FACILITY SOLID WASTE MANAGEMENT

1.0 Purpose & Scope

To ensure that solid wastes in federal facilities are managed in an efficient and environmentally preferable manner.

2.0 Activities & Departments Affected

This procedure is to be used by Property Managers, Contracting Officer's Representative contacts for waste contracts, and Project Managers.

3.0 Exclusions

None

4.0 Forms Used & Permits Required: (include reporting requirements)

Federal and State Forms and Permits:

PERMIT / FORM / REPORT	SUBMITTED TO: FEDERAL OR STATE AGENCY	SUBMITTAL FREQUENCE
Sustainable Practices Report: Green Purchasing, Waste Management, and Chemicals Management (1, 2, 3)	Office of the Federal Environmental Executive (OFEE)	Region Report for Fiscal Year

(1) Reporting requirements began with fiscal year 1992, under Section 502 of the Resource Conservation and Recovery Act (RCRA), in accordance with section 6002(i) of RCRA (42 U.S.C. 6962(i)) and Section 9002 of the Farm Security and Rural Investment Act. Various Congressional Acts and Presidential Executive Orders (i.e., 13101, 13424) since the inception of the original reporting requirement have maintained this requirement; November 2, 2006, letter from the Office of Federal Procurement Policy (OFPP) and the OFEE to Federal Agency Environmental Executives and Agency Senior Procurement Officials. The last changes occurred with Instructions for Implementing EO 13423 was presented by the Council of Environmental Quality on March 28, 2007.
(2) The title of the report form changes per the requirement of the newest regulatory requirement; for example in 2008 and 2009 the report was called "E.O.13423 Sustainable Practices: Green Purchasing, Waste Management, and Chemicals Management". The three Parts include: Green Purchasing, Solid Waste Management (Reduction, Recycling, Electronics Management), and Toxic and Hazardous Chemicals Management.
(3) As of October 2011, the report is no longer required. A review of current contracts on a quarterly basis has replaced the report as it is a more consistent reporting vehicle on the regions success for tracking recycling and green purchasing activities.

In-house GSA Region 8 and Contractor Forms:

- Waste Manifests

5.0 Acronyms, Abbreviations, and Definitions

Acronyms	Meaning
CDPHE	Colorado Department of Public Health and Environment.
CEQ	Council of Environmental Quality
CFR	Code of Federal Regulations
CO	Contracting Officer
DFC	Denver Federal Center
COR	Contracting Officers Representative
EO	Executive Order
EPA	Environmental Protection Agency
GSA	General Service Administration
ISO	International Standards Organization
O&M	Operations and Maintenance
OFEE	Office of the Federal Environmental Executive
PBS	Public Building Services
RCRA	Resource Conservation and Recovery Act

Definitions:

Ash: Ash is the residue from burning wood, coal, coke and other combustible material. Ash usually consists of a mixture of fine powdery residue, cinders (except those produced in large quantities at steam generating plants), clinkers and small portions of unburned or partially burned fuel. Metal, glass and other combustible materials are sometimes found in ash. The residue from central or municipal incinerators should be classified as industrial refuse rather than ash.

Debris: Debris includes but is not limited to plaster, wall board, stone, ceramic tile, old fluorescent tubes and contaminated wood, etc. Contaminated wood includes scrap lumber, crates, wooden boxes, skids, etc.

Garbage: Garbage is the animal and vegetable waste resulting from handling, preparing, cooking and serving foods. In Federal Buildings, it originates primarily in cafeterias, snack bars and employee lunches. Garbage is composed largely of decomposable organic matter and its natural moisture content. Garbage normally includes only a small amount of free liquids. Collection vehicles must be water tight, however, to prevent theses liquids from leaking into the storage area or street. Garbage decomposes rapidly, particularly in warm weather, and may produce disagreeable odors. When carelessly stored, it often becomes a source of flood for rats and other vermin and a breeding place for flies and other insects.

Loose Trash: Loose trash consist of office rubbish bagged in plastic bags, gathered in mobile carts, or stored in trash rooms. Office refuse is predominantly paper materials 55-85%, on average 71%. Lunch and food wrappings, cans and glass, metal fasteners, plastic and some fabric materials make up the remainder of the office trash waste stream. The terms trash and rubbish are used interchangeably.

