

PS4200.09 FACILITIES OPERATIONS MANUAL



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# Change Notice

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DIRECTIVE AFFECTED: 4200.09  
CHANGE NOTICE NUMBER: 02  
DATE: 7/16/98

1. PURPOSE AND SCOPE. This Change Notice provides the uses of the Salaries and Expenses and the Buildings and Facilities (B&F) appropriations and adds the term limit for B&F Modernization and Repair (M&R) projects not Congressionally approved.

2. SUMMARY OF CHANGES

- The uses and approval process of Major Work Orders have been revised.
- The uses of B&F funds have been clearly defined.
- Provides the term limit for M&R projects for a term not to exceed three years.
- Extensions, approval/denial of extensions, and expiration directions are clearly defined.

3. TABLE OF CHANGES

<u>Remove</u>	<u>Insert</u>
Program Statement Chapter 2, Pages 5 - 12 Chapter 3	Program Statement Chapter 2, Pages 5 - 14 Chapter 3

4. ACTION. File this Change Notice in front of PS 4200.09, the Facilities Operations Manual.

/s/  
Kathleen Hawk Sawyer  
Director



# Change Notice

**DIRECTIVE BEING CHANGED:** 4200.09

**CHANGE NOTICE NUMBER:** CN-01

**DATE:** December 31, 1996

1. PURPOSE AND SCOPE. To delete references to the Facilities Development Manual.

2. DIRECTIVE RESCINDED

PS 4220.03 Facilities Development Manual (06/01/94)

3. SUMMARY OF CHANGES. References to the Facilities Development Manual are deleted. That Manual has been replaced with the Facilities Development Technical Reference Manual which is to be used to guide Bureau staff approving new construction and renovations at existing institutions.

5. TABLE OF CHANGES

Remove

Program Statement  
Chapter 1, Pages 1 and 2  
  
Chapter 2, Pages 1 - 4  
Chapter 9, Pages 9 and 10

Insert

Program Statement  
Chapter 1, Pages 1 and 2  
(CN-01)  
Chapter 2, Pages 1 - 4 (CN-01)  
Chapter 9, Pages 9 and 10  
(CN-01)

5. ACTION. File this Change Notice in front of PS 4200.09, the Facilities Operations Manual.

\s\  
Kathleen M. Hawk  
Director



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# Program Statement

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OPI: ADM  
NUMBER: 4200.09  
DATE: CN-02 7/16/98  
SUBJECT: Facilities Operations  
Manual

1. PURPOSE AND SCOPE. To promulgate the Bureau of Prisons Facilities Operations Manual. Since the Manual's last issuance operations have been changed and new policies have been developed to improve the organization's efficiency. This edition of the Facilities Operations Manual incorporates the various changes that have occurred during the past two years and consolidates Bureau directives regarding physical plant maintenance and operations.

2. PROGRAM OBJECTIVES. The expected results of this program are:

a. Institutions will be designed and maintained to meet the physical and functional needs of the Bureau of Prisons.

b. All appropriate building codes and operational and regulatory standards will be met in Bureau facilities.

c. Management of oversight and master planning for physical plant maintenance and construction programs will be maintained.

d. Preservation of the agency's capital investments through program accountability, standardized reporting and work force training will be maintained.

3. DIRECTIVES AFFECTED

a. Directive Rescinded

PS 4200.08      Facilities Operations Manual (9/1/93)

b. Directives Referenced

PS 1150.04      Office of Security Technology (9/4/96)  
PS 1237.11      Information Systems Security (10/24/97)

PS 1600.07 Occupational Safety and Environmental Health  
Manual (5/30/96)  
PS 1602.03 Life Safety and Fire Protection Review  
Program (6/16/97)  
PS 2000.02 Accounting Management Manual (10/15/86)  
\* PS 2310.01 Use of Appropriations (7/16/98) \*  
PS 3713.19 Affirmative Action Programs (11/4/96)  
PS 4100.03 BOP Acquisitions (9/16/96)  
PS 4400.03 Property Management Manual (2/27/96)  
PS 5251.04 Inmate Work and Performance Pay Program  
(1/11/96)  
  
TRM 4201.01 Facilities Development (4/1/96)  
  
Federal Acquisition Regulations (FAR)  
Code of Federal Regulations (CFR)  
Federal Property Management Regulations (FPMR)

#### 4. STANDARDS REFERENCED

- a. American Correctional Association 3rd Edition Standards for Adult Correctional Institutions: 3-4120, 3-4121, 3-4134, 3-4144, 3-4145, 3-4146, 3-4189, 3-4199, 3-4205, 3-4206, 3-4207, 3-4312, 3-4323
- b. American Correctional Association 3rd Edition Standards for Adult Local Detention Facilities: 3-ALDF-2A-01, 2A-02, 2C-10, 2D-07, 2D-07, 2D-09, 3A-23, 3B-01, 3B-07, 3B-08, 3B-09, 4D-03
- c. American Correctional Association Standards for Adult Correctional Boot Camp Programs: 1-ABC-2A-01, 2A-03, 2C-06, 3A-02, 2C-06
- d. American Correctional Association 2<sup>nd</sup> Edition Standards for the Administration of Correctional Agencies: 2-CO-2A-01, 3B-01
- e. American National Standards Institute (ANSI)
- f. National Fire Protection Association (NFPA)
- g. National Plumbing Code
- h. National Electrical Code

- i. Uniform Mechanical Code
- j. National Board of Boiler and Pressure Vessel Inspectors
- k. Sheet Metal and Air Conditioning Contractors National Associations (SMACNA)

/s/  
Kathleen Hawk Sawyer  
Director

**FACILITIES OPERATIONS MANUAL**

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## CHAPTER 1

### FACILITIES ADMINISTRATION AND ORGANIZATION

#### ADMINISTRATION

A. The Facilities Management Branch of the Administration Division, under the general direction of the Assistant Director for Administration, is responsible for coordination, oversight and policy development for facilities management activities at all Bureau of Prisons controlled facilities. See TRM 022.01, 1.1, Facilities Management Branch Organization Chart, Facilities Operations Technical Reference Manual (TRM).

B. The six regional offices are responsible for new construction at existing institutions, as well as physical plant improvements, preventive maintenance, and power plant and utility systems (including UNICOR buildings). New facilities construction projects may be transferred to regions at the discretion of the Assistant Director for Administration and the appropriate Regional Director (see TRM 022.01, 1.2, Regional Facilities Organization Chart, Facilities Operations TRM).

C. Institution facility operations are under the Facility Manager's direct supervision. General supervision is provided by the Associate Warden, appointed by the Warden (see TRM 022.01, 1.3, Facility Operations Organization Chart, Facilities Operations TRM).

#### STAFF ORGANIZATION AND RESPONSIBILITIES

A. Regional Facilities Office: The Regional Facilities Office is composed of a Facilities Administrator, an Assistant Facilities Administrator, and appropriate construction and technical personnel.

1. The Facilities Administrator is responsible for the overall development, implementation and management of the region's Buildings and Facilities (B&F) program as well as general oversight of institution facility operations and work programming.

2. The Regional Director shall ordinarily delegate to the Facilities Administrator the responsibility and authority to administer the B&F program and provide direction for institution facility operations.

3. The Regional Facilities Administrator's responsibilities include:

- a. Programming and monitoring B&F funds;

b. Preparing annual budget requests;

c. Establishing B&F projects;

d. Reviewing annual institution B&F requests and establishing B&F project priority lists;

e. Preparing design programs for new buildings and physical plant improvements;

f. Furnishing detailed planning and design services and implementing procedures for negotiation and selection of architect/engineer firms;

g. Maintaining files for B&F projects, and for correspondence related to institution Major Work Orders;

h. Processing change orders, supplemental agreements, requests for payments, and other procedures in the administration of construction contracts;

i. Reviewing and evaluating bids for construction and major equipment acquisition;

j. Coordinating the supervision of construction by contractors;

k. Monitoring reports from institutions to evaluate progress of B&F projects, Major Work Orders, preventive maintenance and facility operations;

l. Assisting institutions in conducting Physical Plant Reviews, developing Master Plans and Strategic Plans (see provisions contained in Chapter 13);

m. Providing advice concerning personnel appointments to positions of Facility Manager, General Foreman, Chief of Utilities and Project Representatives;

\* n. Reviewing prints, plans, and specifications to ensure they meet the requirements for seismic safety, life safety, Architectural Barriers Act, and life cycle costing as well as guidelines in the Facilities Development TRM. \*

B. Institution Facility Operations Department: The institution Facility Operations Department is under the Associate Warden's general direction. At institutions not having an Associate Warden, such as camps, the Superintendent shall assume the responsibility for directing the department (may be delegated to his/her assistant).

1. Institution Facility Manager. The Institution Facility Manager is responsible for:

a. Management of all construction, repairs, improvements, and maintenance to the physical plant, as well as to UNICOR

buildings. This includes all equipment, utilities, energy conservation, and major operating units;

b. Preparation of preliminary plans and working drawings and all estimates involving construction and mechanical work;

c. The departmental budget, personnel management, reporting compliance, and monitoring of environmental requirements of local, state and Federal regulations;

d. Insuring that required licenses and permits are obtained and are on file as prescribed by local, state, and/or Federal laws. Licenses and/or permits may be needed to conduct actions related to boiler plant operations, sewage plant operations, potable water treatment, fuel storage tanks, etc.

## 2. Institution General Foreman

a. The Institution General Foreman is under the Facility Manager's immediate supervision and is responsible for assisting in the management of personnel, budget, and operation of the Facility Department.

b. The General Foreman assists in the development of the facility work force focusing attention on the strengths and weaknesses of existing operations. The General Foreman is responsible for:

(1) All construction, maintenance, inspection and repair of buildings and grounds, and vehicle fleet management;

(2) Maintenance, operation, and inspection of all utility systems within the buildings (except heating, ventilating, and refrigeration systems, where the institution has a Chief of Utilities).

## 3. Institution Chief of Utilities

a. The Chief of Utilities is under the Facility Manager's immediate supervision and is responsible for assisting in the management of personnel, budget, and operation of the power plant and distribution equipment and systems.

b. The Chief of Utilities assists in the development of the facility work force, focusing attention on the strengths and weaknesses of existing operations. The Chief of Utilities is responsible for:

(1) Steam and electric generating plants;

(2) Refrigeration systems;

(3) Sewage and water treatment plants, including underground water supply and storm and sanitary drainage systems;

(4) Steam distribution and building heating systems;

(5) Ventilation and A/C systems;

(6) Primary and secondary electrical systems from substations to and including all building entrance panels;

(7) The operation, inspection and maintenance of all gas and oil ovens, compressed air systems, and similar equipment.

4. Shops and Details

a. Institution construction and maintenance are under the General Foreman's immediate control and supervision, except for those shops which are located in or related to the power plant (see TRM 022.01, 1.3, Facility Operations Organization Chart, Facilities Operations Technical Reference Manual). The power plant staff are under the Chief of Utilities' supervision and control.

b. The following shop details are typically under the supervision of the General Foreman:

Auto Repair Shop	Carpenter Shop
Communications Shop	Electric Shop
Machine Shop	Paint Shop
Plumbing Shop	Sheet Metal Shop
Welding Shop	Landscape
General Maintenance Shop	

c. The following shop details are typically under the Chief of Utilities' supervision:

Steam fitter Shop	Water Treatment Operator
Powerhouse Operators	HVAC Shop

d. The above list should not be considered as restrictive. Institutions are expected to have a shop organization sufficient to meet their needs.

e. Institutions are generally delegated authority to determine the number and type of shops and shop personnel required within established staffing guidelines.

(1) A foreman, skilled in the required trade, supervises and operates each shop.

(2) An assistant foreman may be assigned if the operation is of sufficient size and scope to warrant additional staff.

f. The Regional Director (through the Regional Facilities Administrator) must be notified in advance of any planned changes, additions, or deletions in the existing Facility Operations staff.

5. Tool Control. The Facility Manager shall provide input into the annual review of tool control Institution Supplements. All facilities employees shall assure compliance with Bureau tool control procedures as set forth in the Correctional Services Manual and tool control Institution Supplements.

6. Staff Meetings. The Facility Operations staff of each institution shall hold monthly meetings.

a. Prior to each meeting, an agenda shall be prepared and distributed to all Facility Operations staff stating meeting time and place and topics to be discussed.

b. Minutes of each meeting shall be made available to all Facility Operations staff, with one copy forwarded to the Regional Facilities Administrator as a part of the monthly Facilities Operations Report.

7. Employee Training

a. It is the Facility Manager's responsibility to ensure that an adequate employee training program is in effect within the department. The Facility Manager shall coordinate with the Employee Development Manager (EDM) to complete an annual training needs assessment for each department employee in accordance with current Bureau directives.

b. The EDM shall coordinate the training program. All department employees shall consult with their supervisors and the EDM to keep themselves informed of current Bureau employee development directives.

8. Affirmative Action Programs. Facilities staff shall actively support the Bureau's Affirmative Action Program as contained in the Program Statement on Affirmative Action Programs and make efforts to encourage the recruitment, selection, and training of minority and female staff. The following activities should be conducted:

a. Include support of the Affirmative Action Program in monthly staff meetings. Encourage staff to notify qualified minority and female applicants of available positions.

b. Coordinate recruitment activities with the institution Affirmative Action Program Manager. Ensure potential applicants are aware of the Facility Department's support of Affirmative Action initiatives.

c. Notify local trade unions, building associations, and technical schools, which support EEO programs, of vacancies and application procedures for Bureau positions.

d. The Facility Manager shall submit a memorandum, by November 1 of each year, to the Regional Facilities Administrator concerning minority and female hiring accomplishments during the past 12 months. The Regional Facilities Administrators shall consolidate individual memorandums and provide a summary report to the Chief, Facilities Management Branch by December 1 of each year.

9. Annual Leave. All Facility Operations employees shall submit requests for annual leave for the next calendar year in accordance with the Union Master Agreement.

10. Inmate Workers

a. Policy. To the extent possible, sufficient numbers of inmates with appropriate skills shall be assigned to the Facility Operations Department. This number is to correlate with the approved institution work program.

b. Assignment. Inmate job assignments should be directed at maintaining and increasing skills which will enable the inmate to secure employment after release, and at the same time accomplish the institution work program.

(1) The Facility Manager and/or his designee shall interview each newly assigned inmate in an effort to select the work assignment most helpful to the inmate and the work program.

(2) Each inmate shall be given copies of work rules, safety requirements, or other information pamphlets, and written explanation of general rules or procedures which he/she is expected to observe.

(3) Facility detail supervisors shall maintain a Hazardous Material Communications Program and provide inmate workers with appropriate hazardous communication information, as well as the Job Efficiency Training program, as required by the Occupational Safety and Environmental Health Manual.

(4) Inmates showing satisfactory adjustments and demonstrating acceptable skills, dependability, and positive work habits shall be recommended for assignment to jobs requiring higher skill levels in accordance with Institution Supplements.

c. Level of Responsibility. All facilities staff are responsible for the work produced by the department, including that accomplished by inmate workers. As defined in the Program Statement on Inmate Work and Performance Pay, there are various skill levels for inmate workers.

(1) There are certain functions which have been, and will continue to be, the responsibility of each individual foreman as

a wage supervisor. Inmates will not be given the sole responsibility for:

- (a) The preliminary planning and laying out of work for future projects, including the steps needed to accomplish them;
- (b) The interpretation of blueprints or specifications;
- (c) The determination of work procedures when they affect other inmates or staff;
- (d) The substitution of materials or the estimating of materials for size, type, or quantity without review;
- (e) The checking of other inmate work for quality and/or quantity against a standard criteria;
- (f) The completion of work on a project without supervisory review.

(2) It may become necessary for a supervisor to perform tasks which would normally be accomplished by inmate workers. This work may be in areas which ordinarily are off limits to inmates; on equipment which is critical to security; or above the inmate worker's level of competence, skill, or knowledge.

d. Custody. The Facility Operations staff is fully responsible for the control and custody of assigned inmates and for assisting in maintaining institutional security. The Facility Operations staff must closely observe all applicable custodial regulations and practices in supervising inmate workers.

e. Inmate Quotas and Requirements. The management and staff of the Facility Operations department, in conjunction with the Institution Inmate Performance Pay Committee, shall develop realistic quotas of inmate workers for each shop or construction detail.

(1) These quotas shall guide the classification committees/unit teams in making assignments.

(2) Quotas will be reviewed periodically, with adjustments made whenever program changes warrant.

(3) The Facility Manager shall advise the Associate Warden well in advance of any requirements for larger crews or higher skilled workers.

f. Performance Reports. Facility Operations staff shall submit reports on inmate workers to Case Management staff using the Work Performance Rating Form (BP-324) or other forms an

Institution Supplement requires.

g. Guidance and Counseling. Inmate guidance and counseling is of primary importance and is the responsibility of each Facility Operations employee.

(1) Inmate workers' attitudes and job performance cannot be expected to remain constant, and all Facility Operations personnel should be aware of changes and take appropriate action.

(2) When inmates encounter adjustment problems or seek assistance on personal matters, discussion of the problem between the inmate and his/her supervisor may resolve an otherwise difficult situation.

(3) Facility Operations personnel shall counsel inmates under their supervision on personal matters as well as on problems involving adjustment to the institution using the following procedures:

- (a) Recognition of problems;
- (b) Handling of those cases where they feel qualified;
- (c) Referring to professional staff those cases for which they do not feel qualified;
- (d) Furnishing institution administrators with information about the inmate's job performance and attitudes;
- (e) Participating in decisions affecting the inmate's job status.

## CHAPTER 2

### WORK PROGRAMMING, SCHEDULING AND REPORTING

#### GENERAL PROCEDURES

A. Under the Warden's general supervision, an Associate Warden (or other staff member appointed by the Warden or Superintendent) is responsible for the supervision the institution work program. He or she shall exercise primary influence in coordinating manpower, funds, and materials in program planning and implementation.

B. The Facility Manager, under the Associate Warden's general supervision, is responsible for planning, program scheduling, and reporting of construction and maintenance activities in accordance with this Manual.

#### SUPPLIES AND MATERIALS

##### A. Procurement of Supplies and Materials

1. Purchase Requests. The Facility Manager is responsible for authorizing purchase requests for materials, equipment, and supplies required for work projects.

a. If materials are not on hand in the warehouse or shop stock, he or she shall assist the Controller to prepare procurement specifications. Materials purchased through the credit card program are excluded.

b. To ensure accurate accounting, all purchase requests shall be properly identified by accounting classification code, office control number, Minor Work Request, Major Work Order, or Project Numbers, to ensure accurate accounting.

2. Procurement. It is the Controller's responsibility to arrange for the timely procurement of supplies requested for approved BOP projects. If there are delays in procuring materials, the Controller shall advise the Facility Manager.

3. Requisitions (Purchase Requests). Shop foremen performing work covered by a Minor Work Request, Major Work Order, or B&F project are responsible for requisitioning materials.

a. They shall prepare the required forms and forward them through the appropriate supervisor to the Facility Manager. The type of forms and approval procedures may vary to meet requirements for purchases made under the credit card program.

b. In each case, the requisition shall indicate the specific Minor Work Request, Major Work Order, or B&F project

number involved. Whenever practical, all of the materials and supplies required for the work shall be requested on one requisition.

4. Buildings and Facilities (B&F) Supplies. All B&F supplies and materials in stores shall be tagged or otherwise identified by the B&F project number. When it is impractical for the storekeeper to store certain items because of their bulk, or when they are to be delivered to the project site for immediate use, the items must retain their identification by project number and may be used only on the project for which purchased.

5. Records Reconciliation. Cost Center Manager at the institution, regions, and Central Office are responsible for insuring that fund control numbers are assigned to all obligation documents and for certifying that funds are available in their respective Cost Center prior to the creation of obligations.

Specifically, Cost Center Managers are responsible for adhering to the Budget Execution Manual, Chapter 4, for controlling, recording, and administering each of their cost center's in the S&E and B&F appropriations.

a. At least on a monthly basis, review the financial management Miscellaneous Obligation Records (MORs).

b. Make any adjusting entries, as needed, to the facilities budget tracking database to reflect differences.

#### MODIFICATION OF EXISTING FACILITIES

A. Central Office Approval: The Regional Facilities Administrator shall submit to the Central Office for approval, initial designs for new construction at existing institutions and for renovations that change the use condition or design of existing buildings. \*

1. The Chief, Facilities Programs, is responsible for reviewing all submittals from the Regional Facilities Administrators. The Chief shall be guided by the standards for new construction in the Facilities Development TRM. To promote consistency and enhance the quality and validity of the reviews, both at the regional and Central Office levels, the following information must accompany all project submittals: \*

a. The submitted prints shall have been reviewed by appropriate regional staff, approved by the Regional Facilities Administrator, and be of sufficient size and clarity and detail for the reviewer to determine policy compliance.

b. A comparison of the proposed net square footage versus the respective design program's net square footage must be provided for each identified space. (Total area square footage comparisons shall not be considered acceptable.)

c. An explanation of whether the project entails new

construction or the renovation of existing space.

d. Any deviation from program requirements must be justified. (The degree of compliance with program standards may vary depending on whether the project involves new construction or the renovation of existing space.)

e. An indication of any time constraints which may impact review priority.

B. Regional Approval: No modification or addition to existing buildings or utility systems, including fences, site work and/or topography, etc. shall take place without the prior written approval of the Regional Facilities Administrator or his/her designee including modifications to doors, doorways, walls, floors, ceilings, or modifications which alter the performance of a utility or mechanical system. Routine maintenance or replacement of components does not require regional approval.

\* The Regional Facilities Administrator is responsible for insuring all modifications to existing facilities, including new construction, meet the requirements of this Program Statement, Executive Order 12699 regarding Seismic Safety, the Architectural Barriers Act, and 42 U.S.C. 4151-4157 using the Uniform Federal Accessibility Standards (UFAS) as compliance rules. In addition, all modifications shall meet the requirements in effect when the modification is designed regarding fire protection and life safety. All requests shall be examined for consistency with the guidelines contained in the Facilities Development TRM. Any proposed deviation from those guidelines should be fully justified. \*

Life Cycle cost analysis, as defined in Public Law 100-615, shall be performed on all modifications, new construction, and energy consuming major equipment using the approved Department of Energy (DOE) software.

C. Safety Manager Review: The institution Safety Manager shall review and sign any plans for alterations, renovations, and in-house new construction before submission to the Regional Office.

D. Work Programming Committee Approval: The Chair of the Work Programming Committee shall review and sign any plans for alterations, renovation, and in-house new construction.

E. Disposal of Real Property: The disposal of real property (buildings and other structures) shall be accomplished in accordance the Property Management Manual, Chapter 18, and the Federal Property Management Regulations contained in 41 CFR Part 101-47, Utilization and Disposal of Real Property. The required forms and instructions are contained in TRM 022.01, 2.1, Request for Disposal of Real Property, Facilities Operations TRM.

MINOR WORK REQUESTS

A. General: Minor Work Requests for repair, maintenance, or construction are submitted to the Facility Manager. Staff are encouraged to submit requests for work involving new construction, repair, and maintenance of buildings, grounds, and facilities. Staff occupying reservation housing shall submit requests to the Facility Manager in accordance with local procedures.

1. Limit. If the cost of the work item will not exceed \$3,000, the Facility Manager or designee shall classify it as a "Minor Work Request" (TRM 022.01, 2.2, Minor Work Request, Facilities Operations TRM). He or she shall approve or disapprove the request, and process it according to the provisions in this Chapter.

2. Exceptions. Repairs of an emergency nature may be made after a telephone request, with written confirmation submitted on the next normal business day.

B. Processing: Minor Work Requests are assigned a priority rating, request number, and approval signature before being forwarded to the appropriate shop foreman.

1. Priorities are designated as follows by the Facility Manager or designee:

a. "1" - URGENT. Work is given preference over all pending work with other priorities and is to be accomplished chronologically.

b. "2" - ROUTINE. Work is accomplished in chronological order as soon as possible after completing "1" URGENT priority items.

2. Numbers shall run in series as issued by the Computerized Maintenance Management System (CMMS).

3. After the work is completed, the appropriate shop foreman shall complete the form and return it to the Facility Manager. A completed Work Request shall indicate all time, materials, and cost expended for the job.

4. Disapproved work requests are returned to the originating department head. One copy of the disapproved work request shall be maintained in a manual file for one year.

C. Records: The Facility Manager shall maintain a copy of all Minor Work Requests in progress in an "Open Work Request" file arranged by shop/work center.

1. When the original is returned after completion of the work, the copy shall be destroyed. The original is maintained in a "Completed Minor Work Request" file.

2. The completed file shall be maintained in numerical order for one year. This hard copy file is in addition to the automated CMMS requirements contained in Chapter 16.

D. Minor Work Request Log: The CMMS shall be used in lieu of manual records to maintain the Minor Work Request Log.

E. Staff Requests: Staff members may request all types of work through their department heads, using the Minor Work Request form.

1. The submitting department head must sign Minor Work Requests.

2. Minor Work Requests shall be filled out in triplicate, with the original and one copy sent to the Facility Manager. The third copy is retained for the submitting department's records. Institutions with local area networks (LANs) may transmit Minor Work Requests electronically. Electronically transmitted work requests shall be considered approved by the submitting department head with the inclusion of his/her name and the word "SIGNED".

3. An exception to this requirement is made only when emergency repairs are needed, in which case the request may be made by telephone, with written confirmation submitted later. If the Facility Manager, General Foreman, or Chief of Utilities cannot be contacted immediately concerning emergency repairs, the appropriate shop, powerhouse, or facilities personnel are to be contacted directly. Facilities department staff completing emergency repairs after normal working hours must comply with institution policies governing the use of staff overtime.

#### MAJOR WORK ORDERS

\* A. General: Work requests for maintenance and repairs including alterations, remodeling, and equipping (structurally installed equipment) of existing facilities that are \$10,000 or less and minor improvements for which property records are not required and are \$10,000 or less, are submitted to the Facility Manager. This shall include work requests financed within the approved decision unit "P" budget and other decision units including UNICOR. If the cost of the work item exceeds \$3,000, the Facility Manager shall initiate a Major Work Order (see Section 2.3, Major Work Order, of the Facilities Operations Technical Reference Manual). In limited instances, with specific approval, maintenance and repairs which exceed \$10,000 may be funded as a

Major Work Order when emergency circumstances necessitate such expenditures in order to address **immediate** threats to institution security and/or safety.

All Major Work Orders costing between \$10,001 and \$50,000 shall be approved/denied at the Regional Office by the Regional Director. Major Work Orders that exceed \$50,000 shall be approved/denied at the Central Office by the Assistant Director for Administration. All proposed Major Work Orders shall be submitted to the Work Programming Committee for processing in accordance with the procedures identified in this section. \*

\* For further clarification on the use of S&E funds, refer to the Program Statement on the Use of Appropriations. \*

1. The Work Programming Committee shall approve/disapprove S&E projects funded from decision units other than "P" and documented as a Major Work Order if either of the following pertain:

- # Work will alter the physical plant or utility system,  
or
- # Work will require 80 manhours or more of facility staff time.

2. Accountability of S&E funds provided from decision units other than "P" is the appropriate cost center manager's responsibility.

B. Initiation: The Major Work Order form shall be supported by cost estimates, staff man-hours, drawings if required, projected starting and completion dates, etc. Sufficient information shall be submitted to enable the Work Programming Committee to consider and evaluate the job.

C. Authority of the Work Programming Committee: The Work Programming Committee shall approve or disapprove all Major Work Orders.

1. If it appears that work may exceed the authorized funds or previously approved estimate for a Major Work Order, the Committee must review and approve additional funds prior to obligation.

\* 2. If the committee deems it necessary to fund a Major Work Order for maintenance and repairs between \$10,001 and \$50,000, the Chief Executive Officer shall request approval from the Regional Director. For requests that exceed \$50,000, the Chief Executive Officer shall request approval through the Regional Director from the Assistant Director for Administration. These

approvals must be granted before work can begin on the project. The funding of approved Major Work Orders shall not exceed authorized limits without the appropriate prior approval. \*

3. Documentation of committee actions shall be reflected in the minutes of the Work Programming Committee meeting or Major Work Order narrative.

D. Processing: Major Work Orders which are approved and funded shall be numbered and processed as follows:

1. The chair of the committee signs the work order, indicating approval or disapproval and the date action was taken.

2. The Facility Manager assigns a number to the approved work order. Major Work Orders are numbered in a separate series from Minor Work Requests and prefixed with the letters "MWO". The first set of digits indicates the institution identification number, the second set is the Work Order Number starting with one and running consecutively each fiscal year, and the third set indicates the current fiscal year (e.g., "MWO-124-01-96").

3. Once established, a Major Work Order Number shall remain the same until completion of the project.

4. Major Work Orders that are not completed within the fiscal year established, shall be reviewed by the committee prior to the beginning of the new fiscal year. Unobligated funding requirements must be determined and be identified in the new fiscal year budget. Documentation of the committee actions shall be reflected in the meeting minutes and the MWO monthly report database narrative for each active MWO.

5. The Work Programming Committee shall review the status of Major Work Orders monthly, with changes in priority schedules documented in the minutes. A monthly priority listing may be established at the institution for committee use.

6. A copy of the work order shall be forwarded to the appropriate shop foreman. After the work is finished, the foreman shall complete the form and return it to the Facility Manager.

7. When work order projects involve more than one shop, a supplemental copy shall be prepared and forwarded to each shop involved.

a. Supplemental Work Orders are identified by Major Work Order number and suffix letter A, B, C, etc., as required. The word "supplemental", to distinguish it from the original, shall be noted.

b. A record of supplemental copies issued shall be maintained on the original Major Work Order. As each phase of the project is completed, the Supplemental Work Order shall be marked complete and shall indicate the total funds obligated and staff man-hours expended. Supplemental Work Orders must be filed in the Major Work Order File Folder after completion of work.

E. Disapproval: Disapproved Major Work Orders shall be signed by the Chairman of the Work Programming Committee and returned to the originator, advising that person of the disapproval.

F. Records: Records regarding all Major Work Orders shall be maintained as follows:

1. The Facility Manager shall maintain an individual file folder for each approved Major Work Order.

2. Major Work Order file folders shall be established in accordance with the Facilities Operations Technical Reference Manual.

