TABLE OF CONTENTS

PURPOSE....2
SCOPE AND APPLICABILITY....2
PROCESS....2
1. PERMITTING....2
2. COMPLIANCE....2
3. REPORTING....3
4. TRAINING....6
RECORDS....6
MANAGEMENT ROLES AND RESPONSIBILITIES....7
FUNCTIONAL ROLES AND RESPONSIBILITIES....7
REFERENCE DOCUMENTS....8
ACRONYMS....9
DEFINITIONS....10
REVISION RECORD....10
DOCUMENT APPROVALS....10

PURPOSE

The purpose of this instruction is to provide an overview of the Drinking Water and Domestic Wastewater Compliance Programs as administered by the Base Operations and Spaceport Services (BOSS) Contract Quality, Safety and Environmental (QSE) Environmental Programs in accordance with the BOSS Performance Work Statement (PWS), Contract No. #80KSC018C0017, applicable sections of Chapter 40, 62 and 64 of the Florida Administrative Code (F.A.C.) and KNPR 8500.1, KSC Environmental Requirements.

SCOPE AND APPLICABILITY

This document defines the elements of the Drinking Water and Domestic Wastewater Compliance Programs and provides environmental compliance guidance for operations under the responsibility of BOSS. The program includes the review of all applicable federal, state and local environmental regulations and proposed rules and encompasses permitting and compliance functions.

PROCESS

The Kennedy Space Center (KSC) and Cape Canaveral Air Force Station (CCAFS) are separate facilities with separate Drinking Water Systems permitted by the Florida Department of Environmental Protection (FDEP). The United States Air Force (USAF) is responsible for the Regional Wastewater Treatment Facility (RWWTF) located at CCAFS. Wastewater from KSC is treated and disposed at the CCAFS RWWTF. Both facilities have numerous Onsite Sewage Treatment and Disposal Systems (OSTDS) permitted by the Brevard County Health Department (BCHD). The Florida Department of Health (FDOH) has delegated OSTDS program responsibility to the BCHD. KSC has a Consumptive Use Permit (CUP) permitted by the St. Johns River Water Management District (SJRWMD), one limited use commercial water well system, and an irrigation well permitted by the BCHD.

BOSS has responsibility for operation and maintenance of the KSC drinking water distribution system, KSC domestic wastewater collection system; one limited use commercial water well system, the NASA Security Gate #4 (H5-2139); one irrigation well, the Mid-Course Radar Facility (E3-1120), and two permitted On-Site Sewage Treatment and Disposal Systems on KSC, the Emergency Power Facility (K6-1091/K6-1141A), and the KARS 1 Storage Facility (P6-1789B). Copies of specific permits are maintained by the BOSS QSE office for reference.

1. PERMITTING

The permit application processing performed by BOSS Environmental Programs is outlined in EAP-I-4300, Environmental Permitting Process”.

2. COMPLIANCE

The general compliance activities performed by a BOSS Environmental Subject Matter Expert (SME) include but are not limited to the following:

2.1. Routinely review applicable EPA/FDEP/BCHD and SJRWMD proposed and/or promulgated rules and regulations and provide compliance feedback to the applicable BOSS operations organizations addressing changes and/or actions needed on their part to maintain compliance.

2.2. Attend facility engineering design reviews and NASA or USAF environmental program working group meetings, to provide support and guidance, if required, on potential compliance issues or permitting concerns.

2.3. Perform routine site visits of permitted locations under BOSS assignment to ensure that the applicable permit and regulatory compliance conditions are adhered to.

2.4. Participate and support internal and external NASA Environmental Functional Review (EFR) inspections. This includes accompanying the inspectors while conducting site visits, providing compliance documents as required, and ensuring corrective actions are implemented in a timely manner.

2.5. Conduct routine internal BOSS compliance assistance visits to ensure BOSS operational personnel comply with all applicable permit requirements and environmental regulations.

2.6. Actively participate in the NASA/USAF/FDEP Water and Wastewater (W&WW) Partnering Workshop meetings. The partnering organizations were developed in order to provide a commitment between government and industry to improve communications and form a relationship of teamwork, cooperation, good faith performance, and avoid disputes.

2.7. Support NASA and regulatory agency inspections.

2.8. Provide review of all Drinking Water and Domestic Wastewater Permit Applications at BOSS assigned facilities and provide comments, if any, to the government or contractor organization responsible for the design of the project and copy appropriate SE.

