly reviewed by the DOPO, the Project Officer, the Technical Manager, and the Contracting Officer.

The technical proposal should be reviewed for:

* The contractor's understanding of the scope and technical requirements for the project

* The suitability of all personnel assigned

* Approach to each aspect of the task(s)

* Interim milestones or deliverables

* Any particular reports suggested.

The cost proposal should be reviewed for:

• Unexplained differences with the technical proposal (e.g., the anticipated amount of effort does not aggree, etc.)

• Appropriateness of all labor categories and amounts of hours proposed

• Use of subcontractors and/or consultants

• Overall labor rates of all personnel

• Amounts proposed for travel, training, and other direct costs

• Any other costs not easily understood

Indirect costs or fees which have been preestablished at the time of contract award are not a concern. Prior to negotiations all project plan reviewers should participate in a prenegotiation conference to discuss recommended changes to the technical approach and suggested increases or decreases in the estimated cost.

Usually the DOPO or the Contracting Officer/Contract Specialist will conduct the negotiations, either by telephone or in person, with participation from others on an as-needed basis. All major issues must be resolved before issuance of a Delivery Order.

It is important to note that in some circumstances it is just as important to negotiate a higher cost than was proposed than a lower one. Discussion with the contractor should occur if the contractor has not provided sufficient personnel, if they do not have the expertise the Government desires, or if the hours appear to be inadequate. The contractor should have a good estimation of the scope of the project if the SOW has been well prepared. Vague language, or uncertainty in requirements, will encourage the contractor to overestimate, in order to protect themselves from the risk that the work ismore complicated that it initially appears, or to underestimate. Clarity of requirements is essential. The SOW must reflect what work is needed.

The contractor may require additional funds to complete requirements of the SOW and plan, but cannot collect award fees based on any cost over the origianlly negotiated amount. This increased the contractor's tendency to overestimate costs and is a factor to be considered during negotiations.

If the technical proposal suggests some good approaches, and it is desireable to require them, the SOW must be changed accordingly. Sometimes negotiations not only resolve costs, but also assist the Government in focussing more closely on the specifics of the work to be accomplished.

Once agreement between the contractor and the Government has been reached, the contractor will be required to submit a final project plan incorporating all items agreed upon as a result of the negotiations. The DOPO is responsible for preparing a PR for the estimated cost negotiated plus the required fee (base fee and award fee) and an additional amount to defray the contractor's facility, management and DMMG costs. The DOPO will submit the PR with the Delivery Order (including SOW, revised as necessary), and the contractor's final project plan to the Project Officer. both documents will be made a part of the resultant delivery order and the contractor will be held responsible for adhering the project plan. The delivery order will be issued by the Contracting Officer at the estimated cost negotiated. The contractor can then begin work immediately.

If, after performance has begun, there is a change to the work requirements, the Delivery Order must be modified. Additional negotiations will be required if there is a change in the estimated cost as a result. The procedures above apply to all SOW modifications as well, but may be scaled down as appropriate depending upon the complexity of the proposed changes. If there is doubt as to how the changes should be handled, the Project Officer should be contacted for advice.

PHASE 4: MONITORING THE DELIVERY ORDER

See the TOSS User's Guide pages 53-57 under the Delivery Orders tab for the appropriate procedures for this phase.

PHASE 5: INITIATION OF MODIFICATIONS

See the TOSS User's Guide pages 59-64 under the Delivery Orders tab for the appropriate procedures for this phase.

NOTES

PHASE 6:   AWARD FEE CYCLES

The MOSES contract is an indefinite delivery/indefinite quantity with Cost Plus Award Fee provisions type contract.

The Award Fee mechanism is provided to create incentives for the SDC contractor to perform well and to improve the quality of their work. The Award Fee will be an additional 10% above the cost of a delivery order. Within this 10% will be a 2% allocated for a fixed fee with the remaining 8% used for the actual award. The DOPOs will be required to fill out evaluation forms twice a year, on the January and July time cycle, to rate the contractor on performance.

The Award Fee Evaluation Coordinator will contact the DOPOs before this time and conduct training sessions to guide them through this process.

The following pages are the MOSES Award Fee Plan.

PHASE 7: MONITORING AND APPROVING EXPENDITURES

See the TOSS User's Guide pages 65-66 under the Delivery Orders tab for the appropriate procedures for this phase.

PHASE 8: DELIVERY ORDER CLOSE-OUT

See the TOSS User's Guide pages 67-69 under the Delivery Orders tab for the appropriate procedures for this phase.

NOTES

APPENDIX A

Appendix A contains a Model Delivery Order Package. The following completed forms are included:

- 2 Procurement Requests - Form 1900-8

  1) Payment of the Project Plan

  2) Negotiated Payment of the DO

- Administrator's Screens*

- Split Funding Justification*

- Superfund Justification*

- Designation of DOPO - Form 1900-65*

- Statement of Work*

- Labor Mix and Budget*

- Statement of Non-Duplication of Effort*

- 7-Point Justification for Government Furnished Property*

*Samples of these forms are in the TOSS section on Model Delivery Orders.

US Environmental Protection Agency
Washington, DC 20460

⊛EPA Procurement Request/Order

1. Name of Originator DOPO	2. Date of Requisition
3. Mail Code	4. Telephone Number	5. Date Item Required

6. Signature of Originator

7. Recommended Procurement Method
☐ Competitive   ☐ Other than full and open competition   ☐ Sole source small purchase

8. Deliver To (Project Manager)	9. Address	10. Mail Code	11. Telephone Number

12. Financial Data

a. Appropriation	b. Servicing Finance Office Number	NOTE: Item 12(d) Document Type — Contract = "C," Purchase Order = "P"

.... FMO Use .... (c) (13 digits)	D T (d)	Document Control Number (e) (6 digits)	Account Number (f) (10 digits)	Object Class (g) (4 digits)	Amount (h) Dollars	Cents

13. Suggested Source (Name, Address, ZIP Code, Phone/Contact)	14. Amount of money committed is:	15. For Small Purchases Only: Contracting Office is authorized to exceed the amount shown in Block 12(h) by 10% or $100, whichever is less.
Science Applications International Corp. 1710 Goodridge Drive McLean, VA 22102	☐ Original ☐ Increase ☐ Decrease	☐ Yes ☐ No

16. Approvals

a. Branch/Office	Date	d. Property Management Officer/Designee	Date
b. Division/Office	Date	e. Other (Specify)	Date
c. Funds listed in Block 12 and Block 15 (if any) are available and reserved. (Signature of Certifying Official)	Date	f. Other (Specify)	Date

17. Date of Order	18. Order Number	19. Contract Number (if any) 68-W0-0055	20. Discount Terms
21. FOB Point	22. Deliver to FOB Point by On or Before (Date)	23. Entry Quote and Phone No.
24. Contractor Name, Address, ZIP Code	25. Type of Order

26. Schedule

Item Number (a)	Supplies or Services (b)	Quantity Ordered (c)	Unit (d)	Estimated Unit Price (e)	
	Delivery Order Title: Project Plan Charge				

27. United States of America By (Signature)

⊛EPA **Procurement Request/Order**	US Environmental Protection Agency Washington, DC 20460	1. Name of Originator DOPO		2. Date of Requisition
		3. Mail Code	4. Telephone Number	5. Date Item Required

6. Signature of Originator ●   **7. Recommended Procurement Method**
☐ Competitive   ☐ Other than full and open competition   ☐ Sole source small purchase

8. Deliver To (Project Manager)	9. Address		10. Mail Code	11. Telephone Number

12. Financial Data	a. Appropriation	b. Servicing Finance Office Number	NOTE: Item 12(d) Document Type — Contract = "C," Purchase Order = "P"

FMO Use (c) (13 digits)	O T (d)	Document Control Number (e) (6 digits)	Account Number (f) (10 digits)	Object Class (g) (4 digits)	Amount (h) Dollars	Cents

13. Suggested Source (Name, Address, ZIP Code, Phone/Contact)	14. Amount of money committed is:	15. For Small Purchases Only: Contracting Office is authorized to exceed the amount shown in Block 12(h) by 10% or $100, whichever is less.
Science Applications International Corp. 1710 Goodridge Drive McLean, VA 22102	☐ Original ☐ Increase ☐ Decrease	☐ Yes ☐ No

16. Approvals

a. Branch/Office	Date	d. Property Management Officer/Designee	Date
b. Division/Office	Date	e. Other (Specify)	Date
c. Funds listed in Block 12 and Block 15 (if any) are available and reserved. (Signature of Certifying Official)	Date	f. Other (Specify)	Date

17. Date of Order	18. Order Number	19. Contract Number 68-W1-0055	20.
21. FOB Point	22. Delivery to FOB Point by		
24. Contractor (Name, address, ZIP Code)		25.	

26. Schedule

Item Number (a)	Supplies or Services (b)	Quantity Ordered (c)	Unit (d)	Estimated Unit Price (e)	
	DELIVERY ORDER TITLE:				
DO 2	(SDC Charges) 682/30108 E20041 1BUH40E000 25.35	$10,000.00			
DO 3	(DMMG Charges) 682/30108 WB0026 1BFE23GOWE 25.35	$ 5,000.00			
DOXXX	(Acutal Delivery Order) 682/30108 PB0002 1BFD23AOPD 25.35	$100,000.00			
	Award Fee Cost -	10,000.00			
		$125,000.00			

27. United States of America BY (Signature)

APPENDIX B

Appendix B contains the MOSES Statement of Work.

W001527-A3   **Attachment A (Rev. 9/4/91)**

STATEMENT OF WORK

INDEX

W001527-A3   **Attachment A (Rev. 9/4/91)**

W001527-A3   **Attachment A (Rev. 9/4/91)**

STATEMENT OF WORK
FOR
Mission Oriented Systems Engineering Support
(MOSES)

1.0 Introduction

Section 9.0 contains a glossary of terms and abbreviations contained in this Statement of Work (SOW).

1.1 Intent of Contract

This is a mission-oriented contract intended to support the Environmental Protection Agency (EPA) in Information Resources Management (IRM) systems engineering by providing the Agency with a Systems Development Center (SDC). The SDC shall perform functions associated with any or all stages of the systems life cycle in support of the EPA mission. The SDC shall also perform significant corollary work including, but not limited to, methodology and standards development; researching, testing and implementing emerging software development and maintenance productivity tools; system documentation; support for an IRM technical library; data base administration; and user training.

Work performed by the contractor may involve any or all stages of the systems life cycle or the corollary functions listed above.

Contractor management and operation of the SDC shall ensure all SDC work is performed in a consistent and coordinated manner. Facilitation of data sharing among EPA programs and other users of EPA data shall be a major focus of the SDC. Products provided for different EPA program offices shall be as compatible as possible while being responsive to individual program office needs. Coordination shall be accomplished through the development and use of an operational infrastructure that ensures consistently high quality products and services.

The contractor shall continuously improve practices and procedures throughout all aspects of the SDC's operation, including management of all contract-related tasks, to help ensure quality products.

1.2 The Environmental Protection Agency (EPA)

The EPA's mission is to administer specific legislation enacted to control and abate pollution's adverse impact on our environment. The EPA coordinates and supports research and pollution prevention activities by other Federal agencies, State and local governments, special interest groups, educational institutions, and individuals.

The EPA is comprised of eleven headquarters program offices including those directly responsible for air and radiation, hazardous and solid waste, pesticides and toxic substances, and water pollution programs. Additionally, ten regional offices, numerous laboratories, and other remote sites are located nation-wide.

1.2.1 The EPA IRM Environment

IRM is an integral part of most Agency programs and a critical success factor to the more visible regulatory and pollution prevention activities. The EPA maintains approximately fifteen large, and hundreds of medium sized, information systems. These systems are both automated and manual and provide support for the EPA's administrative processes, track the EPA's public processes (e.g., grants, permits, and enforcement actions), and collect and store data relating to environmental pollutants. Because of this diversity of systems many are not compatible.

The Agency has embarked on a Systems Modernization Initiative (SMI) and Public Access Initiative (PAI) to improve the quality, consistency, and accessibility of information provided to EPA staff and the public at large. The EPA SDC is the SMI operational component intended to deliver high quality products to the Agency's IRM community.

1.2.2 The EPA IRM Community

The EPA IRM community includes (a) several organizations principally charged with Agency-wide IRM leadership and (b) coordination and organizational components providing direct IRM support to their respective program areas.

The Office of Information Resources Management (OIRM), through its three divisions and two staff offices, establishes EPA IRM policy and guidance; develops, coordinates and/or manages the EPA's administrative, scientific, and some of the Agency program information systems; and provides IRM budget and contract management services to the rest of the Agency. Because of it's broadly based and pivotal role in IRM across the Agency, the OIRM will manage, and be a large consumer of, SDC services.

The National Data Processing Division (NDPD), located in North Carolina's Research Triangle Park (RTP), is responsible for providing high quality, cost-effective computing and telecommunications services to EPA system users nationwide. The NDPD acquires, manages, and performs operational oversight for the Agency IRM, voice, and data telecommunications resources. The NDPD evaluates, tests, and introduces new IRM and telecommunications technology to the EPA

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in a continuing effort to maintain effective, efficient, value-added service.

The NDPD also manages the National Computer Center (NCC) which is co-located with the NDPD at RTP. This facility is a contractor operated facility housing the EPA's primary mainframe computers and serving as the Agency's telecommunications focal point.

The EPA's program offices, regional offices and laboratories comprise the largest component of the EPA's IRM community. These organizational entities, whose principal function is not IRM, typically have components which provide and perform IRM functions. These organizations, referred to generically as program offices, have an ongoing demand for the high quality, IRM-focused management and analytical and technical support available under this contract.

The EPA IRM community is also served by other vendors (See Section 2.5). The SDC shall work cooperatively and in coordination with these other vendors and with the EPA IRM community, as appropriate.

1.2.3 The EPA Hardware, Software and Telecommunications Environment

The EPA employs a broad range of hardware, software and communications protocols supporting its IRM requirements.

The EPA hardware includes IBM 3090 mainframes, VAX minicomputer clusters, PRIME minicomputers, Tektronics hardware, IBM XT/AT and PS/2 compatible microcomputers, Apple MacIntosh microcomputers, SUN workstations, and multiple Local Area/Wide Area Network (LAN/WAN) platforms.

Agency-supported software consists of third and fourth generation programming languages including FOCUS and Natural; database management systems including ADABAS; the Geographic Information System (GIS) software ARC/INFO; a wide variety of statistical, project management, graphics, word processing and utility packages; and LAN software such as Novell Netware 386.

Further detail on this environment is included in the document, "EPA Information Technology Architecture" (See Section 9.0).

The EPA Information Technology Architecture continues to evolve. The contractor shall be prepared to provide services in any of the EPA's current or future hardware and software environments.

1.3 Disclaimers

Nothing in this SOW is intended to authorize contractor effort. All services and support under this contract will be ordered only

through the issuance of individually written delivery orders signed
by the EPA Contracting Officer (CO).

All references in this SOW to SDC staff shall refer solely to con-
tractor personnel unless specifically stated otherwise. Further-
more, nothing in this SOW is meant to imply that the contractor
and/or his subcontractors will supervise or manage any Federal
employee.

2.0 General Guidelines

2.1 Scope of the Total Mission

The contractor shall be required to establish, staff, operate, and
manage the SDC, supporting the EPA's IRM mission and the individual
missions of the EPA's program offices. The SDC staff shall be
required to perform functions associated with any or all stages of
the system life cycle.

2.2 Compliance with Automated Data Processing (ADP)/IRM Policy, Standards, and Guidelines

The contractor shall comply with Federal and EPA ADP/IRM policy and
procedural guidelines. The contractor shall also comply with ap-.
plicable specifications and standards found in the National Insti-
tute of Standards and Technology's (NIST) Federal Information
Processing Standards Publications (FIPS PUBs) and Special Publica-
tions (SPEC PUBs), and specifications and standards adopted by the
Federal Interagency Coordinating Committee on Digital Cartography
(FICCDC) for spatial geographic data in Geographic Information
Systems (GIS).

2.3 Conflict of Interest (COI)

The Environmental Protection Agency (EPA) has identified a need to
avoid, neutralize or miticate actual, apparent, and potential con-
tractor Conflict of Interest (COI). To accomplish this, contrac-
tors shall have a COI plan to identify and report actual, apparent,
and potential COI. The plan shall be consistent with the the Mini-
mum Standards For Contractor Conflict Of Interest (COI) Plans (See
Clause L.24).

The contractor shall comply with the COI plan proposed, or modified
as necessary, and accepted by the EPA.

2.4 Systems Engineering Technical Environment

The contractor shall ensure that the SDC's technical environment is
highly disciplined and methodical and designed to achieve software
quality and user satisfaction in all stages of the system life

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cycle.   The contractor shall provide, maintain, and use automated means such as Computer-Aided Software Engineering (CASE) tools, a central encyclopedia of design information, code libraries, metrics, and project management tools to improve the quality and efficiency of work performed under this contract.

The current EPA environment for systems engineering includes, but is not limited to, use of the following methods and tools:

   o Information Engineering Methodology (IEM)™ (James Martin
     Associates)

   o Information Engineering Facility (IEF)™ (Texas Instruments)

   o Information Engineering Workbench (IEW)™ (Knowledgeware)

The current EPA environment for the project management aspect of systems engineering includes, but is not limited to:

   o Timeline™ (Symantec)

   o Project Workbench™ (Applied Business Technologies)

   o MacProject II™ (Claris)

The contractor shall comply with the Standard Operating Procedures (SOP) proposed for systems engineering, or modified as necessary, and accepted by the EPA.

2.5 Contract of Preference

This is the Contract of Preference for any IRM systems engineering work performed by the Agency that is described by activities belonging to the planning, analysis, design, development and implementation stages of the system life cycle.   The contract may also be used to provide all services listed herein as required by the EPA's Headquarters program offices, Regional Offices, Labora-tories, and other Agency sites.   However, the EPA has other IRM-related contracts which may be the preferred vehicle for some of these areas of support.   The EPA utilizes these other contracts as preferred sources for support of selective requirements and may expand their utilization in the future.

3.0 Designated Government Officials

3.1 Contracting Officer (CO)

The CO for this procurement will be assigned by the EPA's Procure-ment and Contracts Management Division (PCMD) and will be located

at the EPA Headquarters, Washington, DC. The CO is the only
individual authorized to enter into and administer contracts. The
CO is responsible for ensuring performance of all necessary actions
for effective contracting, ensuring compliance with the terms and
conditions of this contract, and safeguarding the interests of the
United States in its contractual relationship with the contractor.
After contract award the CO will provide the contractor with
written documentation designating, by name, the EPA personnel
having CO delegated responsibility and authority under the
contract. The CO, as the Purchasing Agent, shall not delegate any
responsibility or authority as defined for Contracting Officers in
Chapter 8 of the 1984 Contracts Management Manual, EPA Publication
1900. The CO is responsible for issuing written delivery orders
and subsequent modifications to either the contract and/or delivery
orders.

3.2 Project Officer (PO)

The PO, a member of the OIRM's Contract Management Team located at
the EPA Headquarters, receives written authority directly from the
CO and is responsible for reviewing, processing, and forwarding to
the CO for issuance, delivery orders and subsequent modifications
to delivery orders and/or the contract in response to EPA program
office requests for support under this contract. The PO may also·
be responsible for approving various other contract and project-
related actions as specifically delegated by the CO. The PO is
also responsible for various other contract and project-related
duties (See Section 3.2.1 and 3.2.2).

The PO will provide the contractor with written documentation
designating, by name, the EPA personnel who have PO delegated
responsibility and authority.

3.2.1 General PO Contract-Related Duties and Responsibilities

The PO acts as liaison between the program office, the Technical
Manager, and contractor management to review systems development
plans, budget submissions, and program office long-term require-
ments for support under this contract. Delivery order requirements
are discussed with the contractor's program management and the
Technical Manager to help select technical skill requirements
consistent with delivery order tasks.

The PO works with the program office to identify special training
needs and to help develop strategies for improving the quality of
systems engineering and overall contract support. This is accom-
plished through review of contract support services for adequacy in
supporting the EPA's program missions through utilization of the
latest proven IRM technologies. Where change is required, the PO

works closely with the Technical Manager to provide guidance to both OIRM and contractor management.

The PO meets with the contractor's management, program office management and Delivery Order Project Officer (DOPO), Contracting Officer (CO) and the Technical Manager to resolve problems related to contractor responsiveness, quality of performance, cost overruns, schedule slippage, and a need for reallocation of contractor personnel resources. This also includes resolution of common technical problematic issues which cut across individual projects, and resolution of chronic performance problems which cannot be successfully resolved between the DOPO and the contractor.

The PO ensures DOPOs monitor all aspects of their delivery order tasks to ensure compliance with Federal and EPA IRM regulations, standards, and guidelines.

