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## **Kennedy NASA Procedural Requirements**

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**Responsible Office:** Center Operations

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## **KSC SANITATION PROGRAM**

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**National Aeronautics and  
Space Administration**

**John F. Kennedy Space Center**

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### **Preface**

#### **P.1 PURPOSE**

This procedure describes basic Kennedy Space Center (KSC) Environmental Sanitation Program provisions.

#### **P.2 APPLICABILITY**

These provisions apply to all NASA elements under KSC jurisdiction and to associated contractors, sub-contractors, tenants, transients, principal investigators, and visitors.

#### **P.3 AUTHORITY**

- a. NPD 1800.2, NASA Occupational Health Program
- b. KNPD 1800.1, Environmental Health Program

#### **P.4 REFERENCES**

- a. Florida Administrative Code – Title 5E, Department of Agriculture
- b. Florida Administrative Code - Title 61C, Department of Business and Professional Regulation
- c. Florida Administrative Code - Title 62, Department of Environmental Protection
- d. Florida Administrative Code - Title 64E, Department of Health
- e. Florida Administrative Code - Title 65C, Department of Children and Family Services
- f. Florida Statute Chapter 487, Part I, "Florida Pesticide Law"
- g. Title 21 CFR Part 100, "Food and Drugs"
- h. Title 40 Code of Federal Regulations (CFR) Part 141, "National Primary Drinking Water Regulations"
- i. American Water Works Association (AWWA) C654-03, "Standard for the Disinfection of Wells"
- j. AWWA C651-99, "Standard for the Disinfection of Water Mains"
- k. AWWA C652-02, "Standard for the Disinfection of Water-Storage Facilities"
- l. U.S. Department of Health and Human Services, Public Health Service, Food and Drug Administration (FDA) - "Food Code"

#### **P.5 CANCELLATION or SUPERSESION**

This document supersedes KNPR 1870.1, Rev. Basic, KSC Sanitation Handbook.

#### **P.6 PROGRAM DEFINITIONS**

- a. Animal Care Facility - Any place where dogs, cats, or other animals regardless of numbers, are kept for boarding.
- b. Department - The Florida Department of Environmental Protection.
- c. Design Review - A review of properly prepared facility plans to include food service facilities, water system construction or modifications, and sanitary facilities for buildings.
- d. Disinfection - A process that destroys or irreversibly inactivates the vegetative cells of infectious microorganisms.
- e. Domestic Wastewater - Wastewater derived principally from dwellings, business buildings, institutions, and the like; sanitary wastewater; sewage.
- f. Easily Cleanable - A surface that is readily accessible and of such material, finish, and so fabricated that residue may be effectively removed by normal cleaning methods.
- g. Food Contact Surface - Those surfaces of equipment and utensils with which food normally comes in contact, and those surfaces upon which food may drain, drip or splash back into surfaces normally in contact with food.

- h. Food Manager Certification - A written certification test which requires food managers to demonstrate a basic knowledge of food protection practices.
- i. Grade - The general environment not directly connected to surface waters; e.g., ditches, canals, streams, rivers, etc. Usually a land area where discharged water is expected to percolate to ground water as opposed to flowing to surface waters.
- j. HACCP - Hazard Analysis Critical Control Points (HACCP) is a prevention based food safety system. HACCP systems are designed to prevent the occurrence of potential food safety problems. This is achieved by assessing the inherent risks attributable to a product or process and then determining the steps necessary that will control the identified risks.
- k. Labeling - Sources of packaged food must be labeled in accordance with Florida Administrative Code and the Food and Drug Administration Food Code. Proper labeling includes name of manufacturer, and an accurate statement of the contents.
- l. Lead and Copper Rule - An EPA mandated survey of lead and copper levels in drinking water as measured at the point of use of taps and spigots.
- m. Leftovers - Food items that were left over from the serving line and/or were prepared for service, were placed in hot or cold holding facility pending service, or were not served and were returned to refrigerated unit for use at another time. This differs from food items prepared in advance for service at another time.
- n. Maximum Contaminant Level (MCL) - Means the maximum permissible level of a contaminant in drinking water which is delivered to any user of a water system. MCL's are established by Title 40 CFR National Revised Primary Drinking Water Regulations and are regulated by the U.S. Environmental Protection Agency (EPA).
- o. Permit - The legal authorization to engage in or conduct any construction, operation, modification, or expansion of any installation, structure, equipment, facility, or appurtenance, thereto, the operation or activity of which will reasonably be expected to be a source of pollution.
- p. Permit Condition - A statement or stipulation issued with a permit with which compliance is necessary for continued validity of the permit.
- q. Potentially Hazardous Food - Means a food that is natural or synthetic and requires temperature control because it is in a form capable of supporting rapid or progressive growth of infectious or toxigenic microorganisms.
- r. Primary Drinking Water Standard - The presence of a contaminant in drinking water, which at high levels, anticipated adverse health effects may occur.

