

**BY ORDER OF THE COMMANDER
354TH FIGHTER WING (PACAF)**

**354TH FIGHTER WING
INSTRUCTION 32-7003**



26 JANUARY 2010

Civil Engineer

**EIELSON AFB WASTEWATER SYSTEMS
AND PRETREATMENT PROGRAM
COMPLIANCE**

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RELEASABILITY: There are no releasability restrictions on this publication.

OPR: 354 CES/CEAN

Supersedes: 354 FWI32-7003, 4
December 2004

Certified by: 354 MSG/CC
(Col Karlton D. Johnson)

Pages: 9

This instruction implements AFPD 32-70, *Environmental Quality*. It is used in conjunction with AFI 32-7041, *Water Quality Compliance* and AFI 32-1067, *Water Systems*. It establishes base procedures and assigns responsibility for wastewater systems and pretreatment program oversight and operation, and for accomplishing monitoring and reporting requirements of the Clean Water Act and associated publications. This FWI applies to all units, organizations, building occupants, and activities that generate domestic and/or non-domestic wastewater, and/or storm water discharges to the wastewater system on Eielson AFB. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at <https://www.my.af.mil/gcss-af61a/afirms/afirms/>. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional's chain of command. See Attachment 1 for a glossary of references and supporting information.

SUMMARY OF CHANGES

This document is substantially revised and must be completely reviewed.

1. General. The emphasis on environmental pollution prevention and abatement requires all base activities, including housing occupants, contractors, and tenants who generate non-domestic wastewater, to review their processes that generate wastewater and their disposal procedures.

Efforts must be taken by all to reduce or eliminate the pollutant at the point of generation, control its discharge, recycle or reuse the pollutant, and/or properly dispose of the pollutant. An effective base program for eliminating and controlling non-domestic wastewater requires the full support and cooperation of all activities that generate the wastewater.

1.1. This instruction:

1.1.1. Outlines a scoping process for identifying and characterizing wastewater from point sources on base and implementing a waste minimization, control, and permitted treatment program to reduce and prevent pollution.

1.1.2. Prescribes segregation, control, and discharge procedures for domestic and non-domestic wastewater.

1.1.3. Outlines procedures for monitoring, testing, and reporting to regulatory agencies.

1.1.4. Identifies general and specific prohibitions for discharges to the wastewater treatment plant.

1.1.5. Establishes responsibilities for a wastewater pretreatment program.

1.1.6. Designates offices of primary responsibility for various tasks.

1.2. Scope. This instruction is consistent with and augments the following base plans:

1.2.1. Hazardous Waste Management Plan

1.2.2. Oil and Hazardous Substance Discharge Prevention and Contingency Plan

1.2.3. Storm Water Pollution Prevention Plan

1.2.4. Pollution Prevention Management Plan

1.2.5. Solid Waste Management Plan

1.2.6. Wastewater Treatment Plant Pretreatment Program

2. Eielson AFB Responsibilities:

2.1. Comply with federal, state, and local requirements pertaining to permitting, management, treatment, and discharge of wastewater. These requirements take precedence if they conflict with this regulation.

2.2. Assure timely review and submission of monitoring reports to regulatory agencies to avoid regulatory noncompliance.

2.3. Ensure and implement best management practices for collection of wastewater and operation of wastewater treatment systems.

2.4. Conduct wastewater characterization, toxicity reduction evaluations, and other studies to determine the non-domestic pollutant characteristics at each waste generation point.

2.5. Develop consistent base-wide approaches to non-domestic wastewater management that apply to all base and tenant organizations, and base residents.

2.6. Enforce wastewater discharge policies through the use of point source monitoring, shop surveys, and administrative action to prevent treatment system interruptions and discharge

violations. Compliance problems with non-domestic discharges will be addressed and resolved.

2.7. Utilize waste minimization and source reduction techniques through material substitution, process change, and/or administrative change at or near the waste generation point. This should be done as needed to protect collection and treatment facilities from damage, upset, or discharge violations.

2.8. Develop, implement, and manage a wastewater treatment and wastewater collection operator certification program in compliance with all applicable regulations.

