MODIFICATION NO. M066
SUPPLEMENTAL AGREEMENT TO
CONTRACT NO. DE-AC02-98CH10886

# MODIFICATION NO. M066

| | |
|---|---|
| CONTRACTOR AND ADDRESS: | Brookhaven Science Associates, LLC<br>Brookhaven National Laboratory<br>Upton, NY 11973 |
| MODIFICATION FOR: | Recognition of previous obligation increases; Modification to Article 31, Obligation of Funds; Replacement of Article 112, Subcontracts for Commercial Items; Modification to Appendix B, Performance Measures, Critical Outcomes; Replacement of Appendix I, DOE Directives. |
| PRIOR OBLIGATION: | $ 1,550,056,545.86 |
| INCREASE IN MODS. A061 through A065 | $ 59,784,649.42 |
| INCREASE IN THIS MODIFICATION | $ -0- |
| CURRENT TOTAL OBLIGATION: | $ 1,609,841,195.28 |

THIS MODIFICATION, effective the 21st day of September 2001, by and between the UNITED STATES OF AMERICA (hereinafter referred to as the "Government"), as represented by the UNITED STATES DEPARTMENT OF ENERGY (hereinafter referred to as "DOE"), and BROOKHAVEN SCIENCE ASSOCIATES, LLC (hereinafter referred to as the "Contractor"),

WITNESSETH THAT:

WHEREAS, the Government and the Contractor entered into Contract No. DE-AC02-98CH10886 on the 5th day of January 1998, for the operation of the Brookhaven National Laboratory; and

WHEREAS, said contract has been modified previously, and the parties desire to modify said contract further, as hereinafter provided; and

WHEREAS, this modification is authorized by law, including 41 U.S.C. 252(c)(15), P.L. 95-91 and other applicable law;

NOW, THEREFORE, said contract, as modified previously, is hereby further modified as follows:

1. **ARTICLE 31**. OBLIGATION OF FUNDS: The first sentence of paragraph (a) is revised to read as follows: "The amount presently obligated by the Government with respect to this contract is $1,609,841,195.28."

2. **ARTICLE 112**. FAR 52.244-6, SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS: Delete the clause Subcontracts for Commercial Items and Commercial Components (OCT 1995) in its entirety and replace with the attached FAR Clause 52.244-6, Subcontracts for Commercial Items, (MAY 2001).

3. **APPENDIX B** – CRITICAL OUTCOME PERFORMANCE MEASURES: Modification and additions are as follows:

   a. Critical Outcome Performance Measure- 2.0 Operational Excellence, 2.1.3.2, Chemical Safety Performance is revised as reflected on the attached revised page. Delete pages 1-11 and 1-12, Attachment 1, Appendix B in their entirety, and replace with the attached revised pages 1-11, 1-11A and 1-12, identified as Attachment I, Modification No. M066.

   b. Critical Outcome Performance Measure – 2.1 ES&H Operations: 2.1.1, "Environmental Protection Composite" is revised as reflected on the attached revised page. Delete page 1-5, Attachment 1, Appendix B in its entirety, and replace with the attached revised page 1-5, identified as Attachment I, Modification No. M066.

c. Critical Outcome Performance Measure – 2.0 Operational Excellence, 2.4.3, World Wide Web Strategy is revised as reflected on the attached revised page. Delete pages 1-26 through 1-28, Attachment 1, Appendix B in their entirety, and replace with the attached revised pages 1-26, 1-27 and 1-28, identified as Attachment I, Modification No. M066.

4. **APPENDIX I - DOE DIRECTIVES**: DOE Directives identified as Modification M060 is deleted in its entirety and replaced with the attached revised Appendix I, identified as Modification M066.

IN WITNESS WHEREOF, the parties have executed this document.

**UNITED STATES OF AMERICA**
**DEPARTMENT OF ENERGY**

BY: Robert P. Gordon
Robert P. Gordon
Contracting Officer
(*Title*)

DATE: 9-21-01

**BROOKHAVEN SCIENCE ASSOCIATES, LLC**

BY: Brian P. Sack
Brian P. Sack
Chief Financial Officer
(*Title*)

DATE: 9/20/01

**ARTICLE 112** 52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS (MAY 2001)

(a) Definitions. As used in this clause--

"Commercial item" has the meaning contained in the clause at 52.202-1, Definitions.

"Subcontract" includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

(b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.

(c) (1) The following clauses shall be flowed down to subcontracts for commercial items:

(i) 52.219-8, Utilization of Small Business Concerns (Oct 2000) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds $500,000 ($1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(ii) 52.222-26, Equal Opportunity (Feb 1999) (E.O. 11246).

(iii) 52.222-35, Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (Apr 1998) (38 U.S.C. 4212(a)).

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (Jun 1998) (29 U.S.C. 793).