2.9. Provide the Onsite Sewage Treatment and Disposal System Annual Operation Permit Applications for all of the permitted BOSS systems to the NASA EAB office. NASA EAB will submit the permit application to BCHD with associated fees. Upon receipt of a permit, BOSS Environmental Programs will be provided a copy of the permit by NASA EAB to be posted on site and will keep a copy for reference.

3. REPORTING

The specific reporting for compliance performed by the SME vary dependent upon the support requested by the NASA and USAF environmental organizations and include, but are not limited to, the following:

3.1. Monthly Microbial and Chlorine Residual Monitoring Report will be processed in accordance with UTI-P-2000, latest revision.

Additionally, in the event that a routine distribution system sample is total-coliform-positive (TC+), the Water & Wastewater Systems Engineer (SE) shall notify the City of Cocoa Water Plant Superintendent and the Water Quality Assurance Supervisor within 24 hours of being notified of the total-coliform-positive sample as required by the Ground Water Rule (GWR) adopted and incorporated by reference into Rule 62-550.828, F.A.C. and shall provide a copy of the notification to the SME for forwarding to NASA EAB.

The City of Cocoa has a 4-log certification issued by the FDEP for their ground water plant. GWR triggered source water monitoring is not required for 4-log certified PWS, however, the City of Cocoa requested to be notified in case 4-log treatment of viruses is not provided at the time of sampling.

3.2. Potable Water Monthly Operating Report (MOR) shall be processed as follows:

3.2.1. The SE shall complete FDEP MOR forms 62-555.900(3) and 62-555.900(6) for the previous month's report and forward to the SME for review by noon on the 4th of each month.

3.2.2. The SME shall provide comments to the SE for incorporation into the report within four hours.

3.2.3. The SE shall provide the original signed copies of the final MOR forms to the SME by close of business on the 4th of each month.

3.2.4. Upon receipt of the final report, the SME shall prepare a transmittal letter and provide to the Program Management Support Specialist (PMSS). PMSS shall send electronic copy of the report and letter assigned with an official correspondence number to NASA EAB, SME, SE, and NASA Environmental Contractor. Original signed copies of the final report will be provided to NASA EAB. BOSS Environmental Programs shall maintain the official deliverable file copy.

3.3. Potable Water Quarterly Maximum Residual Disinfectant Level (MRDL) Report shall be processed as follows:

3.3.1. The SME shall summarize the chlorine residuals measured by W&WW during monthly sampling in accordance with UTI-P-2000, Potable Water Microbiological Sampling Procedure into a rolling annual average and reported to NASA EAB every quarter.

3.3.2. The SME shall provide the completed report using FDEP Disinfectant Residual Reporting Format to the PMSS for submittal to NASA EAB with cc to

SE, NASA ENVIRONMENTAL CONTRACTOR and SME within 5 days after the end of each quarter in which samples are collected.

3.4. Malfunction Reports for Potable Water shall be processed as follows:

3.4.1. The SE shall notify FDEP and SME within 24 hours of the occurrence.

3.4.2. SME shall make notifications to NASA Environmental and the KSC Sanitation and Public Health Officer within 24 hours of the occurrence.

3.4.3. The SE shall prepare a malfunction or incident report for a potable water line break or outage under the following circumstances:

3.4.3.1. A water main break of three inch internal diameter or greater, or

3.4.3.2. A water main out of service for eight hours or greater, or

3.4.3.3. A drop in water pressure below 20 per square inch (psi)

3.4.4. The SE shall tag-out and post ”Do Not Drink” notices at systems/facilities affected by the outage.

3.4.5. The SE shall request the NASA Environmental Contractor to collect samples on two consecutive days for total chlorine residual and for the presence of total coliform. If any sample indicates the presence of total coliform, re-disinfect the system as necessary until two consecutive daily samples show the absence of total coliform.

3.4.6. The SME shall review the malfunction or incident report and prepare a transmittal letter. PMSS shall send electronic copy of the malfunction report and letter assigned with an official correspondence number to NASA EAB, KSC Sanitation and Public Health Officer, SME, SE, NASA ENVIRONMENTAL CONTRACTOR and BOSS Program Management Office.

3.4.7. When the system is cleared, the SE shall forward sampling results and malfunction closure reports to FDEP and shall provide a copy of the notification to the SME for forwarding to NASA EAB.

3.4.8. For potable water line breaks considered to be non-malfunctions, W&WW shall complete all necessary repairs and request the Medical Environmental Support Contract (NASA ENVIRONMENTAL CONTRACTOR) to collect a one-day bacteriological sample. These records are held internally and are not required to be submitted to FDEP.