3. File folders are labeled with the identifying work order and CMMS reference number and MWO title, and includes the following relevant information:

- # Minor Work Request
- # Original cost and staff man-hour estimates
- # Original copy of Major Work Order
- # Major Work Order Supplements
- # CEO request to exceed the \$10,000 limit to Regional Director
- \* # Regional Director's approval of MWO's between \$10,000 and \$50,000
- # Assistant Director for Administration's approval to exceed the \$50,000 limit \*
- # Equipment justification
- # Revised cost estimate
- # Copy of Work Programming minutes referencing MWO revisions
- # Supplemental MWO completed/signed by shop foreman
- # Completed MWO signed, with total cost/hours
- # MWO database report (monthly)

- # Project photos/Videos
- # Copies of open Requisitions, PR's, PO's, Partial Receiving Reports
- # Copies of completed Requisitions, Receiving Reports, Charge Accounts and Cash Pick-up
- # Summary of expenditures
- # Daily Construction Log Book, if required
- # All related correspondence
- # Approved Contract Modifications (change orders)
- # Drawings/Plans/Specifications approved by Institution/Regional Office/Central Office

4. The Regional Facilities Administrator shall maintain copies of all Major Work Order documents that requires Regional review and approval. An individual file folder is not required for each approved MWO document.

G. Work Order Completion: When the shop foreman returns the work order upon completing the work, it shall be placed in the Major Work Order file. When necessary, a copy shall be forwarded to the Controller for billing to Federal Prison Industries (reference the Accounting Management Manual).

H. Major Work Order Log: The CMMS program shall be used in lieu of manual records to maintain the Major Work Order Log.

I. Contract Work: The Facility Manager shall establish a daily Construction Log Book for each work order being accomplished wholly or in part by contract. If the contractor involvement in the work order is less than two days, a construction log book is not required unless the Regional Facilities Administrator specifically requests it.

1. The construction log shall be a bound book (not loose leaf) and shall contain the following data, numbered as shown (where "none" is the correct entry, it should be so indicated):

a. Number of workers by trade which the contractor and/or FBOP have on site each day;

b. Visits to construction site by project A&E firm. Identify individuals by name and title and provide a brief description of visit purpose, including length of visit;

c. Weather conditions, such as temperature, wind, humidity, rain, etc., which would affect construction progress;

d. Any unusual facts that could affect the construction progress;

- e. Any outstanding deviations from the specifications and/or drawings and reasons for these deviations;
- f. Corrective action taken on any deviations;
- g. Completion date of phase, such as footings, walls, roofs, utilities, major equipment set, etc.;
- h. A description of all Change Orders and approval;
- i. Any other facts of relative importance to the Work Order;
- j. Signature of foreman responsible for maintaining the log after each daily entry.

2. The Facility Manager shall visit work order project sites and sign the construction log book weekly.

3. When the project is 100 percent complete and closed, the daily construction log book shall be retained as a part of the completed Major Work Order file in the Facility Department.

#### WORK PROGRAMMING COMMITTEE

A. Purpose: The Work Programming Committee is responsible for formulating and prioritizing construction, repair, and maintenance activities.

B. Membership: The committee consists of the Associate Warden (who shall serve as Chairperson), Facility Manager, Controller, General Foreman, Chief of Utilities, Safety Manager, and Associate Warden (Industries) or Industries Superintendent. Additional staff may participate with the consent of the chairperson.

#### C. Duties of Members

1. The Associate Warden is responsible for overall supervision of the Work Program and presides as chair at Committee meetings. He or she shall determine the date and time of meetings, initiate advance notices to members, and consult with the Facility Manager to determine inmate and personnel assignments and to predict the availability of manpower for future work projects.

2. The Facility Manager is responsible for recommending a schedule for accomplishing each work item, including the start date and time span needed, with consideration given to the following:

- # existing work load;
- # availability of funds and employees for supervising work;
- # available inmate hours;
- # weather conditions;
- # equipment required;
- # material procurement and;
- # spacing of work to provide a reasonably constant and continuing cycle of employment.

3. The Controller shall coordinate financing and materials procurement with the approved work program.

a. He or she shall make determinations as to financing and identify the activities and accounts to which items are properly chargeable.

b. In consultation with the Facility Manager, the Controller shall reconcile proposed work scheduling with the availability of funds, recommend budgetary adjustments, and arrange procurement and delivery of materials consistent with the work schedule.

D. Meetings: Meetings shall be held at least once a month on an established schedule that allows adequate time for the Facility Department's Monthly Report to be processed and forwarded to the Regional Office for receipt by close of business the 15th day of each month.

E. Meeting Agenda: The meeting agenda for the Monthly Work Programming Meeting shall be conducted in accordance with the prescribed format. The following program areas must be addressed:

1. Minor Work Request Report;
2. Preventive Work Order Report;
3. Inmate Manpower Report;
4. Staff Manpower Report;

5. Budget Report;

6. Motor Vehicle & Equipment Usage Report;

7. Major Work Orders: The Committee shall review each approved Major Work Order (new, current, and work orders completed during the month) including:

- # work order number and title,
- # date approved/start date,
- # estimated completion date,
- # estimated cost,
- # estimated staff hours
- # obligations,
- # staff labor to date,
- # approximate percent complete to date,
- # date completed (when appropriate), and
- # monthly narrative.

8. Buildings and Facilities and Buildings and Industries Projects: The Committee shall review each approved B&F or B&I projects including:

- # B&F/UNICOR project number and title,
- # funds allotted to date,
- # last date worked on,
- # funds obligated to date,
- # percent completed,
- # scheduled beginning date,
- # scheduled completion date,
- # total B&F man-hours,
- # B&F man-hours this month,
- # total S&E man-hours,
- # S&E man-hours this month, and
- # monthly narrative.

9. Minutes of Work Programming Committee Meetings: Minutes of each meeting shall be taken; however, neither word-for-word minutes nor the use of a recorder or stenographer is necessary. Information contained in the monthly status reports (Major Work Order and B&F Progress Reports) need not be repeated in the minutes.

a. Minutes should contain a summary of:

(1) the actual decisions of the meeting, identifying each Major Work Order and B&F project on which decisions are made by name and number;

(2) the status and priority of Major Work Orders and B&F projects the Committee reviewed;

(3) new Major Work Orders approved along with a brief description and estimated cost; and

(4) proposed B&F projects to be submitted for approval along with a brief description and estimated cost.

b. A copy of the Monthly Report shall be made available to Committee members.

#### GENERAL REQUIREMENTS

A. The Committee shall review new submittals of Major Work Orders and B&F projects. The Facility Manager shall supply the Committee with the following information for each new submittal:

- # A description of the proposed work request including the size and scope and any unusual conditions;
- # Detailed cost estimate;
- # Estimated staff man-hours;
- # Single line drawing, if required; and
- # Projected start and completion dates.

B. The Committee shall either approve and fund the request or disapprove and return a copy of the submittal to the originator.

1. If approved, process according to this Chapter.

2. If the committee approves a Major Work Order that is estimated to exceed the \$10,000 MWO limit, follow the procedures contained in this chapter.

C. The Committee shall review applicable testing and inspection reports (see TRM Facilities Operations Technical Reference Manual) to ensure appropriate corrective action is initiated.

D. The Committee shall examine all departmental program reviews and responses to determine any requirements to schedule work projects which address findings.

E. The Committee shall review all justification data concerning B&F project submittals (including UNICOR projects). These justifications shall be submitted to the Regional Facilities Administrator each year in accordance with Chapter 3.

If the urgent need for a project arises during the year, institutions may submit interim justifications at any time with a revised priority listing.

REGIONAL REPORTING

A. Each institution shall submit a monthly report to its respective Regional Office by the 15th of each month. The report must be submitted in the approved database format and contain information from the previous month. The database reporting format will be issued annually as an Operations Memorandum. In addition, individual Regional Facilities Administrators may require that monthly reports be submitted in hard copy.

B. Each Regional Facilities Administrator shall maintain monthly report database files from each institution for the last complete fiscal year and current fiscal year.

CENTRAL OFFICE REPORTING. Each Regional Office shall compile monthly report data submitted from their institutions and forward the consolidated data electronically to the Chief, Facilities Operations. The monthly report is due in the Central Office by the last day of each month for the previous month's data.

## CHAPTER 3

### BUILDINGS AND FACILITIES PROJECTS

#### DEFINITIONS

- \* A. Buildings and Facilities (B&F) Funds: The B&F appropriation is provided for the purchase and acquisition of facilities, new construction at new and existing facilities, renovations, major repairs, and equipping such facilities for penal and correctional use, and related necessary expenses. The B&F funds are also provided for construction, remodeling, and equipping necessary buildings and facilities at existing penal and correctional facilities, including all necessary expenses incident thereto.

B&F funds are "no-year" funds, meaning the funds are available until expended and do not lapse at the end of a fiscal year. Importantly, while the funds do not have time limitations, their use is confined to the basic B&F purposes outlined in the appropriation's language as described above.

The B&F appropriation will normally fund the following:

- ! constructing new facilities and new construction at existing facilities,
- ! renovations at existing facilities that exceed \$10,000,
- ! major repairs that exceed \$10,000, and
- ! equipping the facilities with items that are considered part of the physical plant necessary to equip a facility.

For further clarification on the use of B&F funds, refer to the Program Statement on the Use of Appropriations. \*

- B. Repairs and Improvements (R&I): This term refers to projects covering the installation or repair of fixed capitalized equipment and repair, improvement, alteration, or expansion of an existing facility, which cost less than \$500,000.

R&I project phasing should not be used to circumvent the Line Item budget process.

- C. Line Items: This term refers to all projects covering new construction, repair, improvement, or alterations costing \$500,000 or more.

D. Fixed Capitalized Equipment: Assets of a long-term character that are relatively permanent in nature and are intended to be held or used over a number of years. Typical examples of this type of equipment includes bake ovens, boilers, deep well pumps, heating/ventilating/refrigeration systems, telephone systems, fuel oil systems, elevators, and other items that are considered to be part of the physical plant.

#### REQUESTS FOR BUILDINGS AND FACILITIES PROJECTS

##### A. Master Planning

1. Since B&F funds are limited, it is necessary to determine institution requirements and establish priorities to ensure that the most critical needs are met.

a. Projects submitted through the B&F budget process should be consistent with the institution's Strategic Plan Goals. Other considerations shall be Physical Plant Reviews, Program Review Findings, and discrepancies found during institution physical plant inspections.

2. The institution Work Programming Committee shall serve as the master planning group responsible for formulating the annual B&F budget submission.

a. Typically, the Work Programming Committee meets to formulate annual B&F budget submission before the end of the second quarter of the fiscal year to allow time to prepare the submittals by the due date. For example, a Committee meeting conducted in January or February 1996 (FY'96) considers R&I projects for FY 1997 and Line Item projects for FY 1999.

b. The Committee shall function as a master planning group considering Physical Plant Reviews, Program Review Findings, and discrepancies found during the institution physical plant inspections as primary resources in the development of proposed projects and priority lists.

c. The Facility Manager shall prepare and distribute a memorandum at least one month in advance of the meeting to notify all department heads of the meeting time, place, and purpose. The memorandum shall identify what action they should take to have future projects considered and state that the Facility Department can assist them to formulate any necessary documentation. A copy of this memorandum shall be maintained on file in the Facility Manager's Office.

d. The Facility Manager shall present to the Committee the status of the B&F program, including projects in progress, prior year R&I and Line Item submissions, Line Items expected to be approved for the next fiscal year, and the effect those projects will have on physical plant long range planning.

e. The Facility Manager shall present those projects which are increments of phased projects planned over a period of years.

f. The Work Programming Committee shall consider proposed projects and establish separate priority lists for R&I and Line Item projects.

(1) The Committee shall forward proposed R&I and Line Item priority lists to the Chief Executive Officer for final approval. Upon approval, a copy of the priority lists shall be submitted to the Budget and Planning Committee for informational purposes.

(2) The Work Programming Committee actions shall be documented in the meeting minutes of the Monthly Facility Operations Report.

(3) The approved priority lists and required schedule of cost inputs are then submitted to the appropriate Regional Facilities Administrator in accordance with provisions contained in this Chapter (see the Facilities Operations Technical Reference Manual, 3.1, Priority Listing; 3.2, Schedule of Cost Inputs; and 3.3, Detail Estimating Sheet).

3. Line Item project requests shall be exclusive of proposed projects already included in the R&I submittal. Phasing of R&I projects to avoid Line Item project planning is discouraged, as is consolidation of routine maintenance projects (Major Work Orders) into R&I projects.

B. Project Justifications: Project justifications are to be submitted in the Schedule of Cost Input spreadsheet format. The SCI.SS spreadsheet, (see Section 3.2, Schedule of Cost Inputs, Facilities Operations Technical Reference Manual), is a First Choice spreadsheet that is to be used unless the Regional Facilities Administrator authorizes and issues a Lotus spreadsheet. The Lotus spreadsheet shall be obtained from the Central Office, Resource Management Branch.

A separate schedule of cost input shall be prepared on proposed R&I projects, up to a maximum of five (5) projects. Line Item projects shall have a schedule of cost input prepared on proposed projects, up to a maximum of two (2) projects. The completion of

Advance Procurement Plans (APP) shall be accomplished consistent with the provisions in the Program Statement, BOP Acquisition Policy.

Phased projects shall be thoroughly explained, showing fiscal years to be funded. Regional Facilities Administrators may require the division of Line Item projects into specific categories. If that is required, Facility Managers shall be provided written instructions from their Regional Office.

1. The Schedule of Cost Input spreadsheet (refer to the Facilities Operations Technical Reference Manual) must contain the information necessary to accurately describe what is to be accomplished with the project, provide justification for the project, and develop reliable cost estimates. Detailed line by line instructions are provided in the Facilities Operations Technical Reference Manual, exhibit 10. Particular attention shall be given to the following issues when completing the Schedule of Cost Input spreadsheet:

a. Current Conditions. A justification describing why the project is necessary. Be concise, but descriptive enough so the severity of the condition is conveyed, as well as possible consequences if the project is not approved.

Provide complete information, if the project is required in response to an increase in population, indicate the rated capacity and current overcrowding rate. Provide the age of the institution or building and any other relevant facts to support the proposal, i.e., violation of codes due to the recent changes.

If the project is a continuation of a program started in previous years, the amount previously obligated and total funds required in future years shall be included.

b. Proposal. A description of the proposed project, including the size and scope and any unusual conditions.

(1) As an example of size and scope, a "garage addition" should include dimensions of addition, type of building construction (structural design, roof system, etc.), number and type of vehicles to be housed, construction cost per square foot, utility service requirement, and whether it is attached to another building.

(2) Additional conditions might include type of existing construction, such as drainage, rock and/or sand to be excavated, accessibility, seismic, and life safety requirement, etc.

(3) Identify method of accomplishing work, such as contract, in-house, or a combination of contract and in-house labor.

c. Cost Estimates. The total estimated funding for the design and construction cost and the estimated cost of staff supervision.

(1) This cost includes a general breakdown of the estimated cost by features, such as electrical, plumbing, site preparation, hardware, etc.

(2) All estimated costs shall be itemized by object class (see Detail Estimate Sheet, Facilities Operations Technical Reference Manual). If the Regional Facilities Administrator approves, cost estimates generated through the Timberline software program may be substituted for the Detail Estimating Sheet, Facilities Operations Technical Reference Manual.

(3) The requirement for staff supervision (B&F position) must be addressed, including how long the position will be required. The cost of staff relocation and salary must be included in overall project cost figures.

d. Other Resources. Other resources required for the project, such as equipment (justifications shall be attached for all equipment items to be procured with project funds).

e. Energy Consumption. Any impact the project will have on energy consumption in buildings and/or vehicles.

f. Life Cycle Cost Analysis. A life cycle cost analysis shall be completed for each piece of capitalized equipment or mechanical system and all components of a building or structure that could affect energy consumption (e.g. windows, insulation, exterior wall materials) in accordance with Public Law 100-615.

### C. Due Date

1. R&I priority lists and justifications shall be submitted to the Regional Facilities Administrator by June 15 of each year. The appropriate Regional Office shall provide the approved spreadsheet format (see Schedule of Cost Input, Facilities Operations Technical Reference Manual).

2. Line Item project priority lists and justifications shall be submitted to the Regional Facilities Administrator by October 15 of each year. The appropriate Regional Office shall provide the approved spreadsheet format (see Schedule of Cost Input, Facilities Operations Technical Reference Manual).

3. If the urgent need for a project arises during the year, institutions may submit emergency or special project justifications at any time in accordance with provisions contained in this Chapter.

4. The Regional Facilities Administrator shall compile Line Item priority listings. He or she shall then submit, by December 15 of each year, a Regional Priority List to include justifications in the format provided by the Chief, Resource Management.

\* TERM LIMIT FOR B&F MODERNIZATION AND REPAIR (M&R) PROJECTS

A. Term:

1. An M&R project (B&F Decision Unit 3 project), not Congressionally approved or officially reprogrammed, shall be issued for a term not to exceed three years (calendar) ending on the three year anniversary (expiration date). These are projects not identified with an "L" or "R" after the date in the project name in the Financial Management System or Financial Management Information System.

a. The start date for this M&R project is determined by adding one month to the date of project establishment. The three year anniversary of this B&F project is calculated from the start date.

b. For example: An M&R project is established December 7, 1997. The start date for the project is January 7, 1998. The three year anniversary date is January 7, 2001.

c. To ensure projects are being funded timely, Facilities Management, Central Office, shall perform monthly queries of all projects established during the prior month. If funds are not put into the project by the next allotment cycle, the project will be canceled.

B. Notice of Expiration

Three months prior to the expiration date of the M&R project, Facilities Resource Management shall provide the appropriate Regional Facilities Administrator with a list of projects for the regions that will expire. The Regional Facilities Administrator must respond, within 30 days of receipt of the list, with a status of each project and the action to be taken, i.e., closure or extension request.

C. Extension Request

1. The Warden shall request, thru the Regional Director, to the Assistant Director for Administration, **one** extension to the term of a project. The extension request shall be made no less than two months prior to the expiration date of the project. The request will include the following information:

- a. explanation for project delays
- b. measures taken to ensure completion within proposed new schedule
- c. new completion date

C. Approval/Denial of Extension Request

1. The request to extend the project expiration date must be either **Approved, Approved with Changes, or Denied**. If the project is approved or approved with changes, a new final completion date and possible additional requirements will be included with the approval letter. If the extension request is denied, the following will happen:

- a. the original completion/expiration date will be in force;
  - b. closing procedures must be initiated; and
  - c. any remaining funds must be moved out of the project.
- Facilities Management, Central Office, shall automatically contra-allot any remaining balance of funds from the project to the Central Office on the third year anniversary date.

D. Expiration of Project

1. If, on the third year anniversary date, the project is still open and unobligated funds remain, Facilities Management, Central Office, will automatically contra-allot the remaining funds to the Central Office. A memorandum of notification will be sent from the Assistant Director for Administration through the Regional Director to the Warden, asking that the project be closed.

\*

REGIONAL B&F ADMINISTRATION

A. Repair and Improvement (R&I) Funds

1. R&I funds are distributed to Regional Offices annually. To ensure fair fund distribution, a point system is used to reflect the facility size and complexity, recent renovations, and present condition.

a. One point is assigned to a camp or institution having considerable recent renovation or having several major renovation projects in progress.

b. Two points are assigned to the average FCI with average requirements.

c. Three points are assigned to the average institution having a camp.

d. Four points are assigned to major institutions having a camp.

2. Regional Offices shall distribute project funds to institutions based on project priority lists and justifications submitted in accordance with provisions contained in this Chapter. The distribution of R&I funds from the Regional Office to institutions need not follow the point distribution formula but may be based on a project by project needs assessment. Regional Offices allot funds in accordance with prepared allotment schedules submitted in writing by the institutions, showing object class for each quarter throughout the life of the project (see Section 3.4, B&F Allotment/Plan Revision Request, Facilities Operations Technical Reference Manual).

3. The Regional Facilities Administrator shall notify institutions by letter of project approval and allotment, delineating project title, project number, and amount approved.

B. Line Item Funds

1. The Central Office allots Line Item funds to Regional Offices according to the projects designated in the Public Law for that fiscal year.

a. Regions are advised of approved Line Items by letter and in turn advise institutions by allotment letters. Allotment letters shall indicate project title and number and amount approved.

b. Regional Offices allot funds in accordance with prepared allotment schedules submitted in writing by the institutions, showing object class for each quarter throughout the life of the project (see Section 3.4, B&F Allotment/Plan Revision Request, Facilities Operations Technical Reference Manual).

2. The Central Office assigns Line Item project numbers before allotment. Budget activities for Line Items are assigned at the time of allotment, in accordance with the Accounting Management Manual.

3. Funds appropriated as Congressional Line Items are used for purposes as described in the appropriation language or as specifically designated.

4. If a Congressionally approved project is no longer required due to a change of mission or program, the funds must be returned to the Central Office. A request for transferring the funds to another appropriate project may be submitted for consideration.

a. The Regional Director shall submit a request to the Assistant Director, Administration Division, with a copy to the Chief, Facilities Management Branch, describing the former project and circumstances which eliminated its intended purpose.

b. A completed justification describing the new work with detailed cost estimates shall be furnished with the request.

c. In many cases, Congressional concurrence must be obtained prior to approval by the Assistant Director. Funds shall not be transferred from the project until the Assistant Director for Administration has provided written approval.

5. Congressional Line Item projects shall not be supplemented more than 10 percent or \$500,000, whichever is less, without written approval from the Assistant Director for Administration. In many cases, Congressional concurrence must be obtained prior to approval by the Assistant Director.

6. A Line Item project (either Decision Unit 2 or Decision Unit 3) shall be deemed 100 percent complete when all undelivered orders are received, and all work identified in the project description has been accomplished. Upon 100 percent completion, financial closure shall be requested and the balance of funds shall be contra-allotted back to the Central Office. The Regional Facilities Administrator shall submit a written request for contra-allotment of funds to the Chief of Facilities Management.

7. The transfer of funds between Decision Units shall not be accomplished without prior written approval of the Assistant Director for Administration. In many cases, Congressional concurrence must be obtained prior to approval by the Assistant Director.

C. New Facilities B&F Funds: New facilities B&F funds are appropriated by Congress for site planning and construction of new facilities.

1. New facilities are designated as "Z" projects by the Design and Construction Branch, Central Office.

2. These funds may be allotted to the appropriate Regional Office near completion of construction.

3. New facility construction funds may be re-allotted to the new institution to cover specific small construction items which have been approved by the Central Office Project Manager.

4. A project shall be deemed 100 percent complete when all undelivered orders are received, and all work identified in the project description has been accomplished. Upon 100 percent completion, financial closure shall be requested and the balance of funds shall be contra-allotted back to the Central office.

D. Emergency and Special Projects

1. Regions shall adjust their R&I budget priorities to accomplish unplanned by necessary R&I projects. Regional offices should maintain R&I reserves to fund emergency projects.

2. Proposed, unfunded projects that require Central Office assistance shall be handled as follows:

a. The Regional Director shall submit project justifications which fully explain the project requirements and urgency to the Assistant Director for Administration, with a copy to the Chief, Facilities Management.

b. The Regional Office shall also submit to the Assistant Director for Administration a funding source analysis, which includes the following:

(1) A prioritized list of all B&F projects in the Region (R&I and Line Items) which are not substantially started, showing the unobligated balance for each project, as well as an identification of any existing R&I reserves;

(2) The Regional Director's recommendations as to which of the above projects can be canceled or reduced in scope to completely fund or substantially offset the cost of the unplanned B&F project.

c. Staff in the Administration Division, in conjunction with the Regional Facilities staff, shall analyze this information.

d. Facilities Management Branch staff shall prepare a proposal for the Assistant Director's review and approval, discussing program merits of the project. If the project is recommended for approval, a funding source shall be proposed, either from regional funds or through a reprogramming action.

#### REGIONAL B&F FUND ACCOUNTABILITY PROCEDURES

A. General: Although the official accountability for B&F funds is the Regional Comptroller's responsibility, the Facilities Administrator must maintain a record of allocations and allotments for ready reference. This is accomplished through the Financial Management System (FMS) and Financial Management Information System (FMIS). Each regional office has a computer terminal for the FMIS capable of entering information and extracting reports.

B. Plan/Allotment of Funds: The document used to authorize a change in the financial plan for a project or an allotment is the B&F Allotment/Plan Revision Request (see Section 3.4, Facilities Operations Technical Reference Manual). The financial plan is the total amount of funds established for the entire project. For Line Item projects, the plan must equal the appropriated amount unless funds are reprogrammed into or out of the project. For R&I projects, the plan shall be established at the region and increases or decreases must be reflected as they occur.

1. This is a formal request from the Facilities Staff to Financial Management to allot B&F funds to an institution for a specific project. Additionally, Central Office Facilities

Management Branch uses this form to allot funds from the Central Office to Regional Offices.

2. To effect changes in a project plan or allotment, the Facilities Administrator must submit the completed form to the Comptroller. The Comptroller will have the appropriate information keyed into FMIS. It is important that the form be completely and accurately filled out.

3. This form will also be used to establish allotments for all four quarters of a fiscal year as well as to change an allotment at any given time.

4. Allotments are made in even hundreds except when closing a project.

C. Financial Management Reports: The Financial Management System (FMS) and Financial Management Information System (FMIS) provides detailed information on project funds by Decision Unit, object class, and quarter. Many different reports are produced by both the FMS and FMIS systems.

1. The primary report for monitoring the funds is the FMS Monthly Regional/Institution B&F Status Report (100.45). All information on this report is cumulative for the life of the project. Facility Managers shall monitor these reports to ensure accurate B&F fund control. It must be noted that the 100.45 report only reflects the cumulative operating plans through the current quarter. In addition, there are many other reports that will provide useful information (see the institution Controller).

2. FMIS reports may be run as needed on an individual project by object class, institution, quarter, etc. A listing of these reports is available in the FMIS User's Manual.

D. Initiation of New Projects

1. Beginning of New Fiscal Year

a. Upon receiving the appropriate information, the region shall enter an apportionment schedule into FMIS for the new projects established for the next fiscal year.

b. This information must be keyed into "information only versions".

c. Version 35 is for R&I, and Version 37 is for Line Items.

spread the B&F Allotment/Plan Revision Request schedule to match estimated obligations as nearly as possible. If the project will not be complete within the first fiscal year, the allotment schedule should extend into the succeeding year.

e. Staff in the Budget Execution Branch, Central Office, will then combine this new B&F Allotment/Plan Revision Request schedule with the carry-over funds and produce a new operating plan.

E. Additional Projects: The B&F Allotment/Plan Revision Request is used to initiate a new project. The Plan is to be keyed in FMIS when the project is numbered and funds are allocated.

F. Project Number Assignment

1. The Chief, Resource Management in the Central Office assigns project numbers at the request of the Regional Facilities Administrator. B&F project numbers are identified by a combination of letters and numbers starting with alpha, numeric, alpha thru alpha, alpha, numeric. For example, project number AA1, the first letter "A" identifies the Mid-Atlantic Region and the next two digits "A1" represent a sequential listing of project numbers assigned to the Mid-Atlantic Region.

2. The following chart illustrates the current letter and number assignments to each region. The letters I and O and the numeral zero are not used.

<u>REGION</u>	<u>LETTERS</u>	<u>PROJECTS</u>
Mid-Atlantic Region	A, B, & C	A1A-CZ9
Northeast Region	D, E, & F	D1A-FZ9
Southeast Region	G, H, & J	G1A-JZ9
North Central Region	K, L, & M	K1A-MZ9
South Central Region	N, P, Q, & R	N1A-RZ9
Western Region	S, T, & U	S1A-UZ9

3. Letters V, W, X, Y and Z will not be issued under the new method but held in reserve for use on special projects.

PROJECT ADMINISTRATION

A. Construction Documents. The Regional Facilities Administrator coordinates preparation of construction documents, including Statement of Work (SOW), working drawings, technical specifications, Government cost estimates, and other contract documents for approved projects.

1. They may be prepared by institution staff, regional office personnel or an Architect/Engineer (A&E) firm.

2. The Regional Facilities Administrator and, if required, the Chief, Facilities Programs, shall approve all design, development, and preliminary construction documents before purchase of materials, issuance of an invitation to bid on the project, or commencement of construction.

3. When construction documents are prepared, the following guidelines shall be followed:

a. Statement of Work (SOW). The SOW should be written in clear, simple terms, preventing more than one interpretation and must conform to FAR Part 10.

b. Working Drawings. Drawings submitted for approval shall be complete, clear, and accurate. Enough details shall be provided to give a complete understanding of the project location, scope, and complexity.

c. Specifications. Preparation of specifications are to be coordinated with the institution Contracting Officer to ensure that all requirements of Federal Regulations, Federal Standards, etc. are met. Specifications covering work to be performed by contract shall state clearly the scope of work and what portion of the work, if any, is to be done by the Government.

d. Changes. Changes from approved construction documents are not to be made without the Regional Facilities Administrator's prior written approval.

e. Applications for Payment, A&E Contracts. A&E applications for payment shall be reviewed and signed by the Regional Facilities Administrator, Contracting Officer and Contracting Officer's Technical Representative, if appropriate. The Regional Facilities Administrator must verify A&E performance/services prior to recommending payment of A&E applications for payment to the Contracting Officer. The verification documentation of A&E performance/services shall be maintained in the Regional project files.

f. Applications for Payment, Construction Contracts. Contractor applications for payment will be reviewed and signed by the Facility Manager, Contracting Officer, Contracting Officer's Technical Representative and A&E representative, if appropriate. Processing payment requests through the Regional Administrator is optional and at that Administrator's discretion;

however, the Regional Facilities Administrator must review and sign final payment requests.

g. Documentation. The following documentation must be filed in the appropriate project folder and provided by the Facility Manager with each application for payment that is signed and forwarded to the Regional Facilities Administrator or Contracting Officer.

(1) Document the Bureau's analyses of the percentage of work completed as compared to the percentage reported on the contractor's payment request.

(2) Document analyses to verify that the dollar amounts requested by the contractor for each work category are commensurate with the percentages of work completed.

(3) Verify and document that nonconforming work was corrected prior to approval of contractor payment requests.

(4) Verify and document approval of contract modifications prior to approval of contractor payment requests which include the modifications.

B. Construction Supervision. Project Representatives or Project Foremen the Regional Director selects may supervise major new construction and repair and improvement projects financed by B&F funds or by Federal Prison Industries.

1. Personnel assigned to a project, including the Project Representative and/or Project Foreman, shall be under the Facility Manager's administrative supervision. They shall be responsible to the Facility Manager for such matters as work scheduling, reporting, inmate crew assignments, progress photographs, etc., and shall follow existing institution rules, regulations, and procedures.

2. Project Representatives and/or Project Foreman shall be fully responsible for the project to which they are assigned, and they may be responsible for supervising all subordinate personnel assigned to the project.