3. Organizational Responsibilities:

3.1. 354 CES Base Civil Engineer (BCE):

3.1.1. Establishes and publishes technical guidance through this instruction to base organizations for collection, treatment, storage, and disposal of domestic and non-domestic waste. Attachment 2 presents the prohibitions that apply to all domestic and non-domestic users.

3.1.2. Assumes the title, duties, and responsibilities as the installation Pretreatment Program Manager (PPM). The installation PPM, or designee, will have the legal authority to implement, monitor, and enforce the Eielson AFB Wastewater Treatment Plant (WWTP) Pretreatment Program.

3.1.3. Approves requests from organizations that generate non-domestic wastewater. Reviews the wastewater constituents and volume in coordination with the Water Program Manager to determine if the discharge should be prohibited or have restrictions or controls prior to discharge to the collection system.

3.1.4. Provides the manpower and funding necessary to maintain a Wastewater Pretreatment Program.

3.2. 354 CES/CEA Asset Management Chief

3.2.1. Serves as an advisor to the PPM.

3.3. 354 CES/CEAN, Natural Resources Management Element

3.3.1. Serves as the contact for all activities concerning discharges to the sanitary system. Coordinates with the water systems superintendent.

3.3.2. Works with all generators to control and eliminate, where possible, all non-domestic wastewater discharges to the sanitary sewer system.

3.3.3. Assures wastewater facilities are in compliance with regulatory and base requirements; determines whether corrective actions are needed.

3.3.4. Coordinates negotiations with regulators for discharge limits, monitoring locations, and reporting requirements. Maintains permit and reporting records.

3.3.5. Ensures compliance monitoring and reporting is conducted, reviewed, and submitted in a timely manner.

3.3.6. Provides guidance on waste elimination, product substitution, recycling, and process changes.

3.3.7. Reviews and updates the discharge prohibitions, and the list of non-domestic and significant non-domestic users annually.

3.3.8. Provides pollution prevention and spill control training.

3.3.9. Prepares the base wastewater Pretreatment Plan, if required.

3.4. Unit Environmental Coordinator (UEC) Responsibilities:

3.4.1. Conduct facility inspections to ensure compliance with the base wastewater Pretreatment Plan.

3.4.2. Prepare and submit reports from non-domestic users as required by the Natural Resources Management Element, 354 CES/CEAN.

3.5. 354 FW and Tenant Organizations Generating Activities:

3.5.1. Appoint UECs and facility managers responsible for controlling all non-domestic waste discharges in their facilities and working areas.

3.5.2. Contact the Natural Resources Management Element, 354 CES/CEAN, for approval, guidance, and non-domestic discharge restrictions prior to initiating any physically new non-domestic wastewater connection to the sewer system (i.e. new building or remodeled building), any change in the way an existing drain is used (i.e. uncovering or unplugging a drain that is permanently covered or plugged), any change in the primary function of a facility (i.e. changing storage activities to active equipment maintenance), or prior to modifications to the current discharge or pretreatment of discharge to the WWTP.

3.5.3. Prevent any non-domestic discharge not specifically approved by the Natural Resources Management Element.

3.5.4. Reduce the volume and concentration of discharges through the pollution prevention program.

3.5.5. Notify the Fire Department and the Natural Resources Management Element of any spills or unauthorized discharges of non-domestic waste to the sewer system.

3.5.6. Ensure all personnel working in the generation area are aware of the discharge restrictions listed in Attachment 2 and in the base Wastewater Pretreatment Plan.

3.5.7. Ensure that processes generating non-domestic wastewater are operated and performed properly.

3.5.8. Ensure that personnel involved in non-domestic processes have received pollution prevention and spill control training.

3.5.9. Ensure that pollution prevention and spill control measures are enforced at the activity to prevent violation of pretreatment standards.

3.5.10. Provide all notification as required by the Wastewater Treatment Plant Pretreatment Program and the Water Program Manager.

3.6. 354 CES Water Systems Superintendent:

3.6.1. Operates and maintains the base wastewater treatments systems and ancillary facilities according to federal and state regulations, Air Force instructions, and industry standards.

3.6.2. Operates and maintains the base wastewater collection systems and ancillary processes, facilities, and equipment according to federal and state regulations, Air Force instructions, and industry standards.