3.4.9. Upon discovery or notification of a non-compliance situation, the SME shall work the issue with NASA or USAF environmental offices for speedy resolution.

3.4.10. W&WW shall perform necessary actions to bring the system back into compliance. The SE shall notify personnel in affected areas of the distribution system, and post notices at, or remove from service, impacted drinking water sources (such as fountains and sinks).

3.4.11. NASA EAB shall develop any required public notices, coordinate the public notices through FDEP, and provided to SME and SE for distribution to affected KSC personnel. Facility managers shall post the public notices in conspicuous locations.

3.5. Malfunction Reports for Domestic Wastewater shall be processed as follows:

3.5.1. In the event of a sanitary sewer overflow or a discharge of untreated sewage as the result of a broken pipe, equipment failure, or system overload, W&WW shall isolate the affected area and make repairs to the damaged system.

3.5.2. The SE shall report the malfunction directly to FDEP by telephone within 24 hours of the discovery.

3.5.3. The SE shall prepare a malfunction report using EAP-F-1500A, DWW Malfunction Report and submit directly to FDEP and copy the SME within 5 days of discovery.

3.5.4. The SME shall review the malfunction report and prepare a transmittal letter. PMSS shall send electronic copy of the malfunction report and letter assigned with an official correspondence number to NASA EAB, SME, SE, NASA Environmental Contractor, and BOSS Program Management Office within 5 days of receipt of the malfunction report.

3.5.5. The SE shall Report domestic wastewater releases of at least 1,000 gallons to the State Watch Office (1-800-320-0519) within 24 hours of discovery.

4. TRAINING

Refer to SHP-P-0002, Environmental, Safety & Health Training Requirements for associated training, medical, physical, and certification requirements.

RECORDS

The following records are retained by the organizations listed below:

Record	Responsible Organization
FDEP Construction and Operating Permit (Potable Water, Domestic Wastewater)	BOSS Environmental Programs (Copy) (Official Records – NASA EAB)
FDEP Monthly Microbial and Chlorine Residual Monitoring Report – DEP Form 62-550.730	BOSS Environmental Programs (Copy) (Official Records – NASA EAB)
FDEP Monthly Operation Report for Consecutive Systems that Receive Purchased Finished Water from a Subpart H System – DEP Form 62-555.900(6)	BOSS Environmental Programs (Copy) (Official Records – NASA EAB)

Record	Responsible Organization
FDEP Monthly Operation Report for Public Water Systems Treating Raw Ground Water or Purchased Finished Water – DEP Form 62-555.900(3)	BOSS Environmental Programs (Copy) (Official Records – NASA EAB)
Florida Department of Health/Brevard County Environmental Health Services Limited Use Commercial Public Water Systems Operating Permit and County Inspection Certificates for various water wells	BOSS Environmental Programs (Copy) (Official Records – NASA EAB)
Malfunction Report (Domestic Wastewater)	BOSS Environmental Programs (Copy) (Official Records – NASA EAB)
Malfunction Report (Potable Water)	BOSS Environmental Programs (Copy) (Official Records – NASA EAB)
SJRWMD Consumptive Use Permit No. 50054	BOSS Environmental Programs (Copy) (Official Records – NASA EAB)

MANAGEMENT ROLES AND RESPONSIBILITIES

QSE Department Manager: Ensures compliance with the requirements stated in this procedure.

ROLES AND RESPONSIBILITIES

BOSS Environmental Subject Matter Expert (SME): Ensures operations comply with federal, state, local agency regulatory and NASA/USAF requirements. Provides notification to BOSS operations of changes to the requirements and notifies NASA and the USAF in the event of an anomaly/malfunction. Reviews and update environmental regulatory requirements and coordinates with appropriate BOSS personnel. Reviews operating, monitoring, and malfunction reports.

Water & Wastewater Systems Engineer (SE): Provides support to the Domestic Wastewater and KSC Potable Water System Operators and Supervisors as needed to assure operations comply with all permits and regulatory requirements. Notifies regulators and BOSS Environmental Programs in the event of an anomaly/malfunction and supports shop personnel during system outage/repairs as needed in accordance with UTI-P-0004, Water Treatment Plant Operations Plan. Supports review of Process Waste Questionnaire (PWQ), KSC Form 26-551V3 NS / Technical Response Package (TRP) related Requests for Approval to discharge industrial wastewater to the Regional WWTF located at CCAFS. Prepares operating, monitoring and malfunction reports.