3. The Project Representative Distributed Learning Course shall be completed by each Project Representative or Project Foreman within 3 months of selection to the position. Facility Managers, General Foreman, and Chief of Utilities shall complete the Course within six months of selection to their respective positions.

4. Project staff assigned duties as a Contracting Officers Technical Representative (COTR) must complete required certification training.

5. Institution shops and personnel shall be used as necessary to perform project work if adequate project personnel and facilities are not available.

C. B&F Construction Personnel Assignments

1. Positions assigned to B&F construction projects shall be funded from specific project allotments. However, if the majority of a pay period is devoted to a secondary project, the Facility Manager must provide the necessary information to the time and attendance clerk who will key in the proper accounting code to pay the project position from the secondary project. The Facility Manager must notify the Regional Facilities Administrator prior to obligating salary funds against a secondary project.

2. All B&F positions are controlled by the Chief, Facilities Operations in the Central Office and are established at institutions as required for particular B&F projects upon the Regional Facilities Administrator's recommendation.

3. Positions for R&I projects are established for the duration of a project and abolished at the conclusion of the project. Positions for Line Item projects are established/abolished in accordance to authorization contained in Congressional appropriations.

4. The Chief, Facilities Operations must approve the re-establishment of positions to another B&F project.

5. All personnel actions concerning B&F positions shall start in the Central Office at the Regional Facilities Administrator's request. The request shall be by memorandum to the Chief, Facilities Operations (not a Form 52) and must include:

- # Institution and project number
- # Position title and series
- # Estimated duration of project
- # Justification for position
- # Position establishment date
- # Action to be taken, i.e., abolish/establish, fill vacancy, vacate a position.

6. The Regional Human Resources Office shall classify all B&F positions.

7. Institutions should be aware that B&F positions are assigned only for the duration of the project.

a. Almost without exception, persons selected for these positions are career or career conditional employees.

b. If another B&F project position is not available, the institution must absorb these employees into its S&E complement at the completion of the project.

8. Institutions may assign additional qualified institution personnel (S&E) to work on B&F projects, if required. No S&E salary obligations shall be incurred against any B&F project without prior written approval of the Regional Facilities Administrator and Chief, Facilities Management Branch in the Central Office.

D. Daily Construction Log Book. Project Representatives and/or Project Foremen are responsible for maintaining a daily log for each assigned B&F project being completed wholly or in part by contractors (log books are available through the Regional Facilities Administrator). If the contractor involvement in the project is less than two days, a construction log book is not required unless the Regional Facilities Administrator specifically requests it. The use of a single construction log book to record work activities for more than one project is discouraged.

1. The construction log book shall be bound, not loose leaf, and contain the following data, numbered and listed as shown (if "none" is the appropriate entry, this should be so stated):

a. Number of people by trade the contractor and/or Bureau has on site each day;

b. Visits to construction site by project A&E firm. Identify individuals by name and title and provide a brief description of visit purpose, including length of visit. In addition, include names and purpose for visit for all other visitors to the construction site;

c. Weather conditions, such as temperature, wind, humidity, rain, etc., which would affect construction progress;

d. Any unusual facts that could affect the construction progress;

- e. Any outstanding deviations from the specifications and/or drawings and reasons for such deviations;
- f. Corrective action taken on any deviations;
- g. Completion date of phase, such as footings, walls, roofs, utilities, major equipment set, etc.;
- h. A description of all Change Orders and approvals;
- i. Any other facts of relative importance to the project;  
and;
- j. Signature of Project Representative/Foreman after each daily entry.

2. The Facility Manager shall visit B&F project sites and sign the log book weekly.

3. A daily log shall be maintained for UNICOR projects in the same format.

4. When the project is 100 percent complete and closed, the daily log book shall be retained as part of the completed project file in the Facility Department.

E. Records: Records regarding all B&F projects shall be maintained as follows:

1. The Facility Manager shall maintain an individual file folder for each approved R&I and Line Item project. Completed project files shall be maintained indefinitely in a secure area for future reference.

2. B&F File Folders shall be established in accordance with the File Folder Format, Facilities Operations Technical Reference Manual.

3. File folders (six compartment folders, three ring binders, etc.) are labeled with the identifying project and CMMS reference numbers and the project title, and include the following relevant information:

- # Copy of Strategic Plan reference
- # Project justification/approval letters/APP
- # Original cost estimate
- # Revised cost estimate, if required
- # Equipment Justification, if required
- # Copy of B&F Allotment/Allotment Letters/Financial Plan

- # Photographs/Videos
- # Monthly progress reports
- # Request for Project Closure Memorandum
- # Copies of open requisitions
- # Copies of completed requisitions
- # Funding/Expenditures summary
- # Construction Daily Log Book, if required
- # All related correspondence
- # Contract modifications (change orders) and applications for payment
- # Drawings/Plans/Specifications approved by institution, Region and Central Office

4. The Regional Facilities Administrator shall maintain an individual file folder for each approved B&F project at all institutions within his or her region. These files may be maintained in either a hard copy file or electronic media.

5. File folders are labeled with the identifying project and CMMS reference number and the project title, and include the following relevant information:

- # Project justification/approval letters/APP
- # Original cost estimate
- # Revised cost estimate, if required
- # Equipment Justification, if required
- # Copy of B&F Allotment/Allotment Letters/Financial Plan
- # Monthly progress reports
- # Request for Project Closure Memorandum
- # Copies of open requisitions, if regional expenditures
- # Copies of completed requisitions, if regional expenditures
- # All related correspondence
- # Contract modifications (change orders)
- # Drawings/Plans/Specifications approved by institution, Region and Central Office
- # A&E contract
- # Construction contract

#### F. Project Design and Construction Schedules

1. The development of a planned schedule shall be accomplished on all B&F projects and reported on the initial Construction Progress Report. This reporting process shall begin when funds are allotted to a specific project.

2. Typically, the original planned schedule of design and construction activities shall not be altered for the life of a project. However, if circumstances beyond the institution CEO's control delays project progress, the Work Programming Committee shall submit a memorandum, which fully explains project delays and identifies a new completion schedule, through the CEO to the Regional Director.

3. If approved, the original planned schedule shall be changed to reflect the new schedule and dates. The monthly narrative section of the Construction Progress Report must identify the planned schedule change and provide a brief explanation. This information must remain in the narrative section of the Construction Progress Report for the life of the project. A copy of the approval memorandum from the Regional Director must be filed in the project folder.

G. Construction Progress Reports. The Facility Manager submits Construction Progress Reports to the Regional Facilities Administrator and institution Controller for each R&I and Line Item project as a part of the Institution Monthly Facilities Operations Report. The monthly report database reporting format will be issued annually as an Operations Memorandum. Specific line-by-line instructions on completing the Construction Progress Reports are included in the report format.

#### H. Project Completion

1. When a project has been completed, the percentage of completion shall be shown as 100 percent on the Construction Progress Report, and the date of completion included in the narrative. The narrative shall identify the date the Facility Manager requested financial close-out to the institution Controller. Once a project is reported 100 percent complete, no further Construction Progress Reports are required.

2. A project shall be shown as 100 percent complete and financial closure requested when all undelivered orders are received, and all work identified in the project description has been accomplished.

3. Once a project is reported as 100% complete, the Facility Manager shall forward a "Request for Financial Close-out" memorandum to the institution Controller (within 60 days) indicating completion of the project and request financial management close-out. A copy of this memorandum shall be placed in the official project file folder, with a copy forwarded to the Regional Facilities Administrator.

4. After reporting project completion, no additional obligations shall be incurred against the project.

UNICOR PROJECTS

A. Funds for UNICOR Buildings and Improvements (B&I) projects are "no-year" funds approved by the UNICOR Board of Directors.

B. UNICOR projects are divided into R&I (projects less than \$500,000) and Line Item (\$500,000 and above). Projects are planned, prioritized, requested, approved, administered, and accounted for in accordance with the foregoing procedures of this chapter, with the following exceptions:

1. Line Item project requests from the institution shall be coordinated through the Regional Facilities Administrator prior to being forwarded to the UNICOR Planning, Research and Activation (PRA) branch.

2. R&I project requests are sent to the appropriate UNICOR program manager for evaluation; he or she then makes a recommendation to Corporate Management.

3. Requests for R&I projects shall be in the format required for B&F projects, with a Request for Special Authorization (RSA) attached. (The RSA form is prepared by UNICOR). UNICOR staff are to complete these with the Facility Manager's assistance.

4. Justifications, (see Schedule of Cost Input, Facilities Operations Technical Reference Manual), are to be completed for all projects and accompany each RSA submitted.

5. Subsequent to approval, UNICOR projects shall be entered into the institution work program. This shall be accomplished through the Work Programming Committee following the procedures identified in Chapter 2.

6. The Facility Manager shall submit Construction Progress Reports for B&I projects as a part of the Monthly Facilities Operations Report.

7. Accountability of B&I funds is the responsibility of UNICOR. B&I accounting procedures are independent of the Bureau's FMS and FMIS systems.

## CHAPTER 4

### ARCHITECT - ENGINEER SERVICES

POLICY SUMMARY. The acquisition of Architect-Engineer (A&E) services shall be in accordance with the current Federal Acquisition Regulation (FAR). (See TRM 022.01, 4.1, Architect/Engineer Evaluation, Facilities Operations Technical Reference Manual).

#### REFERENCES

- A. The applicable portions of the FAR implement 40 U.S.C. 541-544
- B. FAR, Part 36 - Construction and Architect-Engineer Contracts, Subpart 36.6 - Architect-Engineer Services
- C. FAR, Part 5 - Publicizing Contract Actions
- D. FAR, Part 15 - Contracting by Negotiation
- E. FAR, Part 52 - Contract Clauses

#### PROCUREMENT of A&E SERVICES

- A. Procurement of A&E services shall be accomplished at the Regional level.
- B. Evaluation and selection of firms for A&E services shall be accomplished through evaluation boards and the designated selection authority.
- C. A designated Contracting Officer shall conduct negotiation with A&E firms.

#### RESPONSIBILITIES

A. Regional Facilities Administrator. It is the responsibility of the Regional Facilities Administrator to retain an indefinite quantity services contract for Architect and Engineering Services.

B. Project Manager

1. All Buildings and Facilities (B&F) projects shall be assigned to a Project Manager. Unless otherwise designated by the Chief, Facilities Management, the Project Manager shall be the Regional Facilities Administrator.

2. The Project Manager is responsible for all R&I or Line Item projects at existing BOP facilities within his/her region as well

as activation and renovation projects to convert an acquired facility into a BOP institution.

3. Project Managers shall be assigned with the final approval and apportionment of funds for a project. Different Project Managers may be assigned for different phases of a project.

4. The assigned Project Manager may delegate the role of project manager to a qualified member of his or her staff.

5. The Project Manager is responsible for determining project requirements, including the need for A&E services, and for coordinating activities related to the acquisition of these services. The Project Manager serves as the Contracting Officer's Technical Representative (COTR) to the extent that such authority is delegated.

C. Contracting Officer

1. Contracting Officers for all A&E contracts shall be one of the following:

- a. Central Office Contract Specialist.
- b. Regional Contract Specialist.

2. Contracting Officers are responsible for directing and negotiating all changes (monetary and non-monetary) to the contract. This authority may not be delegated to the Project Manager or any of the Project Manager's representatives.

MAINTENANCE OF DATA ON FIRMS

A. Each Regional Facilities Administrator shall collect and maintain data on firms within his or her region in accordance with FAR, Subpart 36.6 (FAR 36.603, Collecting Data On and Appraising Firm's Qualifications).<sup>1</sup>

B. Files shall be reviewed and updated at least once a year (Re: FAR 36.603(d)).

C. The Central Office is not required to maintain data on firms.

D. The Regional Office need not maintain records on firms located outside its region, except those firms with which they have had contracts. When information is needed for firms outside of regional boundaries, it can be obtained from the appropriate Regional Office.

1 This requires the utilization of Standard Form 254 (SF 254), "Architect-Engineer and Related Services Questionnaire" and, when applicable, Standard Form 255, "Architect-Engineer and Related Services Questionnaire for Specific Project."

PUBLICATION REQUIREMENTS/ELIGIBILITY

A. Re: FAR, Part 5 - Publicizing Contract Actions

B. For each required A&E contract, the Project Manager shall develop for transmittal through the Contracting Officer, a notice for publication in the Commerce Business Daily (CBD), soliciting prospective firms (see TRM 022.01, 4.2 in the Architect/Engineering Section, Facilities Operations Technical Reference Manual). The notice must include:

1. Contracting office, address, and the name and telephone number of the contracting officer to contact for further information;

2. Supply/service classification code and name (i.e., Architect-Engineer Services);

3. Identification and location of the project;

4. Description of the project, including any potential problems;

5. The scope of service required;

6. The evaluation criteria to be used and their relative importance;

7. Construction cost limitation or estimated project cost range;

8. Type of contract proposed (i.e., fixed price, etc.);

9. Estimated start date;

10. Date by which responses to the notice must be received;

11. Any special project requirements or unique elements;

12. Geographical or other limitations on eligibility for consideration;

13. Any required special qualifications;

14. The statement, "Firms desiring consideration shall submit appropriate data as described in Numbered Note 24. This is not a request for proposal";

15. Requests for SF 254 and SF 255.

C. The Contracting Officer shall prepare and transmit the CBD notice of contract award (Re: FAR, Subpart 5.3 - Synopsis of

Contract Awards).

D. Unless otherwise approved by the Chief, Facilities Management, geographical limitations on eligibility for consideration are as follows:

1. The geographical area for eligibility should be held as close as possible to the project site while ensuring that an adequate number of prospective qualified firms will be available.

2. The maximum geographical area for eligibility shall be the state in which the project is located, with the following exceptions: If a project is located near a state border or, if the Project Manager anticipates that an adequate number of prospective qualified firms will not be available, the area may be expanded to include the adjacent state or states.

3. Prime consultants of a prospective A&E firm (i.e., architectural, structural, civil, mechanical, electrical) should be limited to the same area as the A/E Firm.

4. The Project Manager may designate a geographical area of eligibility less than an entire state if a sufficient number of qualified firms would be available for consideration.

#### EVALUATION/SELECTION CRITERIA

A. Re: FAR, Subpart 36.6, 36.602-1 - Selection Criteria

B. The criteria used in the evaluation and selection of A&E firms (see TRM 022.01, 4.1, Architect/Engineer Evaluation, Facilities Operations Technical Reference Manual) shall include the following:

1. Professional qualifications necessary for satisfactory performance of the required services (i.e. licensed to practice in the state in which the project is located);

2. Specialized experience and technical competence in the type of work required;

3. Capacity to accomplish the work in the required time;

4. Past performance on contracts for government agencies and/or private industry projects in terms of cost control, quality of work and compliance with performance schedules;

5. Location in and knowledge of the general geographical area of the project;

6. Any additional criteria established by the Project Manager.

#### EVALUATION BOARDS

A. Re: FAR, Subpart 36.6, 36.602-2, 36.602-71 - Evaluation  
Boards

B. Each Regional Director or his/her designee shall appoint the members of the A&E Evaluation Board. Typically, the Regional Facilities Administrator serves as the chairperson of the permanent and/or ad hoc A&E Evaluation Board for projects assigned for his/her management.

C. The Chief, Facilities Management Branch or his/her designee shall chair an ad hoc A&E Evaluation Board for each project assigned for his/her management and appoint from two to four additional members to such boards.

D. Optional, separate pre-screening boards may be utilized by the Project Manager to conduct initial evaluation of the prospective firms; a different Evaluation Board may interview the firms selected for further discussions. However, it is desirable to retain the same chairperson.

EVALUATION BOARD FUNCTIONS. Under the general direction of the head of the contracting activity, and Evaluation Board shall perform the following functions:

A. Re: FAR, 36.602-3 - Evaluation Board Functions

B. Prior to review by the Board, submissions in response to solicitation notices for A&E services shall be screened to confirm that they are fully eligible and meet all geographical and special requirements, including those listed in the current Standard Form 254 (SF 254). In addition, they should have completed and submitted an appropriate SF 255.

C. Using the appropriate evaluation forms and through independent assessments by its members, the Evaluation Board shall review the current files on eligible firms and the responses to the solicitation notice.

1. The Board shall evaluate the firms in accordance with the established evaluation/selection criteria. Any changes made to established criteria must be documented in the evaluation file.

2. In accordance with FAR 36.602(c) and FAR 15.609, the Board, in conjunction with the Contracting Officer, shall select the proposals in the competitive range for the purpose of conducting discussions.

D. All firms considered during the initial review shall be informed as to whether or not they have been selected for further consideration.

E. Interviews shall be scheduled with the firms selected.

1. Each firm shall be informed of what is expected during the interview (i.e., length of interview, informal discussion or

formal presentation, introduction of personnel, points or areas of interest to be addressed, types of evidence of qualifications desired, etc.).

2. Each firm shall be furnished any additional information available regarding the proposed project, such as the scope of the program, site information, construction budget, schedule, and draft of proposed contract, if available.

3. Interviews should normally be conducted in the firms' offices by at least three members of the evaluation board.

F. Using the appropriate evaluation forms (see TRM 022.01, 4.1, Architect/Engineer Evaluation, Facilities Operations Technical Reference Manual) and through independent assessments and collective discussions by its members, the Evaluation Board shall recommend, in order of preference, at least three firms considered to be the most highly qualified to perform the required services.

1. The chairperson shall prepare a selection report to include a summary description of the Board's discussions and evaluation.

2. Copies of the forms for the evaluation and interviews shall be attached to the report.

G. For prospective A&E contracts estimated to exceed small purchase limitation, the selection report shall be sent to the selection authority for review and approval.

H. For prospective A&E contracts not expected to exceed small purchase limitation, one of the following procedures may be used to select firms:

1. Selection by the Board: The Evaluation Board shall review and evaluate A&E firms as outlined above. The selection report shall serve as the final selection list and shall be provided directly to the Contracting Officer, with the indication that it serves as authorization to commence negotiations (Re: FAR 36.602-5, (a)); or

2. Selection by the Chairperson of the Board: The Board may decide that formal action by the Board is not necessary for a particular selection, and the chairperson shall review and evaluate A&E firms as outlined above. The chairperson shall send the selection report to the selection authority for review and approval (Re: FAR 36, 602-5, (b)).

#### SELECTION AUTHORITY

A. The selection authority for all BOP A&E contracts shall be the Chief, Facilities Management, for existing institutions (except as noted above).

B. Selections shall be made in accordance with FAR, 36.602- 4 (Selection Authority).

1. The selection authority shall review the Evaluation Board's recommendations and make the final selection, listing, in order of preference, the firms considered most highly qualified to perform the work.

2. If the firm listed as the most preferred by the selection authority is not the one recommended as the most highly qualified by the Evaluation Board, the selection authority shall provide a written explanation for the preference.

3. If the firms recommended in the report are not deemed qualified or the report is considered inadequate for any reason, the selection authority shall record the reasons and return the report to the Evaluation Board chairperson for appropriate revision.

4. The approved final selection list shall be sent to the evaluation board chairperson to be forwarded to the Contracting Officer.

EVALUATION/SELECTION DOCUMENTATION. Records of all decisions and copies of all correspondence shall be maintained to reflect the entire selection process. These records will become part of the entire contract file and must be maintained in a logical and chronological sequence. The file should include the results of the Evaluation Board and the individual members' reports.

RELEASE OF INFORMATION ON FIRM SELECTION Re: FAR 36.607  
(Release of Information on Firm Selection)

GOVERNMENT COST ESTIMATE

A. Re: FAR 36.605 (Government Cost Estimate for Architect-Engineer Work).

B. The Project Manager shall prepare and furnish to the Contracting Officer an independent government estimate of the cost of A&E services for any proposed contract action, regardless of dollar value.

C. The estimate shall be furnished to the Contracting Officer before commencing negotiations with a selected firm.

D. The estimate shall be developed from a detailed analysis of the required work as though the government were submitting a proposal. The estimate shall be prepared utilizing Standard Forms 2630 and 2631 or comparable formats.

E. The A&E firm shall be required to submit a proposal, utilizing S.F. 2630 and 2631 or comparable formats to expedite comparisons between it and the government estimate during the negotiation process.

F. Access to information concerning the government estimate shall be limited in accordance with FAR 36.605(b).

NEGOTIATIONS

A. Re: FAR, 36.606 - Negotiations and FAR 15.903 - Contracting Officer Responsibilities, (d)(1)(ii). FAR 15.903 (d)(1)(ii) states: For architect-engineering services for public works or utilities, the contract price for the estimated cost and fee for production and delivery of designs, plans, drawings, and specifications shall not exceed six percent of the estimated cost of construction of the public work or utility, excluding fees.

B. Unless otherwise specified by the selection authority, the final selection authorizes the Contracting Officer to begin negotiations.

C. The Project Manager or a designated representative shall attend negotiations to assist the Contracting Officer. However, the Contracting Officer is responsible for conducting negotiations.

D. Before final contract approval, the terms must be acceptable to both the Project Manager and the Contracting Officer.

CONTRACTING CLAUSES

A. Re: FAR, 36.609 - Contract Clauses

B. The Contracting Officer shall insert the clauses determined necessary by the contract. Some of the clauses that are a part of construction contracts are:

C Clause 52.244-4, "Subcontractors and Outside Associates and Consultants," which limits a firm's subcontracting to firms agreed upon during negotiations;

C Clause 52.236-22, "Design Within Funding Limitations";

C Clause 52.236-23, "Responsibility of the Architect-Engineer Contractor," which addresses redesign responsibility for design errors or deficiencies;

C Clause 52.236-24, "Work Oversight in Architect-Engineer Contracts";

C Clause 52.236-25, "Requirements for Registration of Designers";

C Clause JAR 2852.223.1 Use of Recovered Materials in Paper and Paper Products (March 92);

C Clause JAR 2852.223.4 Use of Recovered Materials in Building Insulation Products (March 92);

C Clause JAR 2852.223.5 Use of Fly Ash as a Partial Replacement for Cement and Concrete (March 92);

C Clause JAR 2852.223.6 Requirement for Estimates of the Total Percentage of Recovered Materials to be Utilized in the Performance of the Contract (March 92);

C Clause JAR 2852.223.7 Requirement for Certification of Recovered Materials Actually Utilized in the Performance of the Contract (March 92).

C. General Requirements: The Government shall have full rights and privileges to use all documents prepared under this contract.

1. All designs, drawings, specifications, notes, and other work developed and submitted in the performance of this contract shall become the property of the Government.

2. The Government may use any or all of these products on any other Government design or construction without additional compensation to the A&E.

3. The Government shall be considered the "person for whom the work was prepared" for the purpose of authorship in any copyrightable work under Section 201 (b) of Title 17, United States Code.

4. With respect thereto the A&E agrees neither to assert nor authorize others to assert any rights or establish any claims under the design patent or copyright laws.

5. The A&E firm hereby grants to the Government a paid-up license throughout the world to all such work to which it may assert or establish any claim under design patent or copyright laws.

6. For a period of three years after completion of the project, the A&E agrees to furnish copies of all such work on the request of the Contracting Officer (the A&E shall be reimbursed for the cost of such items).

7. All designs, drawings and specifications must be reviewed and approved by a qualified Fire Protection Engineer.

A post construction certification must be provided stating that construction meets all current Life Safety/Fire Protection requirements.

8. All designs, drawings and specifications for construction covered by Executive Order 12699, Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction, must be designed to meet or exceed the design requirements set forth

in either the 1991 Uniform Building Code (UBC), the 1992 Supplement to the National Building Code (NBC), Building Official and Code Administrators (BOCA), or the 1992 Amendments to the Standard Building Code (SBC).

9. All designs shall be developed using approved life cycle cost analysis software as set forth in Public Law 100-615 and BOP policy, Energy Conservation, or most current edition. Life Cycle costing shall be performed using the Department of Energy approved software.

10. All designs shall be developed in accordance with the Architectural Barriers Act, 42 USC 4151-4157, as amended.

#### PERFORMANCE EVALUATIONS

A. RE: FAR, 36.604 - Performance Evaluation

B. Performance evaluation reports shall be prepared for each A&E contract of more than \$25,000 and for each contract of \$25,000 or less when performance was unsatisfactory.

C. Performance evaluation reports may be prepared for record purposes on contracts of \$25,000 or less with satisfactory performance, but higher level review will not be required.

D. Each performance report (Standard Form 1421, Performance Evaluation) shall be reviewed to ensure that it is accurate and fair. The reviewing official should have knowledge of the contractor's performance and should normally be at an organizational level above that of the evaluating official.

E. If the evaluating official concludes that a contractor's overall performance was unsatisfactory, the contractor shall be advised in writing that a report of unsatisfactory performance is being prepared and the basis for the report. If the contractor submits written comments, the evaluating officials shall include them in the report, resolve any alleged factual discrepancies, and make appropriate changes in the report.

F. Performance evaluation reports shall be sent to the Chief, Facilities Management Branch for review.

G. After final review and approval, the report shall be returned to the Contracting Officer for inclusion in the contract file. A copy of the report shall be made a permanent part of the firm's qualification data file.

## CHAPTER 5

### PREVENTIVE MAINTENANCE/INSPECTIONS

RESPONSIBILITY. The Bureau has a substantial investment in the physical plant of it's various institutions. It is the Facilities Department's responsibility to maintain these physical plants to insure maximum life cycle utilization and to insure the reliability of the various systems and components.

The Facility Manager shall develop a Preventive Maintenance (PM), inspection and testing program for the institution, including the UNICOR physical plant. This program shall comply with all applicable BOP policies, American Correctional Association (ACA) standards, National Fire Protection Association (NFPA), manufacturer recommendations, industry standards, and other applicable Federal, state, or local codes and regulations.

DEFINITION. For the purpose of this Manual, a Maintenance Worthy Item (MWI) is defined as a piece of equipment or system that is more cost effective to maintain than to replace. This would include capitalized fixed equipment, non-capitalized equipment such as vehicles, landscape equipment over 7.5 HP, communications equipment, security systems, sprinkler systems, smoke/heat detection systems, emergency lighting, exit signs, food service equipment, etc. See examples in the Facilities Operations Technical Reference Manual.

#### PREVENTIVE MAINTENANCE

A. Each institution shall use the Computerized Maintenance Management Software (CMMS) to schedule and track preventive maintenance (PM), inspections, and test activities. Each institution shall also use the CMMS program for tracking staff time and materials cost for all work activities including Minor Work Request, Major Work Orders, Preventive Maintenance and B&F Projects.

B. Preventive Maintenance work should be scheduled so that staff time is effectively used to accomplish each task as outlined in this Chapter. The frequency that PMs are issued is important to the credibility of the Preventive Maintenance program. Preventive Maintenance work orders are to be accomplished within two weeks. The minimum acceptable completion rate for PMs is 80 percent.

C. Maintenance Worthy Items are to be assigned as JOB VALUE (1); miscellaneous repairs as JOB VALUE (2); inspections/tests as JOB VALUE (3); and hospital equipment as JOB VALUE (4). It must be noted that previously all inspections and tests were assigned a JOB VALUE (3), however, now only the nine inspections and/or tests in the Inspections and Tests section of this Chapter are to

be assigned as JOB VALUE (3). Any other inspections and/or tests are to be considered Maintenance Worthy Items and assigned as JOB VALUE (1).

D. Below are other chapters in this Manual that list items and equipment that have requirements for maintenance and/or inspections and tests.

1. Chapter 9, Telecommunications Systems and Electronic Equipment
2. Chapter 10, Automotive Acquisition, Maintenance, and Operations
3. Chapter 11, Mechanical Systems and Power Plant Operations
4. Chapter 12, Electrical Systems

E. HEALTH SERVICES EQUIPMENT: Each institution shall incorporate a preventive maintenance program for medical equipment into the Facility Department's CMMS program (exclude Medical Centers). This requirement does not impact on physical plant equipment located in Health Services that the Facility Department presently maintains.

1. The Health Services Administrator is responsible for providing the Facility Manager with appropriate equipment data and task and schedule requirements.
2. The Facility Manager is responsible for generating Preventive Maintenance Work Orders from the Computerized Maintenance Management System and forwarding these work orders to the Health Services Administrator for completion by certified medical equipment repair technicians.
3. After completion, PMs are returned to the Facility Manager. Staff time and material cost shall be entered into the CMMS program. A monthly activity report for Health Service Equipment shall be forwarded to the Health Services Administrator.

#### INSPECTIONS AND TESTS

A. The following inspections and tests are required to be scheduled and documented in the CMMS program. Entry into the CMMS program shall ensure timely notification and scheduling.

B. Individual files and hard copy documentation of the inspections and tests indicating dates and deficiencies accompanied by TRM 022.01, 2.5 (Plan of Action, Facilities Operations Technical Reference Manual) and proof of corrective action shall be maintained in the Facility Manager's office. Files shall be maintained for reference for the life of the inspection or test.

C. The Facility Manager shall provide the UNICOR Superintendent with a copy of inspection and test results related to UNICOR

installations.

D. The following three completed inspection/testing reports, to include a Plan of Action for correction of deficiencies, shall be submitted to the Regional Facilities Administrator not later than 30 days after the inspection is completed:

1. Annual Gas Line Inspection and Testing

a. All natural and propane gas and other flammable fuel (oxygen, medical gases, etc.) distribution systems lines shall be surveyed and tested for leaks annually by an independent testing agency in accordance with the Occupational Safety and Environmental Health Manual and NFPA 99, section 4. The annual gas line maintenance requirements shall be entered into the CMMS program to ensure timely notification for inspections and testing work requirements.

b. All discrepancies identified during annual gas line inspections shall be corrected and documented in the inspection file with the appropriate Minor Work Request or Major Work Order identification number (see TRM 022.01, 2.5, Plan of Action, Facilities Operations Technical Reference Manual). If the repair work requires B&F funding, documentation must be provided to ensure inclusion in the institution B&F Program.

c. The inspection report shall be accompanied by a memorandum from the institution indicating that all Grade C (I) and Grade B (II) leaks have been repaired and list expected completion dates for any Grade A (III) leaks that have not already been repaired (leak grades based on ASME standards).

(1) Grade C (I) leaks must be repaired immediately following their discovery.

(2) Grade B (II) leaks shall be repaired immediately after all repairs have been made for Grade C (I) leaks. In no case should repairs to Grade B (II) leaks be made later than two weeks after discovery.

(3) Grade A (III) leaks shall be repaired immediately after all repairs have been made for Grade B (II) leaks. In no case should repairs for Grade A (III) leaks be made later than 30 days after discovery.