- s. Registry - Means a current record, either a ledger or a card, indicating at minimum, animal's name, description, owner's name, owner's address, owner's phone number, veterinarian's name and phone number, and vaccination history.
- t. Sanitize - The effective bactericidal treatment of clean surfaces of equipment and utensils by an approved process which provides enough accumulated heat or concentration of chemicals for enough time to reduce the bacterial count, including pathogens, to a safe level.
- u. Secondary Drinking Water Standards - The presence of a contaminant in drinking water which at high levels will affect the aesthetic quality related to customer's acceptance of the water.
- v. Temporary Event - A food service that operates in conjunction with a single event or celebration.
- w. Vector - A carrier organism that is capable of transmitting a pathogen from one organism to another.
- x. Vermin - Any of various small animals or insects that are destructive, annoying, or injurious to human health, plants, or animals in the environment.
- y. Water Quality Parameters - An EPA mandated survey of finished distribution water for corrosive parameters.
- z. Water System Construction Permit - The legal authorization granted by the Florida Department of Environmental Protection (FDEP) to construct, expand, modify, or make alterations to any Potable Water Distribution System.

## **PROCEDURES**

### **CHAPTER 1. Kennedy Space Center Sanitation Program**

#### **1.1 Program Elements**

The KSC Environmental Sanitation Program is a key element in the overall Environmental Health Program established by KNPD 1800.1 to protect the health and environment of all employees. The Program establishes a preventive approach to planning and comprehensive review of all proposed projects, processes, and procedures to eliminate or minimize, in advance, as many potential health hazards as possible. The Sanitation Program activities are centered around formal design/operational document reviews and periodic and special surveys and include, but are not limited to:

- a. Rabies/animal care inspections.
- b. Food service sanitation compliance inspections.
- c. Potable water compliance monitoring.

- d. Monitoring of chemical toilets.
- e. Launch/landing support.
- f. Disease vector surveillance.
- g. Facility sanitation

## **1.2 Organization**

The KSC Environmental Sanitation Program is one of several elements in the overall KSC Environmental Health Protection Program. Overall authority is delegated to the Sanitation Officer by the KSC Environmental Health Officer (EHO).

## **1.3 Responsibilities**

1.3.1. KSC Pollution Control/Sanitation Officer - For Environmental Sanitation, the Environmental Health Officer's designated representative is the KSC Pollution Control/Sanitation Officer (PCSO). The PCSO is responsible for managing the implementation of, evaluating, making recommendations for, and providing general surveillance over the KSC Sanitation Program to ensure compliance with regulatory and Agency requirements for the control of environmental sanitation matters. Specifically, the PCSO is responsible for:

- a. Acting as the functional representative of the Environmental Health Officer on environmental sanitation matters and providing technical guidance to KSC organizations on related matters/concerns.
- b. Monitoring all installation food services for compliance with applicable local, state, and federal regulations.
- c. Conducting compliance inspections and monitoring of the Center's potable water supplies, to include chemical and bacteriological surveillance.
- d. Investigating complaints associated with sanitation concerns; e.g., potable water, food, insects, animal bites, etc.
- e. Coordinating with outside agencies, as applicable, on environmental/health-related matters.
- f. Notifying NASA/KSC Public Affairs of any major environmental sanitation incident.

