TABLE OF CONTENTS

PURPOSE....2
SCOPE AND APPLICABILITY....2
PROCESS....2
1. BOSS IWW IDENTIFICATION AND DISCHARGE APPROVAL....2
2. ENVIRONMENTAL COMPLIANCE....4
3. MANAGEMENT OF NONCONFORMANCE....5
4. TRAINING....5
RECORDS....5
AFFECTED DIVISIONS/OFFICES....5
MANAGEMENT ROLES AND RESPONSIBILITIES....6
FUNCTIONAL ROLES AND RESPONSIBILITIES....6
REFERENCE DOCUMENTS....6
ACRONYMS....7
DEFINITIONS....7
REVISION RECORD....8
DOCUMENT APPROVALS....8

PURPOSE

The purpose of this instruction is to convey the Industrial Wastewater (IWW) compliance requirements for Base Operations and Spaceport Services Contract (BOSS) operations as administered by the BOSS Quality Safety and Environmental (QSE) Department in accordance with the BOSS Performance Work Statement (PWS), contract number #80KSC018C0017, applicable sections of Chapter 62 of the Florida Administrative Code (FAC), and Kennedy NASA Procedural Requirements (KNPR) 8500.1, KSC Environmental Requirements.

SCOPE AND APPLICABILITY

This document provides instructions for compliance with regulations, policies, and Best Management Practices (BMPs) applicable to BOSS organizations for IWW operations at the National Aeronautics and Space Administration's (NASA's) Kennedy Space Center (KSC) and Cape Canaveral Air Force Station (CCAFS) including IWW generated by BOSS Contractors during performance of BOSS procurements or contracted projects. Compliance requirements for storm water management and dewatering (See EAP-P-1300) along with management of sump/secondary containment effluent (See EAP-I-2300) are excluded from this instruction.

PROCESS

IWW generated by BOSS at KSC and CCAFS is disposed of in several ways: discharge to the sanitary sewer, collection by tanker truck for delivery to the CCAFS Trident IWW Pretreatment Facility prior to discharge to the sanitary sewer, transportation off site in tankers or drums for disposal by a waste vendor and discharge to the environment.

The United States Air Force (USAF) operates the CCAFS Wastewater Treatment Facility (WWTF) which receives sanitary wastewater from both CCAFS and KSC for treatment. IWW discharged to the sanitary sewer at KSC or CCAFS is treated and disposed at the CCAFS WWTF. Disposal of BOSS IWW through offsite vendors is administered by NASA's Medical Environmental Support Contractor (MESC), Innovative Health Applications (IHA). General conditions and guidance concerning minor IWW discharges to the environment at KSC are available in the KSC Industrial Wastewater Inventory (KIWI) list that describes approved categories of IWW allowed to discharge to grade along with criteria and conditions for doing so. Some categories of discharge to the environment require National Pollutant Discharge Elimination System (NPDES) permits from the Florida Department of Environmental Protection (FDEP).

1. BOSS IWW IDENTIFICATION AND DISCHARGE APPROVAL

1.1. An inventory by location of existing BOSS generated IWWs and documentation of details, approved disposal methods and permits, where required, shall be maintained by the BOSS Environmental IWW Environmental Specialist (ES).

1.2. New projects and process changes with potential IWW impacts shall be identified and KNPR 8500.1 required approval coordination with NASA shall be initiated through the National Environmental Policy Act (NEPA) environmental review process administered by NASA or USAF environmental organizations. NEPA

documentation shall be completed and processed by BOSS Environmental in accordance with EAP-P-4000 for proposed project(s)/activities to identify potential environmental impacts including IWW discharge and permitting requirements resulting from the implementation of planned projects and operational activities.

1.3. All new BOSS IWW discharges shall be added to the BOSS Environmental IWW discharges inventory maintained by the Environmental IWW Environmental Specialist (ES).

1.4. The following information shall be documented for each IWW discharge and provided to NASA or the USAF as part of the NEPA review process:

- Location of discharge point
- Building Number
- Building Name
- Organization/Crew
- Equipment/Process/Source Description
- Equipment I.D., if applicable
- Contaminant(s) in Discharge
- Storage locations
- Proposed treatment methods, systems and chemicals and locations
- Mixing or application rates of any chemicals, detergents or other materials used in proposed treatment processes
- Amount of typical discharge, Gallons per Day
- Frequency of discharge, Days per Week
- Destination of Discharge
- Point of Contact
- Point of Contact Phone Number

1.5. For discharges of IWW to the sanitary sewer (including by way of the Trident Plant), a Process Waste Questionnaire (PWQ), form KSC 26-551V3, shall be submitted to IHA Waste Management by BOSS Environmental to characterize the wastewater and request approval for each discharge from the USAF and BOSS Water and Wastewater.