2. Elevator Inspection and Testing

a. Annual Inspection

(1) A qualified elevator inspector shall inspect all elevators and dumbwaiters, whether institution or UNICOR owned, at least annually, using approved state regulations and/or ASME/ANSI A17.1 - 1990 (or the latest edition) guidelines and checklist.

(2) Normally, this inspection service is obtained from the General Services Administration (GSA), by contacting its nearest Regional Office, Public Buildings Service Branch. If GSA is not able to conduct this inspection, the services of a state elevator inspector and/or commercial elevator company may be obtained.

(3) Written inspection reports are required for all tests performed.

b. Five Year Inspection. In addition to the annual inspection, a five-year inspection of traction type elevator safeties and governors is required. A five year load test is not required for hydraulic type elevators, unless specified in local or state codes.

(1) This is to be performed under a full rated load capacity of the elevator--Rule 1004.1, Test of Safeties, ANSI A17.1 - 1990 (or latest edition). A commercial elevator company must perform this test; GSA will not perform it.

(2) The five-year Safeties Test requires that special metal tag(s) be attached in a permanent manner, giving the date of the test along with the name of the person or firm who performed it.

3. Annual Buildings and Grounds Inspection. All areas of the physical plant shall be visually inspected annually, including buildings and structures, roads and grounds, and mechanical/electrical systems. The annual building and grounds inspection shall be completed using the outline contained in TRM 022.01, 5.1, Building and Grounds Inspections, Facilities Operations Technical Reference Manual. At the Regional Facilities Administrator's discretion, the Annual Building and Grounds Inspection may be completed using the optional outline contained in TRM 022.01, 5.2, Optional Building and Grounds Inspection, Facilities Technical Reference Manual.

a. The Facility Manager may assign staff members to perform specific portions of the inspection; however, he/she is responsible for the final result. Staff most qualified to inspect each specific area shall be assigned.

b. Comments, either affirmative or negative, shall be made on each item on the Building and Grounds Inspection form (see TRM 022.01, 5.1, Building and Grounds Inspection, Facilities Operations Technical Reference Manual).

c. If conditions in a given area warrant lengthy recommendations, these recommendations shall accompany the inspection report, referring to the outline by page and item number and identifying problem areas by building number, boiler

number, transfer vault number, etc.

E. At the Regional Facilities Administrator's option, the following six inspections and related reports including a Plan of Action for correction of deficiencies may be required to be forwarded to the Regional Office:

1. Fire Suppression Systems Inspections

a. Annual Inspection: All standpipe, sprinkler and smoke detector systems along with the remote electronic annunciation equipment shall be inspected by a certified service representative for compliance with the latest edition of NFPA 13A and the Occupational Safety and Environmental Health Manual.

b. Semi-Annual Inspection: Manual and automatic (gas and electric) fuel supply shut-offs, hood exhaust systems, and self-contained fire suppression systems shall be inspected/tested to ensure that the systems are operating properly.

2. Annual Boiler Inspection. Inspection of Boilers shall be consistent with all provisions contained in Chapter 11, Inspection of Boilers.

3. Wastewater Treatment Facilities Inspection. It is the intent of this inspection to assure total compliance to EPA, state and local codes relevant to the operation of wastewater treatment facilities.

a. This requirement applies only to BOP-owned facilities. This inspection/test is to be conducted at least annually or as required by state and/or local regulations and codes (the most stringent applies).

b. A qualified source is to be used for the inspection/test. Inspectors from the state and/or local regulating agency or an engineering firm specializing in waste water treatment systems and environmental issues may be considered a qualified source.

4. Inspection and Testing of Water Supply Systems

a. Annual Inspection. Inspect deep well pumps to insure proper operation of pumps and adequate flow rates.

b. Biennial. Every two years or according to manufacturer recommendations (must be on file at the site), inspect internal and external surfaces of all water storage tanks. Inspect for evidence of corrosion, pitting, or signs of weakness. Take necessary steps to correct any internal/external deficiencies identified.

5. Food Service and Laundry Equipment Inspection and Maintenance

a. Each Facility Manager shall be responsible for scheduling monthly inspections (CMMS generated) for the proper care and operation of all major equipment (e.g., refrigeration units, kettles, steamers, ovens, fryers, dishwashers, pot and pan washers, clothes washers and dryers) in food service and laundry.

b. The appropriate department head is to reimburse maintenance costs incurred on capitalized personal property in food service and laundry (see the Property Management Manual and the Accounting Management Manual).

(1) All gas and oil fired ovens shall be checked and maintained monthly.

(a) All existing gas and oil fired ovens which are not equipped with combustion safety controls shall be equipped with pre- and post-purge fans.

(b) Flame sensing devices and all necessary electrical interlocks for oven shut downs, in case of flame failure or high oven temperature, shall be inspected and serviced monthly. Ovens shall be shut down when unsupervised, instead of keeping on low fire, to conserve energy and avoid unsafe conditions.

(2) All gas and electric fryers, grills, and other grease producing equipment shall be checked and maintained monthly. Equipment shall be installed and maintained to comply with NEC and NFPA 96 requirements.

6. Electrical Inspection. Inspection of Electrical Systems shall be consistent with all provisions contained in Chapter 12, Inspections and Testing.

## CHAPTER 6

### ENERGY CONSERVATION

#### INTRODUCTION

A. General: The purpose of this chapter is to define FBOP program objectives concerning energy conservation, establish conservation goals and deadlines, set operational standards, provide for accountability, and standardize reporting.

B. Policy: Federal Energy Management Improvement Act and Executive Order 12902 require a plan for conservation of energy in all Federal buildings.

1. The government-wide goal is a 10 percent reduction in consumption of British Thermal Units (BTU's) per gross square foot of buildings by 1995 and a total of 30 percent reduction by 2005 compared to 1986 consumption levels.

2. Also, numerous Presidential Directives have been issued requiring specific short-term conservation efforts in both building and vehicle energy usage.

3. This chapter establishes procedures that will enable the FBOP to be responsive to these requirements.

C. Program Objective: All facilities and vehicles under Bureau control shall be operated as efficiently as possible in keeping with the Bureau's energy conservation mission.

GOALS. The BOP's goals are to:

A. Reduce energy consumption in buildings each year to achieve a Bureau-wide 10 percent reduction in BTU's per gross square foot by fiscal year 1995, and a total of 30 percent by fiscal year 2005 compared to the adjusted fiscal year 1986 baseline consumption. Baseline computations shall be published annually and be the means of measurement to determine annual energy savings.

B. Reduce consumption of motor vehicle fuel to the maximum extent possible without jeopardizing essential correctional programs.

#### RESPONSIBILITIES

A. Each Regional Director is responsible for the energy conservation program for all activities within his or her region.

B. Each Warden is responsible for the energy conservation program for all activities within his or her institution. Each

Warden shall ensure that the institution meets its established yearly reduction and reports to the Assistant Director for Administration through its respective Regional Director.

C. The FPI Product Support Center (PSC) shall ensure appropriate policy language is issued to cover UNICOR's energy conservation requirements. The FPI Engineering Division Manager shall provide technical support to the Warden and the institution Energy Conservation Committee to develop a plan to reduce energy consumption in FPI operations by the required 30% by FY 2005.

D. Each institution shall begin implementing energy conservation opportunities identified in energy conservation surveys within 180 days of the receipt of the final survey in accordance with the requirements of § 303 of Executive Order 12902.

#### DEFINITIONS

A. Energy Use: Energy that is used in a building or facility and measured in terms of energy delivered to the building or facility.

B. Base Square Foot: Referred to as space that requires any type of energy usage (lighting, heating, etc.).

C. Life Cycle Cost Analysis: An energy conservation project that minimizes the life cycle cost (i.e., maximizes the life cycle benefits) consistent with 10 CFR Part 436.

ENERGY CONSERVATION COMMITTEE. All Bureau and UNICOR locations shall implement regulations, directives, and guidelines to achieve the program objective of energy conservation.

A. Each Regional Director shall appoint the Facilities Administrator or one of his or her subordinates as the Regional Energy Conservation Coordinator (RECC). The RECC shall:

1. Disseminate all directives and guidelines to institutions and field offices within the region;

2. Monitor all energy conservation programs within the region;  
and

3. Consolidate and verify the accuracy of all energy reports within the region prior to submitting them to the Central Office.

B. Wardens at all institutions shall initiate an Institution Supplement that requires the following actions:

1. Establish an Energy Conservation Committee to manage the institution's energy conservation program. The Associate Warden for Operations or other designee of the Warden shall chair the Committee. The Committee shall consist of, at a minimum, five line staff, AWI&E (UNICOR Superintendent), and the Chief of Utilities. Minutes shall be prepared and forwarded to the Regional Facilities Administrator as a part of the monthly

Facilities Operations Report.

2. Appoint department heads, unit managers, farm managers and AWI&E (UNICOR Superintendents) as energy conservation monitors for their individual activity areas, quarters, shops, offices, etc. to ensure that environmental conditions are maintained within prescribed conservation guidelines.

3. Establish an employee awareness program by publicizing conservation practices. This could be accomplished by announcements at staff meetings, special notices posted on bulletin boards, and messages in news memorandums.

4. Make maximum use of the incentive awards program to recognize energy conservation contributions by individuals and/or groups.

5. Establish procedures for the institution Duty Officer to comment on violations of accepted energy conservation practices observed during his or her tour of duty.

6. Ensure that Life-Cycle Cost Analysis is conducted on all projects involving replacement of energy consuming major equipment, new construction, renovation, and expansion. Life cycle cost shall be developed using the Department of Energy approved software supplied by the Energy Conservation Coordinator in the Central Office.

7. Implement all procedures described in this Manual and other directives regarding energy conservation and vehicle mileage reduction.

C. The Energy Conservation Committee shall meet monthly. Each meeting shall include the following agenda items:

1. Review previous month's energy consumption and vehicle mileage, with comparison to proper base periods;

2. Review employee and inmate suggestions for energy conservation and provide recommendations on each item;

3. Review newly issued directives and guidelines on conservation techniques and requirements;

4. Review conservation goals and institution progress toward meeting the goals;

5. Consider recommendations on proposed retrofit projects for energy conservation.

D. At Federal Prison Camps located on military installations, the requirement for a FBOP Conservation Program may be waived provided the camp is an active participant in an energy reduction program sponsored by the military. The Facility Manager must

maintain documentation of meeting participation and energy reduction accomplishments on file.

BUILDING ENERGY MANAGEMENT. The following requirements are consistent with Department of Energy directives, FBOP policy, and Executive Orders. They apply to all FBOP owned and/or controlled buildings (only the Regional Director may grant exceptions).

A. Heating

1. During the seasonably cold months, heating temperature control devices shall be set to maintain temperatures not exceeding the following:

- a. Inmate housing areas 68 degrees Fahrenheit;
- b. Unoccupied areas 55 degrees Fahrenheit;
- c. All other areas including, but not limited to, offices, program areas, visiting rooms, shops, etc. 68 degrees Fahrenheit;
- d. Hospital rooms are exempt from these requirements if warranted for medical reasons; however, if the administrative or other portions of such buildings have separate heating controls, these requirements cover such areas.

2. Window draperies and blinds shall be used whenever feasible to reduce heat. They shall be in the closed position during the night and on cold, cloudy days, and in the open position during periods of sunshine.

3. Cooling energy shall not be used to achieve the temperatures specified for heating.

4. Overheated areas shall be cooled by reducing the heat source rather than opening windows.

5. The use of heat blowers, threshold heaters, and portable space heaters is prohibited. Institutions shall dispose of these types of existing equipment, with one exception: portable heaters may be used for temporary heat on new construction or remodeling projects.

B. Cooling

1. During the seasonably hot months, air cooling temperature control devices shall be set to maintain temperatures not less than 78 degrees Fahrenheit.

Hospital rooms may be exempt from this requirements, if warranted, for medical reasons. If the administrative or other portions of hospital buildings have separate cooling controls, these requirements cover such areas.

2. Window draperies and blinds shall be used whenever feasible

to cut down cooling losses by setting to the closed position during periods of sunshine and open during the night and on cold, cloudy days.

3. Heating energy shall not be used to achieve the temperature specified for cooling.

#### C. Ventilation

1. Institutions must provide minimum ventilation rates to maintain human comfort in accordance with the Guide Book for the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) and current ACA standards. However, outside air intake should be reduced to the greatest extent feasible during heating and cooling seasons.

2. Ventilation systems shall be turned off in unoccupied spaces whenever possible. A common switch should be used for activating lights and ventilation system simultaneously in areas such as toilet rooms.

#### D. Lighting

1. Lighting levels for specific areas within FBOP facilities shall conform to standards identified in the Occupational Safety and Environmental Health Manual.

2. Task lighting shall be used as much as possible for areas requiring higher levels than their surroundings rather than increasing the lighting in the entire area.

3. During non-working hours, lighting shall be eliminated, except where necessary for safety and security.

#### E. Water Heating

1. Primary hot water temperatures shall be maintained as low as possible while still ensuring an adequate supply of 105 degrees Fahrenheit water at the tap in inmate housing areas.

2. If lowering the primary water temperature restricts the supply of adequate hot water for dishwashers and laundry operations, booster heaters shall be installed. The final rinse cycle temperature shall be 180 degrees Fahrenheit for dishwashers and 160 degrees Fahrenheit for laundry washers.

#### F. Operations

1. At many institutions, utility distribution systems were installed without zone or branch controls. In some cases, steam to buildings and facilities is controlled by estimating the need based on outside temperatures. Every effort should be made to provide controls which supply steam only on an as-needed basis with boilers fired as efficiently as possible.

2. All equipment using energy shall be inspected, cleaned,

lubricated, and adjusted for optimum operations to realize maximum efficiency from the energy consumed. Mechanical equipment shall be turned off when it is not in use.

3. Each employee is responsible for energy conservation in the Bureau. Although facility employees are responsible for providing heating, cooling, hot water, electricity, and other services, energy conservation cannot be their responsibility alone. User practices, not restricting the energy flow, will cause the most energy conservation.

#### MOTOR VEHICLE MANAGEMENT

##### A. Definitions

1. Motor Vehicle: Any sedan, station wagon, truck, bus or ambulance.

2. Bureau Vehicle: Any FBOP-owned vehicle.

3. Commercially Leased Vehicle: Any vehicle rented or leased from a commercial source used to conduct government business.

4. Privately Owned Vehicle (POV): Any privately owned vehicle used to conduct government business for which the owner is reimbursed mileage expenses.

5. Interagency Motor Pool System Vehicle: Any vehicle rented or leased from the GSA Motor Pool.

6. Transfer Bus: Any diesel powered coaches used in the Prisoner Transportation Program.

B. Regulations: The following requirements are mandatory and apply to all Bureau-operated vehicles:

1. Speed Limit: The speed limit for government vehicles is the posted limit as determined by local and state laws.

##### 2. Fuel Savings and Mileage Reduction Guidelines

a. Stringent control of the use of vehicles must be maintained pursuant to the provision of 31 U.S.C. (c)(2).

b. Public transportation should be used whenever feasible and cost effective.

c. Vehicle mileage should be reduced through curtailment of non-essential use.

d. Truck assignments should be reviewed to ensure use of the most energy efficient vehicle.

e. Shuttle or group movement operations should be reviewed to ensure use of properly-sized vehicles.

f. All government-owned vehicles shall have tune-ups per manufacturers' recommendations. Documentation of tune-ups shall be made part of each vehicle's record in accordance with provisions contained in Chapter 10.

g. Engines shall not be idled for long periods of time. Generally it is more efficient to restart a vehicle than to let it idle more than one minute. (Exception: Perimeter Patrol Vehicles.)

h. Tire pressure shall be maintained at manufacturers' recommendations. Pressure shall be checked weekly.

REPORTING. All institutions shall submit monthly reports to the appropriate Regional Energy Conservation Coordinator.

A. Energy Conservation Program Report: The Chairman of the Energy Conservation Committee shall prepare this report, which summarizes the activities and decisions of the Energy Conservation Committee. The report is signed by the Energy Conservation Committee Chairperson and submitted to the Facility Manager. The Facility Manager shall include the report as a part of the Monthly Facilities Operations Report. The Energy Conservation Report shall address the following:

1. Progress toward achieving conservation goals and comparison of past month's energy consumption with base periods;

2. Issuance of directives or instructions for energy conservation;

3. Action on employee and inmate suggestions for energy conservation;

4. Any new conservation initiatives, along with a description;

5. Recommendations for operational changes and projects that will conserve energy. (Suggested projects shall also be submitted to the Work Programming Committee).

B. Exception: At Federal Prison Camps located on military installations, the requirement for a BOP Energy Conservation Program may be waived provided the camp is an active participant in an energy reduction program sponsored by the military. The Facility Manager must maintain documentation of meeting participation and energy reduction accomplishments on file.

C. Motor Vehicle and Equipment Fuel Usage Report: The Facility Manager shall complete and submit the Motor Vehicle and Equipment Fuel Usage Report (see Monthly Facilities Operations Report Format) in approved database format.

1. All vehicles shall have functional odometers, which shall be read and total fuel usage shall be recorded on the last day of each month. The garage foreman shall record and maintain these figures.

2. Within five days after the close of the month, the Business Manager shall provide to the Facility Manager mileage for vehicles rented from GSA motor pools on a short-term basis.

This information shall be reported in the month the voucher is processed. This information can be obtained from SF 1012 vouchers, Simplified Intergovernmental Billing and Collection reports from GSA, and billings from rental car agencies.

3. Quantities of gasoline purchased on Bureau credit cards shall be reported to the Facility Manager within five days after the close of the month.

4. The AWI&E (UNICOR Superintendent) must also provide required information on UNICOR POV mileage, government vehicles owned by UNICOR, or GSA vehicles assigned to UNICOR.

5. Each Regional Office and the Central Office shall also complete this form monthly for vehicles used in performance of activities. The Regional Office reports shall include mileage from Community Corrections Centers, Community Program Managers, and staff training centers.

6. It is very important that special attention be given to the units of measure on the form and that quantities be entered in the proper space.

#### E. Utility Usage Report

1. The Facility Manager shall complete and submit the Utility Usage Report (see Monthly Facilities Operations Report Format) in approved database format.

2. All meters shall be read each month. Total quantities shall be matched to the actual utility bill, and then recorded in the proper space on the form.

3. The AWI&E (UNICOR Superintendent) shall be responsible for UNICOR energy usage and shall report the quantities to the Facility Manager within five days after the close of the month.

4. Total gross square footage for energy conservation purposes is determined by the outer dimensions of a structure including enclosed stairwells or other structures attached to the outer envelope of the building. For multiple floor buildings, identify gross square footage for each floor not including overhangs, free standing weight sheds, soffits, or canopies.

F. Computerization of Reports: Programs have been developed to automate the transmission of the Utility Usage Report and the Motor Vehicle and Equipment Fuel Usage Report. These reports shall be transmitted in database format as a part of the Institution Facility Operations Monthly Report. Copies of the report shall be kept in the Facility Manager's office and made available for inspection during Facility Operations Program Reviews.

## CHAPTER 7

### LIFE SAFETY/FIRE PROTECTION

GENERAL. The FBOP shall comply with all applicable National Fire Codes (NFC) with special attention being placed on the National Fire Protection Association's (NFPA) Life Safety Code (NFPA 101). The National Fire Codes impact fire protection and life safety in a wide variety of areas: from inmate housing to offices and classrooms, extinguishing systems in kitchens, computer rooms, spray booths in industrial settings, and sprinkler and alarm systems, etc. The main goal of life safety is to provide quick and safe egress out of buildings in the event of a fire.

A. All facility construction and renovation shall maintain fire safety as described in the Occupational Safety and Environmental Health Manual.

1. When the requirements of this Manual are clearly impractical, they may be modified to allow alternative arrangements.

2. These alternatives, which must present a minimum hazard to the life safety of the occupants, shall only be made after written authorization from the Assistant Director of the Health Services Division. Any such requests shall be forwarded through the Chief, Facilities Programs, for his/her comments.

B. A limited, but reasonable, time is allowed for compliance with the Occupational Safety and Environmental Health Manual's requirements. The amount of expenditure and the disruption of services are prime considerations in the allowances. Schedules for compliance with specific requirements may be established in subsequent directives.

INSPECTIONS AND TESTING. Inspections and testing plays a critical role in the overall effectiveness of fire protection and alarm systems and equipment. To ensure proper operation of these systems and related equipment, tests and inspections shall be conducted in strict accordance with provisions contained in this Manual. In all cases, inspections and tests shall be set up in accordance with either appropriate National Fire Code or the manufacturers specifications, whichever is more stringent.

### CONSTRUCTION REQUIREMENTS

A. The institution Safety Manager shall review and sign all plans for alterations and renovations before submission to the Regional Facilities Administrator.

B. A qualified fire protection engineer (or a public official that meets the criteria defined in part "C" of this section)

shall review and approve all design drawings and specifications for altering use conditions in existing structures or

constructing new structures. The review of design documents shall verify that the design meets all current life safety and fire protection requirements necessary for the building(s). After conclusion of renovation/construction, a qualified professional (architect/engineer) shall provide a post construction certification which verifies that actual as-built construction met applicable code requirements.

C. The definition of a qualified fire protection engineer as contained in 41 CFR Section 101.6.603, is an individual, with a thorough knowledge and understanding of the principles of physics and chemistry governing fire growth, spread, and suppression, meeting one of the following criteria:

1. An engineer having an undergraduate or graduate degree from a college or university offering a course of study in fire protection or fire safety engineering, plus a minimum of four years work experience in fire protection engineering,

2. A professional engineer (P.E. or similar designation) registered in Fire Protection Engineering, or

3. A professional engineer (P.E. or similar designation) registered in a related engineering discipline and holding member grade status in the International Society of Fire Protection Engineers.

4. If a Facilities Administrator deems he/she has a P.E. on staff who can qualify for member grade status in the Society of Fire Protection Engineers, he or she should send an application to the following address to qualify them to perform the duties of this requirement:

Society of Fire Protection Engineers  
One Liberty Square  
Boston, MA 02109-4825  
(617) 482-0686  
FAX (617) 482-8148

D. On small scale renovation or construction projects that do not impact life safety or fire protection, the Regional Facilities Administrator has the authority to suspend pre and/or post reviews for life safety and fire protection. A copy of the justification to suspend life safety and fire protection reviews shall be filed in the project folder.

E. All finish construction materials used in renovation, modification, and new construction projects shall comply with the flame spread and smoke generation requirements of the Occupational Safety and Environmental Health Manual and the National Fire Protection Association (NFPA) Codes and Standards. Finish materials include, but are not limited to, paint, carpet,

curtains, wall coverings, paneling, sheetrock, ceiling coverings,  
etc.

Manufacturers and/or design professionals shall provide the institution with written certification that the material and/or design meets or exceeds those requirements. The certifications shall be filed in the appropriate Project or Major Work Order folder.

The Facility Manager shall keep a copy of the current NFPA 101, Life Safety Code, in the Facility office complex.

LIFE SAFETY PROJECTS. FBOP facilities shall comply with the National Fire Protection Association Life Safety Code as well as all corresponding codes associated with life safety and fire protection to provide a safe environment for staff and inmates.

A. Funding: Life safety funds shall be used for items in the approved institution Life Safety Plan of Action (POA). These funds may be reprogrammed only to another life safety project. The reprogramming of B&F funds must be consistent with the provisions contained in Chapter 3.

B. Priority: Due to the potential for loss of life and destruction of property, completion of projects or major work orders involving life safety and fire protection shall be given a high priority. In institutions where life safety surveys have been conducted and a POA established, corrective actions shall commence immediately.

C. Staff Responsibilities

1. Facility Manager. The Facility Manager has primary control of project activity and funding and monitors each project to verify appropriate use of funds. He/she shall maintain a current approved database status report on the institution's approved Life Safety Plan of Action. The database shall be continuously updated to reflect the current status of all recommendations.

a. This status report must be submitted on a diskette and hard copy to the Regional Office by the 15th day of the first month of each fiscal year quarter (October, January, April, July). Electronic file transfer may be used with approval of the Regional Facilities Administrator.

b. Monthly construction progress reports for B&F project are a part of the Facilities Operations Monthly reporting process (see Chapters 2 and 3 of this Manual).

2. Safety Manager. Monitors and inspects project activities for completion as well as for verification of code compliance. He/she shall assist the Facility Manager with quarterly status reporting and development of variance requests. The Safety Manager shall review and sign monthly and quarterly status reports of the Life Safety Plan of Action.

3. Regional Safety Administrator. Shall review and approve the quarterly status reports of the Life Safety Plan of Action that has been submitted by the institution Facility Managers.

4. Regional Facilities Administrator. Maintains updated status reports of all approved institutional Plan of Actions quarterly. Copies of institution Life Safety Plan of Action status reports are to be forwarded to the Chief, Facilities Operations, in an approved database format by the 25th day of the first month of each fiscal year quarter (October, January, April, July).

5. Safety Administrator, Central Office. Ensures all POA's and variance requests institutions submit comply with applicable National Fire Codes and Bureau policies and maintains a documentation file on all life safety/fire protection issues. In addition, he/she shall advise the Authority Having Jurisdiction (AHJ), regional, and institutional staff as to the intent of the Life Safety and Fire Protection Code applications.

6. Chief, Facilities Programs. Reviews quarterly status reports for accuracy, identifies areas of concern and coordinates efforts with Regional staff to correct any deficiencies.

7. Chief, Facilities Operations. Develops a life safety status report for the Assistant Director for Administration by the 25th day of the second month of each quarter which identifies overall completion percentages, funding obligations, and individual compliance with approved Life Safety Plans of Actions.

## CHAPTER 8

### ENVIRONMENTAL CONTROL

#### INTRODUCTION

A. The purpose of this Chapter is to set forth guidelines for certain environmental issues confronting the Bureau and to provide an overview of some of the more pertinent environmental issues. The first section of this Chapter sets forth operational guidelines for dealing with hazardous spills, asbestos, and confined space. The second section gives a brief summary of some major environmental laws and regulations potentially affecting Bureau facilities.

B. Each Facility Manager shall ensure that operational guidelines set forth in this Manual and applicable environmental laws, regulations and requirements are being followed. It should be noted that the Environmental Protection Agency (EPA) has granted many states authority to manage their own environmental programs. These state programs may be more stringent than Federal program requirements. Therefore, many states or localities may have additional requirements.

C. Prior to undertaking any new activities or continuing an ongoing activity which may be problematic, the Facility Manager shall contact the Regional Facilities Administrator to resolve these issues. Should the Regional Facilities Administrator need further technical guidance, he or she may call the Facilities Management Branch, Central Office.

D. The Facility Manager shall report all notices of violations issued by EPA or a state environmental office to the Regional Facilities Administrator and the Central Office Facilities Management Branch within 48 hours of receipt of the violation notice.

E. Occupational Safety and Environmental Health has issued an Environmental Regulation Technical Reference Manual (TRM 016.01 or latest edition).

#### HAZARDOUS SPILL REPORTING

A. On-Scene Commander: The Safety Manager shall be designated as the On-Scene Commander (OSC). He or she shall receive reports of spills at the institution and implement an approved Emergency Plan of Action (POA) as outlined in the current Occupational Safety and Environmental Health Manual, which includes:

1. A list of institution and regional duty officers, and EPA and state officials, if required;

2. A list of standby equipment and materials, their locations, and how to obtain them; and

3. Procedures for controlling, documenting, and monitoring accidental pollution.

B. Emergency Plans: Emergency Plans will be distributed to the Facility Manager, General Foreman and Chief of Utilities. Emergency Plans shall be updated and submitted to the Regional Safety Administrator for review biennially. The Facility Manager shall assist the institution Safety Manager to implement the Emergency Plan of Action.

C. Assistance: Aid will be available from the Authority Having Jurisdiction (AHJ) in the state affected.

#### PROCEDURES FOLLOWING HAZARDOUS SPILLS

A. The OSC or designee, as identified in local emergency plans, upon receiving notification of a possible hazardous spill, shall determine:

1. the type and quantity of material spilled;
2. the source of spill;
3. the threat posed to the public health or welfare.

The OSC shall give the caller instructions, including steps to prevent further discharge.

B. The OSC shall immediately notify the Chief Executive Officer and EPA Regional Office (a national hot line 1-800-424-8802 has been established for hazardous spill reporting to EPA) and state officials, if necessary. The institution Emergency Plan of Action shall identify notification requirements and telephone numbers.

C. The OSC shall proceed to the scene of the spill to direct cleanup and containment operations. The OSC shall keep the Regional Response Center (RRC) at EPA advised through situation reports containing detailed information about the spill, such as date, time, location, and the source.

D. The Facility Manager shall notify the Regional Facilities Administrator and the Central Office Facilities Management Branch within 48 hours of the spill.

ASBESTOS. Bureau policy and specific detailed information for working with asbestos and asbestos containing materials (ACM) are found in the Occupational Safety and Environmental Health Manual and other related Bureau policies. Trained and medically cleared staff may work with asbestos during emergencies and minor cleanup/repair activities.

A. Current policy emphasizes attention to three regulatory areas:

1. OSHA 29 CFR 1926.58;
2. EPA 40 CFR Part 61; and
3. applicable state regulations.

B. The Facility Manager has the following responsibilities related to asbestos:

1. Review and present to the Work Programming committee all new projects potentially involving work around asbestos containing materials or abatement of asbestos containing materials;

2. Ensure that all persons working with asbestos receive appropriate medical testing and examinations;

3. Ensure that all persons working with asbestos receive appropriate initial and annual refresher training;

4. Provide and enforce proper use of protective equipment and clothing as required for each job site;

5. Ensure that proper work procedures are followed by all persons working with asbestos;

6. Ensure that disposal methods are in accordance with Federal, state, and local regulations; and

7. Ensure that new products purchased are labeled as asbestos free.

CONFINED SPACE. A comprehensive Safety Program shall be in place for performing work in confined spaces. The Facility Manager, with assistance from the Safety Manager, shall ensure that all equipment and work practices and procedures are in compliance with the Occupational Safety and Environmental Health Manual.

#### MAJOR ENVIRONMENTAL STATUTES AND REGULATIONS

A. General: The following outline briefly summarizes some of the major environmental statutes and regulations affecting Facility Managers or persons who may handle or manage hazardous waste or deal with issues pertaining to the environment. This summary is not, however, a comprehensive list of environmental statutes, regulations, or requirements, but is designed to inform Facility Managers of the broad environmental regulation scheme. Each Facility Manager should be familiar with each of the following statutes and have access to the relevant regulations.