Refuse: Refuse comprises all of the solid wastes of the community which may include some semisolids such as pastes, slurries, and sludges which cannot be treated in a

conventional waste water treatment plant.

Rubbish: Rubbish consists of combustible and noncombustible solid waste materials (excluding garbage) from households, stores, offices and institutions. Combustible rubbish is composed of miscellaneous burnable materials. The organic components of rubbish are paper, rags, cartons, boxes, wood, bedding, rubber, leather, grass, leaves and yard trimmings, plus certain inorganic materials such as plastics. Noncombustible rubbish consists of miscellaneous solid waste materials that will not burn at ordinary incinerator operating temperatures (1300° F to 2000° F). It consists mostly of the inorganic component of rubbish such as tin cans, metals, dirt, ceramics and glass. Although noncombustible rubbish is chemically and physically stable, it is esthetically objectionable and may collect mosquito breeding water or harbor vermin if carelessly stored.

Solid Waste: Solid Waste refers to the useless, unwanted or discarded materials resulting from an agency's normal activities. Wastes may be solids, liquids or gases. Only solid wastes are classed as refuse. Liquid wastes are mainly dissolved and suspended matter. Atmospheric wastes consist of particulate matter such as dust, smoke, fumes and gases. The physical state of wastes may change in conveyance or treatment. Dewatered sludge from waste may be ground and discharged into sewers, becoming water-borne wastes; and fly ash may be removed from stack discharged and disposed of as solid or as water-borne wastes.

Special Wastes: Special wastes are hazardous by reason of their pathological, explosive radioactive, caustic or toxic nature. They require careful specialized handling to render them safe for an adequate decay period. These wastes will be responsibly disposed of by the institution generating them.

Universal Wastes: Are hazardous materials that are generated by very small to very large non-residential sources such as private businesses, government agencies and schools. These wastes are subject to wide spread use which makes their disposal difficult to control. Items that are considered universal wastes are: Batteries, pesticides, mercury-containing devices, mercury-containing light wastes, aerosol cans, electronic devices and components. See Recycling Management procedures for appropriate management.

White Goods: White goods are a class of bulky wastes which includes major appliances such as washers, dryers and refrigerator units. Special care must be taken with these items due to the presence of contaminating materials including Freon gas, asbestos and PCB's.

6.0 Procedure

State Specific Procedures & Requirements [refer to individual State Legal Reviews for details on Statues, Laws, and Rules]: State solid waste regulations pertain to Solid Waste Sites and Facilities, and therefore, do not apply to GSA.

STATE	REQUIREMENT
Colorado	These regulations pertain to Solid Waste Sites and Facilities. Establishes requirements for managing batteries, pesticides, mercury-containing devices and lighting wastes, aerosol cans, and electronic devices and components.
Montana	Encourages good management of solid waste and the conservation of natural resources through the promotion or development of systems to collect, separate, reclaim, recycle, and dispose of solid waste for energy production purposes where economically feasible and to provide a coordinated state solid waste and resource recovery plan.
North Dakota	These regulations pertain to Solid Waste Sites and Facilities. No requirements are listed. A concern is expressed to recycle and reduce waste.
South Dakota	These regulations pertain to Solid Waste Sites and Facilities. Elements of a waste reduction and recycling program exist.
Utah	These regulations pertain to Solid Waste Sites and Facilities. No requirements are listed. Waste reduction is encouraged by the state of Utah.
Wyoming	Wyoming solid waste laws and rules pertain to landfills.

Standardized Procedure:

Waste Management Services begin with the removal of trash from the work area by the custodial crew. The trash is then transported to a holding area which may include a trash room, container, or a compactor.

6.1 Storage of Office Trash:

- Trash should be picked up on a regular basis. Cleanliness is key to eliminating odors and not attracting vermin. Each custodial contact should include provisions for routine trash can cleaning including the removal of all incrustation caused by spillage, liquid, solid food and other materials.