1.3.2 Heads of primary organizations, contract managers, and contract technical managers - responsible for ensuring compliance with the provisions of this Handbook on the part of civil service and contractor personnel which support programs for which they have primary responsibility.

1.3.3 The Joint Base Operations Support Contractor (JBOSC) – responsible for providing Sanitation services, to the extent provided by contract, and will act as the designated representative for the KSC PCSO.

- a. Ensure all KSC Sanitation Program elements are implemented and maintained under the direction of the KSC PCSO.
- b. Provide for design/procedure reviews, technical assistance, and consultation to all KSC organizations on matters concerning the Environmental Sanitation Program.
- c. Perform monitoring activities for regulatory compliance and identify and assess the hazard potential of real or suspected food or potable water-contamination which may pose a threat to an individual's occupational health and well-being or the environment.
- d. Maintain accurate and complete survey data records.
- e. Provide Sanitation support as required for launch and/or landing operations.
- f. Perform onsite compliance inspections/surveys of food facilities, exercise facilities, potable water system, and chemical toilets.
- g. Provide technical consultation in the preparation of Federal and/or State permit applications for environmental sanitation activities and maintaining copies of those applications and permits, with associated records, to ensure compliance monitoring and reporting is carried out in a timely manner.
- h. Identify and provide technical support concerning training and certification requirements in the Environmental Health aspects of food service sanitation for all food service employees.

## **CHAPTER 2. General Provisions**

### **2.1 Sanitation Provisions**

The following general provisions are provided to assist organizations in identifying requirements of the KSC Sanitation Program.

2.1.1 All food served or vended for consumption shall be stored, handled, prepared, and dispensed in a manner, which ensures food will be wholesome and safe.

2.1.2 Drinking water provided for consumption shall be maintained in a potable manner. Nonpotable water sources shall be identified and prevented from being provided as a drinking water or bathing water source.

2.1.3 Bathroom facilities shall be provided, and they shall be adequately maintained in a clean, sanitary and properly functioning manner.

2.1.4 Insects, pests, and animals shall be controlled to prevent the creation of a health threat to people.

2.1.5 Waste products generated from Center activities shall be handled, stored, and disposed of in a manner that protects the health and well being of people and the environment.

## **2.2 Constraints**

Constraints imposed upon substances/operations subject to the provisions of this Handbook will be no less than those required by applicable regulatory authorities and will include any special, additional constraints deemed necessary by the KSC PCSO.

## **2.3 Records**

For internal record keeping, KSC Environmental Health Protection forms will be utilized where available. Records, required by permit conditions, must be kept as specified by the permit. Records required by State or Federal Code will be kept in accordance with the code and applicable NASA regulations. All records will be available for review by federal, state and/or local inspectors.

## **2.4 Exemptions**

In some instances, substances/equipment and/or operations subject to the provisions of this Handbook may be exempted from some or all the KSC Environmental Sanitation Program requirements. All such exemptions shall be on a case-by-case basis following review by the KSC PCSO. Requests for exemption/deviation will be submitted to the KSC PCSO in writing, for approval, prior to their initiation.

## **2.5 Surveys and Inspections**

The KSC PCSO or designee will survey and/or inspect various areas on a routine basis to monitor for continuing compliance with the approved procedures and controls of the KSC Sanitation Program. Where noncompliance exists, the responsible organization for that activity shall correct all discrepancies.

## **2.6 Modification of Facilities/Equipment**

Changes that may affect the KSC Environmental Sanitation Program requirements will be coordinated with the KSC PCSO, or designated representative, in advance.

## **2.7 Waivers, Deviations, and Suspensions**

The KSC PCSO on a case-by-case basis may grant interim authorizations of waivers or deviations from requirements described by this Handbook. Authorizations may be withdrawn at any time for violations of the granted waiver or other regulatory noncompliance.



## **2.8 Accidents, Incidents, and Emergencies**

All real or suspected accidents, incidents, or emergencies involving, food or water contamination, animal bites (rabies exposures), etc., must be immediately reported to the KSC PCSO or a designated representative.