(v) 52.247-64, Preference for Privately Owned U.S.-Flagged Commercial Vessels (Jun 2000) (46 U.S.C. Appx 1241) (flowdown not required for subcontracts awarded beginning May 1, 1996).

(2) While not required, the Contractor may flow down to subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

(End of clause)

Using the SPDES Discharge Monitoring Report results, the raw score for permit exceedances (for all parameters) that occurred during the previous calendar year will be determined. The "raw" score is determined using the algorithm shown below.

SPDES Permit performance expectations are:

1. Has a SPDES limit been exceeded?
   If no, assign a raw score value of 0.
2. If yes, is the exceedance significant?
   If no, assign a raw score value of 1.
3. If yes, has the exceedance occurred in two or more consecutive months?
   If no, assign a raw score value of 2.
4. If yes, has the exceedance occurred for more than one consecutive quarter?
   If no, assign a raw score value of 2 per month of violation then add 3 to the raw score total.
5. If yes, assign a raw score value of 2 per month of violation then add 10 to the raw score total.

Once the raw score has been determined, for each exceedance episode, determine the Quality Factor that will be used to adjust the raw score. The Quality Factor is used to rate the extent of the exceedance and is determined in accordance with the following Table:

| Quality Factor | Toxic Pollutants | pH | Non-Toxic Pollutant |
|---|---|---|---|
| 1 | 1.0 – 1.5 x Limit | Within 1 SU of Limit | 1.0 – 3 x Limit |
| 3 | 1.5 – 3 x Limit | Within 1. SU of Limit | 3 – 5 x Limit |
| 5 | 3 – 5 x Limit | Within 2 SU of Limit | 5 – 10 x Limit |
| 10 | 5 – 10 x Limit | Greater than 2 SU from Limit | >10 x Limit |
| 20 | >10 x Limit | N/A | N/A |

Multiply the Quality Factor by the raw score for each exceedance episode to determine the adjusted score.

Assumptions: *Revised by MOD M066*

1. Determination of a Significant Exceedance
   Toxic pollutants: Exceedance > 1.2 x Limit
   Non-Toxic Pollutants: Exceedance > 1.4 x Limit
   PH: > or <1 SU from Limit
2. Toxic Pollutants include all metallic elements (As, Ba, Cd, Cr, Hg, Pb, Se. Ag), volatile organic compounds, cyanide, and radiological contaminants.
3. Non-Toxic Pollutants include BOD, TSS, residual chlorine, ammonia nitrates/nitrites, and coliform non-hazardous inorganics (e.g., Fe, Zn).

The following Table reflects expectations in this area.

Table A.

| Rating Levels | Performance (Adjusted Score) |
|---|---|
| Outstanding | 0 |
| Excellent | 1 – 25 |
| Good | 26 – 45 |
| Marginal | 46 – 75 |
| Unsatisfactory | >75 |

The following Table reflects expectations in these areas. The metrics used for this performance measure are derived from the DOE 5-year averages published on CAIRS as recommended by the DOE Brookhaven Group.

Table 1

| **Metric/ Weight** | Outstanding | Excellent | Good | Marginal | Unsatisfactory |
|---|---|---|---|---|---|
| **TRCR/ 0.33** | <30% of Mean | <15% to 30% of Mean | +/-15% of Mean | >15% to 30% of Mean | >30% of Mean |
| | <2.30 | 2.31 – 2.79 | 2.80 – 3.79 | 3.80 – 4.29 | >4.29 |
| **LWD/0. 33** | <31.99 | 31.99 – 38.44 | 38.85-52.55 | 52.56-59.41 | >59.41 |
| **LWCR/ 0.33** | <50% of Mean | <25% to 50% of Mean | +/-25% of Mean | >25% to 50% of Mean | >50% of Mean |
| | <0.80 | .80-1.19 | 1.20-2.00 | 2.01-2.40 | >2.40 |

*Historical Averages 1995 - 1999 from the CAIRS Data Base (CY)

*Table 2*

| Score | Performance for TRCR and LWDR | Performance for LWCR |
|---|---|---|
| 4 | <30% of Mean | <50% of Mean |
| 3 | <15% to 30% | 25% to 50% of Mean |
| 2 | +/- 15% | +/- 25% of Mean |
| 1 | >15% to 30% | >25% to 50% of Mean |
| 0 | >30% | > 50% of Mean |

Composite Score = TRCR score x .33 + LWDR score x.33 + LWCR score x .33

*Table 3*

| Rating Level | Composite Score Based on Table 2 |
|---|---|
| Outstanding | 3.5 – 4.0 |
| Excellent | 2.5 – 3.49 |
| Good | 1.5 – 2.49 |
| Marginal | 0.5 – 1.49 |
| Unsatisfactory | <0.5 |

2.1.3.2 Chemical Safety Performance. *Revised by MOD M066*

The weight of this element is 80%

I. BNL will seek to ensure that chemical containers are properly inventoried. The following approach will be used:

- Survey all containers in six rooms- (Use lottery to select departments/divisions/rooms). No more that 1 test per organization.
- Survey will be limited to rooms with more than 50 chemical containers. If the room contains more than 400 containers, the room will count as two rooms.
- BNL and BAO would jointly participate in the compilation and evaluation of this data and establishment of the performance metric.
- The field verification would be unannounced.