Each Facility Manager shall contact their Federal, regional, state, or local environmental agencies to determine if requirements apply to his or her facility, or if permits are required for certain activities.

Because permits cover a variety of activities -- such as installation of boilers, storm water runoff, water treatment facilities, and the generation, transport, treatment, storage and disposal of hazardous wastes -- the EPA and state environmental agencies should be contacted to determine these and other requirements when questions arise. The Facility Manager must be aware that these regulations are continuously changing and these changes may have an impact on his or her facility.

Should there be a question that the Facility Manager is unable to resolve or if there is an issue that is problematic for the FBOP, the Regional Facilities Administrator shall be contacted for assistance. Should the Administrator need further guidance, he or she must call the Facilities Management Branch, Central Office which will contact the Office of General Counsel, Health Services Division, EPA, or other government sources to help interpret the requirements.

B. Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et. seq.; Implementing regulations can be found in 40 CFR Parts 240 - 299: In 1965, Congress passed the Solid Waste Disposal Act (SWDA). This first Federal law to encourage environmentally sound methods for the disposal of solid and hazardous wastes has since been amended many times and has created major, new, regulatory requirements. In 1976, SWDA was amended by the Resource Conservation and Recovery Act (RCRA). Today both acts are commonly referred to as RCRA.

RCRA forms a comprehensive system for regulating solid and hazardous wastes. Wastes are regulated from the time of generation until disposal. Subtitle C of RCRA regulates hazardous waste generation, transportation, treatment, storage and disposal, and sets forth requirements for manifests, reporting, and hazardous waste management.

RCRA also encompasses a variety of subjects collateral to the regulation of hazardous wastes, such as inspections and enforcement, and contains ad hoc provisions on used oil, hazardous waste exports, and medical waste. In addition, RCRA Subtitle D regulates solid waste to a limited extent. RCRA requires Federal agencies, to the extent possible, to procure recoverable resources, such as fly ash in concrete, retread tires and recycled paper.

RCRA created an Underground Storage Tank (UST) program. Implementing regulations for this program are codified at 40 CFR Parts 280-281. A UST is defined as a tank having 10% or more of

its volume underground. The UST program regulates petroleum and other products stored in underground storage tanks. For tanks

installed or reused after 1988, EPA requires owners of UST's to register their tanks with state or local agencies. If an institution has any UST's that could leak into navigable waters, then a Spill Prevention Control and Countermeasure Plan (SPCC) must be developed according to the guidelines in implementing regulations at 40 CFR 112.

The Federal Facility Compliance Act of 1992, Pub. L. 102-386, October 9, 1992, 106 Stat, 1505 (the Amendment) amends SWDA, also referred to as RCRA. The Amendment requires Federal facilities to comply with both Federal and state solid and hazardous waste laws. Federal sovereign immunity for violations of RCRA and other hazardous waste laws is expressly waived. The Amendment expands the definition of "a person" to include "each department, agency or instrumentality of the United States".

The Amendment subjects Federal agencies to civil and administrative liability for violations of the Act. It also permits the EPA Administrator to commence administrative enforcement action against Federal facilities which are not in compliance with environmental regulations.

Employees, agents or officers of the United States could be subject to, and personally liable for, any civil penalty under Federal, state, or local solid or hazardous waste laws for any act or omission outside the scope of his or her official duties. In addition, such persons are also subject to criminal sanctions under state or Federal solid or hazardous waste laws. Criminal sanctions for environmental offenses include fines and/or imprisonment.

The Amendment precludes, however, criminal sanctions against any branch of the Federal government.

The Amendment further states that the EPA and/or an authorized state agency, will conduct inspections of Federal facilities and must be allowed on site after showing proper identification. Agencies who have been inspected also are required to reimburse the EPA for the costs of the inspection.

C. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), codified at 42 U.S.C. § 9601 et seq.;  
Implementing regulations can be found at 40 CFR Parts 300-373:  
CERCLA, more commonly known as "Superfund", addresses the response, notification, cleanup, and liability of past and present releases of hazardous substances into the environment. The Superfund was developed to establish Federal authority to clean up abandoned hazardous waste sites and to pay for the cost of waste removal and remediation. CERCLA established "no fault" liability for facility owners, operators, generators and transporters of hazardous substances. It enables the Federal government to respond to releases or threatened releases of

hazardous substances from abandoned and leaking hazardous waste disposal sites. The EPA is authorized to use Congressionally appropriated funds to remedy sites on the National Priority List.

Liability for violations of this Act is extremely broad and can be assigned to transporters, past owners or operators, and those who arrange for the hazardous waste disposal as well as the current owners or operators (deemed as "Potentially Responsible Parties" or "PRPs"). The EPA can seek recovery of cleanup costs from PRPs, regardless of fault. CERCLA violations can lead to significant liability for PRPs involved.

As described in Part I, CERCLA requires notification to the National Response Center of a release of a reportable quantity of a hazardous substance.

D. Clean Air Act (CAA), 42 U.S.C. § 7401 et seq.; Implementing regulations in 40 CFR Parts 50-87: The CAA is a statute aimed at alleviating air pollution caused by various sources, as well as preventing the deterioration of air quality in relatively "clean" areas. Any discharge into the atmosphere of pollutants, such as carbon monoxide, particulates, sulfur oxide, nitrogen oxides, and hydrocarbons, may require a discharge permit.

The CAA authorizes EPA to establish New Source Pollutant Standards (NSPS) for new stationary sources. EPA has established standards for many categories of new sources. Regulations for these standards are contained in 40 CFR Part 60. These standards often require notification and permitting before commencement of construction begins. These standards or permitting requirements often apply if equipment, such as boilers, are replaced.

The CAA also authorizes a program establishing National Emission Standards for Hazardous Air Pollutants (NESHAPS). For hazardous pollutants designated by EPA, certain emission levels are set to protect the public health. The CAA also authorizes EPA to establish a Prevention of Significant Deterioration (PSD) program to limit pollution in areas already cleaner than air quality standards require.

The CAA requires states develop State Implementation Plans (SIPs) that offer a strategy employing emission limits and other measures to meet National Ambient Air Quality Standards (NAAQs). EPA may require additional plans to be developed in non-attainment areas, areas not achieving certain air standards.

P.L. 101-549 amended the CAA in 1990, presenting some of the most significant pieces of environmental legislation to date. These Amendments change the law in several areas, including attainment and maintenance of air quality, mobile vehicle emission and fuel standards, hazardous air pollutants, acid rain deposition control, permitting and enforcement, and stratospheric ozone protection. The Amendments regulate everything from air toxins to air horns and includes the reclamation and containment of Chlorofluorocarbons (CFCs) and Hydrochlorofluorocarbons (HCFCs). The New Source Pollutant Standards include six categories of new

and renovated sources, two of which are boilers and incinerators. The Amendments have increased enforcement mechanisms available to EPA and states with approved air programs for violations of the Act.

E. Federal Water Pollution Control Act (Clean Water Act (CWA)), 33 U.S.C. § 1251 et seq.; Implementing regulations in 40 CFR Parts 100 - 149 and 400-471: The CWA regulates the discharge of pollutants into U. S. waters, including navigable waters such as rivers, as well as other "waters" including wetlands. In addition, the Act regulates discharges into sanitary sewer systems. The basic regulation of water pollution is done through a permit system and effluent limitations for pollution point sources, and by state water quality objectives and implementation plans.

The CWA imposes restrictions on the amount of pollution that may be discharged by certain categories of dischargers within a specified time frame. There are specific effluent (waste water) standards for many manufacturing processes. Regulations for these standards are contained in 40 CFR Parts 425-471.

The CWA also imposes general pretreatment regulations. Implementing regulations contain national pretreatment standards with "specific prohibitions" against the introduction of certain pollutants into Publicly Owned Treatment Works (POTWs). These regulations also contain a "general prohibition" on the introduction of any pollutants that cause "pass-through" or "interference" with the public water treatment system.

The CWA establishes a National Pollutant Discharge Elimination System (NPDES) program. The NPDES program makes it unlawful for any person to discharge any pollutant from any point source into navigable waters without a permit. Regulations are contained in 40 CFR Parts 122 et seq.

The CWA now also authorizes EPA to require permits for industrial or municipal storm water discharges. The storm water permit regulations identify by SIC code and narrative description, 11 narrative categories of facilities considered to be "engaging in industrial activity" for the purpose of the requirements. Some examples where Bureau facilities or UNICOR may be affected include: facilities with landfills that have received industrial waste; construction activity including clearing, grading and excavation activities where five acres or more have been disturbed; or facilities with sewage treatment systems with a design flow greater than one million gallons per day. These are three of the 11 categories listed in the Act.

The CWA also requires permits for discharge of dredged or fill materials into navigable waters, including wetlands. These permits are issued by the Army Corps of Engineers or, by an approved state, for certain waters.

Wetland regulation is currently an area of intense regulatory activity. The current regulatory definition of a wetland is an area that is regularly saturated by surface or ground water and

subsequently is characterized by a prevalence of vegetation that is adapted for life in saturated soil conditions. Examples

include swamps, bogs, fens, marshes, and estuaries. This definition is construed broadly and can include a dry river bed that may only hold water every five years or a puddle that develops with each rainfall.

F. National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. § 4321 et seq.; The Council of Environmental Quality regulations implementing the procedural provisions of NEPA are codified in 40 CFR 1500 et seq. The supplemental implementing regulations for the U.S. Department of Justice are codified in 28 CFR 61 et seq.: NEPA directs all Federal agencies to consider the potential environmental impacts of their proposed major actions and to consider those impacts in their formal decision-making process. Environmental Impact Statements (EIS) are required of Federal agencies through this Act for major projects and/or legislative proposals that will have a significant impact on the environment. It is important to determine if a new or modification action at a Federal prison facility requires the preparation of an EIS.

G. Toxic Substances Control Act (TSCA), 15 U.S.C. § 2601 et seq.; Implementing regulations in 40 CFR Parts 700-799: TSCA regulates the manufacture, processing, distribution, use and disposal of toxic substances. It requires testing of new chemical substances and the regulation of substances that pose unreasonable risks of health or environmental injury. New regulations cover asbestos and hexavalent chromium as well as PCBs and asbestos abatement.

TSCA states "refusal to allow inspectors who present the proper credentials to enter the facility, is a violation of the statute." Upon entering the property, the inspector can interview the Facility Manager and review the records (Part 707) relating to substances such as Asbestos (Part 763), PCBs (Part 761), medical waste and any other chemical substance that falls under this regulation.

H. Energy Conservation and Policy Act, 42 U.S.C. 8251 et seq.; Implementing regulations in 10 CFR parts 420 - 470 and 40 CAR parts 600 - 610: The Energy Conservation and Policy Act's goal is to promote energy conservation and efficiency. The Act contains provisions pertaining to residential, commercial and Federal energy program initiatives. Federal agencies are directed to reduce energy consumption, and guidelines are set in implementing regulations and Executive Orders toward this goal.

The Energy Policy Act of 1992, P.L. 102-486, October 5, 1992, sets additional requirements and more stringent schedules for obtaining certain energy efficiency objectives. The Act contains provisions pertaining to natural gas, alternative fuels, electricity, disposal of radioactive waste, uranium revitalization, renewable energy, coal, petroleum, octane, global climate change, use of oil, hydropower, Indian energy resources,

nuclear energy, and administrative provisions.

Facility Managers should continue to conserve energy and resources by managing the facilities with these goals in mind, and consult as needed pertinent requirements.

I. Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), 7 U.S.C. § 136 et seq.; Implementing regulations in 40 CFR parts 150 - 186: FIFRA regulates the registration and use of pesticides. It is a violation of FIFRA to use pesticides in a manner inconsistent with the labeling instructions. When using chemicals for pest control, it is important to carefully follow the application instructions included with the chemicals.

J. Enforcement: Many of the statutes described above (i.e., RCRA, CERCLA, CAA, CWA, TSCA) contain specific Federal facility provisions, making its requirements applicable to Federal agencies. Accordingly, in many instances, Federal sovereign immunity has been waived requiring Federal facility compliance with Federal, state, and local environmental statutes, regulations and requirements. Some statutes also have waived Federal sovereign immunity with respect to enforcement provisions. Therefore, the Bureau may be subject to enforcement mechanisms, such as administrative orders.

Because of the Federal Facility Compliance Act of 1992, Federal facilities or employees could also be subject to civil or criminal liability, including fines, for non-compliance with RCRA or hazardous waste laws. The Regional Facilities Administrator shall contact the Regional Counsel and, if appropriate, the Office of General Counsel when a facility has been notified of non-compliance, violations, or deficiencies (i.e., a Notice of Violation has been issued), or if there are questions on interpreting environmental law requirements.

K. Inspections: Many environmental statutes also contain provisions authorizing EPA or state agencies to inspect facilities. EPA may want to inspect a FBOP facility to investigate a complaint. A facility also could be targeted for an inspection to ensure permitting requirements are being followed or as a part of EPA's general administrative plan for enforcing environmental statutes.

EPA has recently instilled a "multi-media" approach to inspections, aggregating its authority under the various environmental statutes. Under this approach, EPA has mobilized small inspection teams which combine experience in all environmental media (air, water, solid/hazardous waste). This allows EPA to conduct comprehensive investigations of the pollution potential and/or particular compliance problems at required facilities.

As a result of the inspection authority authorized by environmental statutes, Facility Managers must be prepared and in

compliance with environmental requirements, including proper record keeping. Because of possible security concerns, however,

the FBOP to the extent possible, may want to request that the Facility Managers be given notification in advance of such inspections if possible.

## CHAPTER 9

### TELECOMMUNICATIONS SYSTEMS AND ELECTRONIC EQUIPMENT

#### INTRODUCTION

A. General: This chapter pertains to individual responsibilities in the administration of activities related to design, procurement, installation, and maintenance of all telecommunications systems and electronic equipment throughout the BOP, including but not limited to:

1. Telephone systems (PBX and Inmate)
2. Radio systems
3. Perimeter Intrusion Detection Systems
4. Fire and Smoke Alarm Systems
5. Motion Detection Alarms
6. Window, Power House, Freezer, and misc. Alarms
7. Door and Gate Controls and Alarms
8. Closed Circuit Television (CCTV)
9. Intercom, Paging and Nurse Call Systems
10. Remote Control Devices
11. Metal Detectors and/or Detector Type X-Ray
12. Control Center and Command Center Electronics
13. Electronic Equipment for Special Operations (video cameras, throw phones, etc.)
14. Intelligence Gathering Equipment
15. Fiber Optic Multiplex Systems
16. Biometric Devices
17. Programmable Logic Controllers
18. Alarm Monitoring Systems (AMS or TIS)
19. Grounding, Surge Protection and Lightning Protection Systems

B. Policy: Initiation of procurement documents, specifications, operation, and maintenance of telecommunications systems and electronic equipment throughout the BOP shall:

1. Be performed by the facility's electronic technician, electrician, or by contract maintenance.

2. Comply with applicable Federal regulations, bulletins, and circulars.

C. Chief, Facilities Operations: The Chief, Facilities Operations, is responsible for the overall administration of telecommunication systems and electronic equipment at all institutions and regional offices throughout the BOP, including:

1. Providing to Regional Facilities Administrators consultation and guidance in the overall administration of activities related to telecommunication systems and electronic equipment in new and existing facilities.

2. Providing planning and engineering support to the Central Office Facilities Design and Construction Branch for telecommunication systems and electronic equipment for new facilities.

3. Reviewing proposed electronic or communications equipment purchases of more than \$8,000 before advising the appropriate Regional Facilities Administrator to proceed with the purchase.

4. Serving as the point of contact for GSA, DOJ, and other government agencies including preparing and submitting all required reports and responding to requests for telephone systems management information.

5. Issuing annually an Operations Memorandum outlining the database report format for the Electronic Equipment Replacement Schedule.

D. Regional Facilities Administrator: The Regional Facilities Administrator is responsible for the overall administration of telecommunication systems and electronic equipment at all institutions within a particular region as well as their Regional Office. These responsibilities include:

1. Providing support and guidance to the Facility Manager in developing and maintaining an effective planning program for telecommunication systems and electronic equipment.

2. Reviewing the Annual Electronic Equipment Replacement Schedule Report, compiling the institution reports into a single database, and transmitting the combined reports to the Chief, Facilities Operations, by October 1 of each year.

3. Ensuring adherence to FIRMR, GSA, and 41 CFR and other procurement regulations when reviewing the purchase of electronic and communications equipment.

4. Approving all telecommunication systems and electronic equipment purchases before the Regional Contracting Officer issues Special Authorization (SA) numbers.

5. Reviewing proposed electronic and communications equipment purchases that exceed \$8,000.

6. Coordinating research and development of all new systems and equipment through the Chief, Facilities Operations, and the Office of Security Technology. (Reference the Program Statement 1150, Office of Security Technology.)

E. Facility Manager

1. The Facility Manager is responsible for maintaining equipment information and planning related to telecommunication systems and electronics equipment including the following:

a. A database containing the Annual Equipment Replacement Schedule shall be submitted to the Regional Facilities Administrator by September 1 of each calendar year. The Annual Equipment Replacement Schedule shall be based on the present condition of the systems and equipment and the manufacturers' or industry established life expectancy. The Facility Manager shall establish a plan of action for all equipment identified for replacement and forward a copy of this plan as a part of the Annual Equipment Replacement Schedule to the Regional Facilities Administrator. The reporting database format shall be issued annually in an Operations Memorandum. A copy of the completed report shall be kept on file in the Facilities Department.

b. For institutions with trunked radio systems, the Trunked Radio Report must be submitted to the Inter-department Radio Advisory Committee (IRAC) during the first five years of operation only.

(1) In November of each year, the Facility Manager shall record usage data (on a 3½" diskette) for 10 separate days from the trunked radio system base station.

(2) The diskette containing the base station usage data shall be forwarded to the Regional Facilities Administrator by December 1 of each year.

(3) The Regional Facilities Administrators shall collect all reports and forward them to the Chief, Facilities Operations, by December 15 of each year.

2. The Facility Manager is also responsible for:

a. Ensuring that the Electronics Technician maintains equipment manuals on telecommunications systems and electronic equipment.

b. Providing user training for institution staff as required on new, upgraded, or existing electronic and communications systems.

c. Identifying and seeking guidance on potential legal and/or policy issues.

d. Adhering to FIRMR, GSA, 41 CFR, Bureau policies, and other required procurement regulations when purchasing telecommunications systems and electronic equipment.

e. Reviewing proposed purchases of telephone and electronic equipment by other Cost Center Managers to ensure compliance with Bureau policies.

f. Submitting any B&F project or Major Work Order to the Regional Facilities Administrator with electronic or communications equipment costs of \$8,000 or more, and ensuring that the equipment purchase is approved before obligating funds and/or proceeding with work.

g. Coordinating research and development of all new systems and equipment through the Regional Facilities Administrator as required by this Chapter.

#### TELEPHONE SYSTEMS AND EQUIPMENT

A. General: This section pertains to BOP responsibilities concerning all telephone systems, equipment, and services including:

1. Telephone Private Branch Exchanges (PBX)
2. Telephone Instruments
3. Cable, Wire and Fiber
4. Fiber Optic Circuits
5. Ancillary Equipment
6. Local Trunks
7. Federal Telecommunications System (FTS2000)
8. Long Distance Commercial Services
9. Alarm Monitoring Systems (AMS or TIS) Equipment
10. Telephone Surveillance Equipment
11. Other applications of telephone equipment or services

B. FTS 2000 Telephone Service: The following list outlines the procedures and time frames for ordering, maintaining, and canceling FTS 2000 telephone service at a FBOP location.

1. To request new or additional FTS 2000 service, the Institution must submit a memorandum to the Regional Facilities Administrator stating:

- C The reason for the new/additional trunks;
- C How many trunks will be required;
- C How the trunks will be terminated (DS1 card or T1/DS1 channel bank);
- C Location of trunks termination (i.e. building, room, etc.);
- C The model of PBX to carry the traffic;
- C If Direct-in-out-Dialing (DIOD) is required;
- C Any special signaling arrangements;
- C Local point of contact (Electronics Technician) and telephone number; and
- C Approximate date service can be accepted.

2. The FTS 2000 contract provides for 98 days to process the Telecommunications Service Request. This includes processing the request for service from the BOP to DOJ through GSA and finally to US Sprint.

3. When an institution is considering purchasing a PBX or moving the existing PBX or T1/DS1 services inside of the institution, the Facility Manager shall contact the Regional Telecommunications Specialist to ensure that FTS 2000 services can be scheduled to accommodate the institution time frames with a minimal disruption of service. A request for service must be placed with the region at least 120 days prior to when the service is required.

C. Regulatory Considerations: 47 CFR Part 68, FCC regulations, establishes rules and regulations for the installation, maintenance, and repair of all telephone equipment.

1. Requirements. All BOP facilities are required to:

a. Advise the local telephone company of any equipment directly connected or scheduled for direct connection to their lines and provide them with any required information;

b. Provide protective couplers on any telephone equipment not registered with the FCC as fully protected or grand fathered, before connecting it to lines the local telephone company provided;

c. Ensure that maintenance and repairs on any telephone equipment directly connected to local telephone company lines and registered with the FCC as fully protected or grand fathered, are

performed exclusively by personnel who have a Letter of Agency Relationship with the equipment manufacturer.

2. Telephone Emergency Notification System. The "222" and the NO-Dial emergency notification systems, used for fire reporting, medical emergencies, officer assistance, etc., shall be installed as part of all Bureau PBX telephone systems.

The Chief Executive Officer shall determine the location and the number "222" red phones.

All telephones within the institution, regardless of the security level, shall have primary line pickup capability. Multi-line phones without this capability shall be removed and/or not installed.

a. If an institution has telephones that do not have this capability, they shall establish a Plan of Action (POA) to meet this requirement. The POA shall be submitted to the Regional Facilities Administrator for review and approval.

3. Maintenance. Telephone systems consisting of the main switching equipment, protection blocks, cable out plant, station wire, instruments, and/or ancillary equipment shall be maintained in an operable condition that:

- a. Provides conversation paths that are free of crosstalk;
- b. Provides connections that are free of static and other interference;
- c. Is reliable in all types of operations;
- d. Provides adequate incoming and outgoing telephone traffic;
- e. Provides installations of equipment and cabling in accordance with industry standards for color coding, labeling, termination, cable records, etc.

#### RADIO COMMUNICATION SYSTEMS AND EQUIPMENT

A. General: This section pertains to all radio communication systems and equipment in use throughout the Bureau, including:

1. Two-Way Voice Communications;
2. Radio Pagers with or without one-way voice transmission;
3. Officers' Assistance Alarms;
4. Cellular Telephones;
5. Two-way Voice Systems installed on buses;

6. Microwave transmission equipment (perimeter alarm systems, communications links, etc.); and

7. Any other application requiring the use of radio frequencies.

B. Regulatory Considerations: The Bureau operates radio equipment under the authority of the National Telecommunications and Information Administration (NTIA).

The Administrator of NTIA functions with the aid of the Interdepartmental Radio Advisory Committee (IRAC) and the Frequency Management Advisory Council (FMAC).

C. Radio Frequency Management: The NTIA prescribes policies, standards, and procedures for Federal radio frequency management. (Manual of Regulations and Procedures for Federal Radio Frequency Management).

D. Radio Frequency Assignments

1. All Bureau locations shall use radio frequency assignments only as authorized by the NTIA. The authority granted by a radio frequency assignment is:

a. Limited to the particulars of the assignment e.g., geographic area, frequency, and type of emission;

b. Non-transferable to any other individual, government agency, or non-government entity without NTIA approval.

2. Bureau locations shall not operate any radio communications system or equipment until the NTIA authorizes a radio frequency assignment.

3. Institutions and all other BOP locations shall not obligate funds for developing or procuring such systems and equipment without having certification of the appropriate frequency assignment.

E. Procedures for Requesting Radio Frequency Assignments

1. Radio Frequency Assignments are required for all electronic devices that transmit RF (with the exception of devices that fall under 47 CFR Part 90), such as hand held radios, base stations, microwave units (perimeter alarm), communications links, etc.

a. Radio Frequency Assignments must be updated when the authorized usage of a frequency or radio system is modified, such as a change in:

C Equipment Type (Base, Handhelds, etc.)

C Transmit Power

C Antenna (location, height, pattern, type)

C Use of a frequency (i.e., Sort to Body Alarm)

2. To request a new or additional radio frequency assignment, the institution must submit a request (see TRM 022.01, 9.1, Request for Frequency Authorization, Facilities Operations Technical Reference Manual), to the Regional Facilities Administrator.

a. Trunked frequencies shall be requested using TRM 022.01, 9.1, Request for Frequency Authorization, Facilities Operations Technical Reference Manual.

b. Requests for shared frequencies with other government agencies shall require a Memorandum of Interagency Agreement from the non-BOP government agency, granting approval to use their frequencies, along with a list of the frequencies.

3. The Radio Frequency Request is then reviewed and forwarded to the Chief, Facilities Operations. The request is then forwarded to the appropriate IRAC subcommittee.

4. The time frame for additional or shared frequencies is approximately 60 days after submission to IRAC; new trunked frequencies require approximately 120 days after submission to IRAC.

F. Central Office Responsibilities (Radio Communications): The Chief, Facilities Operations:

1. Serves as a point of contact for the DOJ IRAC representative;

2. Responds to requests from the DOJ IRAC representative for radio communications and/or radio frequency management information;

3. Submits requests to the DOJ IRAC representative to use or amend utilization of the radio frequency spectrum; and

4. Compiles the current radio inventory information received from the Regional Facilities Administrators at the end of each fiscal year and submits a report to the Computer Technology and Telecommunications Staff, Justice Management Division.

G. Regional Responsibilities (Radio Communications): The Regional Facilities Administrator is responsible for issues pertaining to radio communications at all institutions within his/her respective region as well as the Regional Office. This includes responsibilities described throughout this Chapter, including:

1. Reviewing requests and approving SA numbers for any system, device, or service transmitting and/or receiving radio signals;

2. Providing radio communications and/or radio frequency management information to the Chief, Facilities Operations for preparing responses to requests from the DOJ IRAC representative;

3. Coordinating local interagency agreements for shared radio frequency assignments;

4. Informing the Chief, Facilities Operations of new and/or additional frequency requests to use or amend use of the radio frequency spectrum;

5. Keeping radio communication systems or equipment out of operation until NTIA has approved frequency assignments;

6. Ensuring that radio equipment is accountable in accordance with Federal Property Management Regulations (FPMR).

H. Institution Responsibilities (Radio Communications): For issues pertaining to radio communications at an institution, the Facility Manager is responsible for those activities described throughout this Chapter, as well as:

1. Responding to requests for radio communications and/or radio frequency management information from the Regional Facilities Administrator;

2. Verifying that the institution has received SA numbers for procuring any system, device, or service transmitting and/or receiving radio signals;

3. Coordinating local interagency agreements for shared radio frequency assignments;

4. Informing the Regional Facilities Administrator of the need to request additional radio frequency assignment(s) (see TRM 022.01, 9.1, Request for Frequency Authorization, Facilities Operations Technical Reference Manual);

5. Keeping radio communication systems or equipment out of operation until NTIA has approved frequency assignments;

6. Ensuring that radio equipment is accountable in accordance with Federal Property Management Regulations (FPMR).

#### I. Maintenance

1. Frequency verifications of all approved frequencies shall be accomplished every three years by an authorized factory technician or a BOP electronic technician specifically trained for BOP radio equipment on site. The documentation of frequency verification shall include: type of test, test results, radio equipment model and serial number, and any other pertinent data.

Older radio equipment (handhelds, body alarms, body alarm receivers, etc.) using frequency crystals (non-synthesized equipment) shall be required to have an annual frequency

verification.

2. In addition, each institution shall have a battery maintenance program that ensures effective operation of radio equipment.

#### PERIMETER INTRUSION DETECTION SYSTEMS

A. General: This section pertains to all types of perimeter intrusion detection systems used throughout the Bureau.

B. Guideline Specifications: Guidelines for installation of Electronic Perimeter Security Fence Alarms and Detection Systems are in the Facilities Development TRM. \*

#### C. System Performance and Planning

1. The performance capability of any perimeter intrusion detection system is determined by comparing its Probability of Detection (POD) to its Nuisance Alarm Rate (NAR).

a. POD is the percentage of probability that the system will detect a person attempting to penetrate the system security. It is determined, after controlled testing, by dividing the number of alarms by the number of attempts. For example: 97 alarms/100 attempts = 97 percent POD. The recommended minimum POD is 95 percent.

b. NAR is the average number of alarms, per zone per month, that are caused by anything other than a person attempting to penetrate the system security or alarms attributed to system testing. The recommended maximum NAR is 10 alarms per zone per month.

c. In the Monthly Report Database, Perimeter Detection System Report (Security.Fol), the term "Reportable Alarms" is used as a Bureau measure of the system's effectiveness. The Reportable Alarms consist of any alarm that is not attributed to testing, maintenance, or equipment malfunction.

2. All perimeter intrusion detection systems, regardless of type or manufacturer, perform according to the surrounding conditions. Most systems throughout the Bureau have adjustments that control the sensitivity of the POD and NAR, to compensate for conditions that are adversely affecting performance. Balancing the POD and NAR at acceptable levels is essential.

D. Testing: If an institution has a perimeter intrusion detection system, the Facility Manager shall develop a schedule of tasks in the CMMS program to schedule controlled testing and maintenance of the system. Completed work orders, tests results, time, date of tests, etc. shall be controlled according to Chapter 16, Sensitive Information. The controlled testing shall verify the system sensitivity to climb and cut attempts. All

controlled testing shall be coordinated with the Chief Correctional Supervisor and performed according to the equipment manufacturer's recommendations.

The Electronics Technician shall conduct controlled testing at least monthly. The Facility Manager shall maintain a written record of the test, by zone, for one year. (If required test data is written on completed PM hard copy, this form will provide necessary documentation, and shall be considered a Sensitive Document).

E. Reports

1. The Facility Manager shall complete a Perimeter Detection System Report, as a part of the Monthly Facilities Operations Report, for each type of perimeter alarm system installed at an institution. The report must be submitted in the approved database format and contain information from the previous month. The database reporting format will be issued annually as an Operations Memorandum.

a. This report consists of sensitive information and shall be controlled accordance with PS 1237.09, Computer Security, or latest edition.

b. Reportable alarm information is available from the printed record generated by the alarm annunciation system or from the historical archives computer. This data shall be retained for 60 days.

2. The Facility Manager shall include comments from the Chief Correctional Supervisor before forwarding the report, as a part of the monthly Facilities Operations Report, to the Regional Facilities Administrator.