- Each trash can, should be lined with a plastic bag and the plastic bag should be replaced as required. As a minimum, plastic bag liners must be 1.00 mls in thickness. Trash cans should be emptied in the evening or at least after the employees eat lunch. This will prevent lunch discards, including food and beverage containers, from being stored in the waste receptacles over night, the most active time for pest infestation.

- Trash containers, with plastic liners and tight fitting lids, dedicated to the storage of garbage should be provided in each office area. These containers must be washable and should be distributed at the rate of one per every 10 to 15 employees. These garbage containers must be emptied daily and washed on a regular basis.

6.2 Collection Equipment:

Drums and Carts: the types and construction of custodial trash collection equipment varies with individual requirements and preferences. The most

common types of collection equipment include the mobile 55-gallon drum used to collect trash at each work station and the mobile ¾ cubic yard to 3 cubic yard utility cart used as a collection of consolidation container for an entire sector of a building.

All containers must be constructed of a non-porous, leak proof material such as rubber, metal or plastic, including fiberglass. These materials will allow for thorough sanitizing and will prevent spillage. Tight fitting lids should be mandatory when storing garbage. Provisions for the routine cleaning and sanitizing of custodial trash collection equipment must be part of any custodial contract.

Storage and Removal of Refuse from the Building: containers used for the removal of office trash should be constructed of non-porous materials such as plastic, fiberglass, or metal to allow for thorough sanitizing and to prevent spillage. Tight fitting lids should be mandatory when storing garbage. Provisions for the routine cleaning and sanitizing of custodial trash collection equipment must be part of any custodial contract.

6.3 Trash and Debris Removal Service:

There are basically 4 types of trash and debris removal services typically used in Federal Buildings. They are as follows:

- Loose Trash Service
- Closed Container Service
- Compactor Service
- Debris Service

6.4 Loose Trash Service:

Loose trash service uses a rear end loader packer truck with a driver and one or more helpers.

The following are options for the services to be provided:

Choosing Loose Trash/Rear Packer Service: Rear Packer Service is used when access to a building is restricted by clearance, traffic congestion problems or there is no room for a container or compactor. Typically, a rear end loader or packer truck requires 11.5 to 13 feet clearance.

Characteristics of Rear End Packer Service: the packer truck servicing a building is most likely following a scheduled route (typical of the service provided the DFC). The driver will stop at several locations to load trash and will dump its load after the truck is full. The customer is either charged by the cubic yard or a monthly flat rate (what the DFC contract is currently billed for) based on historical data and experience. Fees include the use of the truck, the drivers and

helpers time, all hauling or transfer fees and the dumping or tipping fee at the land fill.

Loose Trash Storage: loose trash is usually stored in a trash holding room located on the ground or sub-level of a building. The storage area should preferable be located near a loading dock or ground level exit, convenient to the freight elevators. Where space is not available, trash may be stored loose in custodial carts on the loading dock, or other designated areas. Daily removal is recommended with no overnight storage.

6.5 Closed Container Service:

Detachable closed container service includes the furnishing of closed type containers, their removal and replacement, the dumping into trucks by the use of vehicles equipped with hoisting equipment, and the disposal of trash. Trucks are scheduled on a route and the charge is by the "pull". Each time a closed container is emptied, a fee is charged based on the volume of the container(s) and the frequency of service.

Closed Container: Closed containers are of a type to facilitate loading by personnel from the side or top from a normal standing position. They are of a type affording mechanical handling and hoisting for emptying into a front end loader truck for transport to the place of disposal (common of containers on DFC). The closed containers must be constructed to prevent the spillage of liquids or scattering of trash.

Front End Loader Truck: These trucks are equipped with a mechanical front end loading device which lifts the closed container and empties into the top of the truck's body. These trucks range in size from 30 to 44 cubic yards and compact the trash up to a 6 to 1 ratio. With their mechanical arms extended, the height requirement to unload a container is approximately 23 feet. Normal height clearance is 14 feet. The average truck requires approximately 45 feet to safely approach and load a 1 closed container.