The PO advises OIRM management on the overall effectiveness of contract support mechanisms, providing information and suggestions for use in planning future procurement of support services. Areas of concern include the identification of required technical skills, selection of high technological skill target areas, and projections of future needs for the EPA's systems development.

3.2.2 PO Project-Related Duties and Responsibilities

In coordination with other OIRM organizations, the PO, working with the Technical Manager, provides guidance to program office's DOPOs in the definition of technical requirements, and ensuring project objectives are compatible with the EPA's IRM programs and related policies. The PO, working with the Technical Manager, reviews all delivery order SOWs prior to submission to and issuance by the CO. This review will determine that SOWs are clear, accurate, technically sound, complete, and within the scope of this contract.

The PO, with the assistance of the Technical Manager, reviews all project requirements to facilitate receiving the maximum advantage from available EPA technology, exchange of IRM resources, and shared development of application systems. In coordination with other OIRM organizations, the PO provides the following assistance to program office DOPOs:

   o Reviews proposed contractor project and staffing plans to determine realism of milestones, schedules, work-breakdown structure, and adequacy of skill level and qualifications of proposed contractor personnel.

o Coordinates efforts between the DOPO and the Technical Man-
  ager to define project technical and functional inspection
  and acceptance specifications.

3.3 Technical Manager (TM)

The TM is located at the SDC and bridges the technical gap between
the EPA user and contractor, with the goal of minimizing cost over-
runs, schedule slippage, and substandard systems. He/she provides
guidance to the PO and the DOPO in definition of technical require-
ments and ensures that projects are compatible with the EPA's IRM
programs, related policies, and the SDC's technical and operational
environment. The TM also represents the EPA's interest in a well-
managed, disciplined and progressive operational environment at the
SDC. He/she assesses and advises the PO on the long-term Agency
technical support requirements and discusses them with the contrac-
tor's program management to determine ongoing and future technical
skill and special training needs, and to develop strategies to
improve the overall quality of SDC work.

The TM works with the PO and CO to resolve significant contractor
problems related to overall responsiveness, quality of performance,
cost overruns, appearance of and/or actual conflict of interest
situations, schedule slippage, and any need for the reallocation of·
personnel resources. He/she also assists the PO in reviewing
delivery order SOWs to ensure they are clear, complete, accurate,
and adequately reflect work requirements. Upon request of the PO
or DOPO, the TM helps review contractor project plans and staffing
plans to determine realism of milestones, schedules, work-breakdown
structures, and adequacy of proposed staff skills and qualifica-
tions. The TM also assists review of level-of-effort projections
and cost estimates to determine adequacy in meeting the delivery
order user requirements.

The TM will include the PO, DOPO and CO in all decisions which
affect contractor efforts under this contract and/or related
delivery order(s). The TM will provide both the PO and all DOPOs
with an approved contractor-developed SDC SOP.

3.4 Delivery Order Project Officer (DOPO)

A DOPO is assigned to each delivery order and is normally appointed
by the program office initiating the request for contract support.
The DOPO function may, however, be delegated to the OIRM by the
program office. The DOPO receives authority directly from the CO
in writing and is responsible for performing various administrative
and technical matters related to assigned delivery orders as
detailed below.

The DOPO may be located at any EPA site location and is responsible for certain technical and administrative matters related to his/her delivery order. Responsibilities include, but are not limited to, drafting delivery orders and required delivery order modifications; technically managing delivery orders at the program office level, including coordinating with the Technical Manager; monitoring, reviewing, inspecting and accepting periodic contractor-provided progress reports, delivery order deliverables, and contractor-provided personnel labor hours and reporting any divergence to the PO for investigation and resolution; and identifying and reporting delivery order-related appearance or actual conflicts-of-interest to the PO and CO.

DOPO responsibilities may also include approval of all contractor invoices for payment. The DOPO advises the PO of suspended or disallowed invoice payment(s) and works with the contractor, CO, PO, and/or Technical Manager to resolve questionable charges.

4.0 Functional Requirements

4.1 Life cycle Services

The contractor may be required to provide comprehensive system life cycle services for all, or a designated portion of, system life cycle stages and, when required, shall use EPA-approved project management and IRM methodology. The contractor shall ensure that all system-related products produced under this contract have adequate documentation covering all relevant portions of the systems life cycle.

The EPA has developed System Design and Development Guidance in three volumes (See Section 9.0) including mission needs analysis; preliminary design and options analysis; and system design, development and implementation. In addition, individual program offices have developed system design and development guidance for their specific program areas. The life cycle outline used in this section of the SOW is compatible with Agency guidelines but is more generic in nature.

4.1.1 Planning

The contractor may be required to provide services associated with the systems life cycle planning stage, including, but not limited to, benefit/cost analyses, concept studies, needs assessments, requirements analyses, feasibility studies, option analyses, and determination of total system life cycle costs. The contractor, when required, shall ensure there is a high degree of interaction between contractor technical staff and EPA client managers and staff in the performance of these services. As part of the planning process, the contractor may be required to take a broad, high level view of many EPA functional areas and information systems for the purpose of identifying appropriate goals and strategies for

development of EPA information systems. The contractor may be required to develop an Information Strategy Plan as defined by the Information Engineering Methodology (IEM)™.

4.1.2 Analysis

The contractor may be required to provide services associated with the systems life cycle analysis stage. In this stage the contractor may be required to perform a detailed analysis of the client's information processing requirements as they relate to the client organization's mission and activities and to evaluate current information systems. Services provided may include, but are not limited to, preparation of logical data models, entity-relationship diagrams, functional models, data flow diagrams, association matrices, action diagrams, and system specifications and requirements documents.

The contractor, when required, shall ensure there is a high degree of interaction between contractor technical staff and EPA client managers and staff as work related to this stage is conducted. The contractor may be required to perform a Business Area Analysis as defined by the Information Engineering Methodology (IEM)™.

4.1.3 Design

The contractor may be required to provide services associated with the systems life cycle design stage, including the development of system performance and transaction response goals. Building on the analysis performed in the preceding stage, the contractor, when required, shall design specific systems and further define data and functional specifications.

Services provided may include, but are not limited to, preparation of external design descriptions such as screen and report layouts, system flow diagrams, dialogue flow diagrams, and prototypes; internal design descriptions including detailed design specifications, design of user codes, and physical database design; and preparation of structure charts, pseudocode, data structure diagrams, and data navigation diagrams.

Procedures for system administration, including security and backup and recovery, should be developed by the conclusion of this stage.

The contractor may be required to perform a Business System Design and Technical Design as defined by the Information Engineering Methodology (IEM)™.

4.1.4 Development

The contractor may be required to provide services associated with the systems life cycle development stage. In this stage hardware and some software may need to be installed; software is written or generated in an EPA approved procedural or non-procedural language; databases are constructed; suites of test data are prepared; unit, integration, and system tests are conducted; and user and system administration manuals are prepared and readied for release. The contractor may be required to perform Construction as defined by the Information Engineering Methodology (IEM)™.

4.1.5 Implementation

The contractor may be required to provide services associated with the systems life cycle implementation stage. In this stage the system is moved into full production status; hardware and software are installed and tested; databases are loaded; system problems are identified and resolved; users are trained in use of the system; and user acceptance testing is conducted. The contractor may be required to perform Transition as defined by the Information Engineering Methodology (IEM)™.

4.1.6 System Maintenance

The contractor may be required to provide services associated with the systems life cycle maintenance stage. In this stage system problems are analyzed and resolved; the system is modified to accommodate changes in its environment and/or statutory require-ments, or to enhance its performance or ability to meet user needs; users are supported through training and consultation; and change to the system is carefully controlled and documented.

In this stage the contractor may provide reverse or re-engineering services. In reverse engineering the intention is generally to investigate and detail the function of existing system components which may not be documented or which may no longer be fully under-stood due to changes in management and/or technical staff. In re-engineering the intention is generally to improve the way system functions are carried out and could include such activities as restructuring of code and/or data or software conversion.

4.1.7 System Retirement

The contractor may be required to provide services associated with the systems life cycle system retirement stage. In this stage provisions are made for the orderly close-out of a system and disposition of all system components. This may involve notifying system users of the changes they may expect as the system is retired, archiving of all system life cycle products and data, and the disposition of system hardware and software.

4.2 Management and Operation of the Systems Development Center
    (SDC)

The contractor shall, through adherence to the contractor-proposed
and EPA-approved management and quality assurance plans, maintain
an acute awareness of the quality, efficiency, and cost effective-
ness of all services provided under this contract.

The contractor, under the direction, oversight, and guidance of the
CO, PO, and/or Technical Manager, shall be responsible for manage-
ment and operation of the SDC and for coordination of all work
conducted under this contract.

The contractor shall be required to establish and manage the SDC in
a manner that ensures both high quality and consistency in its
approach to work conducted and among products produced.   The
contractor shall maintain the SDC as the EPA's "Center for
Excellence" for systems engineering.   To accomplish this, the
contractor shall be required to employ and retain a core group of
highly skilled, experienced managers and staff who understand the
EPA organization, programs, and IRM environment. This core group
shall ensure the SDC's responsiveness to Agency and individual
program office needs and IRM strategies.

The contractor shall continuously place emphasis on improvement of
methods and procedures throughout all aspects of the SDC's opera-
tion, including all contract-related task management, to enhance
the EPA IRM community's ability to meet present and future needs.

In support of the SDC focus to facilitate data sharing among the
EPA programs and other users of the EPA data, the contractor shall
build compatibility, where appropriate, into systems and products
produced under this contract while being responsive to individual
program office needs.

The contractor shall be required to devise, and upon Technical
Manager review and PO approval, implement a program to provide
management information on SDC productivity and on the quality of
SDC products. This program will make use of appropriate software
metrics such as function points, include an accurate measure of
costs, and determine satisfactory means of assessing the quality of
products and measuring user satisfaction with both products and
services.

The contractor shall emphasize development and maintenance of an
"Institutional Memory" of the EPA's information systems and
programs within its highly qualified staff. The EPA will assist
the contractor, as necessary, in acquiring and maintaining
knowledge of Agency programs and missions by providing training,

reference material, and/or program office-provided program/mission summaries.

The contractor shall also be required to employ and retain a group of highly skilled and experienced managers and technical experts who are knowledgeable in the area of systems and software engineering. This staff will be referred to as the Development and Maintenance Methodology Group (DMMG) (See Section 4.6.1). This staff shall work closely with the DOPO, Technical Manager, PO, and other SDC staff to identify, tailor, provide support for, and, upon PO approval, implement appropriate methodologies addressing effective and efficient systems engineering.

The contractor shall ensure that selected DMMG methodologies comply with Federal and EPA IRM/ADP guidelines and that they are applied appropriately and consistently to all SDC projects. These methodologies shall include the comprehensive quality assurance program defined in the contractor-proposed and EPA-approved management plan and systems engineering SOP.

4.2.1 Project Management

The contractor shall apply sound and consistent project management concepts, methods, and tools in the management of SDC delivery orders. Delivery order management shall address such areas as planning and tracking of work and costs, monitoring of quality and productivity, and overall contract/project team building. The methods employed shall include, but are not limited to, work break down structures, and project scheduling and tracking using Gantt or PERT charts, resource allocation, and leveling.

The contractor shall ensure that proposed project plans for individual delivery orders provide for DOPO review and approval of contractor efforts at appropriate stages in the project life cycle.

The contractor shall also ensure overall client satisfaction with the SDC's services and deliverable products in compliance with NIST Standards and Special Publications and/or other EPA acceptable methodology.

The contractor shall coordinate with each of the EPA IRM community components, program offices, and supporting vendors as appropriate for accomplishment of delivery orders issued under this contract.

4.2.2 Configuration Management

The contractor shall, in consultation with the PO, DOPO, and Technical Manager, establish and, upon Technical Manager review and PO approval, implement overall configuration management procedures

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for each delivery order task performed under this contract. These procedures shall identify all deliverables for which change must be controlled. The procedures shall also define the process for controlling change and provide a mechanism for monitoring change and ensuring change control procedures are effective.

As an integral part of configuration management, the contractor shall provide and use automated tools for maintaining version control for SDC documentation, data, and software products.

4.2.3 Information Systems Repository

The contractor shall be required to identify requirements for a centralized automated information repository. If a requirement exists, and after PO, Technical Manager, DOPO and NDPD review and PO approval, the contractor shall assist NDPD in the implementation of such an automated information repository.

The repository shall, as directed by the Technical Manager, be used to collect information relating to systems developed and/or maintained by the SDC. The contractor shall be required to develop and, upon Technical Manager review and PO approval, institute procedures to be used by project teams for submitting information to the repository.

4.2.4 Documentation Services

The contractor may be required to provide documentation services including, but not limited to, the following:

- o Document preparation including preparation of camera-ready copy

- o Document processing including receiving, certifying, bar coding, logging, editing, indexing, abstracting, paginating, separating, filing, microfilming, accessing, and coding

- o Document publication including printing, copying, and binding

- o Documentation distribution

- o Graphic and micrographic services including microfilming, and microfilm and microfiche duplicating

- o Consultation on graphical presentations

- o Operation of data plotting equipment

o Preparation, copying, and distribution of magnetic or optical media including optical disk scanning

The contractor may also be required to provide effective, high quality visual communication aids for use in management presentations (e.g., speeches, meetings, training courses, and public display and special exhibits).

The contractor shall be required to work with the Technical Manager to devise and, upon PO approval, implement standards for SDC documentation and provide automated methods for preparing and maintaining that documentation. These functions shall be in compliance with the Government Printing Office (GPO) and Agency standards and policies, where applicable. The contractor may be required to implement standards for SDC documentation developed by other EPA contracts, as appropriate.

4.2.5 Training Services

The contractor may be required to plan, prepare, and provide training using qualified staff. This may include, but is not limited to, planning courses and seminars; preparing training materials; identifying and making arrangements for temporary training facilities when necessary; preparing and disseminating training schedules; obtaining required training supplies; and obtaining and installing the necessary training-related equipment at the selected training site.

Examples of training the contractor may be required to provide include, but are not limited to, the following:

o Hotline and user support training

o System Administrator training

o Maintenance training

o Configuration Management training

o Data Administration training

o System Development and Maintenance Methodology training

o CASE training

o Quality Assurance training

o Verification and Validation training

Other specific areas of training that may be required are listed in Section 4.6.1.1.

Training services may include, but are not limited to, briefings, seminars, formal classroom instruction, computer-based training, video instruction, or other training delivery vehicles, including acquisition of training materials from third party vendors when the PO has determined such acquisition is in the EPA's best interest.

Training developed through this contract shall be coordinated with existing Agency training vehicles to prevent duplication. A requirement for ongoing training developed under this contract shall be coordinated with and, if appropriate, incorporated into existing EPA training vehicles.

4.2.6 Data Management Services

The contractor shall be required to provide data management services that enhance the EPA's ability to share data across media lines and to distribute data to EPA and non-EPA users.

These services may include, but are not limited to, the following:

- o Development and maintenance of data models

- o Development and maintenance of data dictionaries

- o Consultation on location and availability of Agency data

- o Database administration

- o Design and preparation of data coding schemes

- o Design of data collection and entry procedures

- o Data collection

- o Data entry

- o Data conversion

- o Data quality assurance functions

- o Evaluation of new data management technologies

All data management services provided under this contract shall be coordinated with the EPA's Data Administrator, NDPD and/or appropriate responsible IRM office.

4.3 Specialized and Ad Hoc Services

The contractor shall be required to provide specialized technical services, to include any of the services provided for management and operation of the SDC (See Section 4.2). These services may include, but are not limited to, the services described in sections 4.3.1 through 4.3.7 below.

Specialized services shall be provided as necessary and directed by the EPA in support of an on-site IRM technical library. This library is intended for use by both the contractor and Agency staff and shall be managed and operated either by SDC-staff or, if in the best interest of the Agency, by staff provided through the existing or any future Contract of Preference for library support. The current Contract of Preference is with Labat-Anderson, Inc.

The contractor shall, in consultation with the Technical Manager, be required to develop and, upon PO approval, implement guidelines for the use of these specialized services. These guidelines shall specify prerequisites for their application in a delivery order project, methods and procedures, types of products and milestones, project management considerations, project estimation and measurement techniques, and evaluation criteria.

The contractor shall also, in consultation with the Technical Manager, be required to develop and, upon PO approval, implement operational guidelines for provision of ad hoc services, including request processing guidelines and service evaluation criteria.

Specialized and ad hoc services shall be conducted according to the PO-approved guidelines.

Based on client evaluation, the contractor shall take necessary steps to improve specialized and ad hoc services, revising guidelines as required.

4.3.1 Periodic Experts

The contractor shall periodically be required to provide unique technical expertise to address specific delivery order-related problem areas and/or concerns as identified by the EPA DOPO or Technical Manager. The types of expertise that may be required (intermittently and/or for periods of short duration) include, but are not limited to, the technical skills outlined under Specialized Technical Skills (See Section 4.5).

4.3.2 System Management Support

The contractor may be required to provide system management support. This support may include, but is not limited to, the following:

o Production control

o Documentation (system, software, user) maintenance and distribution (See Section 4.3.3)

o Hotline support

o User support

o User training

o Disaster planning including planning, implementation, and system backup and recovery

o Post system implementation tuning

o System closeout and archiving

o Reporting functions, including preparation of custom reports from many diverse data base sources, executive information support, and preparation/distribution of newsletters

o Marketing support

o Communication support

o Establishment and coordination of user groups, meetings, seminars, presentations, and demonstrations (this may include preparation, coordination, implementation and presentation support)

4.3.3 Office Automation (CA) and Records Management Support

The contractor may be required to provide OA and records management support consistent with Federal and EPA records management guide-lines. This support may include, but is not limited to, the following:

o Records management consultation

o File maintenance (automated and manual)

o Maintenance of a software code library to support code-reusa-bility efforts

o Maintenance of a documentation library

o Support of an IRM technical library containing collections of IRM-related books, journals, and micrographic media

o Managing, maintaining, cataloging, retrieving, and controlling acquisition/disposition of records

o Automation of office functions including requirements definition and analysis, system design, software development and maintenance, and the development of system documentation and operating manuals

o Maintenance of clearinghouses for information on special subject areas or initiatives of concern to the EPA to support Agency communications and facilitate technology transfer

4.3.4 Statistical Services

The contractor may be required to develop surveys, samples, and questionnaires and related documentation and instructions.

The contractor, when required, shall provide technical services using mathematical, statistical, and IRM-related skills to review requirements for data reduction and analysis, to apply statistical methods and standard software packages in the preparation of statistical reports, and for development and automation of statistical and mathematical models and algorithms.

4.3.5 Ad Hoc Information Analysis and Reporting

The contractor may be required to perform ad hoc data analysis, retrieval, manipulation and reporting on an as required basis. These activities, when required, may include, but are not limited to, comparison of data from different data bases, summarization of raw data, statistical analysis of data, and presentation of data in a variety of formats such as reports, charts, graphs and maps.

4.3.6 Geographic Information System (GIS) Services

The contractor may be required to provide GIS services. These services, when required, shall be in compliance with the Agency's GIS program and may include, but are not limited to, the following:

o Application of Agency approved GIS software in system development

o Design and development of customized GIS algorithms

o GIS technical advise

o Update, and maintenance of map products and spatial data

o Technical advise on new GIS technologies

· o Providing Agency GIS Program support including support for
  workshops and conferences

4.3.7 Miscellaneous Specialized Services

The contractor may be required to provide miscellaneous specialized
services including, but not limited to, the following:

o Independent verification and validation

o Expert system consultation, development, and implementation

o Data collection forms consultation and design services

4.4 Technical Support

The contractor shall coordinate technical support activities with
the appropriate Agency contacts including, but not limited to, LAN/
WAN Administrators, PC Site Coordinators, and Telecommunications
Coordinators, and NDPD. Hardware/software required to accomplish
delivery order tasks shall. be acquired through the EPA Contract of
Preference unless a waiver is granted by the Agency.

4.4.1 Local Area/Wide Area Networks (LAN/WAN)

The contractor may be required to provide technical support neces-
sary for the design of LAN/WAN hardware and software configurations
and presentation of functional capabilities requirements, installa-
tion, implementation, operation, modification, and logistical
support during the LAN/WAN life cycle.

4.4.2 Microcomputer/Personal Computer (PC) Technical Support

The contractor may be required to provide PC technical support
services in the areas of PC system hardware configuration and
software design, installation, implementation, operation, modifica-
tion, problem diagnosis and resolution, and related training.

4.4.3 Telecommunications Technical Support

The contractor may be required to identify system telecommunica-
tions needs, support telecommunications requirements, and problems
associated with specific systems. When required, this information
shall be documented and submitted to the Technical Manager or DOPO,
as appropriate, and to NDPD. The contractor, when required, shall
also monitor the quality of telecommunication services for specific
systems at individual site locations and shall notify the appropri-
ate Technical Manager and NDPD of any unsatisfactory performance.

