# DOCUMENT HISTORY LOG

<table>
<thead>
<tr>
<th>Status (Baseline/Revision/Change/Revalidation/Canceled)</th>
<th>Document Revision/Change</th>
<th>Effective Date</th>
<th>Description</th>
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<tr>
<td>Baseline</td>
<td></td>
<td>8/11/2009</td>
<td>On 8/29/11 with approval of OPRD, administrative changes made at 1. Purpose to clarify and add authority citation, at P.2 Applicability to update to latest standard statement, at P.4 Applicable Documents to delete uncited documents, at P.5 References to move content to Appendix A in compliance with MWI 1410.1, at 1. Definitions to delete un-cited terms, at 2. Responsibilities to delete duplicative (shall) requirements, and at 3. Procedures to delete duplicative (shall) requirement.</td>
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<tr>
<td>Change</td>
<td>2</td>
<td>2/8/2013</td>
<td>On 6/29/15, at the request of the OPRD, an administrative change was made to updated link in Appendix D. Records.</td>
</tr>
<tr>
<td>Revision</td>
<td>A</td>
<td>10/3/2014</td>
<td>Total re-write. Re-formatted to comply with new required template per MPR 1410.2J &amp; as instructed in MWI 1410.1F.</td>
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<tr>
<td>Change</td>
<td>1</td>
<td>6/29/2015</td>
<td>Added language in 2.6.2 to address repeat critical violations. Updated editorial in P.3, P.4, P.6 and Appendix D.</td>
</tr>
<tr>
<td>Revision</td>
<td>B</td>
<td>7/7/2017</td>
<td>Updated reference from “temporary long term vendors” to “Food Trucks” at 1.3, removed 1.4 MSFC temporary vendors in permanent locations or temporary vendors in temporary locations, and MSFC Form 4520. Requirement in 2.12.5 to sanitize at least monthly machines dispensing cold drinks in bottles or cans has been removed.</td>
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PREFACE

P.1 PURPOSE

To establish responsibilities and requirements for the MSFC Sanitation Program in accordance with NPR 1800.1.

P.2 APPLICABILITY

a. This MPR applies to Center personnel, programs, projects, and activities, including contractors and resident agencies to the extent specified in their respective contracts or agreements. (“Contractors,” for purposes of this paragraph, include contractors, grantees, Cooperative Agreement recipients, Space Act Agreement partners, or other agreement parties.)

b. This MPR does not apply to the Michoud Assembly Facility.

c. This MPR applies the following: all mandatory actions (i.e., requirements) are denoted by statements containing the term “shall.” The terms: “may” or “can” denote discretionary privilege or permission, “should” denotes a good practice and is recommended, but not required, “will” denotes expected outcome, and “are/is” denotes descriptive material.

d. This MPR applies the following: all document citations are assumed to be the latest version unless otherwise noted.

P.3 AUTHORITY

NPR 1800.1, NASA Occupational Health Program Procedure

P.4 APPLICABLE DOCUMENTS AND FORMS

a. MPR 4000.2, Property Management

b. U.S. Food and Drug Administration (FDA) Food Code

c. Alabama State Board of Health, Bureau of Environmental Services, Food Establishments Sanitation, Code 420-3-22,

d. AWWA Standard C651, Disinfecting Water Mains

e. MSFC Form 4192, MSFC Food Service Inspection Report
P.5 MEASUREMENT/VERIFICATION

None.

P.6 CANCELLATION


Electronically approved by

Jody Singer
Director
CHAPTER 1. RESPONSIBILITIES

1.1 MSFC Environmental Engineering and Occupational Health (EEOH) representatives:

1.1.1 Conduct a program of inspection and surveillance in all vendor-provided food service areas (i.e., cafeterias, concessionaires, and snack bars) where food is stored, prepared, served, or consumed.

1.1.2 Cause the removal from service or sale all food items suspected to be contaminated, unwholesome, or otherwise deemed unfit for consumption.