3. The Regional Facilities Administrator or his/her designee shall review the monthly report. Guidance shall be given to the institution if a report indicates that a system is not performing according to established guidelines.

FIRE ALARM SYSTEMS AND EQUIPMENT

A. General: This section pertains to regulatory considerations, system administration, and maintenance of fire alarm systems and equipment.

B. Regulatory Considerations: The design, installation, testing, and operation of fire alarm systems and equipment shall comply with all current NFPA, ACA, and JCAHO standards and Bureau directives.

C. System Administration and Maintenance

1. Each Facility Manager, with the Safety and Environmental Health Manager's advice and support, is responsible for planning related to fire alarm systems, including the responsibilities as

outlined in the Introduction Section of this chapter, as well as:

a. Developing a testing schedule in compliance with all NFPA, ACA, and JCAHO standards and Bureau directives;

b. Ensuring that maintenance, repairs, and testing are in accordance with the equipment manufacturer's and NFPA recommendations; and

c. Implementing a schedule of tasks in the CMMS database program to complete inspections, tests and preventive maintenance as identified in this section of the Manual. Completion dates and inspection/test/PM's shall be documented in the CMMS database program.

#### GROUNDING, SURGE PROTECTION AND LIGHTNING PROTECTION SYSTEMS

A. General: This section pertains to the specialized Grounding, Surge Protection and/or Lightning Protection Systems that are required to:

1. minimize failures in microprocessor-based Telecommunications Systems and Electronic Equipment from lightning storms.

2. minimize failures in other electrical equipment, appliances and lighting from lightning storms.

3. reduce the likelihood of power anomalies of all kinds which may adversely affect the operation of microprocessor-based Telecommunications Systems and Electronic Equipment.

4. reduce the likelihood of any other environmental problems which may adversely affect the operation of microprocessor-based Telecommunications Systems and Electronic Equipment.

B. Regulatory Consideration: Grounding, Surge Protection and/or Lightning Protection Systems for microprocessor-based Telecommunications Systems and Electronic Equipment shall be installed in accordance with the:

1. latest edition of NFPA 780 - Standard for the Installation of Lightning Protection Systems.

2. latest edition of NFPA 70 - National Electrical Code

3. Federal Information Processing Standards Publication 94 (FIPS PUB 94) "Guideline on Electrical Power for ADP Installations"

4. manufacturer's recommended installation practices

C. Requirements: Grounding, surge protection and lightning protection systems shall be installed on Electrical distribution

systems to protect micro-processor based Telecommunications  
Systems and Electronics Equipment from damage due to induced

lightning, switching devices on AC power lines and voltage transients generated within the facility . The Facility Manager shall insure that these systems are adequately installed and adhere to FBOP policies, regulatory and/or manufacturer's requirements for microprocessor-based Telecommunications Systems and Electronic Equipment.

D. Grounding Requirements: To ensure that the electrical distribution systems is adequately grounded for microprocessor-based Telecommunications Systems and Electronic Equipment, the following requirements shall apply:

1. The earthing impedance shall be five (5) ohms or less.
2. All Telecommunications Systems and Electronic Equipment shall have "dedicated, isolated, insulated grounding conductors" as required in NFPA 70 exception No.4 in section 250-74, the exception in section 250-75 and the exception in section 384-20.
3. A Ground Reference Grid shall be installed under any raised floor such as the central equipment room, control center or any other room designed for a significant amount of micro-processor based Telecommunications Systems and Electronic Equipment.

E. Surge Protection Devices (SPDs): All service entrance panels providing AC power to Division 17 equipment and uninterruptible power systems shall be equipped with surge protection devices on the load side of the main disconnect in accordance with the following specifications.

1. All surge protection devices shall be listed to U.L. 1449, for safety and fire protection, .
2. All surge protection devices shall have the lowest surge voltage rating per U.L. 1449 that is consistent with the nominal line voltage. For example, 120 VAC nominal line voltage would require a 300 volt peak surge voltage rating.
3. All surge protection devices shall be connected with the shortest leads possible.
4. Protection modes shall be only phase-to-phase or phase-to-neutral suppression. Phase-to-ground or neutral-to-ground suppression shall not be used.
5. For extended life and long term reliability, only silicon avalanche technology shall be used. Gas tubes and MOV's shall not be used.
6. The suppression dissipation capability of the Surge Protection Device shall be determined by the characteristics and functions of the service entrance panel.

MISCELLANEOUS ALARMS, SYSTEMS, AND EQUIPMENT

A. General: This section pertains to miscellaneous alarm systems and equipment that operate on telecommunication and/or electronic principles, including:

1. Motion Detection Alarms
2. Window Alarms
3. Mechanical Door Interlocks
4. Door and Access Hatch Alarms
5. Door/Gate Controls and Associated Alarms
6. Closed Circuit Television (CCTV)
7. Intercom, Paging, and Nurse Call Systems
8. Remote Control Devices
9. Metal Detectors
10. Detector Type X-Ray
11. Control Center/Command Center Electronics
12. Electronic Equipment for Special Operations (video cameras, throw phones, etc.)
13. Fiber Optic Multiplex Systems
14. Biometric Devices
15. Programmable Logic Controllers
16. Alarm Monitoring System (AMS or TIS)
17. Freezer Alarms
18. Power House Alarms

B. Regulatory Considerations: If any of the equipment in this section is connected to telephone equipment or uses radio communications, the regulations in the appropriate sections of this Chapter apply.

C. System Administration: The Facility Manager at each institution, with the Chief Correctional Supervisor's advice and support, is responsible for planning related to the miscellaneous alarms, systems, and equipment, as described in this Chapter, and

for establishing effective testing procedures and schedules.

D. Maintenance and Inspection: Motion detection alarms, window alarms, mechanical door interlocks, door and access hatch alarms, metal detectors, and detector type x-ray equipment shall be:

1. Tested regularly by the Electronics Technician and a Correctional Services representative; and

2. Inspected and maintained according to the manufacturer's specifications. A schedule of tasks shall be developed for all appropriate equipment in the CMMS database program to accomplish work identified above. Completion dates and task accomplishments shall be documented in the CMMS database.

All other systems will be inspected and maintained according to the manufacturer's specifications. A schedule of tasks shall be developed in the CMMS database program to accomplish required work. Completion dates and task accomplishments shall be documented in the CMMS database.

E. Disposal: Batteries and other hazardous substances shall be disposed of according to manufacturer's recommendations, the Occupational Safety and Environmental Health Manual, and local directives.

#### RECORDS, INMATE LABOR, AND STANDARDS

A. General: This section pertains to record-keeping, using inmate labor, and the standards of installation and maintenance workmanship for telecommunications systems and electronic equipment.

#### B. Records

1. Records pertaining to telecommunications systems and electronic equipment shall contain all of the information necessary to meet the responsibilities described in this Chapter. At a minimum, they should consist of:

- a. Equipment schematics, including modifications;
- b. Cable out plant records and system wiring;
- c. Operation, maintenance and performance records, when appropriate, and associated costs.

2. The Facility Manager shall ensure that required records are current, kept in a secure place, and available for the Regional Facilities Administrator's review.

C. Inmate Labor

1. The use of inmate labor on some telecommunications systems or electronic equipment may compromise an institution's security. Therefore, the Facility Manager shall develop an Institution Supplement to establish the maximum extent that inmate labor may be used on any operating system.

2. Inmate labor, as approved by the Institution Supplement, may be used to perform repairs on components removed from a system, such as:

- # Telephone instruments
- # Power supplies
- # Television monitors and cameras
- # Other equipment listed in the supplement

D. Standards for Installation and Maintenance

1. The Facility Manager shall ensure that all installation, modification, maintenance, and repair work on telecommunications systems and electronic equipment complies with specifications and requirements of the manufacturer, industry standards, and/or applicable Federal regulations.

2. General guidelines for completed work and shop management that project an image of professional workmanship are:

- a. Cables are neatly butted and formed. If shielded, shields are grounded as necessary.
- b. Jumper and hook-up wire is properly slacked, formed, and neatly dressed.
- c. Applicable standard color codes are used (NFPA, NEC, EIA/TIA, etc.).
- d. Equipment and terminal cabinets are adequately sized and properly installed with covers.
- e. Terminal blocks and backboards are properly installed with wiring neatly formed and dressed.
- f. All required equipment grounds are installed.
- g. Equipment rooms are clean, properly painted, free of clutter, and environmentally controlled.

h. All records, prints, and directories are properly maintained and secured.

i. All storage batteries are checked monthly and their maintenance records properly maintained.

j. All station equipment, such as telephones, intercom units etc., are neatly installed and properly maintained.

3. All electronic and communications system wiring shall be installed in conduit, metallic raceway, or under floor raceways for physical protection of the wiring. Open raceways may be used in secure electronic equipment rooms. All wiring installations shall meet or exceed the current National Electrical Code (NEC 70).

#### TECHNOLOGY EVALUATION AND APPLICATION

A. General: Technology within the telecommunications and electronic industries has provided a wide variety of systems and equipment for communications, security, entertainment, and other operational purposes. Since the application of evolving technology is impacted by technical, operational, financial, and legal issues, the Chief, Facilities Operations and the Office of Security Technology shall ensure that the BOP is continually reviewing and evaluating:

1. Existing systems and equipment;
2. Procedures for the installation, operation, and maintenance of existing systems and equipment;
3. Equipment and other materials for installation on/in existing systems or equipment; and
4. Vendors of equipment, repair parts, replacement items, or other materials for existing systems or equipment.

B. Responsibilities: The Chief, Facilities Operations shall review and evaluate individual ideas, suggestions, or recommendations related to policy or procurement, installation, operation, maintenance, and repairs of telecommunication systems and electronic equipment. If the ideas, suggestions, or recommendations involve new technology, it will be forwarded to the Office of Security Technology for evaluation.

C. Evaluation: To ensure consistency in technological changes throughout the Bureau and to avoid duplication of efforts, institutions shall submit to the Regional Facilities Administrator any ideas, suggestions and recommendations related to policy, procurement, installation, operation, maintenance, and repair of telecommunications systems and electronic equipment or

proposals for new equipment or systems that are not presently being used.

The Regional Facilities Administrator shall review the proposals submitted from each institution:

1. If a proposal is worthy of further consideration, it shall be presented at the next Monthly Telecommunications Specialists Teleconference.

2. If the proposal is found to have merit at the teleconference, it will then be submitted to the Chief, Facilities Operations, who shall either:

(a) Distribute the appropriate information throughout the Bureau or;

(b) Coordinate a research and development project with the Office of Security Technology.

#### INSPECTIONS

A. Each institution Facility Manager shall be responsible for scheduling and conducting the institution's Electronics and Communications Inspection. The inspection shall be completed annually (see TRM 022.01, 9.2, Electronic Communications Systems Inspections, Facilities Operations Technical Reference Manual). The Facility Manager shall ensure that all electronic equipment and telecommunications systems have lightning protection, surge protection, and transient protection. This protection shall be in the form of Silicon-Avalanche technology. See Chapter 12, for information on lightning protection and grounding.

1. The Facility Manager may assign staff members to perform specific portions of the inspection; however, he or she is responsible for the final result. Staff most qualified to inspect each specific area shall be assigned.

a. Narrative comments, either affirmative or negative, should be made for each item on the Electronics and Communications Inspection form (see TRM 022.01, 9.2, Electronic/Communications Systems Inspections, Facilities Operations Technical Reference Manual).

b. If conditions in a given area warrant lengthy recommendations, these recommendations shall accompany the inspection report, referring to the outline by page and item number and identifying problem areas by specific location.

2. Reports shall identify what corrections have been accomplished to date as well as the anticipated completion dates of any uncompleted corrections. All discrepancies identified during the annual electronics and communications inspection shall be corrected and documented in the inspection file with the appropriate Minor Work Request or Major Work Order identification

number (see TRM 022.01, 2.5, Plan of Action, Facilities Operations Technical Reference Manual). If the repair work requires B&F funding, documentation must be provided to ensure inclusion in the institution B&F Program.

B. It should be understood that the guidelines cannot include all conditions peculiar to each institution. Any additional information pertinent to a thorough report shall be included in narrative form.

C. The Institution Work Programming Committee must review and approve the Inspection Report and Plan of Action for identified discrepancies.

1. A copy of the inspection report and approved Plan of Action for discrepancies shall be forwarded to the Regional Facilities Administrator.

2. The Facility Manager shall maintain a copy of the inspection report and corrective actions for two years.

## CHAPTER 10

### AUTOMOTIVE ACQUISITION, MAINTENANCE, AND OPERATIONS

#### GENERAL PROCEDURES

A. To obtain maximum use, safety, and economy of operations, it is essential to follow an organized plan for maintenance, repair, and operation of all BOP automotive equipment.

B. Institutions shall follow the operating and preventive maintenance procedures described herein for all BOP-owned automotive equipment including: tractors, heavy equipment, etc., as well as for GSA fleet vehicles, whether serviced or maintained at a central garage or another location.

#### RESPONSIBILITY

A. Central Office: The BOP Vehicle Fleet Coordinator, located in the Facilities Management Branch, Central Office, provides overall direction for fleet operations throughout the Bureau. These responsibilities include:

1. Development of annual budget submissions;
2. Monitoring of vehicle acquisitions and disposal;
3. Monitoring bus maintenance activities at the BOP's Bus Maintenance Facility located at USP Terre Haute.

B. Regional Office: The Regional Facilities Administrators are responsible for the overall direction of fleet operations at all institutions, Regional Offices, Community Corrections Offices, and Training Centers within a particular region. These responsibilities include:

1. Obtaining required report data (Annual Fleet Tag Reports, Monthly Reports, etc.) and forwarding accurate information to the Central Office;
2. Monitoring vehicle acquisitions and disposal.

C. Institution: The Facility Manager is responsible for the management, maintenance, repair, and operation of the institution vehicle fleet and heavy equipment. This includes maintenance and repair support for UNICOR vehicles and other institution motorized equipment.

#### VEHICLE ACQUISITION

A. To control the quantity and quality of the BOP vehicle fleet, each facility (including Regional Offices, Training Centers,

activation sites, etc.) shall request approval for any vehicle acquisition, including surplus and leased vehicles. This

requirement also extends to heavy equipment and special purpose equipment (such as bulldozers, cranes, tractors over 20 horse power, forklifts, combustible fueled carts, etc.). Acquisition requests for surplus vehicles and equipment must identify source location. (See TRM 022.01, 10.1, Vehicle Acquisition Request Form, Facilities Operations Technical Reference Manual).

B. Vehicle Acquisition Requests shall be prepared by the Facility Manager or his/her designee, approved by the Warden, and forwarded to the Fleet Coordinator in the Central Office. A copy of the request shall be forwarded to the Regional Facilities Administrator.

1. The acquisition of UNICOR vehicles shall be reviewed and approved by the Facility Manager and forwarded by UNICOR to the Central Office Financial Management Division. The UNICOR Central Office Financial Management Division shall forward the vehicle acquisition request to the Central Office Vehicle Fleet Coordinator in the Administration Division, Facilities Management Branch. Approved/disapproved vehicle requests shall be returned to the Facility Manager, with copies to appropriate UNICOR locations.

2. Marketing Centers or other UNICOR locations not directly associated with an institution are to provide their data and receive tags from the closest institution's Facilities office. Vehicle management for these locations shall be the same as for vehicles owned or leased by UNICOR at the tag issuing institution.

C. If the request is approved, the Fleet Coordinator shall assign a Fleet Authorization Number and return the original request to the submitting CEO (if the request is for a UNICOR vehicle, return to UNICOR Central Office Financial Management Branch), with a copy forwarded to the appropriate Regional Facilities Administrator. This number shall appear on all acquisition documents. The approved Vehicle Acquisition Request must be maintained on file for the life of the vehicle. Should the requested acquisition not occur or the type of vehicle change, the Fleet Coordinator must be notified.

1. The acquisition and use of Class 3 and 4 sedans and station wagons is limited to law enforcement use only, reference 41 CFR 101-38.1 and JPMR 128-38.5100.

2. The vehicle fleet color is white. It is important that this color be specified on all procurement documents.

D. When a vehicle acquisition arrives at an institution, regional office, training center, etc., a vehicle tag record (include only the single vehicle record, not the entire tag report) must be forwarded to the Fleet Coordinator as a part of

the Monthly Facilities Operations Report. The Monthly Facilities Operations Report shall also be used to identify fleet additions, deletions, or tag assignment changes.

UNICOR is to promptly notify the Facility Manager of fleet changes affecting tags, vehicle identification, acquisitions, and disposal.

VEHICLE DISPATCHING. Cost effective procedures shall be established for controlling and scheduling vehicle usage to avoid driving unsafe vehicles as well as limiting unnecessary trips.

A. All vehicles shall be dispatched from the garage/motor pool by the garage foreman during normal duty hours.

1. During non-duty hours, an alternate person shall be designated dispatch officer. This person is normally the control center officer, with issuing authority by the on-duty operations lieutenant.

2. Exceptions to this shall be justified to the Chief Executive Officer.

3. During non-duty hours, the dispatcher shall also maintain a Motor Vehicle Daily Dispatch Record (see TRM 022.01, 10.2, Motor Vehicle Daily Dispatch Record, Facilities Operations Technical Reference Manual), which is forwarded to the garage foreman at the end of each dispatcher's shift. The garage foreman uses this record for compiling monthly and quarterly reports.

B. Other than normal transportation requirements (road trips, etc.), requests for vehicles shall be submitted in memorandum format to the Facility Manager. Requests shall be submitted as far in advance of contemplated use as possible, indicating the purpose, destination, type of vehicle required, and date and time of trip. Requests shall be maintained for one year by the garage foreman.

#### VEHICLE MAINTENANCE AND REPAIR

A. An adequate preventive maintenance program for vehicle operation shall be developed. The following guidelines will ensure continued efficient operation of all automotive equipment.

All institutions shall establish vehicle inspection and maintenance schedules and procedures in the CMMS program.

1. Inspection and maintenance practices shall be based on, but not limited to, manufacturers' recommended standards of inspection, lubrication, and maintenance. Special attention shall be given to all safety equipment.

2. Oil and filter changes shall be scheduled for 3,000 miles or 6 months, whichever comes first unless it conflicts with manufacturers' recommendations. "Severe Use" vehicles (i.e. perimeter patrol, fire trucks, etc.) shall have scheduled

maintenance requirements as identified in the manufacturer's instructions manual.

3. Standard practice handbooks, charts, and shop manuals shall be obtained from the manufacturer for each vehicle in operation for reference.

B. Asbestos Brakes: The majority of 1993 and later model vehicles will have factory installed non-asbestos brakes; however, asbestos brakes may appear on a few models. When repairs become necessary:

1. Follow the prescribed precautions in the current edition of the Occupational Safety and Environmental Health Manual.

2. Vehicles with asbestos brakes or clutch pads shall have the repair and replacement of these items completed by a qualified commercial vendor.

#### VEHICLE RECORDS AND LOGS

A. Vehicle Maintenance and Repair: The Facilities department's CMMS program shall be used to track all maintenance and repair work for each vehicle, including prisoner movement buses, where applicable.

1. Any repairs to vehicles other than BOP buses estimated in excess of \$3,000 shall be presented to the Work Programming Committee for approval as a Major Work Order before the work is performed. (See provisions contained in this Chapter for regulations applying to buses.)

3. Regional offices shall develop local controls and procedures to ensure all vehicle costs related to fuel, maintenance and labor are recorded.

4. Facility Managers at new institutions shall obtain copies of approved vehicle acquisitions (see TRM 022.01, 10.1, Vehicle Acquisition Request Form, Facilities Operations Technical Reference Manual) from their Regional Activation Coordinator and report the arrival of activation vehicles to the Fleet Coordinator via the Facilities Operations Monthly Report.

5. The National Bus Center Manager is responsible for maintaining vehicle cost records related to fuel, maintenance and labor for assigned vehicles and inmate transportation buses nationwide.

6. The Chief, Design and Construction Branch, Central Office, is responsible for ensuring that maintenance and operating costs are maintained on BOP owned and leased vehicles at new construction sites.

The reporting of maintenance and operating costs shall be accomplished in accordance with provisions contained in this

chapter.

B. Mileage, Gas, and Oil Records: The garage foreman shall maintain a record of mileage as well as fuel and oil usage on all vehicles the BOP leases or owns.

1. One copy of this record (see TRM 022.01, 10.3, Motor Vehicle Mileage, Fuel, and Oil Usage, Facilities Operations Technical Reference Manual) shall be forwarded to the Facility Manager by the fifth day of each month for the previous month. The original shall stay on file in the garage for one year.

2. This data shall be entered into the CMMS system and charged to the appropriate MWI number.

#### VEHICLE SPEED AND LOAD LIMITS

A. All vehicles shall have stickers affixed to the dash in clear view of the operator denoting institution and highway speed limits.

B. All cargo carrying vehicles shall have stickers affixed to the dash denoting normal weight limitations as well as the words: "CAUTION - Before starting on road trips, CHECK APPLICABLE LOAD LIMITS FOR EACH STATE."

For interstate travel of cargo carrying vehicles, load limits for the states involved shall be provided by the garage foreman.

C. It is the operator's responsibility to conform to all speed and weight limits. The Government assumes no responsibility for violations in these areas.

#### VEHICLE INVENTORY AND TAGS

A. Vehicle Tags: Each DOJ reportable motor vehicle operated by the BOP, including UNICOR, shall properly display assigned DOJ license plates (J-XXX) on both front and rear. The BOP Central Office Fleet Coordinator shall assign all "J" series plates for BOP vehicles.

1. GSA leased vehicles shall display GSA series tags.

2. BOP prisoner transportation buses shall display tags assigned from the National Bus Center.

3. Vehicles used primarily for law enforcement purposes, such as undercover pursuit and undercover inmate transportation, are eligible to use state tags. Before obtaining state tags, a written request must be submitted to the Central Office Fleet Coordinator for review and approval.

The request for state tags must meet the guidelines contained in 41 CFR, Subpart 101.38-2 and Justice Property Management

Regulation (JPMR) 128-38.51. State tags are not transferrable.

4. The Facility Manager is responsible for maintaining accountability and security of unassigned tags.

5. The Central Office Fleet Coordinator shall maintain a centralized listing of all tag assignments.

B. Tag Procurement: The Facility Manager shall order the license tags from the Superintendent of Industries, District of Columbia, Industrial Services, P.O. Box 730, Lorton, Virginia 22199. (Telephone 703-643-2087; FAX 703-643-0219.)

C. Lost or Stolen Tags: Lost or stolen vehicle tags must be reported promptly by telephone to the BOP Fleet Coordinator during routine working hours. A memorandum shall follow, indicating pertinent facts about the missing tag. A lost or stolen tag number shall not be reused without the authorization of the Fleet Coordinator.

D. Annual Vehicle Tag and Inventory Report

1. The Facility Manager shall forward the annual Vehicle Tag and Inventory Report to the Regional Office by October 1 for the preceding fiscal year.

a. The information required for this report will vary as Central Office and DOJ requirements change. Instructions and a database format will be issued annually, as an Operations Memorandum, to assist in the completion of the report.

b. All driven combustible fueled vehicles greater than 20 horsepower that the BOP or UNICOR owns or leases, shall be included in the Vehicle Tag and Inventory Report.

2. Regions shall review and forward a consolidated vehicle report in the same format as above by November 1 for the preceding fiscal year to the BOP Fleet Coordinator, Central Office. The consolidated regional reports shall incorporate vehicle and equipment data from all institutions, Regional Office, Community Correction Offices and Training Centers.

3. Site Project Managers at new institution construction sites shall forward an annual Vehicle Tag and Inventory report to the Chief, Design and Construction, by October 1 for the preceding fiscal year. The Chief, Design and Construction, shall review and forward a consolidated report by November 1 for the preceding fiscal year to the Fleet Coordinator, Central Office.

E. Vehicle and Equipment Replacements

1. Vehicles and equipment identified for replacement with Central Office funds shall be developed from information contained in the annual Vehicle Tag and Inventory Report. GSA guidelines shall provide the primary replacement criteria.

2. The Vehicle Review Committee shall review future year vehicle budget submissions and establish current year vehicle/equipment replacement priorities consistent with available funding.

a. The Vehicle Review Committee shall consist of the Chief, Facilities Operation (who shall serve as Chairperson), Vehicle Fleet Coordinator, and two other randomly selected Central Office staff.

b. The Committee meeting shall be held during the first month of the second quarter of each Fiscal Year. Meeting minutes and supporting documentation shall be maintained on file by the Vehicle Fleet Coordinator.

c. The meeting agenda shall address the following specific issues:

- C Perimeter patrol vehicles
- C Prisoner transportation vehicles
- C BOP buses
- C Pursuit vehicles
- C All other vehicles (sedans, trucks, etc.)
- C Equipment

#### DRIVER TRAINING AND DRIVER PERMITS

A. Inmates: Before allowing inmates to operate automobiles, trucks, heavy equipment, forklifts, etc., the garage foreman or designee shall test the inmates' operating capabilities. These tests and certifications must be conducted in accord with Chapter 1 of the Occupational Safety and Environmental Health Manual.

Inmates receiving certifications shall have any limitations noted on the Inmate Driver's Permit (see TRM 022.01, 10.4, Inmate Driver's Permit, Facilities Operations Technical Reference Manual).

B. Training: Facilities shall establish adequate training courses to provide instructions for all institutional vehicles, heavy equipment, and special equipment.

#### ACCIDENT REPORTS

A. All accidents shall be reported promptly to the institution Safety Manager in accordance with the Occupational Safety and Environmental Health Manual. Accident reports must include the

vehicle tag and FPS number. An adequate supply of the following accident forms shall be maintained in vehicles at all times by the institution Safety Manager:

1. Standard Form 91, Operator's Report of Motor Vehicle Accident;
2. Standard Form 91A, Investigator's Report of Motor Vehicle Accident;
3. Standard Form 94, Statement of Witness;
4. Standard Form 95, Claim for Damage, Injury or Death;
5. Optional Form 26, Data Bearing upon Scope of Employment of Operator.

B. All accidents and damage to BOP prisoner transportation buses shall be reported, along with copies of Items one through four above, to the Bus Operations Manager, Terre Haute, and to the Fleet Coordinator, Central Office. The Fleet Coordinator will forward a copy to the Chief, Prisoner Transportation, Central Office.

#### FUEL CONTROL

A. Dispensing Fuel After Hours: Employees operating vehicles which require fuel after normal garage operating hours shall obtain keys to fuel pumps from a responsible person identified by local Institution Supplement. Typically this individual will be the Control Room Officer or Operations Lieutenant. The Institution Supplement for dispensing fuel after hours shall be formulated by the Facility Manager and contain, as a minimum, the following requirements:

1. The person responsible for issuing fuel pump keys shall maintain a log book, recording the following information each time the keys are issued:

- C name of employee issued key,
- C vehicle license number,
- C mileage of vehicle (odometer reading),
- C number of gallons dispensed and type of fuel,
- C gas pump meter readings (beginning and end),
- C time of key issue and,
- C signature of person receiving fuel.

2. The garage foreman shall be responsible for obtaining the data recorded in the log book and transferring this information to garage records (see TRM 022.01, 10.3, Motor Vehicle Mileage,

Fuel and Oil Usage, Facilities Operations Technical Reference Manual).

3. The garage foreman shall read the fuel pump meters at the beginning and end of each working day and record readings in a hard bound log book.

Records shall be maintained for two years.

4. Institutions with computerized controlled Fuel Lock Systems will not be required to maintain a logbook provided the computer system maintains required information.

B. Fuel Cost Accountability: Fuel purchased from Cost Centers 336 or 334 funds for UNICOR vehicles and equipment and BOP Buses shall be charged as follows:

1. Fuel dispensed into UNICOR owned/leased vehicles and equipment shall be reimbursed by UNICOR.

2. BOP bus fuel issued from institution tanks or by credit card, may be reimbursed by Cost Center 873 (Prisoner Transportation) when the travel is scheduled or approved by the Chief of Prisoner Transportation. All other usage is to be absorbed by the institution.

C. Accountability of Fuel Inventories: The garage foreman shall maintain records of fuel received and dispensed on the Stock Record Card, Accounting Form BP-109 (see TRM 022.01, 10.5, Facilities Operations Technical Reference Manual).

1. All fuel deliveries shall be entered on the form when received, and total quantities of fuel dispensed shall be entered at the close of each month.

2. Current balances shall be computed after each entry. Balances shall be verified by measuring the tank quantities with a calibrated stick.

3. Quantities of fuel in all bulk storage tanks shall be measured at least once each quarter with a calibrated stick.

a. The warehouseman shall verify inventories quarterly in accordance with Property Management Manual.

b. The garage foreman shall check the level of bulk storage tanks before and after deliveries to ensure receipt of proper amounts of fuel.

c. A notation shall be made on the accounting form BP-109 the day measurements are taken. Tank quantities should properly reflect a computation of deliveries less issues of fuel.

d. The person verifying the quantities shall sign the accounting form BP-109.

4. At institutions with Automated Fuel Delivery Systems, an individualized fuel accountability program may be developed that ensures proper documentation of fuel usage and stored quantities.

This program must be reviewed and approved by the institution Safety Manager.

5. The installation of new fuel tanks, maintenance of fuel tanks, and accountability of stored fuels must be accomplished in accordance to applicable local, state or federal laws/regulations.

Each institution must determine applicable jurisdictional authority and applicable compliance standards.

D. Monthly Reporting: The garage foreman must submit to the Facility Manager at the close of each month appropriate vehicle and fuel data necessary to complete the Monthly Facilities Operations Report.

BUS MAINTENANCE. The Bus Operations Manager, located at USP Terre Haute, has overall responsibility for the bus maintenance program, with general oversight provided by the Vehicle Fleet Coordinator, Central Office.

A. Information: All information and questions regarding bus maintenance shall be communicated to the local Facility Manager. He/she shall address these issues or concerns before involving the Bus Operations Manager. (This is intended as a guide and should not prevent communication at any level during emergencies.)

B. Expenditures: Institution expenditures in support of the Bus/Prisoner Transportation Program may be obligated to Cost Center 873. The BOP Fleet Coordinator should be contacted for clarifications.

C. Daily Inspection: The bus operator shall perform an inspection of the bus before putting the vehicle into operation, and note any deficiencies on the Daily Bus Safety, Security, and Maintenance Inspection form (see TRM 022.01, 10.6, Facilities Operations Technical Reference Manual).

1. Before bus operation, the garage foreman shall repair any deficiencies noted or, if applicable, certify that the defect is not a safety/security hazard.