The contractor shall submit a Telecommunication Service Request
(TSR) to NDPD for all telecommunication services required in the
performance of this contract whether provided and/or funded
directly by the EPA or not.

4.5 Specialized Technical Skills

The contractor may be required to provide specialized technical
skills. These skills may include, but are not limited to, the
following:

  o Artificial Intelligence and Expert Systems

  o Cartography

  o Computer-Assisted Software Engineering (CASE)

  o CD ROM Applications

  o Common User Interfaces

  o Communications

  o Computer Assisted Instruction

  o Distributed Databases

  o Electronic Document Interchange

  o Ergonomics

  o Facilitated Group Decision Making Sessions (such as Joint
    Applications Design (JAD))

  o Geographic Information Systems (GIS)

  o Graphical User Interfaces

  o Hypermedia/Multimedia

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o Image Processing·Systems

o Local Area/Wide Area Networks

o Questionnaire and Forms Design

o Rapid Application Development (RAD)

o Re-engineering

o Relational Databases

o Remote Sensing

o Reverse engineering

o Sampling and Statistical Methods

o Software Process Assessment

o Software Process Modeling

4.6 Methodology Management and Planning Support

4.6.1 Development and Maintenance Methodology Group (DMMG) General Guidelines

The contractor shall, under the direction and approval of the Technical Manager, establish a DMMG within the SDC which shall perform, but is not limited to, the functions listed below.

The DMMG shall support all services under this contract by providing methods, techniques, and technologies to assure and improve the quality and efficiency of SDC projects and support their use by SDC staff. Support shall be extended to other service and skill areas as directed by the Technical Manager.

The DMMG shall identify, evaluate, recommend, deploy, and provide support for computerized tools that are appropriate to the selected methods. As a part of this effort the contractor shall work with NDPD to establish and utilize a central repository (See Section 4.2.3) for information relating to systems developed and/or maintained by the SDC.

The primary DMMG clients are delivery order-specific development and maintenance teams comprising, but not limited to, a DOPO, a PO, and SDC contractor staff.

DMMG initiatives will be undertaken to provide a state-of-the-art technical infrastructure in support of team and project needs for the contract as a whole and to individual EPA IRM community components on an as required, delivery order basis.

4.6.1.1 Expertise

The DMMG shall build and maintain expertise in various areas as directed by the Technical Manager. The DMMG shall provide consultation, assistance and training in all such areas on an as required basis.

These areas include, but are not limited to:

o Project planning, management, and tracking methods and tools

o Project cost estimation

o Project team composition and dynamics

o Configuration management practices, techniques and tools

o SDC methodology and techniques based on the IEM^{TM}, (e.g., data modeling, process modeling, JAD, and RAD)

o Re-engineering methods, techniques and tools

o Other methodologies and techniques needed for projects for which the IEM^{TM} is not appropriate

o CASE tools supporting the IEM^{TM}, specifically, but not limited to, the IEF^{TM} (Texas Instruments) and the IEW^{TM} (Knowledgeware)

o Other "lower end" CASE tools which fit the EPA technical environment and which interface with the IEF^{TM} and the IEW^{TM}, providing, but not limited to, technical design, code generation and data base generation

o CASE tools as needed to support alternative methodologies to the IEM^{TM}

o Reverse engineering methods, techniques and tools
o Quality assurance

o Testing methods and tools

o Prototyping methods and tools

o Other productivity tools including, but not limited to, debugging tools, code analyzers, data base analyzers, and code library managers

o Project measurement and estimation methods, techniques and tools

o Reusability practices

o Development, operations, and maintenance of a software library

o Automated information repository

The DMMG shall maintain an awareness of new developments and continually strive to improve SDC staff expertise in all these areas through such means as seminars, conferences, training, user groups, and active participation in SDC projects.

4.6.1.2 Systems Engineering Environment

The DMMG shall identify and propose a complete systems engineering environment incorporating appropriate EPA-compatible hardware, telecommunications, and software to enable the effective use of the above tools. Upon review by the Technical Manager and PO approval, the DMMG shall implement the chosen environment for the SDC, providing training, consultation, and technical support.

4.6.1.3 Feedback and Improvement

Based on project measurement information and team feedback, the DMMG shall monitor and evaluate the effectiveness of the above methods, techniques, practices, and tools as used in the SDC and, upon Technical Manager review and PO approval, implement changes as appropriate to improve their effectiveness. The DMMG shall research and recommend new methods, techniques, practices and tools for evaluation. The DMMG shall pilot the usage of new methods, techniques, practices and tools as directed by the Technical Manager and shall, upon PO approval, implement those chosen within the SDC.

4.6.1.4 Guidelines and Standards Support

The DMMG shall identify areas needing guidelines and standardization and prepare, or coordinate the preparation of, proposed guidelines and standards for EPA consideration and action. The DMMG shall adopt and adhere to guidelines and standards as directed by the Technical Manager and approved by the PO.

4.6.1.5 Ad Hoc Consultation and Project Work

The DMMG shall provide technical consultation support in the above
areas to SDC projects, potential SDC projects and other projects
and systems engineering problems as requested by the Technical
Manager and approved by the PO. The DMMG may be required to
provide extensive consultation and technical support to SDC
projects, which may include responsibility for part or all of a
project.

4.6.1.6 Coordination Support

The DMMG shall provide coordination services with the EPA NDPD to
ensure that, for planning purposes, the Technical Manager is aware
of hardware and software developments. This effort shall include
coordination services with NDPD for acquisition, installation, and
maintenance of management and development tools and for development
and production systems produced by the SDC when those tools and/or
systems must reside on NCC computers. The DMMG shall also provide
other coordination services with NDPD as requested by the Technical
Manager and approved by the PO.

The DMMG shall coordinate with the contractor to ensure training
support for DMMG and other SDC personnel is appropriate for DMMG
initiatives or specific delivery order requirements.

4.6.2 Program Management Support

In support of the EPA IRM programs, the contractor may be required
to identify and, when required, provide required personnel,
supplies and support equipment. These resources shall provide
efficient and cost effective technical, administrative and manage-
rial support in planning, managing, and implementing program
initiatives. Such initiatives may include, but are not limited to,
the following:

   o Planning and implementing the expansion of the EPA Geographic
     Information Systems program

   o Planning and implementing the expansion of the EPA/State Data
     Management program

   o Planning and implementing the EPA Information Integration
     program

   o Planning and implementing the EPA IRM program, including the
     Systems Modernization and Public Access Initiatives

o Planning and implementing the EPA OIRM Program Systems Division (PSD) Desk Officer program

o Planning and implementing other IRM program areas as required

In support of such efforts, the contractor may be required to develop detailed technical and strategic plans, develop operational, technical and managerial policies and procedures, and oversee and coordinate management, technical, and operational activities to ensure successful and timely delivery order project completion.

4.7 SDC Facility

The contractor shall provide an office facility for the SDC that will, except when otherwise specified by individual delivery order, house all contractor and subcontractor staff working under this contract.

Also, this facility shall include office space for EPA IRM Staff (See Section 4.7.2); space for an IRM Technical Library and associated staff (See Section 4.7.4); space to conduct occasional training; and space for routine and ad hoc meetings.

The SDC facility shall contain such normal office furnishings and equipment as are necessary for the conduct of business. The SDC physical environment shall be able to support such government-owned equipment as shall be required, with respect to regulated power and climate control. Standard office wiring and telecommunications closet buildout will be the contractor's responsibility and will be coordinated with NDPD.

The SDC shall comply with all applicable EPA, GSA, Federal, State, and/or local laws, ordinances, policy, and regulations.

4.7.1 Location

The contractor shall, after award of this contract, be required to locate and phase-in (See Section 4.8.1) the SDC facility at an EPA-approved site within sixty (60) days after issuance of an authorizing delivery order.

The contractor shall be required to establish remote SDC facilities near the EPA remote sites (i.e., outside the Washington, DC metropolitan area) throughout the United States when the EPA determines that the level of required service at such sites demands such action. This requirement will be transmitted to the contractor in the form of a specific delivery order.

When remote SDC sites are necessary to the contract or to an indi-
vidual delivery order, the EPA will either provide the remote site
or, for a contractor-provided site, negotiate facility cost from
the proposed ODC pool. Such remote SDC sites shall be operational
within five (5) months after the contractor has received official
notification of the EPA CO authorization in the form of a contract
or delivery order modification.

The EPA anticipates that its headquarters will be relocated to a
new facility and that the SDC will be allocated space in the new
EPA facility. If this becomes a reality, the contractor shall be
required to relocate to the new EPA facility.

4.7.2 SDC Space for the Technical Manager(s) and Related EPA IRM
      Staff

EPA desires to ensure its ability to work closely with the
contractor in carrying out requests of this contract. In this
regard, the contractor shall be required to provide the Technical
Manager(s) and related EPA IRM staff with private and semi-private
offices within the SDC facility. The floor plan shall provide 135
square feet of office space per person. Space shall be provided
for up to forty (40) EPA staff to assist the contractor in project
management of tasks under this contract. The EPA occupied space·
shall be capable of being secured from unauthorized access and
shall include a conference room. Additional meeting rooms and
facilities shall be available on-site or in close proximity to the
SDC for special occasions such as joint application development
(JAD) consultations, conferences, and briefings.

The contractor shall also be required to provide accommodations
adequate to meet the EPA's ADP equipment needs, including climate
control and full access to the EPA data network and telecommun-
ications systems. The EPA SDC requirements also include adequate
electrical outlets for all the EPA IRM-staff work areas; building
maintenance and cleaning services; phone outlets for each EPA staff
member adequate to accommodate phone, modem, and LAN/WAN communica-
tions; office furnishings; support services which may include
shuttle, daily mail, and courier service between the EPA head-
quarters and the SDC. At telephone system to connect approximately
twenty (20) employees to a user-support hot-line with a central
answering and switching device may also be required.

A list of requirements for start-up and operating the SDC include,
but are not limited to:

   o Communication and telecommunication links with Headquarters,
     NDPD, other EPA computers on the EPA Wide Area Network (WAN),
     and Agency E-mail

o ADP equipment to support EPA on-site operations, on-going development efforts and the EPA's CASE tools and PC worksta- tions

o Supplies for ADP and office equipment, reproduction facili- ties and furnishings for the offices of the EPA staff

o Mail and courier services to transport documents, tapes and disks between the EPA headquarters and SDC locations

o Toll-free telephone access for nationwide user assistance

o Provision of all equipment necessary to connect the SDC to the EPA Data Telecommunications Network. This equipment, defined by NDPD, may include cluster controllers, statistical multiplexors, modems, telephone lines, and remote access equipment (e.g., terminals, printers, and plotters)

4.7.3 Administrative Support

The contractor shall provide SDC facility staff with administrative support as required. This support, when required, shall include personnel, supplies, and equipment necessary to provide the direct services described in sections 4.7.3.1 through 4.7.3.8 and shall be accumulated and charged in accordance with the contractor's normal accounting practices for similar services and functions.

In addition to these direct support administrative functions, the contractor is expected to perform certain internal contractor administrative functions which support the entire contract (e.g., payroll, purchasing, and program management).

4.7.3.1 Courier Service

The contractor may be required to provide bonded courier service between the SDC facility and remote locations within the Washington metropolitan area. In addition, the contractor may be required to prepare packages for delivery by the Agency's express mail service.

When such services cannot meet Agency needs, the contractor shall arrange for alternative methods to accomplish necessary delivery.

4.7.3.2 Word Processing (WP) Services

The contractor shall be required to provide continuing WP and related services for the staff located at the SDC facility. Specific instructions will be provided with each request for WP support (e.g., source of the material, style, desired completion

date). These types of services shall be accomplished in accordance with the U.S. Government Printing Office Style Manual.

This support shall be hardware and software compatible with existing Agency WP equipment without the need for conversion or, if converted, without the loss of imbedded formats, fonts, and codes.

4.7.3.3 Facsimile Services

The contractor shall be required, on a continuing basis, to provide the capability for and operation of facsimile transmission equipment at the SDC facility for staff use on official contract-related business.

4.7.3.4 Decision Support System

The contractor may be required to provide the PO and Technical Manager with same-day access to detailed data, information, statistics or reports concerning the technical, operational, cost, EPA-supplied or purchased hardware and software, and managerial aspects of all on-going contract activities through both manual and automated means. When required, this type of data shall be available for both the contract as a whole and for all individual delivery orders.

4.7.3.5 Publication and Reproduction

The contractor may be required to prepare, type, draft, technically write, design graphics, operate and maintain plotters, and reproduce manuals, reports, or other documentation needed by the SDC staff. The contractor may also be required to produce and disseminate pamphlets, overheads, visual aids, and other presentation support materials required by personnel at the SDC facility.

The contractor shall conform to limits established by the Government Printing and Binding Regulations regarding all printing and duplication. Within those established limits, the contractor shall provide these services without resort to the use of similar Government services (e.g., the EPA copy centers and the Government Printing Office) unless specifically authorized by delivery order or contract modification.

4.7.3.6 Meeting and Seminar Coordination

The contractor may be required to plan, coordinate, prepare materials, and provide on-site management of and acquire space for SDC-sponsored meetings, workshops, seminars, JAD sessions and system's user groups.

4.7.3.7 Contractor Acquired Equipment

In addition to present or future government furnished equipment, the contractor shall be required to supply any hardware required to ensure effective SDC computer and telecommunications service. The EPA will be responsible for procuring all major computing systems and/or subsystems (e.g., mainframe central processors, disk subsystems, tape subsystems, tape drives, disk drives and major telecommunications facilities).

The contractor may be required to procure computing equipment (e.g., computers, modems, plotters, terminals, protocol converters, and data switches). The total cost of this equipment will not equal or exceed $2,500,000 over the life of the contract.

All equipment purchased as a direct charge under this contract becomes the property of the EPA and shall be returned to the EPA upon contract completion.

When in the best interest of the government, the contractor may be authorized by the CO to lease ADP equipment as a direct cost under the contract.

4.7.3.8 Contractor Acquired Software

The contractor may be required to acquire commercial application and/or system software to support specific delivery orders. CO direction will be in the form of a written delivery order or delivery order modification.

The total cost of this software will not equal or exceed $1,000,000 over the life of the contract. This contract limit includes contractor proposed and government initiated software. Title, if available, to all software shall vest in the government.

The contractor may also be required to obtain licensing agreements allowing states, other federal agencies, and other EPA-authorized users having access to the EPA's computing facilities to use such software.

4.7.4 IRM Technical Library Space

The contractor-furnished SDC facility shall include a minimum of 200 square feet of office space to house an IRM Technical Library containing technical and professional reference books, monographs, periodicals, project documentation, and other publications on various media as appropriate to support the mission of the SDC and

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associated staff. The contractor may be required to provide
furnishings and equipment for the technical library.

4.8 Miscellaneous Requirements

4.8.1 Phase-In Planning

The phase-in of this contract shall be accomplished in two parts.
In the first part, the contractor shall prepare two detailed
proposals for the site of the Systems Development Center facility
and, subsequent to a decision by EPA on the preferred location,
prepare a complete project plan addressing the phase-in require-
ments detailed in Attachment E and a project plan for the Develop-
ment and Maintenance Methodology Group.

The contractor shall prepare a minimum of two site proposals for
the Systems Development Center.   Any proposal submitted should
propose a location within the Washington Metropolitan Area that can
be provided at a cost within the ceiling suggested by the govern-
ment's estimate of Other Direct Costs when the SDC is fully staffed
at the levels detailed in the government's estimated man-hour
requirements (Section 8.0 of the Statement of Work). Each site
must also be able to comply with the requirements stated in the
Phase-In Requirements document (Attachment E of the Statement of
Work). It is in the government's interest to reduce travel costs
and to locate the SDC as close as possible to EPA client offices.
As a result, one of the two proposed sites should optimize facility
location by proposing a site as close as possible to an existing
EPA Headquarters facility or the route of existing transportation
services linking these same facilities. The second proposal should
consider location secondary to cost and should propose a site that
will cost less than the site that attempted to optimize location.

Each proposal shall provide for a SDC facility to house approxi-
mately twenty (20) contractor employees and ten (10) EPA employees
at the time the SDC facility is established. Each site should
allow for growth to fifty (50) contractor employees within the
first six (6) months of operation if such space is required. If
possible, each site should be able to allow growth to accommodate
approximately two hundred (200) contractor employees, should such
space be required during contract performance.

In addition, each proposed site shall provide approximately 200
square feet of space for the technical library and approximately
400 square feet for a conference room that can serve for JRP and
JAD sessions when required. The conference room should be located
in space provided for EPA employees. The technical library should
be located in space provided for contractor staff.

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The project plans required in part one of the phase-in shall follow project plan guidelines provided to the contractor by the MOSES Project Officer at the time of contract award.

In the second part of phase-in, the contractor shall implement the EPA approved plans for contract and facility phase-in and for the DMMG. The contractor shall attempt to achieve an efficient, coordinated, and orderly phase-in that will have a minimum adverse effect on any on-going projects.

4.8.2 Phase-Out Planning

Upon notification by the CO that the EPA plans NOT to exercise its option to renew this contract, or within six (6) months of the end of the final option period of performance, the contractor shall prepare a Phase-Out Plan for review and acceptance by the EPA and, upon direction from the CO, shall proceed to implement that plan.

4.8.3 Hours of Operation

Unless otherwise directed by the EPA's CO, the contractor shall provide support to cover "normal work hours" as established and set by the EPA sites supported by individual delivery orders. The contractor may be required to establish a staggered SDC work schedule to meet this requirement.

4.8.4 Security

The contractor may be required to develop and conduct risk assessments and implement IRM-related data and physical security procedures. Risk assessments and security procedures shall conform to Agency and Federal regulations, policies, and procedures.

4.8.4.1 Privacy Act

The contractor may be required to review, distribute, and collect information subject to disclosure restrictions based on the Privacy Act of 1974 (FAR 52.224-2 PRIVACY ACT (APR 1984)). EPA and contractor use of this information is controlled by written policy and procedure, including the Privacy Act notice (FAR 52.224-1 PRIVACY ACT NOTIFICATION (APR 1984))published in the Federal Register and instructions appearing in various EPA publications. The contractor shall enforce policies and procedures for handling and safeguarding sensitive information, and provide sufficient training to ensure employee compliance.

4.8.4.2 Toxic Substances Control Act (TSCA)/Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)

The contractor shall institute and maintain security measures for staff and activities under this contract in support of TSCA and FIFRA-related delivery orders. In addition, procedures in sections 4.8.4.2.1 through 4.8.4.2.4 may also be required before initiation of contract activities by the contractor and contractor personnel assigned to a TSCA or FIFRA project.

4.8.4.2.1 Preemployment Reference Check

The contractor shall, as required, investigate the background history of its prospective employees and execute the appropriate documents attesting to that background investigation. This requirement includes those employees currently employed by the incumbent and recruited for employment under this contract.

4.8.4.2.2 Nondisclosure Statement

Each contractor employee working on a TSCA or FIFRA-related delivery order shall receive a security briefing by the TSCA or FIFRA Security Office no less than annually, and shall sign a statement concurring with the specifics of the TSCA or FIFRA security procedures regulations. The statement will be furnished by the TSCA or FIFRA Security Officer. Certain contractor employees may also be required to complete a financial disclosure statement, due to the nature of material to be handled during execution of a delivery order task. Upon completion of all TSCA or FIFRA-related delivery order tasks, or upon employee termination, employees shall be required to complete the EPA's Confidentiality Agreement for Contractor Employees Upon Relinquishing TSCA CBI Access Authority, Form 7740-18 (1/86) or the FIFRA Confidentiality Agreement For Termination/Transfer as appropriate. The completed form shall be furnished by, and returned to, either the TSCA or FIFRA Security Officer.

4.8.4.2.3 Specified Security Procedures

The contractor shall be required to develop, initiate, and maintain security procedures related to the physical area which the contractor occupies, to include, but not limited to, locked file cabinets or safes; document or file markings and covers; access authorization; logs; transportation and use of documents and other data media within a secure environment; disposition of excess or working material no longer needed; and nondisclosure of information. These procedures shall be developed in close cooperation with, and be approved by, the TSCA and/or FIFRA Security Officer as appropriate.

The contractor shall provide a copy of such approved security procedures to all contractor and EPA staff no less than five (5) working days prior to initial commencement of activity under a TSCA

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or FIFRA delivery order.

4.8.4.2.4 Access List

The contractor shall be required to maintain a current list of all
individuals authorized access to TSCA/FIFRA Confidential Business
Information (CBI). The original access list and all updates shall
be provided to the TSCA and/or FIFRA Security Officer as appropri-
ate.