For disposal of IWW by an offsite vendor, a PWQ shall also be submitted by BOSS Environmental. Any needed IWW analysis for PWQ purposes shall be coordinated with and performed by IHA.

1.6. A Technical Response Package (TRP) describing the conditions governing an IWW discharge to sanitary sewer shall be provided to BOSS Environmental by IHA Waste Management along with a copy of a completed IHA Waste Management Discharge Request and Authorization signed by the USAF or authorized USAF contractor representative for the WWTF.

A TRP describing conditions such as waste codes, container types and shipping labels shall be issued by IHA to BOSS Environmental for IWW to be picked up by vendors for offsite disposal.

1.7. For a new discharge to the environment of an IWW listed on the KIWI, BOSS Environmental shall contact NASA EAB in writing to request authorization to use the criteria and conditions for discharge listed for that IWW.

1.8. For a new discharge to the environment of an IWW that is not on the KIWI list but is a candidate for listing based on NASA review, a request shall be made by BOSS Environmental to add it to the KIWI list with FDEP approval.

1.9. For IWW discharges to the environment that require a National Pollutant Discharge Elimination System permit prior to implementation, BOSS Environmental shall follow the BOSS instruction EAP-I-4300 for obtaining permits and permit renewals.

2. ENVIRONMENTAL COMPLIANCE

2.1. To ensure compliance with applicable state federal and local regulations and NASA/USAF requirements, the BOSS Environmental ES shall conduct internal quarterly IWW inspections of established IWW discharges at BOSS operated facilities to educate and assist BOSS operational personnel and shall ensure that:

- Regulatory-agency-permitted IWW systems are being operated in accordance with the permit requirements
- Required IWW discharge records, inspection records and regulatory permits are readily available for inspection.
- Approved non-permitted discharges to grade are discharged in a manner to prevent any erosion and/or run off to surface waters.
- All discharges authorized under the KIWI meet established criteria and conditions.
- There are no unauthorized IWW discharges.

2.2. The Environmental ES shall support regulatory agency and IHA/NASA/USAF inspections of IWW systems.

2.3. The ES shall attend BOSS facility engineering design reviews and provide comments concerning IWW compliance issues and permitting requirements identified during the NEPA process for new projects and activities.

2.4. The ES shall strive to keep current with new and modified regulations and actively participate in the NASA/USAF/FDEP Water and Wastewater Partnering Workshop meetings.

2.5. The ES shall notify the QSE Manager at least quarterly, of proposed changes to IWW regulations that may affect BOSS operations and shall provide updates of regulatory requirements to appropriate organizations as required.

2.6. Unauthorized (unpermitted, nonexempt, unplanned, or anomalous) releases shall be reported to 911 in accordance with SMA-P-0016, Event Notification and Reporting. BOSS Environmental will investigate or assist in the investigation of the event as required.

3. MANAGEMENT OF NONCONFORMANCE

3.1. Any non-compliance issues observed during an internal site visit by the ES shall be documented on form EAP-F-1600, BOSS Environmental IWW Compliance Checklist. For issues that cannot be corrected on the spot, the ES shall coordinate an estimated completion date with the responsible organization and follow up to verify completion. If any major findings are observed, Environmental Assurance personnel shall immediately report those findings to the QSE Manager so that appropriate notifications to NASA Environmental Assurance Branch (EAB) or Air Force Environmental Support Contract (ESC) offices are made. Prior to conducting a subsequent site visit, the ES shall refer to the previous inspection sheet to determine if there are any open action items for the facility.

3.2. During an internal site inspection, the ES shall verify that the open action items have been addressed and are closed. When IHA/NASA conducts an internal inspection, the ES shall track BMPs/findings in the Environmental Compliance Database located in the BOSS Safety and Mission Assurance Recordkeeping and Tracking (SMART) database group until completion. When a regulatory agency conducts an inspection and regulatory findings are noted, the ES shall follow the Nonconforming Product Procedure, QMS-P-0004, and create a Corrective Action Request (CAR) or Preventive Action Request (PAR) to track open corrective actions in Corrective and Preventive Action System (CPAS), QMS-P-0005 and ensure all findings are corrected. When NASA Environmental Function Reviews (EFRs) are conducted, the ES shall create a single CAR or PAR for all open findings in the CPAS. Individual EFR findings will be entered into SMART database and tracked to completion. Once all individual findings are closed then the CAR or PAR can be closed.

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
IWW Discharge Location Record (Includes IWW Authorizations and Inspection Records)	Facilities Responsible for Discharge

AFFECTED DIVISIONS/OFFICES

Engineering Services
FSEU and OM&E
Laboratories
Logistics
Propellants/Life Support
Safety & Mission Assurance

MANAGEMENT ROLES AND RESPONSIBILITIES

Division Manager: Ensures compliance within the Division with the requirements outlined in this procedure.