## **2.9 Assigned Controls**

In addition to compliance with applicable federal, state, and local regulations, the KSC PCSO as a result of unique or operational characteristics may assign additional requirements/controls.

## **CHAPTER 3. Food Service Sanitation**

### **3.1 General**

This chapter outlines the basic methods to prevent outbreaks of foodborne illness by assuring all food served or vended at KSC will be clean, wholesome, and free of pathogenic organisms as well as organic or inorganic toxins (including those of bacterial origin). It applies to transporting, storing, preparing, serving, vending, of food used at KSC. It applies equally to all appropriated funds, nonappropriated funds, organizational, contractor, and private association food activities held on KSC. In general, the provisions and guidelines prescribed herein are consistent with such provisions specified in the United States Department of Health and Human Services, Food and Drug Administration's (FDA) Food Code and applicable regulations of the State of Florida.

### **3.2 Organizational Functions**

3.2.1. The KSC PCSO or designated representative shall:

- a. Conduct a continuing program of inspection and surveillance in all areas where food is stored, prepared, served, transported, vended, or consumed. Such inspections are performed under the guidelines established by this handbook and the FDA Food Code.
- b. Cause the removal from service or sale all food items suspected to be contaminated, unwholesome, or otherwise deemed unfit for consumption.
- c. Review properly prepared facility design packages that include proposed menu, equipment specifications, and equipment layout, for any food facility to be newly constructed, remodeled, or reopened.
- d. Review plans for temporary events and provide recommendations concerning food safety.

3.2.2. KSC Organizations storing, preparing, transporting, or serving food will:

- a. Assure all areas under their control meet or exceed the minimum acceptable requirements established by NASA KSC directives, including this Handbook, as well as applicable federal and state regulation for the safe handling of food.

- b. Develop and implement a HACCP food safety plan unique to each facility, which includes a program of self-inspection and continuous improvement. It is essential that the unique conditions within each facility be considered during the development of the plan. A generic plan is not acceptable. The food safety plan shall identify potential hazards of significance and include preventive measures to insure or improve food safety. Critical Control Points shall be identified and preventive measures incorporated into recipes.
- c. Insure that the KSC PCSO, or designated representative, is promptly notified in the event of an emergency occurrence such as a fire, flood, power outage, or similar event which might result in the contamination of food, or that might prevent potentially hazardous food from being held at safe temperatures.
- d. Provide to the PCSO or designated representative properly prepared facility plans for review concerning proposed food service facilities, redesigned facilities, facilities that intend to make significant changes to the existing menu or theme. Facility plans shall include menu plans, and equipment specifications.
- e. Provide training and maintain certification requirements for all food service employees as identified by the PCSO or designated representative.
- f. Maintain the most recent copy of the KSC inspection form "Food Services Sanitation Checklist," and have it available for review by the PCSO or designated representative.
- g. Ensure all food handlers report to the Occupational Health Facility (OHF) when any symptoms of infections and/or communicable disease are present.
- h. Food management supervision will ensure that all food handlers that have been absent from work due to illness shall report to the OHF for clearance prior to returning to work.

3.2.3 Organizations operating vending machines that dispense food or beverages will:

- a. Provide to the PCSO or designated representative a list of vending machines and their locations.
- b. Assure that all areas under their control, which includes storage, transport and vending, meet or exceed the minimum acceptable requirements of this handbook and the FDA Food Code.
- c. Assure that foods are properly labeled and are removed from the vending machines prior to expiration date.
- d. Establish and maintain a vending machine cleaning schedule and a method of cleaning approved by the KSC PCSO.

3.2.4 Food service personnel shall report information in a manner that allows the

supervision in charge to coordinate with Center Occupational Health representatives and to prevent the likelihood of foodborne disease transmission, including:

- a. Employee diagnosed illness of Salmonella Typhi, Shigella, Escherichia Coli 0157:H7 or Hepatitis.
- b. Employee's symptoms of gastrointestinal illness such as diarrhea, fever, vomiting, jaundice or sore throat with fever.
- c. Employee has boil or infected wound containing pus or a wound that is open or draining and is on the hands or wrists or exposed portions of arms.
- d. The employee resides in the same household as a person who is diagnosed with a disease caused by S. Typhi, Shigella, E.Coli 0157:H7 or Hepatitis.
- e. The employee resides in the same household as a person who attends or works in a setting where there is a confirmed disease outbreak caused by S. Typhi, Shigella, E.Coli, or Hepatitis.