Closed Container Service Fees: each time a closed container is emptied or "pulled", a fee is charged based on the volume of the closed container and the frequency of service. Charges include:

- Equipment rental
- Truck Usage
- Hauling or transfer fee
- Dumping or tipping fee

6.6 Compactor Service:

This efficient trash collection service uses a roll off type truck. Trash is compacted in a compactor and removed to a transfer station, landfill or

incinerator, emptied, and returned to its original location.

Stationary Compactor: A stationary compactor has its charge unit separate from its container. The two are held together by mechanical means. This equipment can compact materials up to a 3 to 1 ratio depending on the condition of the equipment and the types of materials being processed. Sizes generally range from 10 to 50 cubic yards. Because the charge unit is separate from the container, gaps of from 1 to 6 inches are not uncommon. Leaks and spillage may also occur during the removal operation. The container may come in either a rectangular or octagon configuration. The octagon shape is preferred because studies indicate that it compacts material up to 15% more efficiently.

Self Contained Compactor: the self-contained compactor has its charge unit as an integral part of the container. This equipment has the ability to compact material up to a 4 to 1 ratio. Capacity ranges from 10 cubic yards to 35 cubic yards. Because the charge mechanism and container are one unit, rodent infiltration, leakage and spillage of trash during removal operation is minimized.

Compactor Service Fees: Compactor service may be paid by the removal. Charges include:

- Equipment rental fee
- Use of Roll off truck and driver
- Hauling or transfer fee
- Dumping or tipping fee

It is recommended that the actual dumping fee be paid separate from the transfer fee using the disposal facility's certified weight tickets as documentation. This policy will insure fairness to both the Government and the contractor. Also, to insure contractors are reimbursed for their equipment costs. This will facilitate changes reduction and recycling efforts.

Building Requirements:

Access: the minimum clearance required by a roll-off trash truck servicing a self-contained compactor is 17'-6". The minimum clearance required by rectangular containers including the truck is 23'-10", while an octagon container including the truck requires 23'-3". With special equipment this height restriction may be reduced to 11 feet. The raised standard truck lift hoist is 22'-0" in height.

Pad Requirement: the concrete pad supporting the compactor must be 10'-0" wide and the length 5'-0" greater than the combined length of the compactor and container. It should be made of a minimum of 3000 PSI concrete, steel reinforced and 6" thick.

Electrical Service Requirement: all compactors require some type of electrical service. The electrical requirements will depend on the size and

capacity of the equipment being installed. A typical 20-30 yard compactor will require service for an electric motor 3/60/230-460, 10 hp, with electrical control voltage of 120 VAC.

Compactor Location: the compactor is normally placed on a paved area with unrestricted access to the street. Its location is usually beside a loading dock which has access to freight elevators. Roll-off trucks servicing compactors require approximately 65 feet unrestricted operating room to properly load and unload the compactors.

Determining Size Requirements: compactor come in a variety of sizes and applications of use. The primary determining factor is placement of the unit. Take into consideration the location of the unit, i.e. indoors vs. outdoors; height restrictions, accessibility in the loading dock or similar location, type of material disposed, etc. Manufacturers now provide a wide variety of sizes and types of compaction to fit just about any need.

6.7 Debris Service:

Debris service is the storage and removal of construction and demolition wastes. There are basically two types of debris service used in Government Buildings. They are loose debris service, using a stake body truck, and open-top container service, using a roll-off type truck.

6.8 Collection and Removal of refuse from work areas:

Trash Containers: trash should be picked up on a regular basis. Each custodial contract must include provisions for routine trash can cleaning to remove all encrustation caused by the spillage of liquids, solid foods and other substances. All trash cans must be lined with a plastic bag and the plastic bag should be replaced as required. Trash cans should be emptied in the evening or at least after the employees eat lunch. This will prevent lunch food discards from being stored in the waste receptacles over night, the most active time for pest infestation.

Carts and Drums: mobile carts and drums used for the removal of office refuse should be constructed of nonporous materials such as plastic, metal or fiberglass to allow for thorough sanitizing and to prevent spillage. Tight lids must be mandatory when storing garbage. Provisions for the routine cleaning and sanitizing of custodial trash collection equipment must be part of any custodial contract.