The following Table reflects expectation in this area where the composite score is determined by 70% of the percentage of containers with barcodes plus 30% of the percentage of bar coded containers assigned to the correct owners (current staff or visitors at the time of field verification).

**Composite Score**

| | |
|---|---|
| Outstanding | >90 |
| Excellent | 77 – 90 |
| Good | 67 – 76.9 |
| Marginal | 55 – 66.9 |
| Unsatisfactory | <55 |

II. BNL will seek to minimize legacy chemical containers by maximizing the percentage of terminated staff with 100% disposition of assigned chemical containers within one month of termination date. The following approach will be used:

- Measure the percentage of terminated staff with 100% disposition of assigned chemical containers within one month of termination date.
- All termination during prior fiscal year will be evaluated.

The following Table reflects expectation in this performance area.

**Score**

| | |
|---|---|
| Outstanding | >85 |
| Excellent | 75 – 85 |
| Good | 60 – 74.9 |
| Marginal | 50 – 59.9 |
| Unsatisfactory | <50 |

2.1.4 Training and Qualifications

The weight of this Measure is 25%.

Demonstrate Effectiveness of T&Q Program

- Workers trained and qualified to perform assigned work independently
- Worker knowledge commensurate with assigned responsibilities

1) Percentage of Staff Linked to Job-specific Training Assessments (JTAs)
2) Percentage of Requirement JTA Profiles for Staff Reviewed/Updated Yearly (at minimum) for Additional T&Q Needs
3) Percentage of Training and Qualification Requirements Completed by Staff

2.1.4.1 T&Q Metric for Permanent Employees

The weight of this element is 60%.

1) Percentage of Employees Linked to Job-specific Training Assessments
2) Percentage of Requirement Profiles for Employees Reviewed/Updated Yearly for Additional T&Q Needs
3) Percentage of Training and Qualification Requirements Completed by Employees

Metric for Permanent Employees

| | |
|---|---|
| Outstanding | >= 95% |
| Excellent | 90% to < 95% |
| Good | 85% to < 90% |
| Marginal | 80% to < 85% |
| Unsatisfactory | < 80% |

2.1.4.2 T&Q Metric for Transient Staff[1,2]

The weight of this element is 40%.

1) Percentage of Staff Linked to Job-specific Training Assessments
2) Percentage of Requirement Profiles for Staff Reviewed/Updated Yearly for Additional T&Q Needs
3) Percentage of Training and Qualification Requirements Completed by Staff

Metric for Transient Staff (1,2,3):

| | |
|---|---|
| Outstanding | >= 80% |
| Excellent | 75% to < 80% |
| Good | 70% to < 75% |
| Marginal | 65% to < 70% |
| Unsatisfactory | < 65% |

1 Measure does not include transient non-employee staff who will be working on-site for less than 60 days in a year.
2 Measure to be re-evaluated in November 2000 based on the functionality of the Guest/Visitor/Contractor database.

B. Self-Assessment of the process for managing accelerator safety basis documentation upgrades.

Note:
BHG will have an opportunity to review and comment on the assessment plan.

Metric:

Outstanding: Stated safety basis documents upgrades completed and self-assessment of processes results in an outstanding adjectival rating in accordance with established assessment criteria.

Excellent: Stated safety basis document upgrades completed and self-assessment of processes results in an excellent adjectival rating in accordance with established assessment criteria.

Good: One of two safety basis document upgrades completed and self-assessment of processes results in an excellent or above adjectival rating in accordance with established assessment criteria.

Marginal: One of two safety basis document upgrades completed and self- assessment of processes results in a good adjectival rating in accordance with established assessment criteria.

Unsatisfactory No safety basis documentation upgrade completed

### 2.3.2 Environmental Management System

The weight of this Measure is 20%.

Achieve Laboratory-wide ISO 14001 registration by September 30, 2001.

| | |
|---|---|
| Outstanding | Registration before September 30, 2001 |
| Excellent | Within 30 days |
| Good | Within 60 days |
| Marginal | Within 90 days |
| Unsatisfactory | >90 days |

### 2.3.3 IAP Implementation – *Revised by MOD M066*

The weight of this Measure is 30%.