The contractor shall also maintain a current list of all individu-
als authorized access to SDC and/or to the EPA SDC workspace.

5.0 Ordering

The EPA will order services and products under this contract only
through issuance of written, CO-signed delivery orders. These
delivery orders will have specifically defined statements-of-work
and delivery schedules. The contractor shall be obligated to
perform under each delivery order and to deliver all services and
products within each delivery order's delivery schedule. Timing
and size of delivery orders cannot be predicted, and there is no
assurance of a steady work stream. Delivery orders will be issued
on an as-needed basis, and will be on an Indefinite Delivery,.
Indefinite Quantity Award Fee, Completion basis with a negotiated
contract ceiling price.

The contractor shall prepare detailed operational project plans for
each delivery order service and/or product. Plans shall include,
but are not limited to, milestones, data on resource use, proposed
labor mix, and specification of contractor-provided internal
management oversight.

The contractor shall, upon PO approval of a project plan, provide
a level of management to ensure realization of all objectives.
This includes advising the PO, and interested EPA employees and
representatives of other EPA contractors of action necessary on
their part to achieve these objectives.

The contractor may submit written suggestions for modification(s)
to issued delivery orders under this contract. Such written sug-
gestions shall be submitted to the DOPO for review. If the EPA
concurs with the suggested change(s), the CO will issue a formal
written delivery order modification. Under no circumstances will
contractor action related to such submissions be authorized before
the issuance of a CO-signed modification.

6.0 General Contractor Responsibilities

6.1 General Requirements

The contractor shall perform various tasks and services specified in individual delivery order SOWs. These tasks and services may include, but are not limited to:

o Attending meetings with OIRM and program office personnel to discuss project requirements

o Travel to the EPA Regional Offices and Laboratories or other designated remote sites as required by specific projects

o Providing technical consultation services to OIRM and program office personnel to review and analyze existing systems, to discuss alternative approaches to projects, and to provide other technical guidance and instructions as appropriate

o Review of technical literature, system documentation, and management reports required to effectively conduct SDC business

6.2 Contractor Briefings

6.2.1 Quarterly PO Briefing

The contractor shall present a quarterly briefing to the PO. This briefing shall focus on overall contract administrative procedures, management and technical issues; overall contract management and utilization of technical resources, including forecasts of technical resource requirements; and on the same areas for individual contract delivery orders.

6.2.2 Additional Briefings

The EPA may require additional briefings for selected EPA management personnel and special interest groups to review contract performance relative to particular technical subject areas and/or delivery orders, and to provide a forum to discuss opportunities for technology transfer and sharing of common resources for development of required IRM systems.

6.3 Basic Administrative Support

Basic administrative support includes contract administration, the issuance of standard reports, and overall administrative management. The contractor shall establish control mechanisms and internal policies and procedures which shall prevent duplication of effort, enhance development and operational economies of scale, and

encourage the efficient utilization of resources and expertise in support of all delivery orders. The contractor shall maintain and enforce these policies and procedures, report to the PO on their application to delivery orders, and ensure their continual application and review during each delivery order life cycle.

6.4 Contractor Personnel

6.4.1 Key Personnel

Certain senior professional and managerial contractor personnel considered essential for successful contractor performance are referred to as "Key Personnel" as identified in the section of this contract entitled Definition Of Labor Classifications. These "Key Personnel" shall demonstrate an understanding of the EPA's organization and organizational methodology and must also have a demonstrable ability to manage contractor activities at the EPA Headquarters, Regional Offices, and Laboratories nationwide.

6.4.2 Qualifications

All contractor personnel performing under this contract shall meet the minimum requirements for the applicable contract labor category and must be acceptable to the EPA in the areas of personal and professional expertise and conduct. The contractor shall submit individual resumes attesting that proposed personnel meet the minimum requirements stated in the contractor's EPA-accepted delivery order proposal. The DOPO will review resumes for all contractor-proposed staff related to his/her delivery order. The DOPO will send all acceptable resumes to the PO for concurrence and forwarding to the CO for formal, written approval. The contractor shall not assign any key personnel staff to this contract and/or delivery orders issued under this contract until written CO approval for that staff is issued.

All contractor personnel are required to speak, read, and write in English at a level commensurate with the type of position held.

The contractor is responsible for ensuring the level of support provided is adequate for efficient and effective delivery order administration. Contractor staffing problems are not justification for failure to meet established contract or delivery order schedules and could result in contract termination for default.

Within all labor categories, documented related experience may be substituted for education at the following rates:

   o one year of related experience may be substituted for the
     successful completion of an accredited technical or trade

school directly related to the applicable labor category (the technical or trade school course must have been no less than a six month course)

o one year of related experience may be substituted for one year of undergraduate college education directly related to the applicable labor category

o two years of related experience may be substituted for one year of graduate college education directly related to the applicable labor category. A Master's degree is counted as two years of graduate education. A Ph.D. is counted as a Master's degree plus two years of graduate education, but these two years of additional graduate level education may be substituted for experience only if the education is in a discipline applicable to the appropriate labor category, and from an accredited institution. Furthermore, no more than two years of graduate level education may be substituted for experience under any circumstances. Therefore, the maximum number of years of applicable and relevant graduate level education that could be substituted for experience is four (4).

6.4.3 Assignment

The contractor shall assign one (1) Program Manager (PM) with a designated backup, and as many Assistant Program Managers (APM) and site managers as necessary to support the PM in overall contract management and to manage individual delivery orders. These individuals are considered "Key Personnel" and shall not be subcontractor personnel unless approved by the Contracting Officer in writing.

The contractor's PM shall manage this contract's performance full-time, may not serve in any other capacity under this or any other contract, and shall be located at the SDC.

The contractor shall assign additional key personnel as required by individual delivery orders, listing such persons in the delivery order operational project plan. These additional key personnel may include, but are not limited to, any Level A3 or A2 personnel, any level P4 or P3 personnel, and any Level M3 personnel.

The contractor shall provide resumes for all additional personnel assigned to specific delivery order key positions as a part of the applicable delivery order operational project plan. These key personnel must be available for full-time assignment to the applicable delivery order for not less than six (6) months from the effective date of the delivery order or for the life of the delivery order,

whichever is the shorter period.

6.4.4 Training

The contractors' personnel shall maintain expertise in state-of-the-art IRM-related technology including, but not limited to, work functions and skills required by this contract. The contractor shall ensure this level of expertise through various methods (e.g., formal training and seminars). All training shall be paid for by the contractor unless the EPA specifically grants prior approval to meet special needs peculiar to a particular delivery order.

The contractor shall provide supervisory training to new supervisors to ensure they are qualified to perform their jobs.

The contractor shall make appropriate management and staff available for Agency-sponsored/conducted training. The primary purpose of this training will be to develop and maintain adequate knowledge (institutional memory) of EPA-wide and individual program office structure, function, and operation necessary to provide continuity between and coordination among individual delivery orders.

6.4.5 Restrictions and Standards of Conduct

The contractor and its employees, during periods paid for by the EPA, and/or while on the EPA premises, shall conduct only business covered by this contract. Contractor personnel shall abide by normal rules and regulations applicable to any Government premises on which they work, including safety and security regulations and any measures necessary to verify contractor labor hours. Contractor employees assigned to this contract shall not solicit business that may be within the scope of this contract without prior PO approval. This restriction is not intended to restrict submission of contractor written suggested modifications to issued delivery orders (See Section 5.0).

6.4.6 Other Considerations

Should the continued assignment of any contractor personnel to this contract be deemed by the CO, PO, DOPO, or Technical Manager to conflict with the interests of the Government, such personnel shall be immediately removed from the assignment and appropriate steps taken to replace him/her (See Sections 6.4.1 through 6.4.3). The reason for removal shall be fully documented in writing by the CO or PO with copies to the contractor.

Employment and staffing difficulties shall not justify contractor failure to meet the delivery order delivery schedules.

6.5 Subcontracting

Subcontracts may be issued during the life of this contract. The contractor shall submit proposed subcontracts through the PO to the CO for written approval prior to issuance.

7.0 Contractor/EPA Management Relationships

The EPA recognizes three (3) levels of management responsibility in this contract:

o Contract Performance Management

o Delivery Order Performance Management

o Technical Performance Management

Each of these management levels shall be the responsibility of a single individual representing the contractor, or a single individual representing the EPA. The intent is to promote the greatest interchange of information at each management level, allow problem resolution at the lowest management level, promote maximum utilization and efficiency of contractor resources at all management levels, and to avoid confusion in the interpretation of contract and delivery order conditions.

7.1 Contract Performance Management

The contractor's PM shall be the sole individual (with a designated backup) responsible for all facets of the contract and associated delivery orders. This responsibility shall include, but is not limited to, contract and delivery order reporting, invoicing, and milestone tracking. The PM's primary EPA-contact is the DOPO, although the PM may contact the PO and/or CO directly.

The DOPO will report problems to the PO in any PM/APM(s) responsibility area which is unable to be resolved through the PM. The PO, if unable to resolve a DOPO-reported contractor problem, will report the problem to the CO for final resolution.

7.2 Delivery Order Performance Management

Contractor APM(s) shall be responsible for day-to-day management of individual delivery orders and shall report to the PM. This responsibility shall include, but is not limited to, maintaining a close communication with the PM and EPA DOPO, PO, TM, and CO; and delivery order reporting, invoicing, and milestone tracking. The APM(s) primary EPA-contact is the DOPO, although the APM(s) may contact the PO and/or CO directly. The DOPO will review and submit, through the PO, all project plans for delivery orders within his/her assigned area of responsibility to the CO for

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approval. If the plan is determined to be unacceptable, the CO, PO, DOPO and the Contractor will discuss and agree on revisions needed for approval. The contractor shall, upon written CO notification of Project Plan approval, begin performance of delivery order required services in accordance with the approved plan. If approval requires changes requiring formal delivery order modification, such modification(s) shall be clearly identified. Work is not authorized until the DOPO has prepared the modification(s), the PO has forwarded the modification(s) to the CO for review, approval, and issuance, and the CO has formally issued the requested modification(s) in writing.

7.3 Technical Performance Management

The contractor shall designate a single individual, with a designated backup, as the expert on the technical labor specialties defined in this contract. This individual shall be the principal point-of-contact identified by the PM or APM(s) whenever the EPA Technical Manager and/or DOPO needs assistance in efforts to define and interpret the labor specialties for individual delivery orders, to resolve interpretation conflicts, or to reach mutual understanding of the technical requirements of this contract and its associated delivery orders.

8.0 Estimated Man-Hours Requirements

The Government estimates that the following man-hours of management and technical support will be required to perform the work specified herein in each of the contract periods of performance. This estimate is furnished for the purpose of providing additional information to the Statement of Work. During contract performance the Government may deviate from the estimated hours provided for any labor category including the total estimated hours per contract period. The Contractor may not exceed the contract ceiling amount established in Clause B.2, ESTIMATED COST, BASE FEE AND AWARD FEE for each contract period.

APPENDIX C

Appendix C contains the following under the MOSES contract:

- Labor Categories

- Labor Classifications and Definitions

NOTES

LABOR
CATEGORIES

Level	Base
A4-Senior Administration	
Program Manager	280
A3-High-Mid Administration	
Asst Prog Manager	560
A2- Middle Administration	
Tech Proj Leader	—
Operations Supv	—
Admin Assistant	280
A1- Administrative Support	
Admin Assistant	120
P4-Senior Technician	
Systems Engineering Expert	560
Systems Analyst	—
Programmer	—
Systems Designer	—
Network Specialist	280
DBM Systems Specialist	140
P3-Journeyman Technician	
Systems Analyst	—
Programmer	—
Systems Designer	—
Network Specialist	120
DBM Systems Specialist	—
IRM Training Specialist	—
Technical Writer	—
Meeting Facilitator	—
Tech Information Specialist	—
Equip Inst/Logis Support Tech	120
P2-Mid Technician	
Systems Analyst	—
Programmer	—
Systems Designer	—
Network Specialist	—
DBM Systems Specialist	—
IRM Training Specialist	—
Tech Writer	—
Tech Information Specialist	—
Equip Inst/Logis Support Tech	—

P1-Junior Technician
  Programmer   -
  Network Specialist   -
  Equip Inst/Logis Support Tech   -

S3-Senior Operations Support
  Computer Operator   -
  Document Abstractor   -
  Document Indexer   -
  Microfilm Specialist   -

S2-Mid Operations Support
  Computer Operator   -
  Computer Disk/Tape Librarian   -
  Microfilm Equipment Operator   -
  WP Operator   200
  Data Analyst   -

S1-Junior Operations Support
  Computer Operator   -
  Data Entry Operator   -
  Document Control Clerk   -
  WP Operator   160

M3-Sr Scientific/Specialized
  Sr Statistician   -
  Sr Scientific Info Sys Spec   -

M2-Mid Scientific/Specialized
  Statistician   -
  Scientific Info Sys Spec   -

              Total Labor (Base Period)   2,820

Level	Option Year I
A4-Senior Administration	
Program Manager	1,960
A3-High-Mid Administration	
Asst Prog Manager	8,085
A2- Middle Administration	
Tech Proj Leader	10,672
Operations Supv	3,557
Admin Assistant	3,557
A1- Administrative Support	
Admin Assistant	8,085
P4-Senior Technician	
Systems Engineering Expert	16,979
Systems Analyst	16,979
Programmer	6,791
Systems Designer	13,583
Network Specialist	6,791
DBM Systems Specialist	6,791
P3-Journeyman Technician	
Systems Analyst	13,098
Programmer	13,098
Systems Designer	13,098
Network Specialist	4,366
DBM Systems Specialist	13,098
IRM Training Specialist	8,732
Technical Writer	8,732
Meeting Facilitator	4,366
Tech Information Specialist	4,366
Equip Inst/Logis Support Tech	4,366
P2-Mid Technician	
Systems Analyst	2,426
Programmer	9,702
Systems Designer	2,426
Network Specialist	7,277
DBM Systems Specialist	7,277
IRM Training Specialist	4,851
Tech Writer	4,851
Tech Information Specialist	4,851
Equip Inst/Logis Support Tech	4,851

P1-Junior Technician
  Programmer   10,349
  Network Specialist   2,587
  Equip Inst/Logis Support Tech   12,936

S3-Senior Operations Support
  Computer Operator   9,702
  Document Abstractor   3,881
  Document Indexer   3,881
  Microfilm Specialist   1,940

S2-Mid Operations Support
  Computer Operator   2,587
  Computer Disk/Tape Librarian   1,940
  Microfilm Equipment Operator   1,940
  WP Operator   3,881
  Data Analyst   2,587

S1-Junior Operations Support
  Computer Operator   647
  Data Entry Operator   1,940
  Document Control Clerk   1,940
  WP Operator   1,940

M3-Sr Scientific/Specialized
  Sr Statistician   4,851
  Sr Scientific Info Sys Spec   4,851

M2-Mid Scientific/Specialized
  Statistician   4,851
  Scientific Info Sys Spec   4,851

          Total Labor (Option Period I)   323,744

	Option Year II
Level	
A4-Senior Administration	
Program Manager	1,960
A3-High-Mid Administration	
Asst Prog Manager	9,310
A2- Middle Administration	
Tech Proj Leader	12,289
Operations Supv	4,096
Admin Assistant	4,096
A1- Administrative Support	
Admin Assistant	9,310
P4-Senior Technician	
Systems Engineering Expert	19,551
Systems Analyst	19,551
Programmer	7,820
Systems Designer	15,641
Network Specialist	7,820
DBM Systems Specialist	7,820
P3-Journeyman Technician	
Systems Analyst	15,082
Programmer	15,082
Systems Designer	15,082
Network Specialist	5,027
DBM Systems Specialist	15,082
IRM Training Specialist	10,055
Technical Writer	10,055
Meeting Facilitator	5,027
Tech Information Specialist	5,027
Equip Inst/Logis Support Tech	5,027
P2-Mid Technician	
Systems Analyst	2,793
Programmer	11,172
Systems Designer	2,793
Network Specialist	8,379
DBM Systems Specialist	8,379
IRM Training Specialist	5,586
Tech Writer	5,586
Tech Information Specialist	5,586
Equip Inst/Logis Support Tech	5,586

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P1-Junior Technician
  Programmer   11,917
  Network Specialist   2,979
  Equip Inst/Logis Support Tech   14,896

S3-Senior Operations Support
  Computer Operator   11,172
  Document Abstractor   4,469
  Document Indexer   4,469
  Microfilm Specialist   2,234

S2-Mid Operations Support
  Computer Operator   2,979
  Computer Disk/Tape Librarian   2,234
  Microfilm Equipment Operator   2,234
  WP Operator   4,469
  Data Analyst   2,979

S1-Junior Operations Support
  Computer Operator   745
  Data Entry Operator   2,234
  Document Control Clerk   2,234
  WP Operator   2,234

M3-Sr Scientific/Specialized
  Sr Statistician   5,586
  Sr Scientific Info Sys Spec   5,586

M2-Mid Scientific/Specialized
  Statistician   5,586
  Scientific Info Sys Spec   5,586

        Total Labor (Option Period II)   372,492

Level	Option Year III
A4-Senior Administration	
Program Manager	1,960
A3-High-Mid Administration	
Asst Prog Manager	9,800
A2- Middle Administration	
Tech Proj Leader	12,936
Operations Supv	4,312
Admin Assistant	4,312
A1- Administrative Support	
Admin Assistant	9,800
P4-Senior Technician	
Systems Engineering Expert	20,580
Systems Analyst	20,580
Programmer	8,232
Systems Designer	16,464
Network Specialist	8,232
DBM Systems Specialist	8,232
P3-Journeyman Technician	
Systems Analyst	15,876
Programmer	15,876
Systems Designer	15,876
Network Specialist	5,292
DBM Systems Specialist	15,876
IRM Training Specialist	10,584
Technical Writer	10,584
Meeting Facilitator	5,292
Tech Information Specialist	5,292
Equip Inst/Logis Support Tech	5,292
P2-Mid Technician	
Systems Analyst	2,940
Programmer	11,760
Systems Designer	2,940
Network Specialist	8,820
DBM Systems Specialist	8,820
IRM Training Specialist	5,880
Tech Writer	5,880
Tech Information Specialist	5,880
Equip Inst/Logis Support Tech	5,880

P1-Junior Technician
   Programmer   12,544
   Network Specialist   3,136
   Equip Inst/Logis Support Tech   15,680

S3-Senior Operations Support
   Computer Operator   11,760
   Document Abstractor   4,704
   Document Indexer   4,704
   Microfilm Specialist   2,352

S2-Mid Operations Support
   Computer Operator   3,136
   Computer Disk/Tape Librarian   2,352
   Microfilm Equipment Operator   2,352
   WP Operator   4,704
   Data Analyst   3,136

S1-Junior Operations Support
   Computer Operator   784
   Data Entry Operator   2,352
   Document Control Clerk   2,352
   WP Operator   2,352

M3-Sr Scientific/Specialized
   Sr Statistician   5,880
   Sr Scientific Info Sys Spec   5,880

M2-Mid Scientific/Specialized
   Statistician   5,880
   Scientific Info Sys Spec   5,880

       Total Labor (Option Period III)   392,000

Level	Option Year IV
A4-Senior Administration	
Program Manager	1,960
A3-High-Mid Administration	
Asst Prog Manager	9,800
A2- Middle Administration	
Tech Proj Leader	12,936
Operations Supv	4,312
Admin Assistant	4,312
A1- Administrative Support	
Admin Assistant	9,800
P4-Senior Technician	
Systems Engineering Expert	20,580
Systems Analyst	20,580
Programmer	8,232
Systems Designer	16,464
Network Specialist	8,232
DBM Systems Specialist	8,232
P3-Journeyman Technician	
Systems Analyst	15,876
Programmer	15,876
Systems Designer	15,876
Network Specialist	5,292
DBM Systems Specialist	15,876
IRM Training Specialist	10,584
Technical Writer	10,584
Meeting Facilitator	5,292
Tech Information Specialist	5,292
Equip Inst/Logis Support Tech	5,292
P2-Mid Technician	
Systems Analyst	2,940
Programmer	11,760
Systems Designer	2,940
Network Specialist	8,820
DBM Systems Specialist	8,820
IRM Training Specialist	5,880
Tech Writer	5,880
Tech Information Specialist	5,880
Equip Inst/Logis Support Tech	5,880

P1-Junior Technician
  Programmer   12,544
  Network Specialist   3,136
  Equip Inst/Logis Support Tech   15,680

S3-Senior Operations Support
  Computer Operator   11,760
  Document Abstractor   4,704
  Document Indexer   4,704
  Microfilm Specialist   .   2,352

S2-Mid Operations Support
  Computer Operator   3,136
  Computer Disk/Tape Librarian   2,352
  Microfilm Equipment Operator   2,352
  WP Operator   4,704
  Data Analyst   3,136