Branch Manager: Ensures compliance at the branch level with the requirements outlined in this procedure.

FUNCTIONAL ROLES AND RESPONSIBILITIES

QSE Environmental Representative Provide environmental oversight to ensure that BOSS operations involving IWW discharges comply with federal, state, local agency, regulatory, and NASA/USAF requirements. Ensure compliance with the requirements of this document. Provide notification to BOSS operations of changes to the IWW requirements and notify NASA and/or the USAF in the event of an anomaly/malfunction or unauthorized release.

IHA Waste Management: In response to submittal of a PWQ, prepare a Technical Response Package (TRP) and provide an IHA Waste Management Discharge Request and Authorization.

Engineering Services, FSEU and OM&E, Propellants/Life Support, Logistics, and Laboratories: Comply with the applicable regulatory requirements for IWW discharges and support inspections by BOSS Environmental, IHA, NASA, USAF and regulatory agencies as required.

REFERENCE DOCUMENTS

The following documents are referenced in this procedure:

Document Number	Title
Chapter 62-4 FAC	Permits
Chapter 62-620 FAC	Wastewater Facility Permitting
Chapter 62-660 FAC	Industrial Wastewater Facilities
EAP-F-1600	BOSS Environmental IWW Compliance Checklist
EAP-I-2300	BOSS Sump Water Management Instruction
EAP-I-4300	Environmental Permitting Process
EAP-P-1300	BOSS Stormwater Compliance Program
EAP-P-4000	National Environmental Policy Act Review Process (NEPA)
KNPR 8500.1	KSC Environmental Requirements
KSC 26-551V3	Process Waste Questionnaire
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
QMS-P-0004	Nonconformance Control & Escalation
QMS-P-0005	Corrective and Preventive Action System
SHP-P-0002	Environmental, Safety & Health Training Requirements
SMA-P-0016	Event Notification and Reporting

ACRONYMS

BMP – Best Management Practice
BOSS – Base Operations and Spaceport Services Contract
CAR – Corrective Action Request
CCAFS – Cape Canaveral Air Force Station
CPAS – Corrective and Preventive Action System
EFR – Environmental Functional Review
EAB – Environmental Assurance Branch
EPB – Environmental Planning Branch
ES – Environmental Specialist
ESC – Environmental Support Contract
FAC – Florida Administrative Code
FDEP – Florida Department of Environmental Protection
HVAC – Heating, Ventilating, and Air Conditioning
IHA – Innovative Health Applications, LLC
IWW – Industrial Wastewater
KIWI – KSC Industrial Wastewater Inventory
KNPR – Kennedy NASA Procedural Requirements
KSC – Kennedy Space Center
MESC – Medical & Environmental Support Contract
NASA – National Aeronautics and Space Administration
NEPA – National Environmental Policy Act
NPDES – National Pollutant Discharge Elimination System
PAR – Preventive Action Request
PIR – Pollution Incident Report
PWQ – Process Waste Questionnaire
PWS – Performance Work Statement
S&MA – Safety & Mission Assurance
SMART – Safety and Mission Assurance Recordkeeping and Tracking
TRP – Technical Response Package
USAF – United States Air Force
WWTF – Wastewater Treatment Facility

DEFINITIONS

Best Management Practices (BMPs) – A schedule of activities, prohibitions of practices, maintenance procedures, and other management practices for preventing or reducing environmental pollution. A BMP also includes treatment requirements, operational procedures, and practices that control plant-site runoff, spillage or leaks, residuals, industrial sludge or waste disposal, or drainage from raw material storage.

Generator Organizations – Organizations responsible for processes that generate IWW.

Industrial Wastewater (IWW) – Water used in an industrial process that is no longer needed (e.g., non contact cooling water, spent aqueous detergent solutions, air compressor condensate, Heating, Ventilating, and Air Conditioning (HVAC) chiller water, safety shower/eyewash effluent, contaminated accumulations of rainwater, waste mixed

with industrial waste, etc.) Excluded is domestic wastewater (e.g., wastewater from bathrooms, kitchens, drinking fountains, etc.).

KSC Pollution Incident Report (PIR) – A NASA form used by BOSS Environmental for reporting spills and releases of hazardous and controlled materials to NASA EAB.

Unauthorized Release – A wastewater release that is not approved by a PWQ, TRP, KIWI categorical exemption, or NPDES discharge permit

REVISION RECORD

The following revisions have been applied to this document:

Revision Number	Change Description	Date
0	Initial	10/04/11
1	Training, Physicals and Certification section reviewed only. Requirements moved to SHP-P-0002, where appropriate	06/29/15
2	Updated for contract change from ISC to BOSS	03/27/20

DOCUMENT APPROVALS

X

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Quality, Safety and Environmental Manager

Signature on File

X

Ron Traylor
Environmental Engineer

Signature on File