3.6.3. Manages the wastewater treatment and wastewater collection operator certification program to ensure compliance with federal and state regulations, and Air Force instructions.

4. Adopted and Prescribed Forms.

AF Forms 847, *Recommendation for Change of Publication.*

MICHAEL J. JORDAN, Colonel, USAF
354th Fighter Wing

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION***Acronyms and Abbreviations*

ADEC— Alaska Department of Environmental Conservation

BCE— Base Civil Engineer

BOD— Biochemical Oxygen Demand

CFR— Code of Federal Regulations

DoD— Department of Defense

EPC— Environmental Protection Committee

FOG— Fats, Oils, and Greases

HAZMAT— Hazardous Material Handling and Recycling Facility

HMWMP— Hazardous Material and Waste Management Plan

Mg/L— milligram per liter

MSDS— Material Safety Data Sheet

OWS— Oil Water Separator

POL— Petroleum, Oils, Lubricants

PPM— Pretreatment Program Manager

RCRA— Resource Conservation and Recovery Act

SNU— Significant Non-domestic User

TSS— Total Suspended Solids

USACOE— United States Army Corps of Engineers

WWTP— Wastewater Treatment Plant

Terms

Conveyance— as used in this document, a general term that includes all components within the wastewater collection system (e.g., gravity and pressure sewer lines, lift stations, clean-outs, oil water separators, septic tanks, sewage holding tanks, and manholes).

Chemical Surety Materials— all chemical warfare agents designated by the DoD to include blister agents, nerve agents, and other agents identified by the DoD.

Domestic Wastewater— means waterborne human wastes or gray water derived from dwellings, commercial buildings, institutions, or similar structures; domestic wastewater includes the contents of individual removable containers used to collect and temporarily store human wastes; domestic wastewater does not include (a) liquid or solid material removed from septic tank, cesspool, or similar treatment works, if those facilities receive non-domestic or industrial wastewater, or (b) grease removed from a grease trap at a restaurant.

Hazardous Waste— As defined under RCRA in 40 CFR 261.

Interference— The inhibition or disruption of the WWTP treatment processes or operations, that may contribute to violation of the ADEC wastewater discharge permit.

Non-domestic User— any facility discharging wastewater that is not of comparable strength, origin, and/or flow of typical domestic sources; a source of non-domestic wastewater.

Non-domestic Wastewater— means liquid or water-carried wastes other than domestic wastewater; non-domestic wastewater includes wastes resulting from (a) a manufacturing, food processing, or production enterprise; (b) an industrial establishment; (c) the development of natural resources; (d) the construction of a manufacturing, production, or industrial facility; and (e) storm water runoff.

Pass-through— The presence of any pollutant in the WWTP effluent that is not permitted to be discharged. This occurs when pollutants are sent to a WWTP that is not designed to remove them.

Point Source— Any discernible, confined, and discrete conveyance, including any pipe, ditch, channel, tunnel, well, conduit, container, or vessel from which pollutants are or may be discharged.

Pollutant— Any substance, often regulated by environmental protection standards, which may have an adverse impact on the environment. Examples include chemical and biological constituents of sewage, garbage, sewage sludge, chemical wastes, other biological materials, radioactive materials, heat, oil, grease, solvents, heavy metals, organic compounds, suspended solids, surfactants, or any toxic or hazardous material discharged into water.

Pretreatment— Treatment of pollutants prior to discharge to the wastewater collection system. May involve methods to reduce concentrations or alter the chemical/physical properties of the pollutant.

Sanitary Sewer— A sewer intended to receive primarily domestic sewage and some non-domestic wastewater.

Significant Non-domestic User— Non-domestic users that meet the criteria delineated in 40 CFR 403 and *Protocol for the Preparation of Installation Pretreatment Programs* (USACE, 1999); any non-domestic user designated as such by the Pretreatment Program Manager.

Storm Sewer or Storm Drain— A sewer that carries storm or surface waters and drainage, but excludes sewage and industrial wastes.