S1-Junior Operations Support
  Computer Operator   784
  Data Entry Operator   2,352
  Document Control Clerk   2,352
  WP Operator   2,352

M3-Sr Scientific/Specialized
  Sr Statistician   5,880
  Sr Scientific Info Sys Spec   5,880

M2-Mid Scientific/Specialized
  Statistician   5,880
  Scientific Info Sys Spec   5,880

      Total Labor (Option Period IV)   392,000

Level	Option Year V
A4-Senior Administration	
Program Manager	1,960
A3-High-Mid Administration	
Asst Prog Manager	9,800
A2- Middle Administration	
Tech Proj Leader	12,936
Operations Supv	4,312
Admin Assistant	4,312
A1- Administrative Support	
Admin Assistant	9,800
P4-Senior Technician	
Systems Engineering Expert	20,580
Systems Analyst	20,580
Programmer	8,232
Systems Designer	16,464
Network Specialist	8,232
DBM Systems Specialist	8,232
P3-Journeyman Technician	
Systems Analyst	15,876
Programmer	15,876
Systems Designer	15,876
Network Specialist	5,292
DBM Systems Specialist	15,876
IRM Training Specialist	10,584
Technical Writer	10,584
Meeting Facilitator	5,292
Tech Information Specialist	5,292
Equip Inst/Logis Support Tech	5,292
P2-Mid Technician	
Systems Analyst	2,940
Programmer	11,760
Systems Designer	2,940
Network Specialist	8,820
DBM Systems Specialist	8,820
IRM Training Specialist	5,880
Tech Writer	5,880
Tech Information Specialist	5,880
Equip Inst/Logis Support Tech	5,880

P1-Junior Technician
  Programmer   12,544
  Network Specialist   3,136
  Equip Inst/Logis Support Tech   15,680

S3-Senior Operations Support
  Computer Operator   11,760
  Document Abstractor   4,704
  Document Indexer   4,704
  Microfilm Specialist   2,352

S2-Mid Operations Support
  Computer Operator   3,136
  Computer Disk/Tape Librarian   2,352
  Microfilm Equipment Operator   2,352
  WP Operator   4,704
  Data Analyst   3,136

S1-Junior Operations Support
  Computer Operator   784
  Data Entry Operator   2,352
  Document Control Clerk   2,352
  WP Operator   2,352

M3-Sr Scientific/Specialized
  Sr Statistician   5,880
  Sr Scientific Info Sys Spec   5,880

M2-Mid Scientific/Specialized
  Statistician   5,880
  Scientific Info Sys Spec   5,880

       Total Labor (Option Period V)   392,000

W001527-A3   **Attachment A (Rev. 9/4/91)**

Level	Option Year VI
A4-Senior Administration	
Program Manager	1,960
A3-High-Mid Administration	
Asst Prog Manager	9,800
A2- Middle Administration	
Tech Proj Leader	12,936
Operations Supv	4,312
Admin Assistant	4,312
A1- Administrative Support	
Admin Assistant	9,800
P4-Senior Technician	
Systems Engineering Expert	20,580
Systems Analyst	20,580
Programmer	8,232
Systems Designer	16,464
Network Specialist	8,232
DBM Systems Specialist	8,232
P3-Journeyman Technician	
Systems Analyst	15,876
Programmer	15,876
Systems Designer	15,876
Network Specialist	5,292
DBM Systems Specialist	15,876
IRM Training Specialist	10,584
Technical Writer	10,584
Meeting Facilitator	5,292
Tech Information Specialist	5,292
Equip Inst/Logis Support Tech	5,292
P2-Mid Technician	
Systems Analyst	2,940
Programmer	11,760
Systems Designer	2,940
Network Specialist	8,820
DBM Systems Specialist	8,820
IRM Training Specialist	5,880
Tech Writer	5,880
Tech Information Specialist	5,880
Equip Inst/Logis Support Tech	5,880

P1-Junior Technician
   Programmer   12,544
   Network Specialist   3,136
   Equip Inst/Logis Support Tech   15,680

S3-Senior Operations Support
   Computer Operator   11,760
   Document Abstractor   4,704
   Document Indexer   4,704
   Microfilm Specialist   2,352

S2-Mid Operations Support
   Computer Operator   3,136
   Computer Disk/Tape Librarian   2,352
   Microfilm Equipment Operator   2,352
   WP Operator   4,704
   Data Analyst   3,136

S1-Junior Operations Support
   Computer Operator   784
   Data Entry Operator   2,352
   Document Control Clerk   2,352
   WP Operator   2,352

M3-Sr Scientific/Specialized
   Sr Statistician   5,880
   Sr Scientific Info Sys Spec   5,880

M2-Mid Scientific/Specialized
   Statistician   5,880
   Scientific Info Sys Spec   5,880

       Total Labor (Option Period VI)   392,000

W001527-A3   **Attachment A (Rev. 9/4/91)**

	Option Year VII
Level	
A4-Senior Administration	
Program Manager	1,960
A3-High-Mid Administration	
Asst Prog Manager	8,820
A2- Middle Administration	
Tech Proj Leader	11,642
Operations Supv	3,881
Admin Assistant	3,881
A1- Administrative Support	
Admin Assistant	8,820
P4-Senior Technician	
Systems Engineering Expert	18,522
Systems Analyst	18,522
Programmer	7,409
Systems Designer	14,818
Network Specialist	7,409
DBM Systems Specialist	7,409
P3-Journeyman Technician	
Systems Analyst	14,288
Programmer	14,288
Systems Designer	14,288
Network Specialist	4,763
DBM Systems Specialist	14,288
IRM Training Specialist	9,526
Technical Writer	9,526
Meeting Facilitator	4,763
Tech Information Specialist	4,763
Equip Inst/Logis Support Tech	4,763
P2-Mid Technician	
Systems Analyst	2,646
Programmer	10,584
Systems Designer	2,646
Network Specialist	7,938
DBM Systems Specialist	7,938
IRM Training Specialist	5,292
Tech Writer	5,292
Tech Information Specialist	5,292
Equip Inst/Logis Support Tech	5,292

P1-Junior Technician
  Programmer   •   11,290
  Network Specialist   2,822
  Equip Inst/Logis Support Tech   14,112

S3-Senior Operations Support
  Computer Operator   10,584
  Document Abstractor   4,234
  Document Indexer   4,234
  Microfilm Specialist   2,117

S2-Mid Operations Support
  Computer Operator   2,822
  Computer Disk/Tape Librarian   .   2,117
  Microfilm Equipment Operator   2,117
  WP Operator   4,234
  Data Analyst   2,822

S1-Junior Operations Support
  Computer Operator   706
  Data Entry Operator   2,117
  Document Control Clerk   .   2,117
  WP Operator   2,117

M3-Sr Scientific/Specialized
  Sr Statistician   5,292
  Sr Scientific Info Sys Spec   5,292

M2-Mid Scientific/Specialized
  Statistician   .   .   5,292
  Scientific Info Sys Spec   5,292

      Total Labor (Option Period VII)   352,999

TOTAL LABOR HOURS (ALL PERIODS)   2,642,715

Level	Phase Out
A4-Senior Administration	
Program Manager	210
A3-High-Mid Administration	
Asst Prog Manager	1,400
A2- Middle Administration	
Tech Proj Leader	1,764
Operations Supv	588
Admin Assistant	308
A1- Administrative Support	
Admin Assistant	1,350
P4-Senior Technician	
Systems Engineering Expert	910
Systems Analyst	1,470
Programmer	588
Systems Designer	1,176
Network Specialist	208
DBM Systems Specialist	448
P3-Journeyman Technician	
Systems Analyst	588
Programmer	588
Systems Designer	588
Network Specialist	76
DBM Systems Specialist	588
IRM Training Specialist	392
Technical Writer	392
Meeting Facilitator	196
Tech Information Specialist	196
Equip Inst/Logis Support Tech	76
P2-Mid Technician	
Systems Analyst	98
Programmer	392
Systems Designer	98
Network Specialist	294
DBM Systems Specialist	294
IRM Training Specialist	196
Tech Writer	196
Tech Information Specialist	196
Equip Inst/Logis Support Tech	196

P1-Junior Technician
  Programmer   784
  Network Specialist   196
  Equip Inst/Logis Support Tech   980

S3-Senior Operations Support
  Computer Operator   490
  Document Abstractor   196
  Document Indexer   196
  Microfilm Specialist   98

S2-Mid Operations Support
  Computer Operator   196
  Computer Disk/Tape Librarian   147
  Microfilm Equipment Operator   147
  WP Operator   94
  Data Analyst   196

S1-Junior Operations Support
  Computer Operator   98
  Data Entry Operator   294
  Document Control Clerk   294
  WP Operator   134

M3-Sr Scientific/Specialized
  Sr Statistician   490
  Sr Scientific Info Sys Spec   490

M2-Mid Scientific/Specialized
  Statistician   490
  Scientific Info Sys Spec   490

           Total Labor (Phase Out Period)   22,660

LABOR CLASSIFICATIONS AND DEFINITIONS

DEFINITION OF LABOR CLASSIFICATIONS

1.   Introduction

The labor classifications below are divided into four groups with each group subdivided into several levels. The four groups are Administration, Technical Expertise, Operations Support, and Scientific/Specialized. Within each group, one or all levels are subdivided into labor categories. Labor categories in any given level should all be costed-out the same.

Offerors shall use the following labor classifications in preparing their technical proposals and shall use the levels for preparing their cost proposals. However, labor classifications are not confined to those described below.

1.1   **Level A4 - Senior Administration**

Education – A master's degree from an accredited graduate school.

1.1.1.   Program Manager.

Work Experience - Minimum of fifteen years of progressive software engineering experience. This experience shall include a minimum of five years experience in supervision and management of substantive software engineering projects, preferably including the use of the Information Engineering Methodology™, automated productivity tools, rigorous quality assurance and testing practices, configuration management, and project measurement and estimation techniques. The required experience shall also include a minimum of two years experience managing large, complex software engineering installations or projects with geographically dispersed staffs.

Duties - The contractor shall appoint one contract Program Manager who shall be the contractor's single authorized point-of-contact for discussion of EPA requirements and resolution of contractual problems involving the basic contract or individual delivery orders issued under the contract. These contractual problems include, but are not limited to, technical performance, facility problems, quality of products, apparent errors, potential and actual disputes, and invoicing and payment problems.

Responsibilities include organization, direction, and coordination of planning and production of all contractor activities. The Program Manager shall supervise contractor personnel assigned to this contract and oversee other managers in their management of individual delivery orders.

The Program Manager shall be primarily responsible for directing all SDC technical operations. The Program Manager shall manage the implementation of the SDC ensuring that all work is performed in accordance with the methods and procedures described in the Statement of Work and in accordance with methods, procedures, guidelines and standards adopted by the SDC as directed by EPA. The Program Manager will be responsible for all aspects of technical management and administration of the SDC.

The Program Manager shall be responsible for all business, cost containment and accounting activities for the contract and shall be chiefly responsible for operating the SDC facility and any satellite facilities as described in the SOW. The Program Manager shall be responsible for providing costing and cost control and containment advice to other SDC managers.

The Program Manager must be located at the SDC, may not serve in any other capacity under the contract, and shall be available to manage contract performance full-time. The Program Manager shall not be subcontracted personnel, must be available for assignment to this contract on its effective date, and must remain in the position a minimum of six months.

The Program Manager must demonstrate an ability to communicate orally and in writing with all levels of management and be able to interface with EPA management, personnel, and EPA Program Office representatives.

The Program Manager formulates and reviews project plans and costs; ensures contractor personnel conform to established contract work standards; assigns, schedules, and reviews work of subordinates; and also interprets EPA policy, purpose and goals for subordinates.

The Program Manager shall have the authority to negotiate for, and make binding decisions on behalf of, the contractor.

1.2   Level A3 - High-Mid Administration

Education — ?????? ??????? ??????? from an accredited graduate school.

1.2.1   Assistant Program Manager

Work Experience - Minimum of twelve years of progressive software engineering experience. This experience shall include a minimum of three years experience in supervision and management of substantive software engineering projects, preferably including the use of the Information Engineering Methodology™, automated productivity tools, rigorous quality assurance and testing practices, configuration

management, and project measurement and estimation techniques.

Duties - The contractor shall appoint one or more Assistant Program
Managers to assist the Program Manager in managing specific, broad
areas of contractor effort; serve as group leaders where a group
consists of two or more project or work teams; plan and direct SDC
projects, including all phases and components of systems engineer-
ing work; schedule and assign duties to subordinates; interface
with EPA management and Program Office personnel; and submit status
reports orally and in writing to contractor and EPA management.

In directing and managing SDC projects, Assistant Program
Managers will be responsible for the provision of timely and
comprehensive project plans to EPA management and for the well-
managed implementation of such plans.   The Assistant Program
Manager shall implement practices and procedures which ensure
consistent usage of standards, methods, techniques, QA/QC, config-
uration management, project estimation and measurement, scheduling,
management, documentation, evaluation and improvement. Assistant
Program Managers will manage the use of resources across projects
such that project skill needs are fully met and staff skills are
wisely deployed, ensuring the success of SDC projects while achiev-
ing cost containment where possible. Assistant Program Managers
are also responsible for promoting environmental information
sharing within the systems engineering projects conducted by the
SDC.

1.3   Level A2 - Middle Administration

**Education - A bachelor's degree from an accredited four year
college or university.**

1.3.1   Technical Project Leader

Work Experience - Minimum of ten years experience as a systems
engineering technician such as a systems analyst, systems designer,
data base management system specialist. Up to the first three
years of systems engineering experience can be as a programmer. At
least two of the last three years shall demonstrate experience in
managing a team composed of systems engineering specialists such as
systems analysts, systems designers, data base management system
specialists and programmers. Work performed and/or supervised
preferably includes the use of the Information Engineering
Methodology™, automated productivity tools, rigorous quality
assurance and testing practices, configuration management, and
project measurement and estimation techniques.

Duties - The Technical Project Leader (TPL) manages and directs
technical project teams in performing SDC delivery order work. The

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TPL provides technical leadership and guidance to subordinate technical and support contractor personnel. The TPL meets with EPA officials to discuss and analyze management, technical and business issues related to proposed or ongoing SDC delivery order projects.

The TPL must develop work plans and related schedules using state-of-the-art project estimating, planning and managing techniques as approved by EPA. The TPL must work with a variety of scientific and business requirements.

1.3.2   Operations Supervisor

Work Experience - A minimum of ten years, two years of which shall have been within the last three years, experience in Information Resources Management (IRM) system operations, computer hardware operation and system trouble-shooting, including a minimum of one year of experience in the last two years supervising computer operators and related support staff.

Duties - The Operations Supervisor supervises computer operators and other operations staff, and is responsible for controlling computer hardware and other types of equipment such as microfilm equipment and image processing equipment. The Operations Supervisor is responsible for monitoring the operation of computer hardware and other equipment and peripheral devices for the SDC, including all equipment used by on-site EPA staff, and for the preparation and processing of data input/output. The Operations Supervisor establishes schedules for the production environment to obtain maximum usage of IRM equipment. He/she supervises any site preparation and installation of IRM equipment. He/she ensures that hardware malfunctions and error situations are dealt with rapidly and correctly to ensure that data is processed as required.

1.3.3   Administrative Assistant

Work Experience - A minimum of ten years of professional accounting or financial activities with a minimum of three years of such experience in a large systems engineering environment or large data processing systems development organization.

Duties - The Administrative Assistant shall assist management in all business, cost containment and accounting activities for the contract and shall also assist management in operating the SDC facility and any satellite facilities as described in the SOW. The Administrative Assistant shall be responsible for providing costing and cost control and containment advice to other SDC managers. The Administrative Assistant shall supervise subordinate administrative and office staff.

1.4   Level A1 - Administrative Support

Education - A bachelor's degree from an accredited four year college or university.

1.4.1   Administrative Assistant

Work Experience - A minimum of four years of office administration experience including accounting or financial activities, with a minimum of one year of such experience in a large systems engineering environment or large data processing systems development organization.

Duties - The Administrative Assistant shall assist management in office administration, contract administration and facility operation activities for the contract. The Administrative Assistant shall be responsible for assisting management in providing costing and cost control and containment advice to other SDC managers.

1.5   Level P4 - Senior Technician

Education - A master's degree from an accredited college or university.

Work Experience — A minimum of twelve years of progressive systems engineering or software development experience. This experience shall include a minimum of five years of substantial, demonstrated, journeyman level experience in at least one of the following areas: system planning, domain analysis, system design, database design, programming, software quality assurance, system testing or technical architecture design and implementation.

Skills required at this level include, but are not limited to, those listed in Section 4.5 of the SOW. Labor categories are discussed below and work experience for each labor category must include a minimum of five years specialized experience performing duties discussed for that category within the last seven years of experience. In addition, three out of the last five years must include specialized experience in two or more technical application skills (Section 4.5 of the SOW). The contractor must recognize that EPA's hardware and software environment is in a state of constant evolution and that technical skills that are not listed in the SOW may be required. In cases where such skills are in a very new area, a waiver for the three year experience requirement may be granted based on EPA's judgment of the reasonability of such a waiver.

The Network Specialist is the only exception in the P.4 level to the above work experience requirements; Network Specialist work

experience requirements are discussed in the Network Specialist description.

1.5.1   Systems Engineering Expert

Work Experience - In addition to the general requirements listed for level P4, the Systems Engineering Expert must have a minimum of three years experience in substantive systems engineering projects. This experience must include direct and intensive involvement in the application of a recognized, systematic and disciplined methodology for system or software engineering and extensive use of computer assisted software engineering tools. Other software development experience is not a substitute for the three year requirement in this category.

Duties - The Systems Engineering Expert is responsible for advising SDC and EPA management and staff on all aspects of systems engineering, including but not limited to those listed in SOW Section 4.5. He/she provides expert advice, consultation and assistance in one or more of the four specialty areas listed above and applies such expertise to planning, management and evaluation of systems engineering projects. Formulates guidance, standard operating procedures and practices tailored to the SDC and to EPA relative to systems engineering and supporting automated tools, incorporating applicable FIPS standards and/or NIST guidance publications. Monitors the usage of these products and makes revisions as needed. Formulates plans and proposals for informing and training the SDC and the EPA in systems engineering methods, practices, techniques and tools. Serves as an active participant in selected system-engineering projects. Stays abreast of new systems engineering developments and industry and government experiences with major systems engineering efforts for the purpose of evaluating methods, techniques, tools and lessons learned for application at the SDC.

1.5.2   Systems Analyst

Duties - Serves as the senior Systems Analyst in the planning and analysis phases of the system life cycle for major projects, providing expert skills in all aspects of these two phases. Prepares and delivers planning and analysis products for colleagues, team members and clients, reviews work products for correctness and provides consultation and advice to team members in planning and analysis matters. Coordinates closely with Systems Engineering Experts in using and evaluating systems engineering guidance, standard operating procedures and practices related to planning and analysis.

1.5.3   Programmer

for level P4, the Programmer must have five years of the last seven
specializing in developing detailed programming specifications, and
programming, testing and debugging complex applications and/or
systems programs. Must have experience in two of the last three
years in an appropriate specialty area such as a specific high
level language, a specific DBMS, graphics, image processing, or
SQL.

Duties - The programmer develops complex, detailed program
specifications based on program designs produced in the detailed
technical design phase of the systems engineering life cycle.
He/she verifies program specification and code correctness. He/she
analyzes complex program designs, including software integration
programs, for such factors as the type and extent of data to be
transferred from storage units, data sorting, efficient and effec-
tive program modularization, and restart and recovery procedures
both automated and manual. Supervises other programmers in a
systems engineering project team performing large, complex integra-
tion projects, reviewing their work products for correctness and
providing advice and assistance as needed. Designs, codes, tests
and debugs system integration programs for importing and exporting
information between CASE tools as needed. Provides detailed and
clear documentation on all products.

1.5.4   Systems Designer

Duties - Serves as the Senior Systems Designer during the design
and development phases of the system life cycle for large complex
projects, providing expert skills in all aspects of these two
phases.   Prepares and delivers design specifications and other
appropriate products to colleagues, team members and clients,
reviews work products for correctness and provides consultation and
advice to team members in design and development matters. Coordi-
nates closely with systems engineering experts in using and
evaluating systems engineering guidance, standard operating proce-
dures and practices related to design and development.

1.5.5   Network Specialist

Work Experience - Must have a minimum of ten years in the telecom-
munications/networking field with two of the last three years in
telecommunications management. Work experience must have demon-
strated knowledge of federal regulations related to the procurement
and administration of telecommunication services and equipment and
experience in the management and operational requirements of voice
and data telecommunications systems, services, and programs,
including analysis techniques, and knowledge of the design,
operation, and technical capabilities of major telecommunications

systems (includes private line switching, common control switching arrangements, message processing/switching systems, step switching, crossbar switching, and analog or digital computer-based electronics PBX systems). Work experience must have demonstrated competence to work in the highest levels of all phases of the IBM-based telecommunications and X.25 environments independently. Must have demonstrated work experience in Ethernet LAN and token-ring LAN connectivity.