### **3.3 Equipment/Facility Design Features**

The design of a food establishment will meet the principles outlined in the Florida Administrative Code, and the FDA Food Code will be followed, unless they cannot be technically accomplished. The KSC PCSO shall approve the design deviation.

### **3.4 Inspection**

The PCSO or designated representative shall perform periodic and special inspections of all food service facilities and vending operations to ensure compliance with applicable regulatory requirements and the provisions of this Handbook. These inspections shall occur anytime during operational hours, but shall not disrupt the selling of food.

### **3.5 Storage Techniques**

Foods left over from serving lines will not be frozen. They must be wrapped/containerized, labeled, dated, and refrigerated. Food not subject to further washing or cooking before serving shall be stored in a way that protects it against cross contamination from food requiring washing or cooking (e.g., store raw vegetables above raw meats). Separate different types of raw animal products by use of different containers, partitions, shelving, or other approved means.

### **3.6 Preparation and Storage of Sandwiches**

The preparation and storage of sandwiches shall adhere to the following requirements:

- a. Unless a sandwich is made for an individual customer to consume immediately, it is considered a prewrapped sandwich.
- b. All prewrapped sandwiches must be wrapped individually and marked with date

of preparation.

- c. When sandwiches are made with potentially hazardous ingredients, and are to be sold or dispensed as refrigerated items, chill the potentially hazardous ingredients to 41°F or below before making sandwiches. When possible, use chilled or frozen bread.
- d. Never prepare sandwiches from leftover ingredients.
- e. Sandwiches must not be reworked, rewrapped, remarked or relabeled to extend their shelf life. Outdated sandwiches must be disposed as garbage.
- f. Heated sandwiches - Sandwiches to be dispensed from a heated holding unit must be heated rapidly by infrared, microwave, or similar type oven prior to placing them into a holding unit for sale. Sandwiches to be dispensed from a heated holding unit will be maintained at a minimum temperature of 140°F and will have a shelf life of 5 hours.
- g. Refrigerated sandwiches- Sandwiches to be dispensed from refrigerated holding unit shall be maintained at not less than 41°F and will have a shelf life of 96 hours. Sandwiches shall not be stored in direct contact with ice.

### **3.7 Vermin Control**

Effective control measures shall be taken to protect against entry into the food establishment, and the breeding or presence on the premises, of rodents, flies, roaches, and other pests. There shall be an ongoing insect control-spraying program using only PCSO-approved chemical pesticides, applied by personnel who are licensed in the State of Florida. This program will be monitored by JBOSC Environmental Sanitation on a periodic basis.

### **3.8 Food Service Sanitation Education**

Prior to employment, all food service personnel must have received instructions in the principles and practice of food service sanitation.

Managers who are responsible for the storage, preparation, display, and serving of foods to Center personnel shall demonstrate their knowledge of foodborne disease prevention, application of HACCP principles and of the FDA Food Code by being certified as a food protection manager. Certification as a food protection manager shall be obtained through passing a test that is part of an accredited program approved by the KSC PCSO.

### **3.9 Vending Operations Sanitation**

Food exposed for sale, offered for sale, sold through vending machines and offered to patrons of vending machines shall be sound and free from spoilage, filth, or other contamination and shall be safe for human consumption. Commissaries shall be inspected and approved by the PCSO or designated representative. Sources approval is authorized through the use of inspections and/or approval of the Federal, state or local health authorities as appropriate.