Licensed Water and Wastewater Operators: Performs the day to day operation and maintenance of the KSC domestic wastewater collection system, and KSC potable

water distribution system to assure compliance with all permits and regulations stated in this procedure.

BOSS Program Management Office: Maintains administrative file of BOSS control deliverables.

Program Management Support Specialist (PMSS): Responsible for submitting electronic copies and maintaining administrative file of compliance reports.

REFERENCE DOCUMENTS

The following documents are referenced in this procedure:

Document Number	Title
Disinfectant Residual (Chlorine or Chloramines) Reporting Format	Potable Water Quarterly Maximum Residual Disinfectant Level (MRDL)
EAP-F-1500A	DWW Malfunction Report
FDEP Form 62-550 F.A.C.	Drinking Water Standards, Monitoring, and Reporting
FDEP Form 62-555 F.A.C.	Permitting, Construction, Operation, and Maintenance of Public Water Systems
FDEP Form 62-555.900(3) F.A.C.	Monthly Operation Report for PWSs Treating Raw Ground Water or Purchased Finished Water
FDEP Form 62-555.900(6) F.A.C.	Monthly Operation Report for Consecutive Systems that Receive Purchased Finished Water from a Subpart H System
FDEP Form 62-560 F.A.C.	Requirements for Public Water Systems that are Out of Compliance
FDEP Malfunction or Incident Report	Malfunction Report for Potable Water
FDEP Reporting Format – Form 62-555.730 F.A.C.	Monthly Microbial and Chlorine Residual Monitoring Report
KNPR 8500.1	KSC Environmental Requirements, Procedure for PWQ/TRP
KSC Form 26-551V3 NS	Process Waste Questionnaire (PWQ) – KNPR 8500.1
N/A	Water Plant Operations Logbook
N/A	Water Distribution Logbook
80KSC018C0017	Base Operations and Spaceport Services Contract, PWS 1.8, Environmental Management, PWS 3.2.7, Water Distribution and PWS 3.2.8, Wastewater Collection and Pre-Treatment
Rule 62-550.828, F.A.C.	The Groundwater Rule (GWR) was adopted and incorporated by reference into Rule 62-550.828, F.A.C., effective December 30, 2011.
SHP-P-0002	Environmental, Safety & Health Training Requirements

Document Number	Title
UTI-P-0004	Water Treatment Plant Operations Plan
UTI-P-2000	Potable Water Microbiological Sampling Procedure

ACRONYMS

BCHD – Brevard County Health Department
BOSS – Base Operations and Spaceport Services
CCAFS – Cape Canaveral Air Force Station
CUP – Consumptive Use Permit
DWW – Domestic Wastewater
EAB – Environmental Assurance Branch
EFR – Environmental Functional Review
EPA – Environmental Protection Agency
F.A.C. – Florida Administrative Code
FDEP – Florida Department of Environmental Protection
FDOH – Florida Department of Health
FSEU – Facilities, Systems, Equipment & Utilities
GWR – Ground Water Rule
BOSS – Base Operations and Spaceport Services
KNPR – Kennedy NASA Procedural Requirements
KSC – Kennedy Space Center
LLC – Limited Liability Company
MOR – Monthly Operating Report
MRDL – Maximum Residual Disinfectant Level
NASA – National Aeronautics and Space Administration
NEPA – National Environmental Policy Act
OM&E – Operations, Maintenance & Engineering
PMSS – Program Management Support Specialist
PWQ – Process Waste Questionnaire
PWS – Performance Work Statement
PWS – Public Water Systems
RWWTF – Regional Wastewater Treatment Facility
SJRWMD – St. Johns River Water Management District
SMA – Safety and Mission Assurance
SME – Subject Matter Expert
SE – Systems Engineer
TRP – Technical Response Package

USAF – United States Air Force
W&WW – Water & Wastewater
WWTF – Wastewater Treatment Facility

DEFINITIONS

None

REVISION RECORD

The following revisions have been applied to this document:

Revision Number	Change Description	Date
0	Initial Release	09/02/10
1	Removed all references to TEL IV STP and UTI-P-0005 which was cancelled on 7/19/11 and other required administrative changes. Updated procedure to reflect KNPR 8500.1 Rev C.	08/14/14
2	Training, Physicals and Certification section reviewed only. Requirements moved to SHP-P-0002, where appropriate	06/29/15
3	Updated for contract change from ISC to BOSS	03/27/20

DOCUMENT APPROVALS

X

David Boykin
Quality, Safety and Environmental Manager

Signature on File

X

Ron Traylor
Environmental Engineer

Signature on File