2.3.3.1 Overall Evaluation of the Laboratory's Integrated Assessment Program 100%

BSA will coordinate and conduct an overall evaluation of the Laboratory's Assessment Program. The evaluation will consider the "approach/definition, deployment/implementation, and improvements/results" of three Laboratory assessment processes; Line Management (organizational assessments), Management System (programmatic assessments), and Independent Assessments (which can either look at programmatic and organizational performance). Note: Independent assessments are considered to be those assessment activities managed by the BSA Internal Audit and/or Independent Oversight Organizations.

The evaluation team will include DOE representatives (BAO and others selected by BAO), BSA Representatives and "peer reviewers" from other Laboratories.

A consensus scoring approach based on using a "maturity scale" will be utilized. Previous DOE/BAO evaluation scores (FY 99 and FY 00) will be used as benchmarks. BAO will have final authority to determine the evaluation score.

### 2.3.4 Quality Management System Verification

The weight of this Measure is 20%.

2.3.4.1 Develop Verification Plan by February 15, 2001 30%
This Plan will have been previously reviewed by DOE and will incorporate resolution of comments as agreed to by DOE-BHG

2.3.4.2 Complete Verification by July 30, 2001 70%

Metrics:

- Prior to, or meeting milestone = outstanding
- +15days = excellent
- +16 - 30days = good
- +31 - 45days = marginal
- >45days = unsatisfactory

### 2.3.5 Rad Con Program Implementation

The weight of this Measure is 20%.

2.3.5.1 Performance measurement based on the composite ratings received in the four program element reviews of the triennial assessment.

Weighting Factor 60%

Performance Rating Levels

| Rating Levels | Performance |
|---|---|
| Outstanding | Composite is Outstanding |
| Excellent | Composite is Excellent |
| Good | Composite is Good |
| Marginal | Composite is Marginal |
| Unsatisfactory | Composite is Unsatisfactory |

2.3.5.2 Overall radiological control program performance evaluation based on annual self-assessment evaluation.

Weighting Factor 40%

Performance Rating Levels

| Rating Levels | Performance |
|---|---|
| Outstanding | Excellent overall evaluation |
| Excellent | Very good overall evaluation |
| Good | Good overall evaluation |
| Marginal | Marginal overall evaluation |
| Unsatisfactory | Unsatisfactory overall evaluation |

Performance Measure Milestones:

1. Formally evaluate, on a quarterly basis, the Multi-Tier Network architecture and the Perimeter Defense Network with the Cyber Security Advisory Council (CSAC) and the Cyber Security Incident Response Team (CSIRT) throughout 2001.

2. Complete the establishment of the Perimeter Defense Network – 3/31/01.

3. Implement Host-based security (including clear text passwords, Kerberos evaluation) and authentication services by 07/31/01.

4. Establish a Security Information Management System, including a Threat Assessment Subsystem, Intrusion Detection Subsystem, and a data fusion system for Monitoring Independent Trends to Enhance Network Security by 4/15/01.

5. Conduct a comprehensive vulnerability assessment and assess results by 9/30/01.

6. Develop an application level security strategy by 09/30/01.

Metric: Meeting the project milestones above will be considered Excellent performance and bettering a milestone by 30 days or more will comprise Outstanding performance for that milestone. Missing a milestone by up to 45 days will be considered Good performance for that milestone. Missing a milestone by more than 45 days will be considered Marginal performance for that milestone and by more than 90 days will be considered Unsatisfactory performance for that milestone.

Each milestone will be awarded points as follows based on accomplishment of that milestone:

| | |
|---|---|
| Outstanding | 4 Points |
| Excellent | 3 Points |
| Good | 2 Points |
| Marginal | 1 Point |
| Unsatisfactory | 0 Points |

The evaluation of the Performance Measure will be the numerical average of the scores of the supporting milestones.

2.4.3 World Wide Web Support Strategy – *Revised by MOD M066*

Implement systems and tools that enhance BNL's WWW infrastructure. Provide web-based capabilities to improve business and scientific processes at the Laboratory. Develop capabilities in the latest web technologies and provide the expertise as a resource to the Laboratory.

The weight of this Measure is 15%

Performance Measure Milestones:

a. Develop web application programming and design capabilities to meet the needs of Laboratory scientific and business programs.

1. Train staff in application and database technologies - 6/30/01.
2. Train staff in XML and Unix server component technologies – 9/30/01

b. Implement policy and standards for web site creation, content attributes, and content maintenance.

1. Implement content management templates that reflect web page creation policies and standards - 9/30/01.
2. Establish development/approval/publish process for web content - 9/30/01.
3. Implement distributed editing capability through content management system –9/30/01.

Metric: Meeting the project milestones above will be considered Excellent performance and bettering a milestone by 30 days or more will comprise Outstanding performance for that milestone. Missing a milestone by up to 45 days will be considered Good performance for that milestone. Missing a milestone by more than 45 days will be considered Marginal performance for that milestone and by more than 90 days will be considered unsatisfactory performance for that milestone.