1.1.3 Review facility design packages concerning any food facility to be newly constructed, remodeled, or reopened.

1.1.4 Review plans for a temporary event and provide recommendations concerning food safety.

1.1.5 Provide appropriate assistance with the procurement of equipment to be used for food storage or preparation.

1.1.6 Provide annual medical surveillance monitoring for all individuals who are routine food handlers.

1.1.7 Investigate complaints associated with sanitation concerns; e.g., potable water, food, insects, animal bites.

1.1.8 Coordinate with outside agencies, as applicable, on sanitation/health-related matters.

1.2 MSFC long-term vendors in fixed locations:

1.2.1 Assure all areas under their control meet or exceed the minimum acceptable requirements established by NASA MSFC directives, including this document, as well as applicable Federal and State regulations for the safe handling of food.

1.2.2 Develop and implement an Hazard Analysis Critical Control Points (HACCP) food safety plan unique to each facility, which includes a program of self-inspection and continuous improvement.

1.2.3 Identify and immediately correct critical control points which include food from unsafe sources, inadequate cooking temperatures, improper holding temperatures, contaminated equipment, and poor personal hygiene and incorporate preventive measures into recipes.

1.2.4 Assure that EEOH or designated representative is promptly notified in the event of an emergency 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.
1.2.5 Provide to EEOH or designated representative facility design packages for review. This would include proposed food service facilities, redesigned facilities, or facilities that intend to make significant changes to the existing menu or theme.

1.2.6 Provide training and maintain certification requirements for all food service employees.

1.2.7 Maintain the most recent copy of the MSFC inspection form 4192 and have it available for review by the EEOH or designated representative.

1.2.8 Assure that all areas under their control, which includes storage, transport, and vending, meet or exceed the minimum acceptable requirements of this MPR and the Food and Drug Administration (FDA) Food Code.

1.2.9 Establish and maintain a beverage dispensing machine cleaning schedule and a method of cleaning.

1.2.10 Ensure food service personnel receive their annual mandatory physical.

1.2.11 Ensure food service personnel report health related information in a manner that allows the supervision in charge to coordinate with EEOH representatives and to prevent the likelihood of foodborne disease transmission.

1.2.12 Ensure that appropriate housekeeping measures (following such events) are applied to ensure a sanitary workplace environment.

1.2.13 Ensure all chemical sanitizers are used at the manufacturer’s recommended use concentrations and, if applicable, be used at the manufacturer’s specified sanitizing pH and temperature. If no manufacturer specifications, follow procedures in 2.5 to determine the efficacy of the sanitation system.

1.3 **Food Trucks:**

1.3.1 Provide to EEOH a copy of the most recent inspection by the Alabama Department of Public Health (ADPH) or Madison County Health Department.

1.3.2 Affirmatively indicate in writing that they have received, reviewed and are compliant with sections 1.2.1 through 1.2.4, 1.2.6, 1.2.8, 1.2.9, 1.2.11, and 1.2.12 of this document.

1.3.3 Provide a mechanism for hand washing with running water while at MSFC.

1.3.4 Provide a mechanism for cleaning and sanitation of food containers and utensils using running water unless soiled items are segregated and taken to an off-site location for cleaning.

*NOTE: If off-site preparation/cleaning is done, ADPH/Madison County inspection record is required, if applicable.*
1.3.5 Are inspected by EEOH prior to serving food if the latest ADPH or Madison County inspection indicates a score less than 90 or any critical violations.

1.3.6 Provide access at any time to EEOH personnel to their food service location and any records required under ADPH, Madison County, or section 1.3.2 of this document.

1.3.7 Are inspected by EEOH, ADPH or Madison County Health Department at least every 6 months. Proof of inspection is an MSFC Form 4192 or ADPH/Madison County inspection report.

1.4 **MSFC Facilities Management Office:**

1.4.1 Provides appropriate custodial and pest control services.

1.4.2 Performs repairs, maintenance, modification, including the installation of backflow prevention devices to the MSFC potable water system, and ensure disinfection procedures are followed in accordance with section 2.14 and 2.15.

1.4.3 Ensures sewage and toilet overflows are cleaned up in accordance with section 2.16.

1.5 **Wellness Center Facility Manager:**

Ensures the sanitary conditions of the facilities and equipment.

1.6 **MSFC Food Service Managers:**

1.6.1 Ensure personnel receive instructions in the principles and practice of food service sanitation.

1.6.2 Be certified as a food protection manager.

1.7 **MSFC Employees:**

Ensure when food is prepared, handled, stored, served or consumed for personal use, office luncheons, parties, etc., that sanitary conditions are followed.