- a. Processing, Packing, and Dispensing - Expiration dates are acceptable, provided an official letter of the coding system is provided to the KSC PCSO or designated representative by the vendor. Similarly, chilled dairy products must be coded and removed from the machine within 7 (seven) days after packaging or by the expiration date.
- b. Transporting Food, Equipment, and Supplies - While the food is in transit to the vending location, it must be protected from contamination and temperature fluctuations. Submersing food, milk, etc., in liquid and/or ice is prohibited. Potentially hazardous food shall be maintained at a proper temperature of 41°F or below or 140°F or above, as applicable, at all times during transportation. In addition, Protect single-service containers, and surfaces of equipment, containers, and devices that contact food, from contamination while in transit.
- c. Locating, Cleaning, and Providing Water Supply and Waste Disposal - Locate vending machines in areas to prevent food contamination and to protect them from leakage or condensation. The location must be easy to clean; free from vermin, well lighted, and well ventilated. The area must be cleaned daily. If the vendor does not visit the vending machine area daily, the organization requesting the vending service is responsible for cleaning the area when the vendor does not.
- d. Clean and sanitize vending machines - Machines dispensing cold drinks, hot drinks, or soups (not in bottles or cans) - at each servicing, or at least twice a week; Sandwich and milk machines - at least once a week; Machines dispensing cold drinks (in bottles or cans), gum or candy - at least once a month. A record of such cleaning and sanitizing operations shall be current for at least the past 30 days.
- e. Waste Containers – Each vendor must provide self-closing, leak proof, easily cleaned waste containers of adequate capacity at the vending location and remove trash and waste from vending machine location in a timely manner.
- f. Vending Machine Standards - All vending machines, except those that vend only beverages in bottles or cans, must meet current standards of the National Sanitation Foundation (NSF) by displaying the NSF Seal of Approval or by having a listing in the current edition of "Listing of Food Service Equipment," published by the National Sanitation Foundation.

## **CHAPTER 4. Surveillance of Potable Water**

### **4.1 General**

This chapter contains requirements to ensure all KSC potable water supplies are in compliance with Federal, state, and local regulations. In addition, the chapter contains provisions for water line disinfection, contaminant evaluation, and the removal from service points of consumption that exceed certain Maximum Contaminant Levels.

## 4.2 Organizational Functions

The KSC PCSO shall maintain a continuing surveillance of all potable water operations at KSC, including sampling and providing for bacteriological and chemical analysis of all potable water supplies for compliance with NASA, Federal, State, and local drinking water standards. In addition, the organizations responsible for the operation and maintenance of the KSC potable water system will ensure compliance with the provisions of this Handbook and applicable federal, state, and local regulations.

## 4.3 Bottled Water

Bottled water may be authorized on a case-by-case basis, for use at sites on KSC and NASA facilities on CCAFS not supplied with plumbed potable water. Only bottled water procured under KSC contract will be placed in bottled water dispensers. Under no circumstances, will empty bottles be refilled by anyone other than the processor. Standards for bottled water are outlined in Florida Administrative Code. All organizations procuring bottled water will ensure that:

- a. Water dispensers will be located in proximity to other sanitary facilities and will be available to all users in the assigned area.
- b. No dispensers shall be provided, nor should bottles of water be stored, in areas where general hazards or contamination of any kind (e.g., noise, chemical gases, etc.) pose a threat to users under normal operations.
- c. Subcontractors furnishing bottled water will provide routine chemical and microbiological laboratory analysis reports for bottled water delivered to the Center.
- d. Bottled water dispensers are maintained in a sanitary condition.
- e. All dispensers have equipment numbers.
- f. The bottled water subcontractor provides three bottles of water randomly selected from the shipment to the PCSO, or designated representative, once a month for bacteriological analysis of the delivered bottled water.
- g. Recall of the suspect bottled water and/or other appropriate action when notified by the PCSO of contamination detection.

## 4.4 Well Water

Well water is available for limited use at certain isolated locations on KSC. The PCSO, or designated representative, samples each of these wells on a quarterly basis for bacteriological quality. Unless specified by the PCSO, the well water is not considered to be potable and shall not be used for potable purposes, e.g., drinking water, bathing, washing of eating utensils, etc. Disinfection of wells shall be in accordance with AWWA Standards.

#### **4.5 Water Main Taps/Saddles**

Prior to installing a service saddle or tapping into a potable water line, the KSC PCSO, or designated representative, must be contacted to monitor the event.