Duties - Serves as the network supervisor for the SDC and is responsible for all telecommunications and LAN operation support activities, including planning, designing, installing and maintaining on-line data communications networks in support of data systems and projects. Interfaces with SDC and EPA management and staff to coordinate telecommunication software, hardware, and systems capabilities. Advises SDC and EPA management of problem areas and makes recommendations for improvements.

1.5.6   Data Base Management Systems Specialist

Work Experience - In addition to the general requirements listed for level P4, the DBMS Specialist must have at least five of the last seven years as a DBMS designer, implementer and administrator using at least two of the following six: a relational DBMS such as DB2, Oracle or Ingres; ADABAS; System 2000; FOCUS; ARC/INFO GIS; or IDMS.

Duties - Serves as senior DBMS Specialist on complex applications projects in the DBMS design, implementation and administration area. Supervises other DBMS specialists on project teams. Serves as consultant and advisor to system designers to develop DBMS options for system implementation proposals. Evaluates database design tradeoffs, impacts, user expectations, performance levels, and space allocation requirements, balancing ease of use with performance. Responsible for the operation and maintenance of the SDC central encyclopedia which will serve as the repository for all systems information entered through the use of CASE tools. Serves as the liaison between the central encyclopedia vendor and the SDC and as the liaison between the mainframe facility running the encyclopedia and the SDC. Identifies areas where standards are appropriate and proposes standards, guidelines, controls and procedures to ensure efficient, disciplined usage of the encyclopedia. Gains and continually develops a thorough understanding of the encyclopedia and its security and management.

1.6   Level P3 - Journeyman Technician

Education - A bachelor's degree from an accredited four year college or university.

Work Experience -- Minimum of eight years of progressive systems engineering experience. This experience shall include a minimum of five years experience in substantive systems engineering or software development projects. Use of a structured systems engineering methodology, automated productivity tools, rigorous quality assurance and testing practices, configuration management, and project measurement and estimation techniques are preferred but not required at this level.

Skills required at this level include, but are not limited to, those listed in Section 4.5 of the SOW. Labor categories are discussed below and work experience for each labor category must include a minimum of three years specialized experience performing duties discussed for that category within the last five years of experience. In addition, three out of the last five years must include specialized experience in two or more technical application skills (Section 4.5 of the SOW). The contractor must recognize that EPA's hardware and software environment is in a state of constant evolution and that technical skills that are not listed in the SOW may be required. In cases where such skills are in a very new area, a waiver for the three year experience requirement may be granted based on EPA's judgment of the reasonability of such a waiver.

The Network Specialist, Training Specialist, Technical Information Specialist, Equipment Installation and Logistical Support Technician and Technical Writer are exceptions in the P.3 level to the above education and/or work experience requirements; requirements for these labor categories are discussed in their descriptions below.

1.6.1 Systems Analyst

Duties - Serves as a Systems Analyst in the planning and analysis phases of the system life cycle for complex major projects, and as the senior Systems Analyst for less complex projects, providing expert skills in all aspects of these two phases. Prepares and delivers planning and analysis products for colleagues, team members and clients, reviews work products for correctness and provides consultation and advice to team members in planning and analysis matters. Coordinates closely with Systems Engineering Experts in using and evaluating systems engineering guidance, standard operating procedures and practices related to planning and analysis.

1.6.2 Programmer

Work Experience - In addition to the general requirements listed for level P3, the Programmer must have three years of the last five

specializing in developing detailed programming specifications, and
programming, testing and debugging complex applications and/or
systems programs. Must have experience in two of the last three
years in an appropriate specialty area such as a specific high
level language, a specific DBMS, graphics, image processing, or
SQL.

Duties - The programmer develops complex, detailed program
specifications based on program designs produced in the detailed
technical design phase of the systems engineering life cycle.
He/she verifies program specification and code correctness. He/she
analyzes complex program designs for such factors as the type and
extent of data to be transferred from storage units, data sorting,
efficient and effective program modularization, and restart and
recovery procedures both automated and manual. Supervises other
programmers in a systems engineering project team, reviewing their
work products for correctness and providing advice and assistance
as needed. Designs, codes, tests and debugs system integration
programs for importing and exporting information between CASE tools
as needed. Provides detailed and clear documentation on all
products.

1.6.3   Systems Designer

Duties - Serves as a Senior Systems Designer during the design and
development phases of the system life cycle for large complex
projects and as the senior Systems Designer for less complex
projects, providing expert skills in all aspects of these two
phases. Prepares and delivers design specifications and other
appropriate products to colleagues, team members and clients,
reviews work products for correctness and provides consultation and
advice to team members in design and development matters.
Coordinates closely with systems engineering experts in using and
evaluating systems engineering guidance, standard operating
procedures and practices related to design and development.

1.6.4   Network Specialist

Work Experience - Must have a minimum of eight years in the
telecommunications/networking field with one of the last two years
in telecommunications management. Work experience must have
demonstrated knowledge of federal regulations related to the
procurement and administration of telecommunication services and
equipment and experience in the management and operational require-
ments of voice and data telecommunications systems, service, and
programs, including analysis techniques, and knowledge of the
design, operation, and technical capabilities of major telecom-
munications systems (includes private line switching, common
control switching arrangements, message processing/switching

systems, step switching, crossbar switching, and analog or digital computer based electronics PBX systems). Work experience must have demonstrated competence to work in the highest levels of all phases of the IBM-based telecommunications and X.25 environments independently. Must have demonstrated work experience in Ethernet LAN and token-ring LAN connectivity.

Duties - The Network Specialist is responsible for telecommunications and LAN operation support activities, including planning, designing, installing and maintaining on-line data communications networks in support of data systems and projects as directed by the Network Supervisor. Supports the network supervisor in coordinating telecommunication software, hardware, and systems capabilities. Advises the network supervisor of problem areas and makes recommendations for improvements. Performs most work independently and serves as network advisor to project teams.

1.6.5   Data Base Management Systems Specialist

Work Experience - In addition to the general requirements listed for level P3, the DBMS Specialist must have at least three of the last five years as a DBMS designer, implementer and administrator using at least one of the following six: a relational DBMS such as DB2, Oracle or Ingres; ADABAS; System 2000; FOCUS; ARC/INFO GIS; or IDMS.

Duties - Serves as a DBMS Specialist on complex applications projects in the DBMS design, implementation and administration area and as the senior DBMS specialist on projects of medium complexity. Supervises other DBMS specialists on project teams. Serves as consultant and advisor to system designers to develop DBMS options for system implementation proposals. Evaluates database design tradeoffs, impacts, user expectations, performance levels, and space allocation requirements, balancing ease of use with performance. Responsible for supporting the operation and maintenance of the SDC central encyclopedia/repository. Identifies areas where standards are appropriate and proposes standards, guidelines, controls and procedures to ensure efficient, disciplined usage of the encyclopedia. Gains and continually develops a thorough understanding of the encyclopedia and its security and management.

1.6.6   IRM Training Specialist.

Work Experience - Requires a minimum of seven years experience as a computer programmer, systems analyst, or system designer, including a minimum of three years, two years of which shall have been within the last three years, documented experience developing and managing IRM training programs. Work experience must also demonstrate a minimum of two years of supervisory experience.

Duties - The IRM Training Specialist at the P3 level serves as the senior training specialist for the SDC, providing technical assistance and training related to the use of a variety of IRM tools, methods and technologies. Training assistance is associated with EPA's Personal Computer (PC), LAN, and mainframe computer community and focuses on application systems and systems engineering methods, techniques and tools. The IRM Training Specialist assists in the selection, development, coordination, and update of training methods and training materials (e.g., hardware and application software, tools and user guides, classroom texts, automated tutorials and referencing systems, and self-help instructional systems).

The Training Specialist is responsible for IRM training planning and/or management, to include system and software demonstrations; organization of, and/or conducting of specialized project team training in systems development structured methodologies, specific aspects of the systems development life-cycle, and/or CASE tools; IRM and project-related training plans; training logistics and associated record keeping; and training to introduce EPA management to various aspects of systems engineering and related SDC activities and experiences.

1.6.7   Technical Writer.

Work Experience - Work experience required includes a minimum of seven years, three years of which shall be within the last three years, of general technical and documentation writing experience. This experience must include development of IRM system, program and user documentation.

Duties - The Technical Writer is responsible for planning, managing, coordinating and/or conducting the documentation of all aspects of the systems engineering life cycle for projects, including: preparation and editing of IRM system and user documentation, incorporating information provided by users, specialists, analysts, programmers and operations personnel; and ensuring adequate software documentation in development and maintenance activities. This position requires substantial knowledge of the capabilities and operation of computer systems and various IRM technologies and will require close coordination with the senior IRM Training Specialist and staff. Duties also include writing, editing, graphically representing and presenting technical information for technical and nontechnical personnel. This will require interpretation of technical documentation standards and preparation of documentation according to those standards. He/she must be capable of working independently and may be required to supervise technical writers.

Must work with appropriate SDC staff to plan and implement a system to support electronic preparation, storage and retrieval of all SDC project-related control documents (project plan, configuration management plan, etc.) and client deliverables. Must ensure that the documentation support system provides for configuration management control of all SDC documents, easy access to current versions of all such documents in electronic form from a central, controlled source and provides for printing hard copies from the central source. Responsible for proposing and implementing EPA-approved guidelines for the presentation of SDC documents.

1.6.8   Meeting Facilitator.

Work Experience - In addition to the work experience required for level P3, this position requires that three of the last five years demonstrate extensive meeting facilitation experience in direct support of systems engineering projects, with progressively increasing complexity in project and meeting requirements.

Duties - The Meeting Facilitator works with SDC project teams as the chief advisor and consultant on facilitated meetings and assists in identifying appropriate uses of facilitated meetings in the various systems engineering projects. He/she assists in planning such meetings and is often required to serve as the lead planner. He/she either conducts or serves as advisor to others conducting such meetings. He/she evaluates or assists in evaluating the meetings, develops or revises facilitation guidelines as appropriate and works with the IRM Training Specialist to train appropriate SDC and EPA staff in the conduct and use of facilitated meetings. Stays abreast of facilitated meeting developments in methods, philosophy and purpose, applying such developments to SDC practices as appropriate.

1.6.9   Technical Information Specialist

Work Experience - A minimum of eight years, two years of which shall have been within the last two years, experience in IRM-related project work.

Duties - The Technical Information Specialist at this level performs highly complex information processing functions that require independent judgement and knowledge of the subject matter. These functions involve the design and use of specialized database searching, data entry and report generation techniques for routine and ad hoc purposes as well as the acquisition, control, analysis, processing, dissemination and computerization of materials, documents and data capture forms. Application areas include, but are not limited to: automated data libraries, databases, and surveys; technical literature; and other IRM services.

He/she may be responsible for directing the work of several Technical Information Specialists.

1.6.10   Equipment Installation and Logistical Support Technician

Work Experience - A minimum of eight years, two years of which shall have been within the last two years, hands-on experience in the repair/maintenance/installation of various computer systems/equipment, including PC's, telephone instruments and equipment (e.g. instruments comparable to standard single-line, key, speaker phone, and touch-a-matic sets and electronic key or 1A2 key systems), and data modems (e.g. modems equal to standard models 212 and 103), including a minimum of one year supervisory experience.

Duties - The Equipment Installation and Logistical Support Technician's duties at this level shall include, but not necessarily be limited to: installation, deinstallation, and in-house moves of PC's and telecommunications equipment; addition or exchange of externally connected accessories to PC's and telecommunication equipment; hardware problem isolation and diagnosis on PC's, LAN's, and telecommunications equipment; addition or replacement of boards, batteries, disk drives, and similar components internal to PC's and telecommunication equipment; installation of cabling required for LAN's; attachment, detachment, or exchange of LAN cabling to workstations (PC's or terminals), servers, and telecommunications equipment; assist EPA in the use of "Depot" repair contracts (or equivalent) to obtain repairs or replacements for defective PC, LAN or telecommunications components.

1.7   Level P2 - Middle Technician

Education - A bachelor's degree from an accredited four year college or university.

Work Experience -- Minimum of five years of progressive systems engineering or software development experience.

Skills required at this level include, but are not limited to, those listed in Section 4.5 of the SOW. Labor categories are discussed below and work experience for each labor category must include a minimum of two years specialized experience performing duties discussed for that category within the last three years of experience. In addition, two out of the last three years must include specialized experience in one or more technical application skills (Section 4.5 of the SOW). The contractor must recognize that EPA's hardware and software environment is in a state of constant evolution and that technical skills that are not listed in the SOW may be required. In cases where such skills are in a very new area, a waiver for the two year experience requirement may be

granted based on EPA's judgment of the reasonability of such a waiver.

The Network Specialist, Training Specialist, Technical Information Specialist, Equipment Installation and Logistical Support Technician, and Technical Writer are exceptions in the P2 level to the above work experience requirements; requirements for these labor categories are discussed in their descriptions below.

1.7.1   Systems Analyst

Duties - Serves as a Systems Analyst in the planning and analysis phases of the system life cycle for projects of medium complexity. Prepares and delivers planning and analysis products for colleagues, team members and clients, reviews work products for correctness and provides consultation and advice to team members in planning and analysis matters. Coordinates closely with Systems Engineering Experts in using and evaluating systems engineering guidance, standard operating procedures and practices related to planning and analysis.

1.7.2   Programmer

Work Experience - In addition to the general requirements listed for level P2, the Programmer must have two years of the last three years specializing in programming, testing and debugging applications and/or systems programs of medium complexity. This experience must include one year of working in an appropriate specialty area such as a specific high-level language, a specific DBMS, graphics, image processing, or SQL.

Duties - The programmer translates detailed design specifications of medium to high complexity into computer program coded instructions, tests programs, and corrects program errors to produce a product which conforms to the approved project design specifications. This effort includes documenting programs to aid programmers in the performance of program maintenance as required to improve overall program operating time/system efficiency, or ease of use.

1.7.3   Systems Designer

Duties - Serves as a Systems Designer during the design and development phases of the system life cycle for projects of medium complexity. Prepares and delivers design specifications and other appropriate products to colleagues, team members and clients, reviews work products for correctness and provides consultation and advice to team members in design and development matters. Coordinates closely with systems engineering experts in using and

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evaluating systems engineering guidance, standard operating procedures and practices related to design and development.

1.7.4   Network Specialist

Work Experience - Must have a minimum of five years in the telecommunications/networking field.   Work experience must have demonstrated knowledge of federal regulations related to the procurement and administration of telecommunication services and equipment and experience in the operational requirements of voice and data telecommunications systems, service, and programs, including knowledge of the design, operation, and technical capabilities of major telecommunications systems (includes private line switching, common control switching arrangements, message processing/ switching systems, step switching, crossbar switching, and analog or digital computer based electronics PBX systems).   Must have demonstrated work experience in Ethernet LAN and token-ring LAN connectivity.

Duties - The Network Specialist is responsible for supporting telecommunications and LAN operations, including installing and maintaining on-line data communications networks in support of data systems and projects as directed by the network supervisor.

Supports the network supervisor in coordinating telecommunication software, hardware, and systems capabilities. Advises the network supervisor of problem areas and makes recommendations for improvements.

1.7.5   Data Base Management Systems Specialist

Work Experience - In addition to the general requirements listed for level P2, the DBMS Specialist must have experience in at least two of the last three years as a DBMS designer, implementer and administrator using at least one of the following six: a relational DBMS such as DB2, Oracle or Ingres; ADABAS; System 2000; FOCUS; ARC/INFO GIS; or IDMS.

Duties - Serves as a DBMS Specialist on applications projects of medium complexity in the DBMS design, implementation and administration area.   Serves as consultant and advisor to system designers to develop DBMS options for system implementation proposals.   Evaluates database design tradeoffs, performance levels, and space allocation requirements, balancing ease of use with performance. Serves as data base administrator on data bases of medium to low complexity.

1.7.6   IRM Training Specialist.

Work Experience - Requires a minimum of five years experience as a computer programmer, systems analyst or systems designer; including a minimum of three years, two years of which shall have been within the last three years, documented experience participating in conducting IRM training programs.

Duties - The IRM Training Specialist at the P2 level supports the senior training specialist for the SDC, providing technical assistance and training related to the use of a variety of IRM tools, methods and technologies. Training assistance is associated with EPA's Personal Computer (PC), LAN, and mainframe computer community and focuses on application systems and systems engineering methods, techniques and tools. The IRM Training Specialist assists the senior IRM Training Specialist in the selection, development, coordination, and update of training methods and training materials (e.g., hardware and application software, tools and user guides, classroom texts, automated tutorials and referencing systems, and self-help instructional systems).

The IRM Training Specialist is responsible for coordinating logistical support for training sessions.

1.7.7   Technical Writer.

Work Experience - Work experience required includes a minimum of five years, two years of which shall be within the last three years, of general technical and documentation writing experience. This experience must include development of IRM system, program and user documentation.

Duties - The Technical Writer is responsible for planning, managing, coordinating and/or conducting the documentation of all aspects of the systems engineering life cycle for projects, including: preparation and editing of IRM system and user documentation, incorporating information provided by users, specialists, analysts, programmers and operations personnel; and ensuring adequate software documentation in development and maintenance activities. This position requires substantial knowledge of the capabilities and operation of computer systems and various IRM technologies and will require close coordination with the senior IRM Training Specialist and staff. Duties also include writing, editing, graphically representing and presenting technical information for technical and nontechnical personnel. This will require interpretation of technical documentation standards and preparation of documentation according to those standards.

Supports the senior Technical Writer in developing a plan for a system to support electronic preparation, storage and retrieval of all SDC project-related control documents (project plan,

configuration management plan, etc.) and client deliverables.

1.7.8   Technical Information Specialist

Work Experience - A minimum of three years, two years of which
shall have been within the last two years, experience in IRM-
related project work.

Duties - The Technical Information Specialist performs complex
information processing functions that require independent judgement
and knowledge of the subject matter. These functions involve the
preliminary design and use of predesigned database searches, data
entry and report generation techniques for routine and ad hoc pur-
poses as well as the acquisition, control, analysis, processing,
dissemination and computerization of materials, documents and data
capture forms.

        Application areas include, but are not limited to: automated
data libraries, databases, and surveys; technical literature; and
other information management services.

1.7.9   Equipment Installation and Logistical Support Technician

Work Experience - A minimum of six years, one year of which shall
have been within the last year, hands-on experience in the
repair/maintenance/installation of various computer systems/equip-
ment, including PC's, telephone instruments and equipment (e.g.
instruments comparable to standard single-line, key, speaker phone,
and touch-a-matic sets and electronic key or 1A2 key systems), and
data modems (e.g. modems equal to standard models 212 and 103).

Duties - The Equipment Installation and Logistical Support Technic-
ian's duties shall include, but not be limited to, installation,
deinstallation, and in-house moves of PC's and telecommunications
equipment; addition or exchange of externally connected accessories
to PC's and telecommunications equipment; hardware problem
isolation and diagnosis on PC's, LAN's, and telecommunications
equipment; the addition or replacement of boards, disk drives, bat-
teries, and similar components internal to PC's and telecommunica-
tion equipment; installation of cabling required for LAN's;
attachment, detachment, or exchange of LAN workstations (PC's or
terminals), servers, and telecommunications equipment cabling;
assisting EPA in the use of "Depot" repair contracts (or equiva-
lent) for repair or replacement of defective PC, LAN or telecommu-
nications components. Work is reviewed at completion.

1.8   Level P1 -- Junior Technician

Work Experience - Skills that may be required at this level
include, but are not limited to, those listed in Section 4.5 of the
SOW. Labor categories are discussed below and work experience for
each labor category must include a minimum of one year specialized
experience performing duties discussed for that category within the
last two years of experience. In addition, one out of the last two
years must include specialized experience in one or more technical
application skills (refer to Sections 4.1-4.5 of the SOW). The
contractor must recognize that EPA's hardware and software
environment is in a state of constant evolution and that technical
skills that are not listed in the SOW may be required. In cases
where such skills are in a very new area, a waiver for the one year
experience requirement may be granted based on EPA's judgment of
the reasonability of such a waiver.

1.8.1   Programmer

Education - A bachelor's degree from an accredited four year
college or university.

Work Experience - Must have a minimum of two years of systems
engineering or software development experience. Must have one year
of the last two years specializing in programming, testing and
debugging applications and/or systems programs of low to moderate
complexity.