*NOTE: Individual employees are solely responsible for the food safety aspects of these activities.*
CHAPTER 2. PROCEDURES

2.1 Inspections

Inspections shall be performed in accordance with requirements of this MPR and under the guidelines established by the Alabama State Board of Health, and the FDA Food Code.

2.2 Facility Plans

Facility plans shall include menu plans and equipment specifications.

2.3 Food Service Personnel

Food service personnel shall report information in a manner that allows the supervision in charge to coordinate with EEOH representatives and to prevent the likelihood of foodborne disease transmission, including:

2.3.1 Employee diagnosed illness of Salmonella Typhi, Shigella, Escherichia Coli 0157:H7, or Hepatitis.

2.3.2 Employee’s symptoms of gastrointestinal illness such as diarrhea, fever, vomiting, jaundice, or sore throat with fever.

2.3.3 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.

2.3.4 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.

2.3.5 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 0157:H7, or Hepatitis.

2.4 HACCP Food Safety Plan

It is essential MSFC Food service vendors, and concessionaires storing, preparing, transporting, or serving food consider the unique conditions within each facility during the development of the food safety plan. A generic plan is not acceptable.

2.4.1 The food safety plan shall identify potential hazards of significance and include preventive measures to insure or improve food safety.
2.5 Chemical Sanitizing Solutions

2.5.1 Chlorine solutions shall have a minimum temperature based on the concentration and pH of the solution as listed below:

<table>
<thead>
<tr>
<th>Min Concentration (mg/L)</th>
<th>pH 10 or less °F</th>
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<td>25</td>
<td>120</td>
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<tr>
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<td>100</td>
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2.5.2 An iodine solution shall have a minimum temperature of 75°F, a pH of 5.0 or less or a pH no higher than the level for which the manufacturer specifies the solution is effective, and a concentration between 12.5 mg/L and 25 mg/L.

2.5.3 A quaternary ammonium compound solution shall have a minimum temperature of 75°F and have a concentration as indicated by the manufacturer’s use directions including labeling, and be used in water with 500 mg/L hardness or less or in water having a hardness no greater than specified by the manufacturer’s label.

2.5.4 If another solution of a chemical is used other than those listed above:

2.5.4.1 The food service supplier shall demonstrate that the solution achieves sanitation as specified by the United States Food and Drug Administration.

2.5.4.2 It shall be used in accordance with the manufacturer’s use directions including labeling.

2.6 Food Service Inspection

2.6.1 MSFC EEOH or a designated representative shall perform periodic, at least quarterly, inspections of all food service facilities to ensure compliance with applicable regulatory requirements and the provisions of this document. These inspections will occur anytime during operational hours, but not disrupt the selling of food. The overall scores from inspections will determine the re-inspection schedule as well as any enforcement actions. Re-inspection and enforcement will be based on the following schedule:
Score* | Action
--- | ---
Scoring between 85 and 100 | Establishments are considered to be in satisfactory compliance and are inspected on routine schedule
Scoring between 70 and 84 | Establishments require follow-up and re-inspection within 60 days
Scoring 60-69 | Establishments require follow-up and re-inspection within 48 hours
Scoring below 60 | Establishment closed immediately. All violations corrected and establishment re-inspected prior to reopening. A re-inspection score of greater than or equal to 85 is required to allow reopening.

*Re-inspection and enforcement action is based on Alabama Department of Public Health standards.

2.6.2 Any item found deficient during inspection that is shown as “critical” on MSFC Form 4192, “Food Service Inspection Report” shall be corrected immediately and the facility re-inspected within 1 month to ensure the critical item is corrected.

2.6.2.1 If the facility has not corrected the deficient critical item, the food service vendor may be closed until such time as the deficiency has been corrected and verified as such by the EEOH Office. The decision to close the vendor is at the discretion of the EEOH Office.

2.6.2.2 If the same critical item is found deficient during two consecutive quarterly inspections, the food service vendor shall be referred for disciplinary measures up to, and including, termination of services.