Attachment 2

GENERAL RESTRICTIONS FOR ALL ACTIVITIES

The following prohibitions apply to all domestic and non-domestic users regardless of and in addition to any specific pretreatment standards. These prohibitions are from 40 CFR 403.5, with modifications recommended in the *Protocol for the Preparation of Installation Pretreatment Programs* (USACE, 1999)

A2.1. General Prohibitions: Users shall not discharge pollutants that will pass through the WWTP or interfere with operation and/or performance of the treatment facility.

A2.2. Specific Prohibitions

Users shall not intentionally introduce the following pollutants into the sanitary sewer system:

- a. Pollutants that create a fire or explosion hazard in the WWTP or its conveyance system. In no case, will a waste stream have a flashpoint of less than 140 degrees Fahrenheit (⁰F) using test methods specified in 40 CFR 261.21. These pollutants include, but are not limited to: gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, and pyrogenic or explosive materials.
- b. Pollutants that will cause corrosive structural damage to the WWTP. In no case shall discharges with a pH lower than 5.0 or greater than 10.0 standard units be made.
- c. Solid or viscous pollutants in amounts that will or may cause obstruction to the flow in the WWTP or its conveyance system, resulting in interference. These pollutants include, but are not limited to: animal/vegetable fats, oils, and greases (FOG); petroleum, oils, and lubricants (POL); ashes; cinders; mud; lime slurry; straw; shavings; metal; glass; rags; feathers; tar; plastics; wood; paunch; manure, or disposable diapers
- d. Any pollutant, including biological oxygen demand (BOD) or chemical oxygen demand pollutants, released in a discharge and at a flow rate and/or pollutant concentration that will cause interference with/at the WWTP and its conveyance system. These pollutants include, but are not limited to aqueous film forming foams (AFFF).
- e. Heat in amounts that will inhibit biological activity in the WWTP resulting in interference, but in no case heat in such quantities that the temperature at the WWTP exceeds 104⁰F unless the PPM, in conjunction with ADEC, approves alternate temperature limits.
- f. Petroleum-based products, non-biodegradable cutting oil, or products of mineral oil origin will not be discharged to the sewer, except for incidental amounts that are generated during equipment and facility washing operations. Discharge will then only be allowed after the effluent is pretreated through the use of an OWS or some other device designed to remove oil from water.
- g. Pollutants that result in the presence of toxic gases, vapors, or fumes within the WWTP and/or its conveyance systems in a quantity that may cause acute worker health and safety problems.
- h. Any trucked or hauled pollutants, except at discharge points designated by the WWTP.
- i. Any chemical surety materials, except as noted below. Simulated and experimental surety agents that produce the characteristic effects of surety materials on living tissue (e.g., blistering, cholinesterase inhibition, etc.), but have not been designated by the DoD as surety material, also

are prohibited from being discharged to the sanitary sewer. *De minimis* amounts of surety agents may be discharged to the WWTP and its conveyance system **if** associated with decontamination of personnel in accordance with contingency plans for biological or chemical attack.

j. Any RCRA-listed hazardous wastes or mixtures that contain those wastes, that do not meet the requirements of 40 CFR 261.3(a)(2)(iv), and that do not meet the local discharge limits established by the WWTP Pretreatment Plan.

k. Any wastewater containing radionuclide concentrations greater than natural background levels, unless approved by the PPM.

l. Any substance that may cause a violation of the Eielson AFB WWTP wastewater disposal permit, or render as hazardous the sludge produced by the WWTP.

m. Pollutants incorporated in any State standard for the purpose of protecting the WWTP, and as specified in the WWTP's wastewater disposal permit, will be enforceable as pretreatment standards.

A2.3. Specific Treatment Requirements

a. All silver-contaminated wastewater will be collected and disposed of through a silver recovery unit.

b. Aircraft, AGE, and government or commercial vehicle washing shall be performed in wash racks connected to an oil/water separator unless authorized by the Base Civil Engineer.

c. Ground water or storm water contaminated with petroleum products cannot be discharged in sanitary sewers. Contact the Natural Resources Management Element, 354 CES/CEAN, for approval and guidance.

d. Direct and/or indirect discharge of uncontaminated ground water or storm water to the sanitary sewer system is prohibited unless authorized by the Base Civil Engineer to clear utilidors of ground and/or storm water.

e. Shop floor drains will remain plugged until needed to drain authorized waste unless exempted by CEOI and CEAN.