If no safety/security hazard exists, repairs can be deferred until the bus returns to its assigned institution.

2. Upon completion of the trip, the bus operator shall complete the inspection form. The original is sent to the

institution garage foreman with a copy forwarded to the Chief  
Correctional Supervisor.

D. Preventive Maintenance/Inspections: Buses assigned to an institution shall be entered into the institution CMMS program as a maintenance worthy item using the tag number as the MWI number. Specific maintenance tasks, inspections and schedules will be issued to the institution by the Bus Operations Manager at USP Terre Haute.

The Facility Manager shall be responsible for generating monthly, quarterly and semi-annual preventive maintenance and inspection work orders as well as:

1. Ensuring that tasks, schedules and estimated staff labor is entered into the CMMS program for each bus;

2. Ensuring that actual staff labor and material costs are being logged against the appropriate MWI number of each bus;

3. Monitoring PMs to ensure that they are being accomplished in a timely manner;

4. Reporting maintenance activities to the Bus Operations Manager on the first day of October, January, April and July. The reporting requirements are contained in a predefined report generated by the CMMS program.

E. Annual Bus Inspection: An annual inspection will be performed on all BOP buses regardless of the miles traveled since the last inspection.

1. This inspection will, at a minimum, consist of the items listed in the Annual Bus Inspection, Chassis and Brakes form (see TRM 022.01, 10.7, Facilities Operations Technical Reference Manual).

2. Inspections are coordinated and scheduled by the Bus Center Manager to be completed at the Terre Haute Bus Maintenance Facility. However, at the Bus Center Manager's discretion, authorization may be granted to accomplish annual inspections at a local authorized garage for some low mileage buses.

3. A schedule for these inspections shall be distributed to those institutions assigned buses, annually.

4. The garage foreman shall accompany the bus to the Bus Maintenance Facility to receive up to 40 hours of specialized bus maintenance training. This shall include the latest updates for the particular bus assigned to that institution. The appropriate travel expenses related to this training and the annual bus maintenance inspection shall be charged to Cost Center 873.

F. Bus Operations and Maintenance Review

1. Buses identified for priority replacement shall be identified through information contained in the vehicle maintenance history and current industry standards.

2. The Bus Operations Review Committee shall review future replacement budgets submissions and establish replacement priorities consistent with available funding levels.

a. The Bus Operations Review Committee shall consist of the Chief, Facilities Operations (who shall serve as Chairperson), Chief of Prisoner Transportation, Vehicle Fleet Coordinator and Bus Operations Manager.

b. The Committee meeting shall be held during the first quarter of each Fiscal Year. Meeting minutes and supporting documentation shall be maintained on file by the Bus Operations Manager.

c. The meeting agenda shall address the following specific issues:

(1) Review condition and maintenance history of each bus (mileage, age, repair cost, overall assessment of condition, projected replacement year, etc.);

(2) Review proposed bus rotation schedule;

(3) Review proposed budget submission for future bus replacements.

G. Bus Modifications: No alterations, modifications, or equipment additions to a BOP prisoner transportation bus shall take place without prior written approval of the Chief, Facilities Operations, Central Office. Facilities Operations shall coordinate requested changes with the Chief of Prisoner Transportation, Chief of Correctional Services, and Bus Operations Manager before approval is granted.

H. Bus Center Quarterly Report: The National Bus Center Manager shall submit a Bus Center Operations Report to the Central Office Fleet Coordinator by the 15th day of the first month of each fiscal quarter. The Fleet Coordinator shall establish the database format.

## CHAPTER 11

### MECHANICAL SYSTEMS AND POWER PLANT OPERATIONS

#### COMPLIANCE

A. The purpose of this Chapter is to provide standards to safeguard life, health, and property by regulating the design, construction, installation, quality of materials, location, operation, maintenance, and use of mechanical systems within the BOP. These include all heating, ventilating, cooling, or refrigeration systems, as well as boilers, incinerators, and other heat-producing appliances.

B. For maximum benefit, this Chapter shall be used in conjunction with the applicable codes listed below. This Chapter is directed toward those persons who operate, maintain, and inspect mechanical systems, boilers (see TRM 022.01, 11.1, Boiler Definitions, Facilities Operations Technical Reference Manual), and unfired pressure vessels, whether directly or in a supervisory capacity.

#### APPLICABLE CODES

A. The latest version of the following codes are applicable in the installation, inspections, and testing of mechanical systems, boilers, and pressure vessels within the BOP. These publications shall be located in the Facility Manager or Chief of Utilities office. When a conflict occurs between this Manual and applicable codes, the most restrictive shall apply.

1. ASME Boiler and Pressure Vessel Codes. Published by the American Society of Mechanical Engineers, New York, New York.

2. National Board Inspection Code. Published by the National Board of Boiler and Pressure Vessel Inspectors, Columbus, Ohio (ANSI/NB-23).

3. ANSI/ASME CSD-1 Controls and Safety Devices for Automatically Fired Boilers. Published by the American Society of Mechanical Engineers, New York, New York.

4. National Fire Code Published by the National Fire Protection Associations (NFPA), Quincy, Massachusetts.

The following publications also apply to mechanical systems, boilers, and pressure vessel systems. It is recommended that copies of the latest version of these publications be maintained at the same location as the above:

1. SMACNA Manuals on HVAC Systems Installation, Air Duct Construction Standards, Balancing and Adjustment of air

Distribution Systems, and Fire Damper Guide. Published by the  
Sheet Metal and Air Conditioning Contractors National  
Association, Inc., Tysons Corner, Vienna, Virginia.

2. EPA Guidelines for Air and Water Quality, National and Local requirements for your location.

3. American Correctional Association Standards. Published by the American Correctional Association, Laurel, Maryland.

4. Uniform Mechanical Code. Published by the International Conference of Building Officials, Whittier, California.

#### MECHANICAL SYSTEMS CHANGES

A. No modifications or addition to existing buildings, mechanical, or utility systems shall take place (other than routine maintenance or replacement of components) without the Regional Facilities Administrator's prior written approval. Design of new equipment shall be subject to the Regional Facilities Administrator's approval.

1. Fuel burning heating appliances shall be equipped with U.L. listed devices which will shut off the fuel to both the main burner and pilot burner if failure of the pilot burner or spark igniter occurs.

2. Fuel-burning equipment shall be assured a sufficient supply of combustion air as outlined in applicable codes and the manufacturer's installation manual.

3. Circulating air and conditioned air supplies for heating, cooling, or evaporative cooling systems shall be conducted through duct systems. These systems shall be constructed of metal or factory-made air ducting material approved for the use intended and shall conform to the requirements as set forth in the applicable codes section of this Chapter.

4. All new and replacement HVAC and refrigeration systems shall be sized and installed in accordance with this Manual and applicable codes section identified in this Chapter.

a. All insulating material shall meet EPA standards.

b. Make-up air will be incorporated in all new facilities and renovations in accordance with current American Correctional Association (ACA) and ASHRAE standards.

c. High efficiency type HVAC units shall be used where practical.

d. The replacement of cooling equipment must be accomplished with environmentally safe equipment.

POWER BOILER SUPERVISION. Steam boilers operated at pressure exceeding 15 psi and water heating boilers (industrial type boilers, not domestic hot water heating boilers) that exceed 400,000 BTU/hr input capacity shall be supervised by qualified operating engineers through all shifts. Where boilers are located outside a supervised central power plant or at institutions without a supervised central power plant, remote supervision shall be accomplished as noted in the "Remote Supervised Boilers" section below. Except for institution emergency situations, not to exceed 30 minutes, boilers shall not be left unattended on automatic control under normal boiler operating conditions. (Local and/or state codes may have additional requirements not identified in this Manual).

Shift Rotation: To maintain a well trained, well balanced staff of operating engineers, a formal schedule of shift rotation shall be implemented at all power plants.

1. Each engineer is required to rotate through all shifts and become familiar with all phases of the power plant.
2. All staff under the supervision of the Chief of Utilities shall be cross-trained in boiler plant operations where possible.
3. The plant shall have at least one operating engineer and at least one inmate through each shift.

#### REMOTE SUPERVISED BOILERS

A. Boilers may be supervised remotely through electronic monitoring equipment at BOP facilities, UNICOR facilities, farms, and similar structures with the Regional Facilities Administrator's written approval. (Local and/or state codes may have additional requirements not identified in this Manual).

1. Remote supervision shall consist of sensors affixed to each boiler and wired to an annunciation panel(s) located in the main powerhouse. In the case of institutions without 24-hour staff supervision at a central boiler site (powerhouse), the annunciation panel(s) shall be located in the institution control center.

2. These automatically controlled boilers shall be equipped with devices to maintain the burner firing conditions, the pressure and/or temperature, and the water level or water content within the predetermined limits without manual manipulation.

3. Each boiler shall have automatic safety shutdown devices. These safety controls (other than operating controls) monitor certain essential operating conditions of a fired boiler. These safety devices will shut down the boiler in the proper sequence when any of the essential conditions vary from set limits and

require the services of a qualified person to place the boiler back in operation.

4. To ensure the boiler will shut down in the event of low water conditions, the electrically operated burner controls shall be connected in the electrical circuit ahead of the automatic boiler water pump switch, or the burner control switch shall be mechanically interlocked to the disconnect switch for the boiler water circulating pumps.

5. All remote supervised boiler locations shall have manual and automatic fuel supply shut-offs separate from the boiler controls. Manual fuel shut-offs shall be clearly marked and located where they are easily accessible during a boiler or fire emergency. Electrical fuel shut-offs shall be controlled by a fire/smoke alarm and gas/fuel leak detection system. There shall be a push type over-ride panic button to close the electrical fuel shut-off valve by the common entrance/exit to the boiler room. This valve shall move to the closed position during loss of electrical power.

6. The institution shall have one or more facility staff members qualified to operate and maintain remote boilers during normal working hours. A log shall be maintained on each boiler which provides information of problems encountered either during or after normal duty hours.

7. Remote boiler operating instructions shall be posted at each remote boiler location listing institution personnel who may monitor and perform minor operational adjustments to the boilers after normal working hours. The instructions shall, at a minimum, give the proper method of lighting, relighting, and shutting down the boiler in an emergency. Repairs made after normal working hours must be entered into the boiler log.

8. Instructions shall also be given to institution personnel that the boiler shall not be placed back in service after having been shut down by the operation of the safety fuel shut-off valve until a qualified Facility Department staff member determines and corrects the cause of such a shutdown. No inmates shall be allowed to operate or repair any boiler without proper facility staff supervision.

9. Institutions having a need for remote boiler supervision shall submit plans for sensors and audible alarm systems to the Regional Facilities Administrator for approval prior to performing any changes to the current boiler control systems.

B. The Facility Manager shall submit a detailed plan for remote monitoring of all unsupervised boilers, as required by this Chapter, to the Regional Facilities Administrator for review and approval. The remote monitoring plan must conform to all requirements identified in this Chapter (if applicable, local and/or state codes may have additional requirements) for remote supervision. A copy of the approved monitoring plan must be

maintained on file in the Facility Department.

1. When BOP policy, code, state or local requirements are modified, remote supervised boilers shall be updated to conform to the new standards.

2. Any changes/modifications to the approved remote supervision plan must be submitted to the Regional Facilities Administrator for review and approval.

AS-BUILT DRAWINGS. Each institution shall maintain up-to-date drawings of its site utilities. Included are water and sewer lines, gas lines, tunnels, steam lines, chilled water lines, recording layouts, elevations, modifications, additions, etc.

A. All underground gas lines shall have their locations identified by signs at the surface. These signs shall be posted every 100 yards on the run of the lines at every junction and where lines change direction. (Re: the Occupational Safety and Environmental Health Manual).

B. Locations of all underground utility lines shall be identified by signs at the surface except where locations can be determined between manholes.

POWER PLANT LOG

A. An Engineers' Daily Log shall be maintained at each power plant and signed by the shift operating engineer. The Chief of Utilities shall review and sign each daily log. The log shall be maintained on file for five years. Should the BP-451 be inadequate for this function, changes are acceptable. The changes or new form will require the Regional Facilities Administrator's approval before local implementation.

B. The daily log shall include the following information:

1. Entries shall be made as required on the Engineers Daily Log concerning all operating boilers and equipment.

2. Daily test results of boiler makeup water for hardness where water softeners are being used.

3. Daily test results of boiler water for phosphates, causticity, dispersant, total dissolved solids, sulfite, and PH.

4. Results of condensate return tests for PH on every shift.

5. Daily test results for residual chlorine in the domestic cold water supply.

6. Daily flue gas analysis to determine stack temperature, carbon dioxide, oxygen, and carbon monoxide values. These values shall be reported on Facilities Operations Form BP-252 and used

to calculate the boiler's combustion efficiency.

PLANT OPERATIONS REPORTING

A. A Utility Usage Report shall be submitted monthly as a part of the Monthly Facilities Operations Report. The report must be submitted in the approved database format and contain information from the previous month. The database reporting format will be issued annually as an Operations Memorandum.

B. A Plant Operations Report (TRM 022.01, 11.2, Facilities Operations Technical Reference Manual) shall be completed monthly and maintained on file for program review purposes. This form is not forwarded to the Regional Facilities Administrator.

CALCULATION OF BOILER EFFICIENCY

A. Boiler efficiency shall be calculated daily for each boiler in operation. The average boiler efficiency shall be logged on the Plant Operations Report each month.

B. Boiler efficiency is calculated by two separate methods; thermal efficiency and combustion efficiency. See the Facilities Operations Technical Reference Manual for methods of calculation.

WATER TREATMENT PROGRAMS

A. Treatment and Testing: A water treatment and testing program shall be established and maintained to protect equipment that uses water as a heat transfer medium.

B. Boiler Water Treatment: All institution steam and closed loop water heating boilers shall have a chemical treatment program. Chemical treatments and operations shall be conducted to minimize scaling, corrosion, and carryover (tests shall be made daily to maintain the specified levels):

1. Zeolite softeners shall be used to minimize hardness of makeup water. Total hardness of makeup water for watertube boilers - (<0.5); fire tube boilers - (<1.0).

2. Phosphate treatment shall be used to prevent scaling of pipes and tubes. Residual phosphate concentration of boiler water shall be between 30 and 60 PPM.

3. Hydroxide treatment shall be used to maintain an alkalinity (PH) between 7.0 and 10.5 for boiler water.

4. Sodium sulfite shall be used as an oxygen scavenger. The residual concentration of sodium sulfite shall be between 30 and 50 PPM.

5. Chemical dispersant and synthetic polymers shall be added for sludge conditioning and precipitation.

6. Blow-down shall be performed to reduce concentration of solids and prevent carryover. The limits of conductance shall be between 2,500 and 4,000 micromhos. In no case shall the blow-down be carried to make concentration of solids less than 2,000 micromhos. Automatic blow-down systems are recommended.

7. Neutralizing or filming agents similar to morpholine, cyclohexy-lamine, etc., shall be used to prevent corrosion of condensate return lines. A PH between 7.5 and 9 shall be maintained in all condensate return lines.

C. Cooling Tower Water Treatment: Chemical treatment and equipment operations shall be conducted to minimize corrosion, scale deposits, and microbiological activity.

1. A biocide water treatment shall be used to prevent growth of algae and scaling.

2. Blow-down shall be performed periodically to reduce the concentration of solids. Automatic blow-down systems are recommended.

3. No chromium, zinc or any other heavy metal may be used for corrosion control.

D. Chilled and Hot Water Systems Water Treatment: Nitrate water treatment shall be used as an inhibitor to control both corrosion and scale deposits. Use of chromates is prohibited.

E. Consulting Services: All institutions shall obtain consulting services to assist in conducting proper water treatment programs. If water treatment plans, recommended by the consulting service, uses chemicals not identified in this Chapter or exceed specified limits contained in this Chapter the Facility Manager must submit the treatment plan to the Regional Facilities Administrator for review and approval. These services shall include monthly visits to observe and make on-site analysis and reports. Institutions shall ensure that water treatment programs meet Federal, state and local EPA standards.

1. These services are available in conjunction with the chemical purchases from the Federal Supply Schedule.

2. Institutions shall pay all costs of the water treatment program.

3. Institutions shall obtain a monthly report from the consulting services.

F. Training: Institutions shall train all power plant operations personnel in correct water treatment and testing procedures.

INSPECTION OF BOILERS

A. An approved boiler inspection service shall conduct an inspection of all steam power boilers and water heating boilers that exceed 400,000 BTUs/hr input capacity (industrial type boilers, not domestic hot water heaters) at least once every 12 calendar months. During annual inspections, boilers with fusible plugs shall have them replaced.

All other boilers (including gas fired domestic hot water heaters) shall be inspected in accordance with requirements contained in the National Board Inspection Code (ANSI-NB-23).

B. Two types of inspections will be conducted:

1. Type "B" Internal and External with Hydrostatic test (water heating boilers less than 800,000 BTUs/hr input capacity are not required to have a hydrostatic test performed).

a. To determine tightness, the hydrostatic test pressure need be no greater than the set pressure of the safety valve having the lowest setting.

b. The Hydrostatic pressure test shall NOT exceed 1-1/2 times the maximum allowable working pressure (MAWP) stamped on the boiler.

c. ASME Hydrostatic testing procedures shall be followed.

2. Type "C" External Under Pressure. This will include lifting the safety valves to determine whether the valve will open and close within the allowable tolerances under steam boiler pressure. (Lifting of hot water relief valves by pressure is not required on water heating type boilers.)

C. Annually, the Central Office shall issue an Operations Memorandum, Boiler Inspection Service, providing current guidelines for obtaining boiler inspection services.

D. The Facility Manager is responsible for ensuring that boilers are inspected as required by this Chapter.

1. Institutions shall use the current Operations Memorandum on Boiler Inspection Service for contracting boiler inspections.

2. No agreements shall be entered with any other source for inspections without prior approval of the Chief of Facilities Operations, Central Office.

3. Institutions shall pay all costs of boiler inspections.

4. When the boiler inspection is completed, all discrepancies identified during annual boiler inspections shall be corrected and documented in the inspection file with the appropriate Minor Work Request or Major Work Order identification number (see TRM 022.01, 2.5, Plan of Action, Facilities Operations Technical Reference Manual). If the repair work requires B&F funding, documentation must be provided to ensure inclusion in the institution B&F Program. The boiler inspection file shall be maintained on site for a minimum of five years.

NEW OR REPAIRED BOILERS

A. New boilers and boilers relocated within BOP facilities shall be installed to meet all ASME codes. The boiler shall be inspected for safe/satisfactory operating condition and to ensure the new installation does not deviate from the original equipment design and/or use. After being inspected and certified, the ASME (A) certificate holder shall stamp and date the boiler.

B. The BOP shall not place new boilers and boilers that have required repairs by welding in service until both type "B" and "C" inspections have been performed; and the boiler inspector certifies the boilers safe for use.

BOILER REPAIRS: Repairs and alterations to boilers and unfired pressure vessels by welding shall be made by a contractor holding a NBBI (R) stamp in accordance with Chapter III of the National Board Inspection Code. For welding repairs or alterations, the contractor shall complete a National Board Form R-1 and stamping and nameplate attachment is required.

SAFETY VALVES. Repairs and adjustments of safety valves are not valid unless performed by the manufacturer or a valve repair company. Repairs by the Government are prohibited. The contractor shall be required to affix a National Board VR nameplate to the repaired valve. Whether the valve is repaired or adjusted, the breaking of the seal, the setting of the valve and/or the resealing of the valve shall be documented. Power boilers are not certifiable unless all safety valves are sealed and tagged.

COMBUSTION CONTROLS. For combustion control safeguards (burner safety electronic controls), the electronic equipment must be repaired to meet the requirements of the National Fire Codes or ANSI/ASME CSD-1 as applicable. To ensure safe operating conditions, repairs to flame safeguard electronic equipment shall only be made by the manufacturer or his authorized representative.

COAL SAMPLES. Samples of coal shipments shall be sent to the Department of Energy for analysis to determine conformity with contract guarantees. The Chief of Utilities and operating

engineers (where applicable) should be thoroughly familiar with coal testing procedures as prescribed by Federal Property Management Regulations. The cost of testing coal samples shall be charged to Cost Center 339.

BOILER PLANT INSPECTIONS AND TESTING

A. The Facility Manager shall develop a schedule of tasks in the CMMS database to accomplish inspections, testing, and preventive maintenance for all boiler plant and related equipment, as outlined below. Dates of inspections, tests, and maintenance activities shall be documented in the CMMS program database. (All inspections shall include examination of asbestos containing materials for condition and repair needs).

1. All discrepancies identified during annual and biennial inspections, tests, and preventive maintenance shall be corrected and documented in the inspection file with the appropriate Minor Work Request or Major Work Order identification number (see TRM 022.01, 2.5, Plan of Action, Facilities Operations Technical Reference Manual). If the repair work requires B&F funding, documentation must be provided to ensure inclusion in the institution B&F Program.

2. Regional Facilities Administrators may request that copies of these scheduled tasks and corrective action be forwarded to the Regional Office.

B. Boiler plant equipment design requires that each institution review and maintain on hand manufacturers' operating manuals and the latest edition of ASME as well as state regulations and/or guidelines.

C. All boilers at BOP facilities shall be equipped with hour meters to better review total hours of operation and ensure an accurate preventive maintenance program.

D. Daily:

1. The plant operator is responsible for daily inspections of each major unit of the plant.

a. Any unusual conditions noted shall be reported in the power plant log. Faulty conditions should be remedied immediately.

b. Accurate plant operating data shall be compiled each day in the power plant log, to be compared with previous data to help maintain the plant in proper operating condition. Such data becomes invaluable for future reference.

2. In addition to inspections, the plant operator is responsible for performing the following daily tests and treatments:

- # Boiler water testing and treatment;
- # Flue gas analysis;

# Boiler blow-down; and  
# Blow-down boiler water column, high and low water cut outs,  
float and water level controls.

E. Weekly:

1. Drain float chamber while boiler is running to determine if the low water control will shut down the boiler.

2. Close the boiler lower gage glass valve, then open drain cock and blow the glass clear. Close the drain cock and open lower gage glass valve to ensure that water returns to the glass immediately. Clean dirty glass and replace defective column or glass at once. Defects include leaking gage cocks and glass, excessive corrosion, inability to discern water level and improper operation.

3. Observe flame condition on each boiler.

4. Inspect the power plant, tunnel equipment, and piping for leaks and general condition.

5. Observe all circulating pumps for satisfactory operation.

6. Inspect all combustion air fans for satisfactory operations.

F. Monthly:

1. Lift safety valve try-lever on steam boilers to full open and release it to snap shut. Leaking safety valves must be replaced.

2. Test and clean flame detection devices and associated automatic fuel cut-off valves. Loss of flame should shut off flow of fuel to the burner.

3. Inspect and operate all linkages and damper controls to ensure proper operation.

4. Test all limit/cut-outs and operating controls.

5. Test all floor and blow-down drains for proper drainage.

6. Check all stop, check, and drain valves.

7. Check combustion air supply for obstructions and adequacy of air flow.

8. Inspect recording, indicating and integrating boiler meters, steam flow meters, and pressure gauges. Calibrate, adjust, repair, or replace as required.

9. Inspect chemical feed equipment for satisfactory operation.

10. Inspect all fuel, ash handling equipment, and fuel storage

facilities for damage and leakage. Also inspect any mechanical repairs or replacements.

11. Inspect all temperature regulators on water heaters for satisfactory operation.

12. Inspect all pressure reducing stations for satisfactory operation.

G. Quarterly: On the outside of the boilers, inspect handhole/manhole plates, effectiveness of insulation, soot blower equipment, fuel burning equipment, forced and inducted draft equipment, boiler piping, stop valves for leaks, and fuel burning safety devices.

H. Semi-annually:

1. Inspect the water side of the boilers for evidence of scale, oil, corrosion, sagging, loose rivets, loose stay bolts, internal piping disarrangement, etc.

2. Inspect the fire side of the boilers for defective baffles, slag on tubes, position and effectiveness of soot blower elements, conditions of brick settings, setting expansion joints, leaking dampers, conditions of inspection doors, condition of grates, and fuel burning equipment.

3. Test, calibrate, and adjust combustion control equipment.

4. Although these are more or less under constant supervision, the piping, insulation, pressure regulating stations, thermostatically operated valves, and etc. should be inspected at least every six months for replacement of inefficient material and defective or worn parts.

I. Annually:

1. Have the boilers inspected by an independent, qualified boiler inspector.

2. Inspect de-aerator tank for corrosion and pitting.

3. Inspect domestic water heaters (more often than annually if conditions dictate). Items to look for include corrosion, scaling and leakage in tube bundles, and condition of heating elements.

4. Inspect condensate receivers internally for corrosion and scaling.

5. Calibrate all pressure gages by comparison to an inspector gage or by using a deadweight tester. Each gage tested shall have a calibration sticker affixed showing date of calibration. Institutions using the inspector gage method shall have the gage calibrated by a qualified lab every 12 months.

6. Inspect and repair all steam traps for proper operation.

7. Open and inspect all vacuum pumps, feed water pumps, booster pumps, circulating pumps, condenser and chilled water pumps, fire pumps, and etc. Repair worn or defective parts.

8. Open, inspect, and repair feedwater heaters at least once every year, preferably in the summer months, but more often if feedwater conditions warrant.

9. Test and inspect all relief valves on non-fired pressure vessels to detect any leakage or weakness.

a. Pressure vessel openings for relief valves shall not be reduced to accept smaller relief valves; discharge piping from the relief valve shall not be reduced.

b. All relief valves are to be sized and piped so they relieve pressure adequately and safely.

J. Biennially:

1. Have a manufacturer's service representative inspect and calibrate recording/indicating boiler and steam flow meters at least once every two years.

2. Perform a hydrostatic test on all non-fired pressure vessels to detect any leakage or weakness.

a. Each vessel shall be tested at 1-1/2 times the stamped design working pressure (residential household type hot water heaters are exempt).

b. The vessel shall be stenciled clearly with 1- inch lettering indicating date and maximum pressure tested.

c. No pressure vessels will be used in BOP facilities without official symbols or markings denoting it as inspected and approved by the ASME Standard.

INSPECTIONS AND TESTING OF WATER SUPPLY SYSTEM

A. Inspections and Tests: One of the most essential features in the operation of a correctional institution is a safe potable water system. For this reason, it is of absolute necessity that institutions conduct periodic inspections and tests related to the water supply system.

B. Schedule: The Facility Manager shall develop a schedule of tasks in the CMMS database to accomplish inspections, tests, and preventive maintenance for the water supply system and related equipment as outlined below. Dates of inspections, tests, and maintenance activities shall be documented in the CMMS program database.

All discrepancies identified during annual and biennial inspections, tests, and preventive maintenance shall be corrected and documented in the inspection file with the appropriate Minor Work Request or Major Work Order identification number (see TRM 022.01, 2.5, Plan of Action, Facilities Operations Technical Reference Manual). If the repair work requires B&F funding, documentation must be provided to ensure inclusion in the institution B&F Program.

C. Daily: Perform daily tests at the power plant for residual chlorine levels in the domestic cold water supply.

D. Weekly:

1. Inspect booster pumps for satisfactory operation.
2. Inspect chlorination and metering equipment for satisfactory operation.

E. Monthly:

1. Obtain monthly water samples at various taps to guard against contamination of the water supply.

a. These samples will be tested by a certified laboratory serving the area in which the institution is located.

b. This shall be done in accordance with Chapter 4 of Institutional Sanitation by Walton.

c. Unless otherwise appointed, the institution Safety Manager is to conduct the testing.

d. Since chlorination is necessary to prevent contamination, it is important to keep the chlorinating equipment in good operating condition.

2. Maintain metering equipment in perfect operating condition to assure correct portions of chemicals are dispensed. A record of chemical use and amount of water treated shall be maintained.

3. Inspect intakes to booster pumps to assure free flow to the pumping equipment.

F. As Needed:

1. Backwash filter beds, where applicable, and as indicated by the loss of head gauge pressure. Special care must be taken to backwash, at the proper rate of flow, to prevent upsetting the filter bed.

2. Draw off sludge in sedimentation basins frequently so as

not to allow accumulation.

3. Maintain, in perfect operating condition, the rate of flow controllers, loss of head pressure gauges, chemical feed machines, and chlorinators.

4. Where large reservoirs are the source of water supply, introduce the proper chemicals for the control of algae. Keep the shores of such reservoirs clear of vegetation at all times.

G. Annually: Inspect deep well pumps annually to ensure proper operation of pump and adequate flow rate. Maintain copies of inspection reports for three years.

H. Biennially: Every two years or according to manufacturer recommendations (must be on file at the site), inspect internal and external surfaces of all water storage tanks. Inspect for evidence of corrosion, pitting, or signs of weakness. Take necessary steps to correct any internal/external deficiencies identified.

#### POWER PLANT SAFETY

A. Boilers, water/fuel tanks, and all other enclosed spaces shall not be entered by staff or inmates without a Confined Space Entry Permit. (Refer to the Occupational Safety and Environmental Health Manual).

B. When working in and around boilers and metal tanks, all electrical hand tools shall be protected with a GFCI electrical interrupt system.

C. Only low voltage DC type lights shall be used within the boiler and other metal type enclosed spaces.

D. Explosive proof lights shall be used where required. Staff and inmates shall not enter an area where there is a flammable or explosive atmosphere. The area shall be ventilated using OSHA guidelines prior to entry by staff and/or inmates.

#### COLOR CODING

A. Power plant equipment and related distribution systems shall be color coded as per 29 CFR-1910.253 which specifies the use of ANSI Standard A13.1 1981. The use of standard OSHA Safety Colors and/or Federal Standard 595 colors is specified.

B. In general, adherence to the color coding standards applies to any material conveyed in a piping system. The ANSI standard delineates materials into three classifications. (See table (2) of the ANSI standard for further regulation). BOP facilities may use the total length method or the intermittent display method for color application.

METHOD OF IDENTIFICATION

A. Positive identification of the contents of a piping system shall be by lettered legend and given the name of the contents in full or abbreviated form.

B. Attention shall be given to visibility with reference to pipe markings. The size of the legend lettering shall be in adherence with the ANSI standard (See table (3) for further regulation):

POWER PLANT and MECHANICAL ROOM COLOR CODES

**YELLOW** (safety yellow) Federal Standard # 13519

Steam lines and valves, ammonia, blow off water, boiler feed, chlorine, fuel oil and gas, compressed air, condensate returns, domestic hot water, high pressure air, hot water, refrigerant, and any other materials that could be considered inherently hazardous.