6.9 Waste Management Contract:

A trash and removal contract provides the equipment for the storage of trash and debris and its removal and dumping in a legal, environmentally responsible manner. There are several methods to accomplish this. These services may be

included in a lease, custodial contract, service contract for a single or multiple buildings or by group forces.

6.10 Equipment Features and Restrictions:

Equipment type and size including any special features, or requirements, must be specified by location to insure the most efficient cost effective waste management operation. Any access restrictions including clearances to interior loading docks or difficult traffic patterns must be identified. Also any locations requiring the installation of ramps, hand or foot rails to safely install compactor equipment should be listed. It should be made mandatory that perspective contractors make an on-site inspection of all buildings under contract in order to submit a responsible bid.

6.11 Inspection of Equipment:

The equipment selected for the waste management must meet the manufacturer's specifications, OSHA safety requirements, and local safety ordinances. Compactors should be inspected for proper operation and safety once each quarter by the contractor's qualified mechanic. The Government retains the right to monitor the operations of all equipment using hydraulic pressure gauges or computerized monitoring equipment. The Government may also require the contractor to demonstrate the proper operation of the compactor unit's hydraulic and electrical systems.

6.12 Maintenance of Equipment:

The contractor must maintain all equipment in good physical and mechanical condition without rust, damaged seams, tops, rollers or leaking hydraulics. Equipment must be maintained in a sanitary conditions Avoiding offensive odors and an unsightly appearance. If equipment is damaged or determined to be unacceptable by the Government due to mechanical failure, sanitary or esthetic reasons, the contractor should correct the deficiencies or replace the equipment in a specified period of time after notice. If a compactor becomes inoperative, the contractor must furnish an alternative means of trash collection such as a packer truck or container service until the necessary repairs have been completed.

6.13 Service Requirement Changes:

In order to take advantage of cost avoidance opportunities created by the Government's source reductions and recycling programs, a provision to drop or add locations and scheduled pickups including days and times should be included in all contracts. These schedule and service changes should only be made by notification of the contract specifications and signed by the contracting officer. Further savings in man hours and dollars may be achieved by altering custodial contracts. In buildings where the waste stream has been reduced by a minimum

of 40%, office trash pickup schedules may be changed to three days per week; Monday, Wednesday and Friday. Friday office trash pickup is mandatory to avoid the storage of trash in all recycling maintenance activities. These activities include the collection and storage of all recycling materials, removal of contaminants, and the cleaning of recycling collection and storage containers.

6.14 Disposal Facility:

It is the desire of the Government that all trash and debris collected as a requirement of waste hauling contracts be removed from Government premises and transported to a processing facility for the purpose of manufacturing or recycling to the extent available. Trash and debris not transported to a facility for manufacture or recycling must be disposed of only through a waste disposal facility that has been certified by the appropriate state or local agency for waste management, or by the Environmental Protection Agency.

6.15 Environmental Quality Assurances:

The contractor must comply with all State, County and City laws and regulations regarding sanitation and solid waste disposal. Monoxide eliminators must be furnished on all gasoline powered vehicles used to remove trash and debris from any pick-up site located inside of a building. The contractor should instruct his drivers to turn off the motor of all vehicles if it is not required for the loading operation. Also, the contractor must follow EPA regulations outlined in the code of Federal Regulations 40, Parts 241, 243 and 256.

6.16 Waste Analysis Survey:

Waste Analysis Surveys shall be conducted on an annual basis, if funding is available, to determine the volume, content and diversion rate of the waste stream.

6.17 Disposal Needs Assessments:

Disposal Needs Assessments should be conducted on an annual basis to ensure that each building is receiving the appropriate type of service based upon waste load out. Use of dumpsters and containers should be used in facilities that don't generate a lot of trash or for temporary situations such as construction related activities. For buildings that generate a large volume of trash daily, they should be provided with compactors and bailers. The equipment will allow for greater diversion rates of recyclables from waste and reduce dumping opportunities from tenants and visitors with unwanted items.