2.7 Equipment/Facility Design Features

The design of a food establishment shall meet the principles outlined in the Alabama Code 420-3-22, Alabama State Board of Health, Bureau of Environmental Services, Food Establishments Sanitation and the FDA Food Code, unless the principles cannot be technically accomplished. Consult MSFC EEOH for approval for the design deviation.

2.8 Storage Techniques

2.8.1 Foods left over from serving lines shall be wrapped, containerized, labeled, dated, and refrigerated – not frozen.

2.8.2 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).
2.8.3 Different types of raw animal products shall be separated by use of different containers, partitions, shelving, or other approved means.

2.9 Preparation and Storage of Sandwiches

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

2.9.1 Unless a sandwich is made for an individual customer to consume immediately, it is considered a pre-wrapped sandwich.

2.9.2 All pre-wrapped sandwiches shall be wrapped individually and marked with date of preparation.

2.9.3 When sandwiches are made with potentially-hazardous ingredients and 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.

2.9.4 Sandwiches shall not be prepared from leftovers.

2.9.5 Sandwiches shall not be reworked, rewrapped, remarked, or relabeled to extend their shelf life.

2.9.5.1 Outdated sandwiches shall be disposed as garbage.

2.9.6 Heated sandwiches - Sandwiches to be dispensed from a heated holding unit shall be heated rapidly by infrared, microwave, or similar type oven prior to placing them into a holding unit for sale, maintained at a minimum temperature of 140°F and have a maximum shelf life of 5 hours.

2.9.7 Refrigerated sandwiches - Sandwiches to be dispensed from refrigerated holding unit shall be maintained at less than 41°F, have a shelf life of 96 hours, and not be stored in direct contact with ice.

2.10 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.

2.11 Food Service Sanitation Education

2.11.1 Prior to employment, all food service personnel shall receive instructions in the principles and practice of food service sanitation.
2.11.2 Managers who are responsible for the storage, preparation, display, and serving of foods to Center personnel shall demonstrate their knowledge of foodborne disease prevention, and application of HACCP principles and of the FDA Food Code by being certified as a food protection manager.

2.12 **Vending Operations Sanitation**

2.12.1 Food exposed for sale or offered for sale shall be sound and free from spoilage, filth, or other contamination and safe for human consumption. Sources approval is authorized through the use of inspections and/or approval of the Federal, State or local health authorities as appropriate. Hot-holding or cold-holding food vending machines are not allowed at MSFC.

2.12.2 Processing, Packing, and Dispensing - Expiration dates are acceptable, provided an official letter of the coding system is provided to EEOH by the vendor. Similarly, chilled dairy products shall be coded and removed from the machine within 7 days after packaging or by the expiration date.

2.12.3 Transporting Food, Equipment, and Supplies - While the food is in transit to the vending location, it shall be protected from contamination and temperature fluctuations. Submerging food, milk, etc., in liquid and/or ice is prohibited.

2.12.3.1 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.

2.12.4 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 shall be easy to clean, cleaned daily, free from vermin, well-lighted, and well-ventilated. 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.

2.12.5 Clean and sanitize vending machines - Machines dispensing beverages cold drinks or hot drinks (not in bottles or cans), at least daily. A record of such cleaning and sanitizing operations shall be current for at least the past 30 days.

2.13 **Potable Water**

2.13.1 **Bottled Water**

2.13.1.1 Bottled water may be authorized by EEOH and Facilities Management Office on a case-by-case basis for use at sites on MSFC. Only bottled water procured under a MSFC/NASA contract is to be placed in NASA-procured, rented, leased, etc., bottled water dispensers. Bottled water and dispensers procured by other than NASA funds are the user’s and owner’s
responsibility and is outside the purview of this program. Under no circumstances should empty bottles be refilled by anyone other than the processor. All organizations procuring bottled water shall ensure that:

a. Water dispensers are located in proximity to other sanitary facilities and available to all users in the assigned area.

b. Dispensers or bottles of water are not to be stored in areas where general hazards or contamination of any kind (e.g., chemicals, gases) pose a threat to users under normal operations.

c. Vendors furnishing bottled water provide chemical and microbiological laboratory analysis reports for bottled water delivered to the Center to EEOH.

d. Bottled water dispensers are maintained in a sanitary condition.

e. All dispensers have equipment numbers or other appropriate label showing NASA ownership in accordance with MPR 4000.2.