Each milestone will be awarded points as follows based on accomplishment of that milestone:

Outstanding - 4 Points
Excellent - 3 Points
Good - 2 Points
Marginal - 1 Point
Unsatisfactory - 0 Points

The evaluation of the Performance Measure will be the numerical average of the scores of the supporting milestones.

**2.4.4 Scientific Computing Infrastructure** – *Revised by MOD M060*

Develop a scientific computing infrastructure that is fully supportive of the Laboratory's scientific mission, focusing initially on those areas where leveraging existing expertise and local/regional collaborations can produce significant improvement over the current status.

The weight of this Measure is 20%.

(a) Strengthen and upgrade the existing Visualization Program to address the visualization and data analysis requirements for the major BNL scientific initiatives – in particular for RHIC and ATLAS. This initiative includes both the research component to be pursued in collaboration with the Center for Data Intensive Computing (CDIC) and service components, applicable to the BNL Computing Facility (BCF) and desktop services.

Performance Measure Milestones:

(1) Research component – Generate one or more peer-reviewable research proposals in collaboration with the CDIC *by 09/15/01.*

(2) Service Component – Develop a plan for improving a visualization infrastructure and initiate its implementation, including: an upgrade path for the Visualization Theater; evaluation of distributed and parallel visualization technology; and support of the advanced applications required by the Laboratory Research Programs which are enabled by this infrastructure. (The latter includes accelerator simulation, medical imaging, and structural biology computations). *Milestone Date: 09/15/01*

*(b)* Strengthen and upgrade the scientific computing resources present in the BNL computing Facility (BCF), to provide strategic value to the major scientific programs at the Laboratory, as well as to local/regional collaborations.

Performance Measure Milestones:

(1) Upgrade the high-performance computing resources required for support of the enhanced Visualization function, as well as other scientific initiatives; namely, the hardware and advanced system administration for the BNL Linux Cluster (BLC). Milestone Date: 03/01/01

(2) Expand collaboration with the CDIC by developing and supporting the infrastructure to connect the CDIC's Galaxy Cluster located in the BCF, and the counterpart machine, located at Stony Brook University. This extended high-performance platform will provide the requisite interoperability to perform otherwise intractable computations. Examples of such computations appear in BNL research programs in Accelerator Design, RHIC Data Management, Meterology/Climatology and Fluid Dynamics. Milestone Date: 04/15/01

# APPENDIX I

# DOE DIRECTIVES

There is no List A to this Appendix.

List B to this Appendix contains two parts as follows:

**Part I: " Directives List"**

This section contains a list of Directives that are considered by DOE as applicable to the BNL contract.

**Part II: "Partial Deletions of Directives"**

This section contains a list of Directives that were accepted and implemented by the previous contractor but have subsequently been revised by DOE to remove certain sections.

CRD=Contract Requirements Document

| DIRECTIVES LIST | | |
|---|---|---|
| **DATE** | **DOE DIRECTIVE NUMBER** | **SUBJECT TITLE** |
| 7/14/99 | N 142.1 | UNCLASSIFIED FOREIGN VISITS AND ASSIGNMENTS (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01) |
| 10/02/00 | N 203.1 | CRD - SOFTWARE QUALITY ASSURANCE (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01) |
| 7/26/99 | N 205.1 | CRD - UNCLASSIFIED CYBER SECURITY PROGRAM (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01) |
| 11/1/99 | N 205.2 | CRD - FOREIGN NATIONAL ACCESS TO DOE CYBER SYSTEMS (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01) |
| 11/23/99 | N 205.3 | CRD - PASSWORD GENERATION, PROTECTION, AND USE (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01) |
| 4/15/99 | N 350.5 | CRD - USE OF FACILITY CONTRACTING EMPLOYEES FOR SERVICES TO DOE IN THE WASHINGTON, D.C., AREA |
| 7/15/97 | N 440.1 | CRD - INTERIM CHRONIC BERYLLIUM DISEASE PREVENTION PROGRAM |
| 9/30/95 | N 441.1 | RADIOLOGICAL PROTECTION FOR DOE ACTIVITIES (using ORNL/TM-11497 in lieu of Attachment 1)(Extended until 6/30/00 by DOE N 441.4 dated 11/20/98) |
| 12/15/00 | N 470.2 | CRD - REPORTING UNOFFICIAL FOREIGN TRAVEL (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01) |
| 5/26/00 | N 473.4 | CRD - DEPARTMENT OF ENERGY BADGES (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01) |
| 6/5/00 | N 473.5 | CRD - SECURITY AREA VOUCHING AND PIGGYBACKING (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01) |
| 9/18/00 | N 473.6 | CRD - SECURITY CONDITIONS (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01) |
| 10/26/00 | N 473.7 | CRD - EXPLOSIVE DETECTION PROGRAM (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01) |
| 11/3/99 | O 110.3 | CRD - CONFERENCE MANAGEMENT |
| 9/29/95 | O 130.1 | CRD - BUDGET FORMULATION PROCESS |
| 9/30/95 | O.135.1 | BUDGET EXECUTION-FUNDS DISTRIBUTION AND CONTROL (Extended until 9/30/00 by DOE N 135.1 dated 11/29/99) |
| 11/01/00 | O 151.1A | CRD - COMPREHENSIVE EMERGENCY MANAGEMENT SYSTEM |
| 9/30/96 | O 200.1 | CRD - INFORMATION MANAGEMENT SYSTEM |
| 9/27/95<br>10/26/95<br>5/1/95 | O 210.1<br>Change 1<br>Change 2 | CRD - PERFORMANCE INDICATORS AND ANALYSIS OF OPERATIONS INFORMATION |