Duties - The programmer translates detailed design specifications
of low to moderate complexity into computer program coded instruc-
tions, tests programs, and corrects program errors to produce a
product which conforms to the approved project design specifica-
tions. This effort includes documenting programs to aid program-
mers in the performance of program maintenance as required to
improve overall program operating time/system efficiency, or ease
of use.

1.8.2   Network Specialist

Education - A bachelor's degree from an accredited four year
college or university.

Work Experience - Must have a minimum of two years in the
telecommunications/networking field. Work experience must have
demonstrated knowledge of telecommunication services and equipment
and experience in the operational requirements of voice and data
telecommunications systems, service, and programs. Must have
demonstrated work experience in Ethernet LAN or token-ring LAN
connectivity.

Duties - The Network Specialist at the P1 level is responsible for

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supporting telecommunications and LAN operations, including installing and maintaining on-line data communications networks in support of data systems and projects as directed by the network supervisor. Advises the network supervisor of problem areas.

1.8.3   Equipment Installation and Logistical Support Technician

Education - An associate's degree from an accredited two year college in computer electronics or a related field.

Work Experience - A minimum four years, one year of which shall have been within the last year, hands-on experience in the repair/maintenance/installation of various computer systems/equipment, including PC's, telephone instruments and equipment (e.g. instruments comparable to standard single-line, key, speaker phone, and touch-a-matic sets and electronic key or 1A2 key systems), and data modems (e.g. modems equal to standard models 212 and 103).

Duties - Under the direct supervision of Senior Equipment Installation and Logistical Support Technician, the Equipment Installation and Logistical Support Technician's duties shall include, but not necessarily be limited to: installation, deinstallation, and in-house moves of PC's and telecommunications equipment; addition or exchange of externally connected PC accessories and telecommunications equipment; hardware problem isolation and diagnosis on PC's, LAN's, and telecommunications equipment; addition or replacement of boards, batteries, disk drives, and similar components internal to PC's and telecommunication equipment; installation of cabling required for LAN's; attachment, detachment, or exchange of LAN cabling to workstations (PC's or terminals), servers, and telecommunications equipment; assist EPA in the use of "Depot" repair contracts (or equivalent) to obtain repairs or replacements for defective PC, LAN or telecommunications components. Work is carefully monitored during progress and at completion.

1.9   **Level S3 - Senior Operations Support**

The education and work experience requirements are described separately for each of the Level S3 labor categories, due to their differences.

1.9.1   Computer Operator

Education - A high school diploma.

Work Experience - A minimum of five years, two years of which shall have been within the last two years, experience in IRM system operations, scheduling, computer hardware operation, and trouble-

shooting; including a minimum of two years experience supervising computer operators.

Duties - The Computer Operator at this level controls computer hardware, monitors operation of the system and tends the associated peripheral devices. He/she must possess complete understanding of equipment operation to minimize downtime and be able to generate alternative solutions to achieve desired results. The Computer Operator supervises and trains personnel in the operation of off-line and on-line equipment; controls and directs a shift of fellow Computer Operators; recognizes, diagnoses and independently acts on hardware malfunctions and error situations to ensure that data processing is in accord with run instructions; and prepares output for proper distribution.

The Computer Operator also provides technical guidance for system users on system capabilities, and for optimal processing of the equipment. He/she must be capable of directing operations in a multiple vendor environment, and must be capable of coordination and scheduling of equipment operations within priorities and constraints as defined by government officials.

1.9.2   Document Abstractor

Education - A bachelor's degree from an accredited four year college or university.

Work Experience - A minimum of three years abstracting experience requiring development and use of a thesaurus and controlled vocabularies; including experience in working with scientific/pro-fessional journals, technical reports, monographs, and other professional writing forums; and a demonstrated working knowledge of modern IRM-based research techniques and user information requests.

Duties - The Document Abstractor performs information processing functions involving the abstracting, cataloging, editing, and analysis of documents and document surrogates.

He/she reviews and analyzes articles, reports, and other source documents in area of expertise to prepare an abstract of the document which shall identify the basic content of the study or report quickly and accurately. The abstract should state the purpose, methodology, results, and conclusions presented in the original document in such a way as to enable relevant users to determine if the content of the document is pertinent.

He/she acts as a subject specialist in one or more areas of expertise. In depth familiarity with the subject field of the

input documents is essential to analyze and extract the points of
interest for user groups, and to sort new data from established
facts.

The Document Abstractor develops or maintains a thesaurus or
controlled vocabulary for appropriate representation of concepts in
normalized terms and subsequent data capture and use as retrieval
terms.

He/she requires limited guidance and may provide technical
oversight and quality control to one or more professional technical
personnel on an assigned project.

1.9.3   Document Indexer

Education - A bachelor's degree from an accredited four year
college or university.

Work Experience - A minimum of three years experience in abstract-
ing and indexing, preferable in the IRM, or scientific/technical
field.

Duties - The Document Indexer is responsible for review of
documents and texts, the extraction of index terms, and listing of
reviewed documents and texts for delivery order specified special-
ized areas requiring specific expertise.

He/she selects and reviews specific subjects reported by
author; paraphrases the text relating to delivery order-specific
subject areas; selects key terms from the paraphrases for indexing
purposes; translates selected key terms, if necessary, organizing
them into standard subject headings, and makes cross-references
where necessary.

1.9.4   Microfilm Specialist

Education - A high school diploma.

Work Experience - A minimum of two years experience as a microfilm
quality control inspector. A demonstrated knowledge of federal
regulations/specifications pertaining to microfilm.

Duties - The Microfilm Specialist provides quality control over
microfilm products generated under this contract. This quality
control must adhere to federal regulations governing microfilm
products.

1.10   Level 82 - Middle Operations Support

1.10.1   Computer Operator

Education - A high school diploma.

Work Experience - A minimum of two years experience in IRM system operations, scheduling, computer hardware operation and troubleshooting.

Duties - The Computer Operator controls computer hardware, monitors operation of the system and tends the associated peripheral devices. He/she performs computer systems operations functions such as peripheral or console operator. He/she processes computer output generated by jobs and users on all computer systems, reviews output for completeness, and collates, bursts, and binds the printed output as required.

1.10.2   Computer Disk/Tape Librarian

Education - A high school diploma.

Work Experience - A minimum of one year experience within the last three years in supporting computer tape and disk library systems.

Duties - The Computer Disk/Tape Librarian manages the magnetic tape and disk library. He/she inspects tapes for flaws, damage, or wear. He/she conducts off-site storage of magnetic media, when necessary.

1.10.3   Microfilm Equipment Operator

Education - A high school diploma.

Work Experience - A minimum of one year experience performing reproduction of source documents using state-of-the-art microfilm/-micrographic/duplicating equipment.

Duties - The Microfilm Equipment Operator performs the filming of source documents assuring proper sequence of pages and targets, and maintaining the camera in good working condition.

He/she operates micrographic and duplicating equipment producing such products as duplicate fiche and hardcopy, performing routine maintenance of equipment to ensure quality output.

Detailed instructions are provided and work is monitored for accuracy and quality using rigid standards.

1.10.4   WP Operator

Education - A high school diploma.

Work Experience - A minimum of three years experience, one year of which shall have been within the last year, as a WP operator, including elementary WP ability in support of desk top publishing packages (e.g., Wordperfect and Ventura), a demonstrated ability to type over 75 words per minute with no more than a 2% error rate; and a demonstrated command of the English language.

Duties - The WP Operator at this level operates automated typewriting equipment and utilizes WP computer systems to record and store technical, textual, and statistical data for the production of reports and documents. Using a rough draft or printed copy as a source document, he/she uses independent judgement to key in specific commands to an automated WP system to achieve the required textual material formats. This includes paging, indentation and spacing, selection of character fonts, and insertion of headings. Using draft copies of a manuscript, he/she may assist in proofreading and correction of syntactical, spelling, and grammatical errors. He/she may be required to supervise other word processing operators.

1.10.5   Data Analyst

Education - A high school diploma.

Work Experience - A minimum of one year within the last two years as a Data Analyst.

Duties - The Data Analyst supports data entry operations for systems that support internal SDC activities and for other systems that the SDC may be required to operate. He/she supervises, trains, and directs technical personnel in using prescribed input forms to transcribe data, personally verifies code sheets, and ensures completeness and accuracy of all records transcribed, ensures that error correction is performed as needed. Performs other tasks as required.

1.11   Level 81 - Junior Operations Support

1.11.1   Computer Operator

Education - A high school diploma.

Work Experience - A minimum of six months experience in IRM system operations.

Duties - The Computer Operator at this level controls computer hardware, monitors operation of the system and tends the associated

peripheral devices. With the assistance of more senior operators, he/she performs computer systems operations functions such as peripheral or console operator. He/she processes computer output generated by jobs and users on all computer systems, reviews output for completeness, and collates, bursts, and binds the printed output as required. The Computer Operator is also responsible for supporting the operation of image processing equipment.

1.11.2   Data Entry Operator

Education - A high school diploma.

Work Experience - A minimum of one year experience within the last year performing on-line data input.

Duties - The Data Entry Operator performs data input to computer systems or data logging and storage devices. Detailed instructions are usually provided with respect to data content and format. Work is closely monitored for completeness and accuracy. Frequently the operator shall be required to perform validation of data entered by other data entry operators.

1.11.3   Document Control Clerk

Education - A high school diploma.

Work Experience - A minimum of two years demonstrated library or information processing experience; including experience in computerized document tracking or reference systems.

Duties - The Document Control Clerk is responsible for the organization and accurate maintenance of a collection of documents, books, reports, microfilm, and similar media, for responding to EPA staff requests for use of the document holdings.

He/she is also responsible for maintaining timely accurate data entry to automated document control systems and nonautomated document control logs where applicable.

Duties may include the preparation of documents for archival processes such as microfilming or storage at Federal Record Center facilities.

1.11.4   WP Operator.

Education - A high school diploma.

Work Experience - A minimum of one year, within the last year, of

experience as WP operator, including elementary WP ability in
support of desk top publishing packages (e.g., Wordperfect and
Ventura); a demonstrated ability to type over 55 words per minute
with no more than a 2% error rate; and a demonstrated command of
the English language.

Duties - The WP Operator operates automated typewriting equipment
and utilizes WP computer systems to record and store technical,
textual, and statistical data for the production of reports and
documents.   Using a rough draft or printed copy as a source
document, he/she uses independent judgement to key in specific
commands to an automated WP system to achieve the required textual
material formats. This includes paging, indentation and spacing,
selection of character fonts, and insertion of headings.

    Using draft copies of a manuscript, the WP operator may assist
in proofreading and correction of syntactical, spelling, and
grammatical errors.

1.12   Level M3 - Senior Scientific/Specialized

1.12.1   Senior Statistician

Education - A master's degree from an accredited graduate school
in applied mathematics, statistics, or biostatistics.

Work Experience - A minimum of six years experience in the proper
use of statistical analysis computer packages (e.g., SAS, SPSS, and
Minitab).

Duties - The Senior Statistician conducts experimental statistical
and computerized data analysis activities, coordinating and
directing efforts of other Statisticians whenever applicable.

    He/she assists in complex experimental design problems and
consults with research personnel in these activities.

    He/she assists in the written and oral interpretation of
results of data analysis and reviews research literature for
correctness and completeness from an experimental statistical user
perspective.

1.12.2   Senior Scientific Information Systems Specialist

Education - A master's degree from an accredited graduate school in
engineering, mathematics, or the natural or physical sciences.

Work Experience - A minimum of six years experience in planning
research programs, analyzing research results, and developing

solutions to technical problems associated with specialized research programs. Work experience shall include a minimum of two years, one year of which shall have been within the last year, experience designing and using efficient IRM scientific systems. Duties - The Senior Scientific Information specialist serves as a skilled specialist in a particular discipline of science like biology, chemistry, statistics, mathematics, physics or engineering, coordinating and directing efforts of other Science Specialists when applicable.

He/she plans research programs, analyzes results, and develops solutions to highly complex technical problems, developing and analyzing appropriate research models.

He/she plans principles and procedures for accomplishing unique customer studies, giving expert professional analysis of documenting and substantiating research findings and provides consultation to customers and software systems specialists to design efficient IRM systems.

He/she utilizes computer technology as a tool to solve problems of an advanced nature.

1.13   Level M2 - Middle Scientific/Specialized

1.13.1   Statistician

Education - A bachelor's degree from an accredited four year college or university with a degree in applied mathematics, statistics, or biostatistics.

Work Experience - A minimum of three years experience in the proper use of statistical analysis computer packages (e.g., SAS, SPSS, and Minitab).

Duties - The Statistician conducts or assists in experimental statistical and computerized data analysis activities.
He/she assists in complex experimental design problems and consults with research personnel in these activities. He/she also assists in the written and oral interpretation of results of data analysis, and reviews research literature for correctness and completeness from an experimental statistical user perspective.

1.13.2   Scientific Information Systems Specialist

Education - A bachelor's degree from an accredited four year college or university with a degree in engineering, mathematics, or the natural or physical sciences.

Work Experience - A minimum of four years experience in planning research programs, analyzing research results, and developing solutions to technical problems associated with specialized research programs and include a minimum of two years, one year of which shall have been within the last year, experience designing and using efficient IRM scientific systems.

Duties - The Scientific Information Specialist serves as a skilled specialist in a particular discipline of science such as biology, chemistry, statistics, mathematics, physics or engineering.

He/she plans research programs, analyzes the results, and develops solutions to highly complex technical problems, developing and analyzing appropriate research models; identifies scientific principles; and prepares procedures for accomplishing unique customer studies, giving expert professional analysis of documentation and substantiating research findings.

He/she also provides consultation to users and software systems specialists to design efficient IRM scientific systems, utilizing computer technology as a tool to solve problems of an advanced nature.

APPENDIX D

Appendix D contains the Award Fee Plan under the MOSES contract.

FEE PLAN

1.0   Award Fee

1.1   Introduction

The contractual approach taken by the Government for the
phase-in and implementation phases of the Systems Development
Center (SDC) is cost plus a base fee and the potential for
earning an additional award fee based upon the Government's
evaluation of contractor performance. The award fee process
provides a performance incentive for the contractor and provides
the Government the flexibility to evaluate and reward the
contractor for this performance and the circumstances under which
that performance was achieved. It enhances communications,
effective management of work, cost control, as well as
timeliness, quantity, and quality of performance. During
technical implementation, the requirements and evaluation
criteria change considerably to incorporate effectiveness and
performance on projects and user satisfaction. Here, it is
important that the award fee approach be maximized.

1.2   Award Fee Process

The amount of award fee the contractor earns, if any, is
based on a subjective evaluation by the government of the quality
of the contractor's performance in accordance with the Award Fee
Plan (AFP). The Government will determine the amount of award
fee beginning with the first three months of contract performance
and every six months thereafter.

The Fee Determination Official (FDO) will unilaterally
determine the amount of the award fee. The FDO will consider the
evaluation of the Contractor's performance provided to him by the
Performance Evaluation Board (PEB). Within forty five (45)
calendar days after the end of the evaluation period, the FDO
determines the amount of fee to be paid and notifies the
Contracting Officer. The award fee determination is the
responsibility of the FDO. If the final fee determination
results in an amount different from that recommended by the PEB,
the FDO shall communicate this decision and the rationale to the
Chair of the PEB prior to issuance of the award fee modification.

The Contracting Officer (CO) shall notify the contractor of
the FDO's decision in writing along with an explanation of the
contractor's performance as measured against the evaluation
criteria and the amount and percentage of the award fee earned.
The letter will contain, in addition, the reasons why the fee
was, or was not, earned. The Contracting Officer, assisted by
the PEB members, may elect to conduct a debriefing of the

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contractor to ensure that the contractor fully understands what
aspects of performance were judged to be unsatisfactory, and how
performance can be improved during subsequent evaluation periods.

The contractor shall respond to the CO within 30 days
following written notification identifying solutions and steps to
be taken to rectify any identified problems.

The contract will be changed by unilateral modification,
executed by the EPA Contracting Officer, when the award fee, if
any, has been determined by the FDO. The modification shall set
forth the amount of base fee, and any earned award fee awarded
for the performance period evaluated. Upon receipt of the
contract modification, the contractor may submit a public voucher
for payment of base fee and the award fee earned for the period
evaluated, subject to any withholding provisions of the
"Allowable Cost and Payment" clause of this contract. Available
award fee not earned during one period does not carry over to
subsequent periods.

The Government may unilaterally change the AFP at any time
and will provide such changes in writing to the contractor prior
to the beginning of the applicable evaluation period.

2.0 Payment of Base and Award Fee

2.1 Base Fee

Funding of the base fee will be provided through the
issuance of individual delivery orders. The Government will make
payment of the base fee as incurred costs are invoiced. The
amount of base fee paid on any delivery order may not exceed the
amount of base fee determined at the time of delivery order
negotiation, unless subsequently modified by the Contracting
Officer. In no event will the cumulative amount of base fee paid
on all delivery orders to the contractor exceed the maximum base
fee set forth in Clause B.2 of this contract. Payment of the
base fee is subject to any withholdings as provided for elsewhere
in this contract.

2.2 Award Fee

The Government will promptly make payments of the award fee
in accordance with the schedule established in the AFP and the
Evaluation Periods set forth in the Distribution of Award Fee
clause. The amount of award fee the contractor earns, if any,
during each evaluation period is based upon the subjective
evaluation by the Government of the quality of the contractor's
performance in accordance with the award fee plan, as limited by
the Government's prior establishment of the ceiling amount of

award fee available during each evaluation period. The Government
will subsequently determine the amount of award fee earned at the
completion of the each evaluation period.

2.3   Award Fee Pool

The amount of award fee available during an evaluation
period from the award fee pool will be based upon costs incurred
under contract delivery orders active during the performance
period.   The amount of award fee paid on all delivery orders may
not exceed the· cumulative amounts of award fee determined at the
time of these delivery order negotiations.   In no case will the
amount of award fee available during each evaluation period
exceed the total award fee pool available for the contract
period.

3.0   Award Fee Plan

An award fee evaluation procedure is established for
determination of award fee payable under this contract.   The
payment of any award fee is contingent upon compliance with
contractual requirements and performance.   It is the Government's
desire that the contractor perform services in such a manner as
to warrant the highest possible rating.   EPA reserves the right
to update, modify or replace these procedures.

3.1   Evaluation Coordinator (EC)

The EC is an EPA employee responsible for gathering
contractor observation reports for each evaluation period and for
coordinating the activities of the Performance Evaluation Board
(PEB) in the recommendation of appropriate award fees.   The EC
may receive reports from the Contracting Officer (CO), Project
Officer (PO), Technical Manager (TM), Delivery Order Project
Officers (DOPO's), and the contractor, should the contractor
chose to submit a report.   The EC is responsible for highlighting
differences between EPA and contractor reports concerning the
same performance observation period.   Explanations of such
differences must be completed prior to the PEB meeting and award
fee decision.

3.2   Performance Evaluation Board

The Performance Evaluation Board (PEB), composed of selected
technical and administrative EPA personnel, will evaluate the
contractor's performance as related to the performance categories
in the Fee Allocation Matrix, based on the performance
observation reports submitted by the Evaluation Coordinator.

3.3   Evaluation Period

The performance will be evaluated on a periodic basis beginning with the first three months of contract performance, and every six months thereafter.

Each evaluation will be scheduled so that the final determination of the fee earned will be accomplished within approximately 45 calendar days after the end of the evaluation period.

3.5 Fee Allocation Matrix

The amount of fee available for award during any period will be based upon a fee allocation matrix. The matrix is made a part of this plan, and will be subject to periodic revision by the PEB to reflect any changes in emphasis. The contractor will be provided with complete and current copies of the fee allocation matrix by the Contracting Officer (CO).

3.6 Performance Evaluation Reports

The EPA Project Officer, Technical Manager, DOPO's will submit individual performance observation reports to the Evaluation Coordinator concerning the contractor's performance in accordance with a schedule established by the Evaluation Coordinator.

Within ten (10) working days after the end of each evaluation period, the contractor may submit a report to the CO concerning its performance during the evaluation period. The report should contain any information which might reasonably be expected to assist the PEB in evaluating the contractor's performance during the period.

The Evaluation Coordinator (EC) will be responsible for highlighting any differences between an EPA report and any contractor report concerning the same performance observations prior to the PEB meeting. The EPA and contractor provided reports will be considered by the PEB in making its evaluation of performance.

3.7 Evaluation Criteria - General

In evaluating the contractor's performance within a category, the evaluation should be based on at least the following elements:

3.7.1   Quality of Delivered Products and Services

Did delivered products and services meet the needs and expectations of EPA and the EPA user community? Were technical

experts highly qualified and effective in performing required
services? Did delivered products reflect notable skill, thought,
analysis, creativity, or appropriateness to the EPA environment?
Was delivered documentation clear, concise, complete, accurate,
well-presented, and appropriate to the needs of targeted users?
Were delivered software products well-structured, complete,
accurate, robust, consistent, well-engineered for human use,
efficient, reliable, and maintainable?