2.14 Disinfection Criteria for Potable Water System Installation, Repair, or Modification to Water Mains

Disinfection procedures shall be according to American Water Works Association (AWWA) standards or equivalent. Upon completion of disinfection and flushing to a background residual, water samples are to be collected via Army Chemistry Lab and evaluated for prevailing chlorine requirements. No system may be placed into service prior to the satisfactory results of the chlorine analysis.

2.14.1 For water lines that have remained full of water under pressure during the repairs, no disinfection is required.

2.14.2 For water lines that have been dewatered (in whole or in part) during the repair, AWWA standard C651 or equivalent for disinfecting water mains shall be used.

2.14.3 Water samples are collected by the Army Chemistry Lab 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.

2.15 Backflow Prevention Devices

Backflow prevention devices shall 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.
2.16 Facility Sanitation

2.16.1 General

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

2.16.2 Sanitary Conditions in the Workplace

2.16.2.1 Workplaces shall be kept clean and free from recognized health threats.

2.16.2.2 Pests shall be controlled to the greatest extent possible through the use of preventive pest control measures.

2.16.2.3 Pest control measures shall be employed in a manner that does not endanger personnel or the environment. Pesticides, when used, are limited to those offering the least possible harm to persons and the environment that accomplish the desired goal. Custodial and pest control services are provided by the Facilities Management Office.

2.16.3 Toilet Facilities

2.16.3.1 An adequate number of toilet facilities shall be provided in the workplace to ensure compliance with regulatory requirements.

2.16.3.2 Hand-washing capabilities shall be available when portable toilet facilities are used.

2.16.4 Sewage and Toilet Overflows

All clean-up activities involving overflowed sewage shall be performed to provide sanitary conditions for the affected area.

2.16.4.1 Clean-up and sanitization procedures shall follow, as a minimum, current public health standards.

2.16.5 Sanitary Conditions in Wellness/Exercise Facilities

2.16.5.1 Wellness/Exercise facilities shall be maintained in a sanitary manner in accordance with industry accepted practices.

2.16.5.2 Wellness Center/Exercise facility managers shall ensure all unsanitary conditions are corrected and provide to the patrons sanitary supplies including, but not limited to individually-wrapped or dispensed body soap.
APPENDIX A

DEFINITIONS

**Disinfection** – A process that destroys or irreversibly inactivates the vegetative cells of infectious micro-organisms.

**Fixed Locations** – A food service location housed in MSFC buildings that provides services only to the MSFC or Redstone Arsenal sites.

**Hazard Analysis Critical Control Points (HACCP)** – 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.

**Labeling** – Sources of packaged food labeled in accordance with Food and Drug Administration Food Code. Proper labeling includes name of manufacturer, and an accurate statement of the contents.

**Leftovers** – Food items that were leftover 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.

**Long-Term Vendors** – Food service vendors and concessionaires storing, preparing, transporting, or serving food at MSFC whose period of performance exceeds 4 consecutive weeks in duration.

**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 micro-organisms.

**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.

**Temporary Event** – A food service that operates in conjunction with a single event or celebration.

**Food Truck** – A food service location that is housed in a mobile or otherwise movable structure that provides services both on and off the MSFC and Redstone Arsenal Sites.

**Vermin** – Any of various small animals or insects that are destructive, annoying, or injurious to human health, plants, or animals in the environment.
APPENDIX B

ACRONYMS

ADPH  Alabama Department of Public Health
AWWA  American Water Works Association
EEOH  Environmental Engineering and Occupational Health
FDA   Food and Drug Administration
HACCP Hazard Analysis Critical Control Points
APPENDIX C.

VERIFICATION MATRIX (Reserved)

None.
APPENDIX D

RECORDS

The following records will be maintained according to the “List of AS10 Environmental Records” located at: (https://explornet.msfc.nasa.gov/community/msfc/office-of-center-operations/as10).

D.1 MSFC Form 4192, Food Service Inspection Report and the inspection report memo

D.2 Vendor’s Food Safety Plan

D.3 Army Chemistry Lab potable water quality reports

D.4 Potable Water Vendor’s water quality reports (NASA procured services only)