| | | |
|---|---|---|
| 3/22/01 | O 221.1 | REPORTING FRAUD, WASTE, AND ABUSE TO THE OFFICE OF INSPECTOR GENERAL |
| 3/22/01 | O 221.2 | CRD - COOPERATION WITH THE OFFICE OF INSPECTOR GENERAL |
| 12/8/97 | O 224.1 | CRD - CONTRACTOR PERFORMANCE-BASED BUSINESS MANAGEMENT PROCESS |
| 11/26/97 | O 225.1A | CRD - TYPE A AND B ACCIDENT INVESTIGATIONS |
| 9/30/95<br>10/26/95<br>11/7/96 | O 231.1<br>Change 1<br>Change 2 | CRD - ENVIRONMENT, SAFETY & HEALTH REPORTING<br>CANCELLATION - ES&H Reporting, dated 11/7/96, Paragraph 5b(2). |
| 9/30/95<br>11/7/96<br>01/28/00 | M 231.1-1<br>Change 1<br>Change 2 | ENVIRONMENT, SAFETY, AND HEALTH REPORTING MANUAL<br>CANCELLATION - ES&H Reporting Manual, dated 11/7/96, Chapter IV. |
| 8/1/97 | O 232.1A | CRD - OCCURRENCE REPORTING AND PROCESSING OF OPERATIONS INFORMATION (As modified by letter Grahn/Gordon, dated 4/10/98, effective 5/5/98) |
| 7/21/97 | M 232.1-1A | OCCURRENCE REPORTING AND PROCESSING OF OPERATIONS INFORMATION (As modified by letter Grahn/Gordon, dated 4/10/98, effective 5/5/98) |
| 4/9/01 | O 241.1A | CRD - SCIENTIFIC AND TECHNICAL INFORMATION MANAGEMENT |
| 1/30/98 | O 251.1A | CRD - DIRECTIVES SYSTEM |
| 11/19/99 | O.252.1 | CRD - TECHNICAL STANDARDS PROGRAM |
| 12/30/96 | O 311.1A | CRD - EQUAL EMPLOYMENT OPPORTUNITY AND DIVERSITY PROGRAM (Extended until 12/30/01 BY DOE N 311.1 DATED 12/20/00) |
| 9/30/96<br><br>5/8/98 | O 350.1<br><br>Change 1 | CRD - CONTRACTOR HUMAN RESOURCE MANAGEMENT PROGRAMS<br>CRD - EMPLOYEE BENEFITS |
| 12/6/95 | O 413.1 | CRD - MANAGEMENT CONTROL PROGRAM (Extended until 12/6/01 or until DOE O 413.1A is published, DOE N 413.1 dated 12/10/99) |
| 1/08/01 | O 413.2A | CRD - LABORATORY DIRECTED RESEARCH AND DEVELOPMENT |
| 10/13/00 | 0 413.3 | CRD - PROGRAM AND PROJECT MANAGEMENT FOR THE ACQUISITION OF CAPITAL ASSETS |
| 11/24/98 | O 414.1 | CRD - QUALITY ASSURANCE |
| 10/13/95<br>11/16/95<br>10/24/96<br>11/22/00 | O 420.1<br>Change 1<br>Change 2<br>Change 3 | CRD - FACILITY SAFETY |
| 1/08/01 | O 420.2A | CRD - SAFETY OF ACCELERATOR FACILITIES |
| 12/21/00 | O 425.1B | CRD - STARTUP AND RESTART OF NUCLEAR FACILITIES |