**RED** (safety red) Federal Standard # 11105

Fire protection systems and apparatuses, automatic fire sprinklers, fire protection water, halon and any other fire quenching materials.

**BLUE** (safety blue) Federal Standard # 15092

Air, Argon, filtered water, instrument air, inert gas, and any other materials that are inherently low hazard.

**GREEN** (safety green) Federal Standard # 14120

Circulating water, city water, cold water returns or supply, cooling water, distilled water, emergency showers, make up water, potable water, soft water, storm sewer, plumbing vents, and waste drains, etc.

## CHAPTER 12

### ELECTRICAL SYSTEMS

COMPLIANCE. All new and existing electrical installations, maintenance, inspections and tests, within the BOP, shall conform with the intent of the latest edition of the National Fire Protection Association (NFPA) and the National Electrical Code (NEC). More stringent requirements in this Program Statement or by construction documents (drawings and/or specifications) may be specified.

#### ELECTRICAL SYSTEM CHANGES

A. Permanent changes in institution electrical distribution systems of the following types shall not be initiated without the Regional Facilities Administrator's prior written approval (see Chapter 2, Modification of Existing Facilities):

1. Modification or alteration of high voltage switch gear to include changes of relay settings and/or removal of interlocking devices;
2. Shifting or addition of connected load in excess of 50 KW where transformers or feeders are affected;
3. Changes, extension, or removal of feeders with potential in excess of 600 volts;
4. Removal of ground fault circuit interruption (GFCI) devices;
5. Changes to fire protection control systems;
6. Modifications/alterations to secondary distribution feeders.

B. Changes in electrical distribution systems involving the load or configuration described above shall be requested through the Regional Facilities Administrator. The request shall contain:

1. A description of the proposed alteration and an explanation of all reasons why the change is necessary or desirable;
2. Information on the magnitude of electrical loads or currents involved; and
3. Detailed scale drawings or dimensional sketches indicating the extent of the work to be performed.

C. Electrical distribution system changes above the size indicated shall not begin until the request has been approved.

ELECTRICAL SAFETY

A. The Facility Manager shall ensure that staff assigned to work on high voltage electrical systems have the knowledge necessary to accomplish the assigned work safely and in accord with appropriate codes. Particular attention should be given to the safe disconnection and connection of high voltage circuits, grounding of de-energized high voltage circuits and proper care and use of electrical safety equipment.

1. High voltage is determined to be that in excess of 600 Volts AC.

2. Only qualified staff may work on electric circuit parts or equipment that have not been de-energized under the procedures of 29 CFR section 1926.417. Such staff shall be capable of working on energized circuits and shall be familiar with the proper use of special precautionary techniques, personal protective equipment, insulation and shielding materials, and insulated tools.

3. Inmates are prohibited from working on any energized electrical circuits or equipment.

B. The Facility Manager shall ensure that written instructions are available for all high voltage equipment which identifies proper method to disconnect, tagout/lockout, ground de-energized equipment and, after work is accomplished, to re-energize equipment (see NFPA 70E-32 for additional details). It should also be noted that a tagout/lockout program shall be implemented for all appropriate maintenance activities on low voltage electrical systems.

C. The Facility Manager shall ensure that all live-line tools comply with appropriate tests. All protective equipment shall be tested as follows:

1. Live-line tools (hot sticks, fuse pullers, etc.) shall be tested for dielectric strength every six months by an independent testing agency. More frequent testing shall be completed if manufacturers' recommendation dictate.

2. Linemen's rubber gloves, rubber insulated blankets and insulated sleeves shall be tested each six months by an independent testing agency. If gloves, blankets and sleeves have not been in service, they may be tested annually.

D. Test results shall be routed to the Facility Manager and Safety Manager. The Facilities Manager shall maintain copies of the test results on file for two years.

E. Hard hats and safety shoes worn by electricians will be of

non-conductive material constructed without the use of metal rivets.

F. The use of specialized protective clothing such as flash suits shall be used only for work on high voltage systems, and shall be properly stored per the manufacturer's recommendations.

G. All portable trouble lights for use in powerhouses for inspection of boilers, metal enclosed spaces, etc. shall be of the low voltage DC type. (Code compliance may require the use of low voltage trouble lights in other areas outside of the powerhouse.)

H. Buried high voltage lines shall be marked in a manner that will leave no doubt as to their location. Where above ground power lines are readily accessible, they will be identified by signs stating "DANGER - HIGH VOLTAGE" (Re: the Occupational Safety and Environmental Health Manual).

I. High voltage transformers, switch gear, and vaults shall be locked and labeled "Danger High Voltage" as required by OSHA standards. High voltage manholes shall be labeled and/or locked to prevent unauthorized entry.

#### POLYCHLORINATED BIPHENYL (PCB)

A. Oil used in electrical equipment as an insulating medium or coolant shall have been tested for PCB one time only.

1. If PCB is present, concentrations shall be stenciled on the equipment's protective case and/or a permanent tag affixed to the equipment.

2. These test markings shall be coordinated with the institution Safety Manager in accord with the Occupational Safety and Environmental Health Manual.

3. The Facility Manager shall ensure that required documentation is present indicating that PCB testing has been conducted on all transformers (including non-institution-owned) located on institution property.

B. Procedures and records relating to the use, storage, and disposal of PCB shall be maintained in accordance with the published Federal Register and EPA guidelines.

C. Switches and transformers containing PCB materials, if pad mounted or located inside a building, shall be provided with curbs. These curbs shall be of sufficient size to hold the contents of the switch or transformer to prevent the material from getting into floor drains, sewers, waterways, soil, etc.

#### INSPECTIONS AND TESTING

A. Each institution Facility Manager shall be responsible for

conducting inspections of his or her facility as prescribed by the schedules listed below. The identified inspections and tests

shall have individual task requirements, schedules, and estimated staff time entered into the CMMS program. Completion dates and staff time shall be documented in the CMMS program. Deficiencies shall be noted on the PM form and a Plan of Action (TRM 022.01, 2.5, Facilities Operations Technical Reference Manual) shall be initiated.

B. It should be understood that these guidelines cannot include all conditions appropriate to each institution. Therefore, at the Regional Facilities Administrator's discretion, individual institutions may elect to develop a customized inspection and testing plan. These customized plans must be developed in accordance with requirements contained in NFPA 70B and approved by the Regional Facilities Administrator.

C. If a customized inspection and testing plan is not developed, the following inspections/tests requirements shall be entered into the CMMS program. These PMS shall be scheduled as prescribed with the task(s) listed on the work order. Documentation for inspection/test dates shall be maintained in the CMMS program.

1. Quarterly. Visually inspect transformer vaults for faults, cleanliness, proper ventilation, and improper use for storage.

2. Semi-annually

a. Visually inspect primary switchgear for cleanliness. Check all connections for indications of insulation breakdown, such as cracking or burning. Exercise manually all switching operations to ensure proper and smooth operation. Confirm that proper size fuses are used and adequate spares are on hand.

b. Inspect overhead distribution systems, ensuring that poles, cross arms, insulators, guy wires, braces, lightning protection, etc. are in good condition. Also ensure that trees or other obstructions are not interfering with these systems.

c. Visually inspect underground cables and splices in access holes or pull boxes for insulation damage and ground and shield connections. Visually inspect enclosure for cleanliness, signs of rodents, and presence of water. Where appropriate, check drains for blockage.

d. Visually inspect all dry-type transformers for cleanliness of windings and enclosure. Ensure that vents for enclosures are not blocked. Check environment surrounding the transformer to ensure adequate ventilation is available.

e. Visually inspect transformer connections for primary and secondary terminations, lightning arresters, and ground connections.

f. Visually inspect all low voltage, main distribution, and branch circuit panel boards. This inspection shall include all connections for indications of insulation breakdown such as cracking or burning.

(1) Manually exercise all switching operations to ensure proper and smooth operation.

(2) Confirm that proper size fuses are used and adequate spares are on hand.

(3) Check for corrosion or other evidence of water penetration within the panel. (Special attention should be given to those panels located and exposed within the Food Services areas).

g. Inspect exterior compound and perimeter lighting for proper function. Ensure that all photo-electrical cells or time clocks controlling exterior lighting are properly set and calibrated. Check all ground connections for tightness and frayed or damaged conductors. Provide the same inspection for the perimeter fence ground system.

h. Inspect equipment requiring electrical disconnects to ensure proper type and size disconnects are being used. Inspect cords and conductors for proper size and type. Where required, inspect mechanical connectors, strain relief, and bonding devices. Ensure that all disconnects are properly marked to identify equipment served.

### 3. Annually

a. Perform a visual inspection on each primary circuit, where possible. Load readings should be documented on all primary transformers during peak load conditions. Where current transformer capability is not available, alternative methods for obtaining primary loads are as follows:

(1) The power company can supply information if separate metering is available.

(2) Secondary low voltage current readings can be taken and used to calculate the primary load.

b. Ensure protective devices are adjusted to reflect changes in load characteristics. (Protective relay calibration should not be attempted without specific training and equipment.)

c. Arrange, as needed, for electrical power down time to perform the following checks and maintenance in addition to the required semi-annual inspections:

(1) Tighten all switchgear and transformer cable and bus connections; particular attention shall be paid to primary connections. In lieu of physically checking every connection, an Infrared Scan may be performed to identify loose connections.

(2) Clean all switchgear, transformer, and panel enclosures and interiors if they appear dirty. Cleaning materials specifically designed for cleaning high voltage cable, bus bar, and transformer windings shall be used.

The Regional Office shall be contacted if assistance is required to comply with the above.

#### 4. Every Five Years

a. Have the oil in switches and transformers using the newer types of insulating oils tested every five years, unless the manufacturer recommends otherwise. (Newer oils are those which a manufacturer certifies do not contain PCBs.)

b. Transformers using the older type oils shall be tested every two years as previously required.

c. Transformers and switches which have had the insulating oil replaced with the newer type oils shall be tested under the five-year program.

d. The Facility Manager shall maintain transformer testing results on file for the life of the transformer.

#### D. BIENNIAL ELECTRICAL INSPECTION

1. Conduct a biennial inspection of the facility (see TRM 022.01, 12.1, Electrical Systems Inspection, Facilities Operations Technical Reference Manual). The Electrical Foreman or Chief of Utilities shall personally conduct the inspection and make any appropriate tests. The Facility Manager shall be responsible for proper scheduling of the inspection and for review of the results.

2. At the Regional Facilities Administrator's discretion, an institution may elect to develop a customized inspection and testing plan. The Regional Facilities Administrator must approve any customized plan which shall be developed in accord with requirements contained in NFPA 70B.

a. Narrative comments, either affirmative or negative, shall be made on each item on the Electrical System Inspection form (TRM 022.01, 12.1, Facilities Operations Technical Reference Manual or customized inspection and testing plan). Simple yes/no responses are not acceptable.

b. If conditions in a given area warrant lengthy recommendations, these recommendations shall accompany the inspection report, referring to the outline by page and item number and identifying problem areas by building number, transfer vault number, etc.

c. The Work Programming Committee must approve the completed inspection report and plan of action (see TRM 022.01, 2.5, Plan of Action, Facilities Operations Technical Reference Manual) for identified discrepancies. The Inspection Report shall identify what corrections have been accomplished to date as well as anticipated completion dates of any uncompleted items.

d. The inspection report shall be maintained for the life of the inspection. If requested, a copy of the inspection report shall be forwarded to the Regional Facilities Administrator.

#### ELECTRIC GENERATING EQUIPMENT

A. Responsibilities: Each institution Facility Manager shall initiate a preventive maintenance, inspection, and testing program for emergency power supply equipment. The identified maintenance, inspections, and tests shall have individual task requirements, schedules and staff labor estimates entered into the CMMS program. Documentation of work completions shall be maintained in the CMMS program.

B. Maintenance: Electric generating equipment shall be maintained in accordance to manufactures' recommendations and NFPA 110, current edition. Suggested maintenance schedules for emergency power supply equipment is contained in NFPA 110 Appendix A.

C. Other Inspections/Tests: In addition to the inspection and testing requirements identified above, the following inspections and tests shall be conducted and documented in the CMMS program database and generator log book:

1. Biweekly. The emergency power generator shall be started and brought up to normal operating temperature for a minimum period of one hour. This test will be conducted in a no-load condition.

2. Monthly. The emergency power generator shall be run under load for a minimum of one hour. Associated electrical equipment shall be checked for proper operation and adjustment of high voltage switches, tripping devices, exciters, interlocks, rheostats, voltage regulators, and instruments.

At the Regional Facilities Administrator's discretion, a load bank of sufficient capacity to meet load testing requirements contained in NFPA 110 may be used. If the use of a load bank is

approved, it is recommended that a load test using actual building(s) load be conducted at least once each six months.

D. Log Book: A qualified operator shall maintain a generator log book in the electrical generating room. This log book shall be bound (not loose leaf) and contain at a minimum, the following information for each generator:

1. Date
2. Start time
3. Stop time
4. Total operating time
5. Load/no load operation
6. Operating voltage
7. Operating amperage
8. Operating Hertz
9. Engine operating temperature
10. Engine operating oil pressure
11. Comments
12. Signature

E. Operating Procedures: Proper procedures for starting and operating generating equipment shall be posted adjacent to the equipment. These procedures shall include a description of the equipment's operational capabilities and limitations (i.e., capacity, flexibility, capability of load distribution and transfer, start-up and shut-down procedures, etc.).

F. Generating Rooms: Electric generating equipment and rooms housing this equipment shall be clean and free of storage and in a structurally sound condition.

Equipment rooms shall be provided with a fire extinguisher and battery powered emergency lights to supply adequate lighting for activating the generator.

G. Internal Engine Inspection: Diesel engine prime movers shall be internally inspected for wear, clearances, and condition of parts after 4,000 hours of operation, or more often, if annual oil analysis testing indicates possible engine problems. A factory representative shall make repairs and replacements when appropriate.

H. Lubricant Test: A qualified lubricant testing service shall conduct a "Failure Analysis" test conducted on the electrical generator's engine oil. The analysis shall include all the recommended tests as specified by ASTM (D) Standards for Fuel and Lubricant Oil Analysis Volumes 501 and 502, and the lubricant manufacturer. Typically, the testing service will analyze the data and identify any conditions that may disclose the possibility of equipment failure. The testing service shall provide a summary report that will make recommendations for corrective action. The Facility Manager shall maintain copies of the engine oil analysis on file for five years.

PRIMARY DISTRIBUTION SYSTEMS. All high voltage distribution switches shall have indicating lights to show if the switch is energized or not. Visual and electrical tests shall be performed if power distribution is not evident. NFPA 70B shall be followed concerning maintenance and inspection of electrical switchgear equipment.

SECONDARY DISTRIBUTION SYSTEMS

A. Main distribution panels and branch circuit panel boards shall be balanced to evenly distribute loads between phases.

B. Main distribution panels and branch circuit panel boards shall be labeled with manufacturers' data (size, type, model number, capacity, etc.). Panels and panel boards shall have all circuits labeled as to what they serve.

C. All disconnecting services for motors, appliances, and service feeders shall be marked as to their purpose in accordance with NEC 110-22.

D. All grounding systems shall be tested annually to ensure that design conductivity is maintained. It should be noted that individual electrical systems require different levels of conductivity i.e., transformer equipment cabinets, perimeter fencing, lightning protection, electronics equipment, etc. The Regional Facilities Administrator shall provide guidance and assistance to determine proper levels of conductivity and any other testing concerns.

GROUND FAULT PROTECTION

A. Ground fault circuit protection shall be provided for all single phase 20 ampere receptacles, as required by the National Electric Code 210-7,8.

B. Circuits protected by GFCI breakers or devices shall include only receptacles. Such receptacles shall not be connected into lighting or other power or branch circuits.

LIGHTNING PROTECTION AND ELECTRICAL DISTRIBUTION SYSTEMS

A. The Facility Manager shall ensure that all lightning protection systems, electrical power distribution systems, and spaces containing microprocessor-based equipment are designed and installed in compliance with:

1. The latest edition of NFPA 780 - Standard for the Installation of Lightning Protection Systems;
2. The latest edition of NFPA 70 - National Electrical Code;
3. The most current Federal Information Processing Standards Publication (FIPS PUB) - Guidance on Electrical Power for ADP Installations.
4. Manufacturer's recommendations for grounding.

B. The Facility Manager shall ensure that all lightning protection systems, electrical power distribution systems, and spaces containing microprocessor-based equipment are designed in compliance with the following specifications. (Reference Section 250-84 of the National Electrical Code).

1. If earthing resistance to ground is less than 25 ohms, the Facility Manager shall comply with equipment manufacturer's recommendations.

2. All computerized electronic equipment shall be supplied with "dedicated, isolated, insulated grounds". (Reference Sections 250-74, Exception No. 4; 250-75, Exception; 384-20, Exception; NEC 70).

3. All grounding conductors, safety or isolated, shall be the same AWG size as the phase conductors.

4. The central equipment room, control center, and any other room designed for a significant amount of computer based electronics equipment shall be designed in compliance with the current version of FIPS PUB.

C. To protect computerized electronic equipment from being damaged by induced lightning, switching AC power lines, and voltage transients generated within the facility, the Facility Manager shall ensure that the design of the AC electrical power system includes surge protection devices (SPDs) at the point of use.

1. Alternating Current power to computerized electronic equipment and uninterruptible power systems shall have SPDs installed on the load side of the main disconnect, in accordance with the following specifications:

a. For safety and fire protection, all SPDs shall be listed to U.L. 1449.

b. All SPDs shall have the lowest surge voltage rating (SVR) per U.L. 1449 that is consistent with the nominal line voltage. (For example, 120 VAC nominal line voltage would require a 330 volt peak SVR).

c. SPDs shall be connected with the shortest leads possible.

d. Protection modes shall be only phase-to-phase or phase-to-neutral suppression. Phase-to-ground or neutral-to-ground suppression shall not be installed.

e. For extended life and long term reliability, only silicon avalanche technology shall be installed. Gas tubes and metal oxide varistors shall not be used.

f. Suppression dissipation capability of the SPDs shall be determined by the location of the device in the facility.

2. Instrumentation, DC signal, data telephone, and other low voltage lines shall be protected from transients induced by lightning and transients resulting from close proximity to power distribution conductors.

#### ELECTRICAL RACEWAYS

A. Non-metallic electrical raceways shall not be used in inmate housing units, also non-metallic electrical raceways shall not be exposed above ground in any area of the institution.

B. Wiring above ceilings and concealed in masonry block walls shall be in electric metallic tubing (EMT).

C. Metallic sheathed cable (BX) shall not be used for any type of wiring.

D. Flexible metal conduit used in wet areas (kitchens, power-houses, pump room, exterior locations, etc.) shall be liquid tight.

E. All underground raceways shall be installed in accord with the NEC.

#### ELECTRICAL WIRING CONDUCTORS

A. Unless otherwise approved by the Regional Facilities Administrator in writing or by approved contract drawings, electrical wiring shall conform to the following:

1. All conductors up to size 1/0 shall be copper. Conductors No. 1/0 AWG and larger can be either copper or aluminum as specified herein. Aluminum conductors No. 1/0 AWG and larger

shall be compact stranded AA-8000 series electrical grade aluminum alloy conductor material.

2. Wire and cable up to No. 6 AWG shall be factory color coded. Colors for each phase and neutral are to be used consistently through each system. On larger wires, not factory color coded, a 1-inch wide band of colored tape on each conductor end or brilliant waterproof lacquer may be used. Each system conductor shall be identified by phase and system as per the National Electrical Code 210-4,5.

## CHAPTER 13

### PHYSICAL PLANT REVIEW PROGRAM

#### GENERAL

A. The Physical Plant Review Program (PPRP), formerly known as space utilization study, has been revised to incorporate physical plant infrastructure repairs and major equipment replacement, as well as proper use of building spaces. The CMMS program and inspection reports must support the inclusion of infrastructure repairs or major equipment replacements in the physical plant review.

B. The PPRP is a process designed to assist institutions in the development of long range budget planning and efficient use of physical plant spaces.

1. The PPRP can be a valuable tool in the reorganization of institution functions and/or physical plant modifications. The PPRP provides the opportunity to assure that recommended or planned modifications to the physical plant take into consideration coordination with other programs such as:

- # future construction or renovation projects,
- # other funded projects, or
- # mission changes, etc.

2. PPRP generated recommendations shall be considered during annual strategic planning sessions and by the institution Work Programming Committee when formulating the annual B&F budget submission.

PROCEDURE. Physical Plant Reviews shall be conducted on institutions prior to mission changes or if requested by the Warden, Regional Director, or Assistant Director for Administration.

A. A Physical Plant Review may be limited in scope and not include all areas of an institution.

B. Reviews shall be coordinated with the Physical Plant Review Program Manager in the Central Office.

C. Reviews shall utilize the guidelines contained in TRM 022.01, 13.1, Physical Plant Survey, Facilities Operations Technical Reference Manual.

## CHAPTER 14

### PLUMBING SYSTEMS

COMPLIANCE. All additions or alterations to plumbing installations at BOP institutions shall conform with the latest edition of the National Plumbing Code, NFPA Codes and Standards, Bureau policies, and applicable State or local codes.

#### PLUMBING SYSTEM ALTERATIONS

A. Modifications to the institution's plumbing distribution systems of the types discussed below shall not be made without the Regional Facilities Administrator's prior written approval in accord with provisions contained in Chapter 2 of this Manual.

B. When system modifications become necessary, the approval request to the Regional Facilities Administrator must contain a description of the proposed alteration, an explanation of all reasons why the change is necessary or desirable, the magnitude of plumbing loads, and detailed scale drawings or dimension sketches indicating the extent of the work to be performed.

C. The following plumbing distribution system modifications shall not begin until the Regional Facilities Administrator has approved the request for such changes:

1. Modifications of the distribution lines from the utilities company take-off to the building entrance (or shut-off valves) for water, sewer, gas, and storm sewers;

2. Changes, extension, or removal of a service that serves 15 connections or 25 people;

3. Any connection or change to a connection between a potable and non-potable water source;

4. Change in a service above four inch pipe size.

D. Changes or additions of connected load to a service shall be completed in accordance with all codes related to back-flow prevention.

#### UNDERGROUND UTILITIES

A. Manholes shall be installed on sanitary sewer and storm sewers every 300 feet and at any change of direction.

B. All underground gas lines shall be identified by signs at the surface. These signs shall be located every 300 feet on the run of the lines, at every junction, and where lines change direction (re: the Occupational Safety and Environmental Health Manual).

**CHAPTER 15**

**RESERVED**

## CHAPTER 16

### AUTOMATED SYSTEMS

#### COMPLIANCE

A. The Facility Manager is responsible for collecting, recording, and communicating data relative to all aspects of a physical plant management program.

The purpose of this Chapter is to provide directions for the use of specific computer-based software systems. Computer based data collection is intended to improve information sharing and enhance the physical plant management program.

B. The Facility Manager or his/her designee shall have a working knowledge of each software program being used in the Facility Office.

DEFINITION. Total Maintenance System "TMS" copyrighted by Four Rivers Software is the brand name for the Computerized Maintenance Management System (CMMS) Facilities Operations uses. The brand name has been removed from this revision of the Manual. The verbiage "computerized maintenance management system" or "CMMS" refers to the approved maintenance software used by Facilities Operations.

#### MINIMUM HARDWARE EQUIPMENT

A. All Facility Departments shall be equipped with a minimum of two computers to accommodate both the computerized maintenance management system (CMMS) and the department's administrative requirements.

B. The CMMS computer shall be capable of 50MHZ or higher operating speed.

C. New acquisitions or upgrades of existing computers shall conform, at a minimum, to current BOP policies, and consist of the following hardware and peripheral equipment:

1. IBM compatible computer (or equivalent) with a 486 or higher processor and a minimum of:

- a. One 500 megabyte fixed disk
- b. Sixteen (16) MB of resident memory (RAM)
- c. One 3 ½" floppy disk drive (1.44MB)
- d. One parallel port and one serial port (additional peripheral devices could require additional ports)

e. A color graphics adaptor card

2. A VGA or higher quality color monitor.
3. A wide body, high speed, dot matrix, tractor feed printer at 220 characters width in compressed print mode, equipped with a print buffer, either internal or external, with a minimum of 256K. Laser printers are acceptable.
4. A Hayes Smartcom or compatible 9600 BAUD, or greater, external modem. Modems shall be maintained per current BOP policies and controlled as a Class "A" item.
5. A tape backup system compatible with a Colorado Jumbo Trakker 250 that uses DC2120 mini data cartridges with minimum storage of 250MB of data.

#### REQUIRED SOFTWARE PROGRAMS

A. To provide consistent data throughout the Bureau, Facility Departments shall use IBM or MS DOS 6.2 or later version, and the specific software programs for data management and reporting outlined below.

1. Total Maintenance System (TMS). TMS is the only maintenance management software to be used at BOP facilities. There may be occasions when the Central Office may pilot another CMMS program, if so, a memo from the Chief, Facilities Operations, shall be on file to authorize the specific software.

Refer to the Facilities Operations CMMS Technical Reference Manual for specific instruction for the setup and operation of the program.

- a. The CMMS program shall be used for the following:
  - (1) Scheduling and issuing work orders for inspections, tests and preventive maintenance. Refer to Chapters 5, 9, 10, 11, and 12 of this Manual for requirements for preventive maintenance, inspection and test;
  - (2) Storing data and tracking information about Minor Work Requests, Major Work Orders, PMs, and projects. This shall include staff time and materials costs for all work as well as staff time for administrative duties and custodial duties. Estimated staff time and estimated materials costs are to be entered for Major Work Orders and projects.
- b. The Weekly Work Order/Project Accrual Form (TRM 022.01, 16.1, Facilities Operations Technical Reference Manual) is to be submitted to the Facility Manager at the end of the work week for work orders and/or projects that are not completed. The time will be entered into the CMMS program allowing accurate tracking of staff time for work orders and projects.

c. The Regional Facilities Administrator shall conduct a review annually of the CMMS program for each institution in the region. The CMMS Evaluation Form (TRM 022.01, 16.2, Facilities Operations Technical Reference Manual) shall be used for the review. Copies of the completed reviews shall be forwarded to the Chief, Facilities Operations in the Central Office by October 25 each fiscal year.

2. WordPerfect. WordPerfect is the BOP-approved word processing software program.

3. First Choice. The First Choice software program, by Softkey International, shall be used for databases, spreadsheets, and graphics. Version 3.5p is a special prison version and has the communications capabilities removed. This version shall be used on all facilities computers with inmate access.

a. All report data is to be maintained in First Choice databases.

b. Budget tracking shall be accomplished using a computerized format approved by the Regional Facilities Administrator, such as the First Choice database or other FBOP approved software. This shall include all funds in Decision Unit "P" (CC-334, 335, 336, 362) and B&F Projects.

4. Carbon Copy Plus. The Carbon Copy Plus software program, by Microcom Systems, Inc., shall be used to provide technical assistance and data transfer information between the Central Office, Regional Offices, and institutions. This software enables the transfer of files, reports, etc., and provides a method for troubleshooting and resolving computer software problems from the regional office to each institution. This software program shall not be left installed on the hard disk drive of computers that are accessible to inmate workers. The Carbon Copy program shall be run from the A: drive via a floppy disk. Copies of this program are to be treated as a sensitive item and stored in a secure area away from inmates.

5. Windows. Windows 3.1 is recommended as the operating system for existing computers and is required for any new computer system.

6. AutoCAD. The AutoCAD software program, by Autodesk is the standard program for use by BOP facilities for computer-aided design and drafting design work.

Facilities requiring limited design and drafting capabilities may use the AutoSketch software, by Autodesk. AutoSketch is a low cost CAD program for small users, and is compatible with AutoCAD.

7. Timberline. Timberline is an industry standard cost estimating software program. Timberline estimates are based on MEANS cost data. Periodic updates are made available by MEANS to insure current pricing guidelines. If estimating software is being purchased, Timberline is recommended.

COMPUTER SYSTEMS SUPPORT AND OPERATIONS

A. Regional Facilities offices shall provide technical support, training, and troubleshooting of systems at the institution level.

B. Under no circumstances shall inmates operate the computer while the modem is attached. Any use of the computer with a modem attached shall be done hands-on by a staff member with no inmates present. A computer with no modem attached may be considered for use by inmates under staff supervision. (Internal modems in institution computers are not authorized.)

C. The computer systems shall be backed up weekly, (daily backup is recommended) onto a tape. The tapes shall be rotated to maintain current and past week backup.

D. The Facilities Manager shall ensure consistent application of programs by providing training opportunities for subordinates on an as-needed basis. The Facilities Assistant or Engineering Technician is responsible for the daily integrity of data entered into the computer systems.

SENSITIVE INFORMATION. Sensitive security information entered into any computer program shall be treated as SENSITIVE. Any sensitive and/or security information that is stored on electronic media shall adhere to P.S. 1237.09, Computer Security or latest edition.

A. Each institution shall develop Institution Supplements to establish methods, procedures, and definitions of sensitive security items.

B. Work orders, requests for purchase, drawings, specifications (hard copy or electronic media), or other data that could affect the security or integrity of the institution, shall be classified as "SENSITIVE". The following procedures shall be followed:

1. All copies of work requests and requests for purchase shall be stamped with a RED "SENSITIVE" stamp.

2. No entry shall be made into any computer program concerning operating conditions, repairs, or purchase requests for repair parts or services of sensitive systems. An entry of "REFER` to SENSITIVE WORK REQUEST FILE" or "REFER to SENSITIVE REQUEST for PURCHASE FILE" shall be made in the computer program. All

descriptive tasks and parts shall be on the original submitted copy only.

3. All originals and copies of Work Requests and Requests for Purchase containing "SENSITIVE" information will remain in the physical possession of the assigned staff member or shall be secured in the appropriate "SENSITIVE" file. The Facility Manager is responsible for the security of the "SENSITIVE" files in the Facility Office.

DOCUMENTS CONTROL

A. Construction Documents

1. Government officials and architect/engineers doing design work for the Bureau may be given specific information extracted from construction drawings or specifications, such as secure wall or secure window details, on an as-needed basis only.

2. Particularly sensitive drawings, such as those of a security alarm system or other electronic devices, shall not be distributed.

B. Institution Documents. The Facility Manager is responsible for ensuring that sensitive drawings and specifications are maintained in a secure area and not made available to inmates. Sensitive drawings, specifications, product literature and other documents shall be stamped with a red "SENSITIVE" stamp.

C. Document Storage and Disposal. Records shall be retained or disposed of as outlined in the National Archives and Records Administration, General Records Schedule. A reference copy of this document is maintained in the Inmate Systems and Financial Management departments.