6.18 Periodic Container Inspections:

A GSA representative should conduct a periodic inspection of the containers to ensure that any materials being disposed of meet the definitions of loose trash and

debris. All items that are hazardous in nature, property (i.e. chairs, tables etc.), universal wastes (computers, electronics, etc.) and other prohibited items shall be removed from the buildings waste steam and managed according to standards and regulations for the regulated materials.

6.19 Tenant Notification:

Building occupants need to be notified on what items can be disposed of in regular trash and also notified on what items are prohibited. Appropriate signage and other control techniques should be used to reduce public access to the waste containers. Alternatives should be put in place to manage the regulated wastes.

6.20 Record Keeping

Record keeping is an important component of management of the Solid Waste Program. The more accurate the data, the easier it will be to determine whether or not changes need to made at various facilities regarding their waste management needs. The types of records that need to be maintained are as follows:

a. Weight Slips: Most service providers do have trucks available that have on board scales. A weight slip should be provided for each "pull". Ensure that the service provider submits weight slips per building once a month for data tracking purposes. By maintaining the weight slips, it is possible to ensure that the hauler does not charge the government for services not provided. These records should be kept for 3 years then disposed.

b. Billing Documents: These records should be kept with the contract file and cross referenced with the weight slips to ensure that what services are provided are exactly what is being charged to the Government. These records should be kept for 3 years then disposed.

c. Waste Analysis Surveys: These surveys are done on an annual basis. The resulting report should be kept on file with the building. Provide additional copies to the Regional Recycling coordinator. These records are to be kept for 3 years then disposed.

7.0 Records Management

Weight Slips
Billing Documents
Waste Analysis Surveys

8.0 References

- CDPHE: Colorado Hazardous Waste Regulations 6 CCR 1007-3 Part 273, Universal Waste Rule, June 2003

- CDPHE: Compliance Bulletin, Hazardous Waste, Universal Waste Rule, reviewed/revised June 2003

- GSA Waste Management Desk Guide

- Council of Environmental Quality, Instructions for Implementing Executive Order 13423, “Strengthening Federal Environmental, Energy, and Transportation Management”, March 28, 2007

- Executive Order 13101: “Greening the Government through Waste Prevention, Recycling and Federal Acquisition”, signed by President William J. Clinton on 14 September 1998.

- Executive Order 13423: "Strengthening Federal Environmental, Energy, and Transportation Management", signed by President George W. Bush on 24 January 2007.

- Executive Order 13514: "Federal Leadership in Environmental, Energy, and Economic Performance", signed by President Barack Obama on 5 October 2009.

- Paul A. Denett, Administrator, Office of Federal Procurement Policy, and Edwin Piñero, Federal Environmental Executive, Office of the Federal Environmental Executive, Letter: FY 2006 Reporting on Implementation of the Resource Conservation and Recovery Act, Section 6002, the Farm Security and Rural Investment Act, Section 9002, and Other Environmental Purchasing Requirements, November 2, 2006