3.7.2   Effectiveness in Project Planning and Management

Did the contractor prepare reasonable plans and schedules
and follow them? Was the contractor routinely able to make
accurate and thorough assessments of project status? Were
deliverables completed on time and within budget? Was EPA
notified in a timely manner when circumstances not within the
control of the contractor threatened to delay delivery of a
product or increase the projected cost of the product? Did the
contractor manage subcontractor and consultant contributions
effectively? Were project plans prepared in a timely manner?

3.7.3   Efficiency of Staffing and Performance

Did the contractor (and its subcontractors) manage work and
use manpower and resources in an economic and effective manner?
Was the correct mix of people assembled to perform the task?
Were contractor staff assembled in a timely manner? Were an
appropriate number of people assigned to tasks? Did contractor
staff assigned to tasks have training and experience appropriate
and adequate to their assigned tasks? Was work scheduled so that
it was completed without serious contentions for critical staff?
Did requests for training, travel, and equipment demonstrate a
concern for efficient and effective use of resources?

3.7.4   Responsiveness

Did the contractor (and its subcontractors or consultants)
respond to delivery orders, technical direction and to problems
in an effective and timely manner? Was the contractor (and its
subcontractors or consultants) able to adjust to changes in
direction or requirements? Was this adjustment rapid and smooth?
Were problems remedied to the satisfaction of EPA and its
clients? Were problems remedied quickly? Were technical
comments from responsible EPA staff acted upon or incorporated in
drafts and final versions of the deliverables?

3.7.5   Systems Development Center Management

Was the contractor effective in managing and providing for
the Systems Development Center (SDC) facility? Were contractor

staff adequately equipped to effectively perform their duties?
Was there consistency in the contractor's approach to delivery of
services across delivery orders? Were EPA and SDC standards and
guidelines routinely followed and were exceptions well justified?
Was the Development and Maintenance Methodology Group (DMMG) an
effective force in influencing software engineering process at
the SDC? Were recommendations for process improvement from the
DMMG considered and acted upon? Did the SDC contribute to
furthering OIRM efforts to facilitate data sharing?

3.7.6   Contract Management

Did the contractor make diligent efforts to comply with all
contract clauses, make immediate disclosure of changes in
accounting systems (such as indirect rate changes or labor
rates), effectively oversee the work of subcontractors and
consultants, make appropriate conflict of interest disclosures,
submit timely work plans and reports, and comply with Small
Business/Small Disadvantaged Business subcontracting plan goals?
Was the contractor able to thoroughly account for government
furnished equipment, contractor-acquired property, and use of
Other Direct Cost funds?

3.7.7   Innovation and Ingenuity

Did the contractor and its subcontractors seek and develop
original and well thought out solutions to problems? Were the
solutions effective and did they result in savings of time,
money, manpower, machine resources, or improvements in service?

3.7.8   Thoroughness

Did the contractor and its subcontractors fully complete
delivery orders and appropriate documentation, user notification,
and develop and implement final solutions to problems? Were
alternatives analyzed to determine their impact on other delivery
orders?

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3.8   Performance Criteria

3.8.1   Performance Rating Definitions

  a.   Superior - "5" Performance of contract-related events
       is extraordinary. Generally, this rating includes the
       Section 3.9 evaluation range of 91 - 100.

  b.   Excellent - "4" Performance of contract-related events
       is of consistently high quality but is something less
       than extraordinary. This rating relates to the Section
       3.9 evaluation range of 76 - 90.

  c.   Satisfactory - "3" Performance of contract-related
       events is merely acceptable. Generally, this rating
       relates to the Section 3.9 evaluation range of 51 - 75.

  d.   Substandard - "2" Performance of contract-related
       events is unacceptable and significant change is
       required to make it acceptable. This rating relates to
       the Section 3.9 evaluation range of 31 - 50

  e.   Unsatisfactory - "1" Performance of contract- related
       events is totally deficient and without merit. This
       rating relates to the Section 3.9 evaluation range of 0
       - 30.

3.8.2   Selection of Significant Performance Events

     DOPOs may obtain guidance as to what constitutes a 5, 4, 3,
2, or 1 performance event from: (1) the Award Fee Plan; (2)
previous PEB reports; and/or (3) the Evaluation Coordinator. The
DOPOs will report all factual performance events that they judge
to be indicative of either superior, substandard or
unsatisfactory performance.

3.8.3   Coordination

     The Evaluation Coordinator (EC) will receive, code, validate
and evaluate the performance reports submitted by the DOPOs and
select all those he considers to be significant, i.e.,
outstanding, substandard or unsatisfactory performance. The
Coordinator will also evaluate any items reported by the
contractor and its subcontractors and identify any differences
between the DOPO and the contractor's and its subcontractors'
versions of the performance. The coordinator will make certain
that the DOPO's statements are supported by facts before
presentation to the PEB.

The Evaluation Coordinator will be responsible for preparing
and presenting all material the PEB requires for its performance
assessment. This material will be organized so it can be used
(1) as the PEB's agenda and (2) as the complete documentation
package which will support the PEB's fee recommendation. It will
be organized into separate sections for each performance
evaluation category.

The Evaluation Coordinator will transmit the performance
evaluations to members of the PEB at least five (5) working days
prior to the PEB meeting.

Following the PEB meeting at which the award fee
recommendation is reached, the Executive Secretary will prepare a
Performance Evaluation Report letter for signature of the FDO
informing the contractor's general management of the amount and
basis of the fee awarded and forward the letter to the
Contracting Officer (CO). The CO shall forward the fee
determination letter through the Procurement and Contracts
Management Division to the FDO. The FDO will review the
performance evaluation and the fee recommendation and make a
final determination of fee. The PEB members, and the CO shall
each receive a copy. NO award fee shall be paid for
unsatisfactory performance (Unsatisfactory performance is defined
as performance that is rated by the PEB as "Unsatisfactory" or
"Substandard").

3.9 Evaluation of Overall Performance

The PEB will observe the following definitions for
performance within individual performance evaluation categories,
when determining its assessment of performance:

o   0 - 30 Performance is substandard to the point that
     the Government has to intervene to resolve problems.
     Cure notices or stop work orders have been or will soon
     be issued in an attempt to remedy contractor problems.
     Inadequate cost or time estimates are made in
     development of work plans. Schedule slips result in
     delays which negatively impact project completion.
     Services are completed at a significantly increased
     cost to the Government and products are of poor quality
     or unusable. Poor resource utilization results in
     overruns or delays. Contractor does not respond to
     technical direction or priority adjustments.
     Coordination and communication with the Government are
     infrequent or ineffective.

     Major elements in the technical analyses are missing or
     require significant reworking. Recommendations are not

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accepted due to major deficiencies in the technical
analyses and recommendations. Contractor routinely
ignores contract clauses, performs inherently
Governmental functions, fails to identify conflicts of
interest, and fails to pursue SB/SDB subcontracting
plan goals.

Performance is indicative of serious mismanagement,
negligence and/or incompetence. Continued performance
at this level may require the Government to consider
contract termination for cause.

o   31 - 50 Performance is substandard requiring verbal or
written notices to contractor to keep projects on track
or take corrective action. Areas of adequate or better
performance are offset significantly by poorer
performance in other areas. Work plans do not
consistently address all requirements of the SOW. Cost
and/or time estimates are frequently disproportionate
to the required level of effort. Contractor does not
consistently respond to changes in the SOW, priority
adjustments, or problems in a timely manner, or does
not involve the Government at an appropriate time.
Original schedule slips without warning or
justification, or services are completed at an
increased cost to the Government without adequate
justification.

Technical analyses are often incomplete or inaccurate
and require rework. Recommendations are not accepted
due to flawed analysis and products are of poor quality
or require significant revisions to be made acceptable.
Contractor fails to comply with contract provisions.
Contractor fails to identify work that may present a
conflict of interest or constitute an inherently
Governmental function, and does not comply with SB/SDB
subcontracting plan goals.

o   51 - 75 Performance is at an acceptable level. Work
plans are adequate to address requirements in the SOW
with reasonable cost and time estimates for the
required effort. Projects are completed within
schedule and budget. In those cases where slippages
occur, adequate justification is provided and prior
Government approval is obtained. Efforts are taken to
ensure that costs are minimized.

Technical analyses are thorough and technically
justified. Recommendations are always submitted for
routine assignments. Contractor utilizes resources and

an appropriate professional mix to meet project and
contract requirements. Products are acceptable and
require little modification. Contractor interacts
regularly and appropriately with the Government.

Contractor complies with all contract clauses, does not
perform work that presents a conflict of interest or
constitutes an inherently Governmental function, and
uses best efforts to pursue SB/SDB subcontracting plan
goals.

Performance is satisfactory. Areas requiring
improvement are appropriately offset by better
performance in other areas.

o   76 - 90 Performance is not only within the
     satisfactory range but actually exceeds expectations of
     the Government. Original schedule is met in spite of
     impediments, and services are completed within budget
     at minimum costs. Government is generally informed in
     advance of progress in meeting the schedule and budget.
     Contractor is responsive to all direction given in the
     statement of work as well as changes and priority
     adjustments. Responses to problems are made in a
     timely manner and good interaction takes place with the
     Government.

     Technical analyses are thorough requiring little or no
     revision and technically justified recommendations are
     submitted for all routine and complex work. Contractor
     uses resources in a manner which minimizes costs and
     time expenditures, while using the appropriate
     professional mix to ensure that work quality is
     acceptable to the Government. Products are of high
     quality and require no significant revisions.

     Contractor consistently complies with all contract
     provisions. Contractor shows insight in identifying
     work that may present a conflict of interest or is an
     inherently Governmental function, and diligently
     pursues SB/SDB subcontracting plan goals.

o   91 - 100   Performance is consistently beyond
     expectations and clearly excellent. Contractor
     develops accurate and well-substantiated cost estimates
     and consistently uses cost-saving measures whenever
     possible. Tasks are completed ahead of schedule or on
     schedule in spite of impediments. The Government is
     always informed in advance of progress in meeting
     schedule and budget. Identifies problems early on and

informs EPA.

Technical analyses and approach are thorough, requiring
no rework; technical recommendations are acceptable in
nearly all instances. Contractor demonstrates unusual
insight in dealing with complex technical issues.
Solutions demonstrate unusual creativity and result in
state of the art approaches that can be applied to
similar system development problems. Products are of
superior quality and continuous improvement is evident
in performance and products produced. Contractor
consistently uses resources in a manner which minimizes
cost and time expenditures while using the appropriate
professional mix to ensure that the overall quality of
the work remains exceptional.

Contractor demonstrates exceptional contract management
practices including management of subcontractors and
consultants, takes aggressive actions to avoid real or
apparent conflicts of interest and to avoid engaging in
performance of inherently Governmental functions, and
aggressively pursues SD/SDB subcontracting plan goals.

Note that the presence of any of the individual factors
within the performance definitions will be considered during the
evaluation and rating the contractors performance.

3.10 Award Fee Limitation

The amount of the award fee that the contractor may receive
during any rating period shall not exceed the amount of fee
established for that period.

3.11 Performance Evaluation Categories

The contractor shall be responsible for achieving the
mission of the Systems Development Center and providing the
services detailed in the Statement of Work. Performance will be
evaluated in the four (4) performance categories described below.

3.11.1   Life Cycle and Other Specialized Support Services

The contractor shall be evaluated on its delivery of   life
cycle and other related specialized support services through the
Systems Development Center (SDC). It shall be expected to
provide a high level of technical expertise, support and
assistance to the users of the SDC, particularly in the area of
systems engineering. This category includes, but is not limited
to, the following functions (not necessarily in order of

importance):

- Systems Engineering, including planning, analysis, design, develeopment, implementation, mainte.nance, and retirement life-cycle stages
- Implementation of formal structured methods including Information Engineering Methodology TM (IEM)
- Re-engineering
- Reverse engineering
- Project Estimation, Scheduling, and Management
- Documentation Development and Maintenance
- Use of Automated Tools
- QA/QC (including Quality Measurement)
- Joint Application Design
- Implementation of Reusability
- Configuration Management
- System Configuration Impact Analysis
- Hardware, Software and Telecommunications Planning
- Database Administration and Coordination
- Periodic Experts
- Geographic Information System Support
- Documentation Maintenance and Distribution
- Office Automation and Records Management Support
- Statistical Services
- Verification, Validation and Testing
- Hotline and User Support and User Training
- Disaster Planning
- System Backup and Recovery Planning and Implementation
- Program Management and Support
- Marketing Support
- Communications Support
- Program Office/User Support
- Data Entry/Data Management
- Database User Support
- Telecommunications Technical Support
- LAN Technical Support
- Microcomputer Technical Support
- Training
- Equipment Maintenance and Support
- Graphics Support

3.11.2 Methodology Management and Planning Support

The contractor shall be evaluated on its performance in providing consistent and formal methods, techniques, and technologies to assure and improve the quality and cost efficiency of SDC products. This category includes, but is not limited to, the following functions (not necessarily in order of

importance):

- o   Identification and Implementation of a Complete Systems Engineering Environment
- o   Establishment and Implementation of a Central Repository of EPA System Information
- o   Standards and Guidelines Development
- o   Training in Methods, Standards, Guidelines, Techniques, Tools and System Engineering Technologies
- o   Assistance to SDC Project Teams
- o   Consultation
- o   Metrics and Supporting Tools
- o   Use of Metrics and Feedback for Process Improvement
- o   Application of Established Methods and Standards
- o   Application of Consistent Systems Engineering Approach to SDC Projects
- o   Encouragement of Data Sharing
- o   Facilitation of Establishment of Data Standards
- o   Cost Effectiveness of Selected Methods and Tools

3.11.3   Systems Development Center Management and Operations

The contractor shall be evaluated on its management and operation of the Systems Development Center. It shall be responsible for the hiring, training, and placement of a competent technical, professional and managerial staff for itself and its subcontractors. It shall be responsible for appropriate reporting to EPA and for assisting in the planning activities of the SDC. This category will include, but is not limited to, the following functions (not necessarily in order of importance):

- o   Transition/Phase-in Planning and Implementation
- o   SDC Facility
- o   SDC Telecommunication and LAN Facilities
- o   SDC Staffing
- o   Management and Coordination of Subcontractor and Consultant Efforts
- o   Overall Management of the SDC
- o   Overall Operation of the SDC
- o   Equipping of SDC Staff
- o   Adherence to Established SDC Standards and Guidelines
- o   Effective Training Program for SDC Staff
- o   Delivery Order Tracking
- o   Project Management (Including Cost Effectiveness and Effective Use of Resources)
- o   Configuration Management
- o   Data Management

      o   Maintenance of EPA Institutional Knowledge
      o   Availability of Accurate Management Information
      o   SDC Administrative Support
      o   Documentation Services
      o   Effective Reporting
      o   Security
      o   Development and Implementation of Guidelines for
              Specialized Services
      o   IRM Technical Library Support

3.11.4   Contract Management

The contractor shall be evaulated on its performance in meeting contract management requirements. This category will include, but is not limited to, the following functions (not necessarily in order of importance):

      o   Conflict of Interest (COI) Management and
              Implementation of COI Plan
      o   Routine Reporting
      o   Time Accounting
      o   Other Direct Cost Accounting
      o   Property Management
      o   Communication with EPA Management
      o   Compliance with Occasional CO and PO Requests
      o   Cost Control
      o   Avoidance of Inherently Government Functions
      o   Problem Solving

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3.12 Fee Allocation Matrix

Award Fee - Performance Evaluation Periods (PEP)

Performance Category	Phase-in Award date to 12/31/91	PEP-1 01/01/92 to 06/30/92	PEP-2* 07/01/92 to 12/31/92	PEP-14** 07/01/98 to 12/31/98
Life Cycle& Other Srvcs	10%	40%	60%	60%
Methodology Mgmt. and Planning Support	30%	30%	25%	25%
SDC Mgmt. and Ops.	40%	20%	10%	10%
Contract Management	20%	10%	5%	5%
Total AF Available Dollars	$X,XXX,XXX	$X,XXX,XXX	$X,XXX,XXX	$X,XXX,XXX

*   PEP 3 - 13 are 1/01/XX through 6/30/XX and 7/01/XX through
       12/31/XX (**) and the weighting is identical to PEP 2.
**   In the event than an option period is not exercised, the
       ending date for the last PEP will be 09/30/XX and this PEP
       will consist of three months, 07/01/XX through 09/30/XX.

Total Maximum Fee Dollars:

```
             BASE FEE              AWARD FEE
BASE         $X,XXX,XXX.00         $X,XXX,XXX.00
OPTION 1     $X,XXX,XXX.00         $X,XXX,XXX.00
OPTION 2     $X,XXX,XXX.00         $X,XXX,XXX.00
OPTION 3     $X,XXX,XXX.00         $X,XXX,XXX.00
OPTION 4     $X,XXX,XXX.00         $X,XXX,XXX.00
OPTION 5     $X,XXX,XXX.00         $X,XXX,XXX.00
OPTION 6     $X,XXX,XXX.00         $X,XXX,XXX.00
OPTION 7     $X,XXX,XXX.00         $X,XXX,XXX.00
```

In the event of contract termination, either in whole or in

part, the amount of award fee available shall represent a pro-rata distribution associated with evaluation period activities or events as determined by the FDO as designated in the contract.

3.12.1   Award Allocation Matrix

This matrix shows the base fee and award fee, if any, of each term based on the evaluation of the prior term's evaluation. For example if the contractor were rated satisfactory in term 1 and superior in term 2, then they would receive 90% of award fee available for that period plus the base fee.

Prior Term	Evaluation Term				
	Unsatis-factory	Sub-Standard	Satisfactory	* Ex-cellent	Superior
Unsatisfactory	Base Fec Only	Base Fee Only	15% of AF +Base Fee	70% of AF +Base Fee	80% of AF +Base Fee
Substandard	Base Fee Only	Base Fee Only	20% of AF +Base Fee	70% of AF +Base Fee	80% of AF +Base Fee
˙atisfactory	Base Fee Only	Base Fee Only	25% of AF +Base Fee	70% of AF +Base Fee	90% of AF +Base Fee
Excellent *	Base Fee Only	Base Fee Only	25% of AF +Base Fee	75-90% AF +Base Fee	95% of AF +Base Fee
Superior	Base Fee Only	Base Fee Only	25% of AF +Base Fee	75-90% AF +Base Fee	100% of AF +Base Fee

*   See Section 3.12.2 below

Ground Rules:

1.   Adjective ratings determined by performing at the following
      levels:

                  0 - 30 --- Unsatisfactory
                 31 - 50 --- Substandard
                 51 - 75 --- Satisfactory
                 76 - 90 --- Excellent
                 91 - 100 --- Superior

2.   Ratings of "Sub-standard" or "Unsatisfactory" for any
      performanc category (e.g., Life Cycle and Other Support
      Services) requires that composite rating can be no greater

than "Satisfactory."

3. Major Factors:

      a. Life Cycle and Other Specialized Support Services
      b. Methodology Management and Planning Support
      c. Systems Development Center Management and
          Operations
      d. Contract Management

3.12.2   Expansion of "Excellent" Evaluation Quadrant

This chart depicts the method of determining the precise
award fee percentage identified by the spread of 75-90% under the
excellent category in the Award Allocation Matrix above. For
example, the contractor is rated excellent in the current rating
period and received an excellent rating in the preceding rating
period. If the contractor had been rated excellent in the last 4
consecutive rating periods (including the current period), it
would receive 90% of the award fee available for that evaluation
period.

No. Consecutive Terms Rated Ex- cellent/Superior	2	3	4 or more
Total Percentage	75%	85%	90%

Purpose: Incentive for continuity of performance.

By definition a rating below "Excellent" means that the
percentage reverts back to the standard percentage.

3.13 Award Fee for the Phase-In Period

3.13.1   Evaluation Procedures

The PEB will evaluate the contractor's performance as
related to the Statement of Work for phase-in activities, based
upon performance observation reports submitted to the Evaluation
Coordinator by the Contracting Officer, Project Officer,
Technical Manager, and the Delivery Order Project Officer for the
SDC facility and base services.

3.13.2   Evaluation Period

The evaluation period will be the period of performance for

the first three months of contract performance, which will
include the phase-in activities.

3.13.3   Performance Evaluation Reports

Same as for the award fee plan above.

3.13.4   Evaluation Criteria

The PEB will make a subjective assessment of the
contractor's performance of phase-in activities as it relates to
amount of program continuity, efficiency, cost effectiveness and
schedule.

3.13.5   Definitions

Same as for the award fee plan above.

3.13.6   Evaluation of Performance

Same as for the award fee plan above.

3.13.7   Performance Evaluation Categories

The phase-in of the categories for the award fee plan above.