#### **4.6 Disinfection Criteria for Potable Water System Installation, Repair or Modification to Water Mains**

Disinfection procedures shall be according to AWWA Standards. Upon completion of disinfection and flushing to a background residual, water samples will be collected by the KSC PCSO, or designated representative, and submitted to a certified laboratory for coliform bacteria analysis. No system may be placed into service prior to the satisfactory results of the bacteriological analysis.

- a. For water lines that have remained full of water under pressure during the repairs, no disinfection is required. The KSC PCSO, or designated representative, shall collect water samples for bacteriological examination after repairs to document the effectiveness of the procedure used.
- b. For water lines that have been dewatered (in whole or in part) during the repair, AWWA standard C651 for disinfecting water mains shall be used.
- c. Water samples will be collected by the KSC PCSO, or designated representative, after the repairs are completed. The water shall not be considered acceptable for human consumption until the bacteriological quality has been proven to be acceptable.

#### **4.7 Water System Construction Permits**

The PCSO or designated representative shall provide verification and sampling as per the specific conditions section of the Florida Department of Environmental Protection (FDEP) Water System Construction Permits.

#### **4.8 Compliance Monitoring**

The PCSO or designated representative shall provide monitoring of the finished water and points of consumptive use for Primary and Secondary Drinking Water Standards in accordance with the monitoring cycle established by the regulatory authorities.

#### **4.9 Disposing of Heavily Chlorinated Water**

The environment to which chlorinated water may be discharged shall be approved by the NASA Environmental Program Branch.

#### **4.10 Backflow Prevention Devices**

Backflow prevention devices must be installed on all water system connections of nonpotable water lines to potable water lines that may result in cross contamination and therefore pose a threat to human health.

## **CHAPTER 5. Facility Sanitation**

### **5.1 General**

This chapter identifies the basic provisions for the maintenance, inspection, and monitoring of sanitary conditions in the work place, exercise facilities, and in facilities housing animals.

### **5.2 Organizational Functions**

a. The PCSO or designated representative maintains continuous surveillance of sanitary conditions in the workplace, exercise facilities and facilities that house animals. In addition, the PCSO or designated representative shall report investigative results to appropriate facility managers and verify corrective has been action taken.

b. The organizations responsible for the operation and maintenance of facilities will ensure compliance with this handbook and applicable federal, state, and local regulations. In addition, request PCSO approval for the type, formulation, and method of application of all new pesticides to be used at KSC.

### **5.3 Sanitary Conditions in the Work Place**

Workplaces shall be kept clean and free from recognized health threats. Pests shall be controlled to the greatest extent possible through the use of preventive pest control measures. However, pest control measures shall be employed in a manner that does not endanger personnel or the environment. Pesticides, when used, will be limited to those offering the least possible harm to persons and the environment that accomplishes the desired goal.

### **5.4 Toilet Facilities**

An adequate number of toilet facilities shall be provided in the workplace to ensure compliance with regulatory requirements. Where portable toilet facilities must be provided, hand-washing facilities shall be provided.

### **5.5 Sanitary Conditions In Exercise Facilities**

Exercise facilities shall be maintained in a sanitary manner and facility managers shall correct all unsanitary conditions reported to them. In addition, exercise facility managers shall provide to the patrons sanitary supplies including; individually wrapped or dispensed body soap, and individual clean towels.

### **5.6 Facilities housing animals**

5.6.1 The PCSO or designated representative shall inspect facilities that house animals on quarterly basis and report the results to the facility manager.

5.6.2 Managers of facilities that house animals shall maintain the premises in a



sanitary manner and shall correct all unsanitary conditions reported to them. In addition, Managers of facilities that house animals shall ensure the protection, safety, and welfare of animals entrusted to them and at a minimum provide the following:

- a. All animals are adequately fed on a daily basis.
- b. Fresh water is available to all animals at all times.
- c. Animal enclosures are of sizes appropriate to the size of the animal held so that the animal may freely stand normally erect and have enough floor space to turn around without obstruction.
  - (1) All animal feces and other wastes are removed from the animal enclosure area on a daily basis and disposed of in an approved sewage system.
  - (2) A program exists for the effective control of insects, vermin, and parasites within the facility.