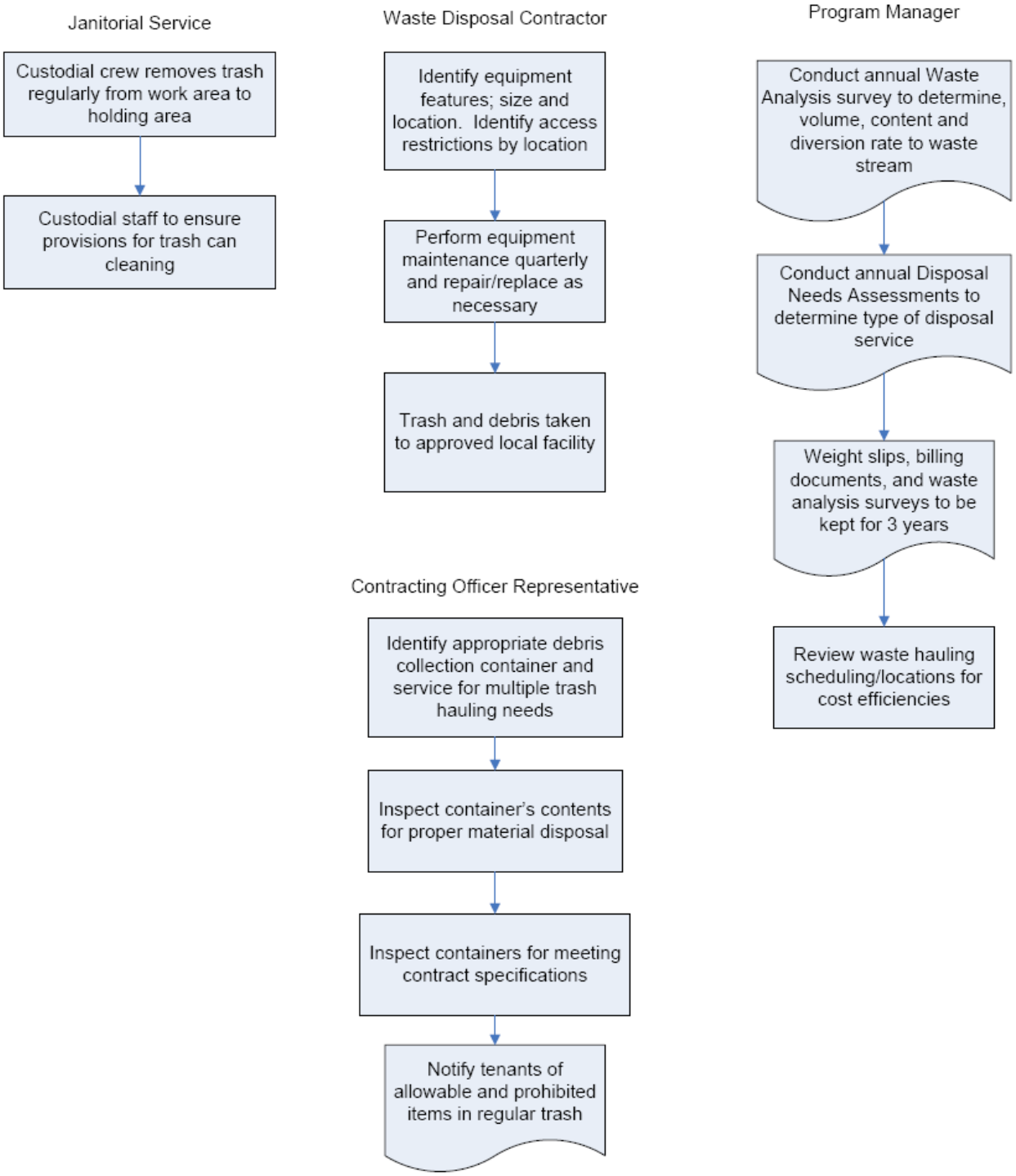
- Resource Conservation and Recovery Act (RCRA), 40 CFR 239, Subchapter I—Solid Wastes

- U.S. Environmental Protection Agency [Administering Agency], Resource Conservation and Recovery Act (RCRA) of 1976; 42 U.S.C. § 6901 et seq, as amended by the Federal Facility Compliance Act. [Statute]; 40 CFR 148, 239- 282 {283-299 revised} [Regulation]; Section 6002 of RCRA (42 USC 6962)

9.0 Appendices

Attachment A: Janitorial Service and Waste Disposal Contractor Flowchart

Document Control Information:	Approved & Dated:
Facility Solid Waste Management *"Month-Date-Year"*.doc	Robert Melvin March 19, 2010

Document Revision and Update:		
Revision Date	**Nature of Revision**	**Revision made by:**
12/06/2005	Working Draft	Marion Rule Buntyn
03/16/2006	Original Release	Marion Rule Buntyn
01/22/2010	Add ISO 14001 Document Controls, add state regulations, add Flowchart, outline Region 8 requirements, and update to address new federal regulations.	Robert Melvin
03/19/2010	Include RCRA and Farm Security and Rural Investment Act Report requirements	Marion Buntyn, Robert Melvin

ATTACHMENT A: Janitorial Service and Waste Disposal Contractor Flowchart