| | | |
|---|---|---|
| 10/14/98 | O 430.1A | CRD - LIFE CYCLE ASSET MANAGEMENT |
| 6/13/96 | O 430.2 | IN HOUSE ENERGY MANAGEMENT (NO CONTRACTS REQUIREMENT DOCUMENT)(Extended until 6/13/01 by DOE N 430.3 dated 12/13/00) |
| 7/9/99 | O 435.1 | CRD - RADIOACTIVE WASTE MANAGEMENT |
| 7/9/99 | M 435.1-1 | RADIOACTIVE WASTE MANAGEMENT MANUAL |
| 3/27/98 | O 440.1A | CRD - WORKER PROTECTION MANAGEMENT FOR DOE CONTRACTOR EMPLOYEES |
| 9/25/95<br>10/13/95<br>10/26/95<br>1/08/01 | O 440.2<br>Change 1<br>Change 2<br>Change 3 | CRD - AVIATION |
| 6/6/01 | O 442.1A | CRD - DEPARTMENT OF ENERGY EMPLOYEE CONCERNS PRG. |
| 5/15/00 | O 443.1 | PROTECTION OF HUMAN SUBJECTS |
| 10/26/00 | O 451.1B | NATIONAL ENVIRONMENTAL POLICY ACT COMPLIANCE PROGRAM |
| 10/2/96 | O 460.1A | CRD - PACKAGING AND TRANSPORTATION SAFETY |
| 9/27/95<br>10/26/95 | O 460.2<br>Change 1 | CRD - DEPARTMENTAL MATERIALS TRANSPORTATION AND PACKAGING MANAGEMENT |
| 9/28/95<br>6/21/95 | O 470.1<br>Change 1 | CRD - CONTRACTOR SAFEGUARDS AND SECURITY PROGRAM REQUIREMENTS ((Extended until 12/31/01 by DOE N 251.40 dated 5/3/01) |
| 03/01/00 | O 470.2A | CRD - SECURITY AND EMERGENCY MANAGEMENT INDEPENDENT OVERSIGHT AND PERFORMANCE ASSURANCE PROGRAM |
| 6/30/00 | 0 471.1A | CRD - IDENTIFICATION AND PROTECTION OF UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION |
| 6/30/00 | M.471.1-1 | IDENTIFICATION AND PROTECTION OF UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION MANUAL |
| 3/27/97 | O 471.2A | CRD - INFORMATION SECURITY PROGRAM (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01) |
| 1/6/99 | M 471.2-1B | CRD - PROTECTION AND CONTROL OF CLASSIFIED MATTER |
| 8/3/99 | M 471.2-2 | CRD - CLASSIFIED INFORMATION SYSTEMS SECURITY MANUAL (DOE N 205.3, dated 11/23/99 cancel Paragraphs 4j(2) and 4j(6) of Chapter VI, and Paragraph 12a(2)(a) of Chapter VII.) |
| 3/24/97 | O 472.1B | CRD - PERSONNEL SECURITY ACTIVITIES (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01) |
| 11600 | M 472.1-1A | PERSONNEL SECURITY PROGRAM MANUAL |
| 6/30/00 | O 473.2 | CRD - PROTECTIVE FORCE PROGRAM |
| 6/30/00 | M 473.2-2 | PROTECTIVE FORCE PROGRAM MANUAL |
| 11/20/00 | O 474.1A | CRD - CONTROL AND ACCOUNTABILITY OF NUCLEAR MATERIALS |
| 11/22/00 | M 474.1-1A | CRD - MANUAL FOR CONTROL AND ACCOUNTABILITY OF NUCLEAR MATERIALS |

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|---|---|---|
| 5/8/98 | M 475.1-1 | CRD - IDENTIFYING CLASSIFIED INFORMATION |
| 1/03/01 | O 481.1A | CRD - WORK FOR OTHERS (NON DOE FUNDED WORK) |
| 1/03/01 | M 481.1-1A | REIMBURSABLE W0RK FOR NON-FEDERAL SPONSORED PROCESS MANUAL |
| 1/12/01 | O 482.1 | CRD - DOE FACILITIES TECHNOLOGY PARTNERING PROGRAMS |
| 8/25/00 | O 551.1A | CRD - OFFICIAL FOREIGN TRAVEL |
| 9/29/95 | O 534.1 | CRD - ACCOUNTING (Extended until 9/29/00 by DOE N 534.1 dated 9/29/99) |
| 7/12/00 | M 573.1-1 | MAIL SERVICES USER'S MANUAL |
| 6/10/00 | P 413.1 | PROGRAM AND PROJECT MANAGEMENT POLICY FOR THE PLANNING, PROGRAMMING, BUDGETING, AND ACQUISITION OF CAPITAL ASSETS |
| 5/08/01 | P 470.1 | INTEGRATED SAFEGUARDS AND SECURITY MANAGEMENT POLICY |

| DIRECTIVES LIST | | |
|---|---|---|
| **DATE** | **DOE DIRECTIVE NUMBER** | **SUBJECT TITLE** |
| 6/23/92 | 1270.2B | SAFEGUARDS AGREEMENT WITH TH INTERNATIONAL ATOMIC ENERGY AGENCY |
| 7/14/88<br>10/5/88<br>5/18/92 | 2110.1A<br>Change 1<br>Change 2 | PRICING OF DEPARTMENTAL MATERIALS AND SERVICES |
| 6/8/92 | 2300.1B | AUDIT RESOLUTION AND FOLLOWUP |
| 2/10/94 | 4330.4B | MAINTENANCE MANAGEMENT PROGRAM (Nuclear Facilities Portion Only) |
| 11/9/88<br>6/29/90 | 5400.1*<br>Change 1 | GENERAL ENVIRONMENTAL PROTECTION PROGRAM |
| 2/8/90<br>6/5/90<br>1/7/93 | 5400.5*<br>Change 1<br>Change 2 | RADIATION PROTECTION OF THE PUBLIC AND THE ENVIRONMENT |
| 5/15/84<br>5/16/88<br>5/16/89<br>9/20/91 | 5480.4*<br>Change 1<br>Change 2<br>Change 3 | ENVIRONMENTAL PROTECTION, SAFETY, AND HEALTH PROTECTION STANDARDS |
| 7/9/90<br>5/18/92 | 5480.19<br>Change 1 | CONDUCT OF OPERATIONS REQUIREMENTS FOR DOE FACILITIES |
| 11/15/94 | 5480.20A | PERSONNEL SELECTION, QUALIFICATION AND TRAINING REQUIREMENTS FOR DOE NUCLEAR FACILITIES |
| 12/24/91 | 5480.21 | UNREVIEWED SAFETY QUESTIONS |
| 2/25/92<br>9/15/92<br>1/23/96 | 5480.22<br>Change 1<br>Change 2 | TECHNICAL SAFETY REQUIREMENTS |
| 4/10/92<br>3/10/94 | 5480.23<br>Change 1 | NUCLEAR SAFETY ANALYSIS REPORTS |
| 1/19/93 | 5480.30 | NUCLEAR REACTOR SAFETY DESIGN CRITERIA |
| 9/20/91 | 5530.1A | ACCIDENT RESPONSE GROUP |
| 1/14/92<br>4/10/92 | 5530.3<br>Change 1 | RADIOLOGICAL ASSISTANCE PROGRAM |
| 5/8/85 | 5560.1A | PRIORITIES AND ALLOCATIONS PROGRAM |
| 8/1/80 | 5610.2 | CONTROL OF WEAPON DATA |
| 7/15/94 | 5632.1C* | PROTECTION AND CONTROL OF SAFEGUARDS AND SECURITY INTERESTS |
| 5/26/94 | 5660.1B | MANAGEMENT OF NUCLEAR MATERIALS |
| 9/4/92 | 5670.3 | COUNTERINTELLIGENCE PROGRAM |
| 5/18/92 | 5700.7C | WORK AUTHORIZATION SYSTEM |

| ACCOUNTING PRACTICES AND PROCEDURES HANDBOOK | | |
|---|---|---|
| 5/2/83 | Chapter V | INVENTORIES |
| 6/30/80 | Chapter X | PRODUCT COST ACCOUNTING |

**Appendix I - Part II**

| PARTIAL DELETIONS OF DIRECTIVES | | | | |
|---|---|---|---|---|
| DATE | DOE DIRECTIVE NUMBER | SUBJECT TITLE | DELETION DIRECTIVE DATE | SECTIONS DELETED |
| 11/9/88<br>6/29/90 | 5400.1<br>Change 1 | GENERAL ENVIRONMENTAL PROTECTION PROGRAM | O 231.1<br>9/30/95<br>Change 1<br>10/26/95<br>Change 2<br>11/7/96 | Paras. 2d, 2b, 4b & 4c of Chap II; Paras 2d & 3b of Chap III; Para 10(c) of Chap IV |
| 2/8/90<br>6/5/90<br>1/7/93 | 5400.5<br>Change 1<br>Change 2 | RADIATION PROTECTION OF THE PUBLIC AND THE ENVIRONMENT | O 231.1<br>9/30/95<br>Change 1<br>10/26/95 | Chapter II:<br>Para 1a(3) (a) |
| 5/15/84<br>5/16/88<br>5/16/89<br>9/20/91 | 5480.4<br>Change 1<br>Change 2<br>Change 3 | ENVIRONMENTAL PROTECTION, SAFETY, AND HEALTH PROTECTION STANDARDS | O 440.1<br>9/30/95<br>Change 1<br>10/26/95 | Attachment 2:<br>Paras 2c, 2d(2) - (3), 2e(1) - (8); and Attach. 3:<br>Paras 2c,; 2d(2) - (3), 2e(1) - (7) |
| 7/15/94 | M5632.1C-1 | MANUAL FOR PROTECTION AND CONTROL OF SAFEGUARDS AND SECURITY INTERESTS | O 470.1<br>9/28/95<br>O 471.2A<br>3/27/97 | Chapter XI<br><br>Chapter III,<br>Paras 1, 2, 4-9 |

*See Part II, Partial Deletions