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Aerospace Medicine

**MEDICAL SERVICE ENVIRONMENTAL
QUALITY PROGRAMS**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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(Maj Forrest C. Cunningham)
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This instruction implements paragraph **1.5** of Air Force Policy Directive 48-1, *Aerospace Medical Program*, and provides directive requirements for the Medical Service Environmental Quality Programs. It applies to all personnel and operations at Air Force installations and activities. It identifies Medical Service roles and responsibilities as a member of the Air Force Environmental Quality team in implementing AFPD 32-70, *Environmental Quality*. Included are responsibilities in clean-up, compliance, conservation, and pollution prevention. Environmental program management associated with the operations of medical treatment facilities are excluded from this instruction and are addressed in AFI 41-201, *Clinical Engineering Support*. Major Commands (MAJCOM), Air Reserve Components (ARC), Field Operating Agencies (FOA), and Direct Reporting Units (DRU) send copies of their supplement to HQ AFMOA/SGPA, 170 Luke Avenue, Suite 400, Bolling AFB DC 20332-5113. Send comments and suggestions for improvements on AF Form 847, **Recommendation for Change of Publication**, through channels to HQ AFMOA/SGPA, 170 Luke Avenue, Suite 400, Bolling AFB DC 20332-5113.

(440AW) This supplement implements and extends the guidance of AFPD 48-1, *Aerospace Medical Program*. This instruction applies to Civil Engineering Environmental Flight (CEV) and Bioenvironmental Engineering (PB) at General Mitchell IAP WI.

SUMMARY OF REVISIONS

This publication supersedes AFR 19-7, *Environmental Pollution Monitoring* and 161-44, *Management of the Drinking Water Surveillance Program* and incorporates new and revised environmental quality roles of the Air Force Medical Service.

(440AW) This revision removed para 9.4.1.1.

1. Responsibilities.

1.1. The Assistant Secretary of the Air Force for Manpower, Reserve Affairs, Installations, and Environment (SAF/MI). Acts as the Air Force Secretariat point of contact for matters governed by this instruction and serves as the principle representative and advocate for Medical Service Environmental Quality Programs with the Office of the Secretary of Defense (OSD), Federal agencies, and the Congress. Promulgates and oversees the Air Force Medical Service Environmental Quality Programs.

1.2. The Air Force Surgeon General (AF/SG). Establishes the Medical Service Environmental Quality Programs, sets policy, and provides manpower resources and advocates for sampling, analysis, and monitoring requirements.

1.3. The Air Force Civil Engineer (AF/CE). Manages the Air Force Environmental Quality program as in accordance with AFPD 32-70 and the 32-series AFIs. Programs and budgets for the Medical Service Environmental Quality Programs, including cleanup, compliance, conservation, and pollution prevention, that meet the criteria in AFI 32-7001, *Environmental Budgeting*.

1.4. Headquarters Air Force Medical Operations Agency (HQ AFMOA/SGP). Reviews proposed and executed federal legislation and rules, assesses impact on resources, develops the Medical Service Environmental Quality Programs policy for the AF/SG, provides implementing and supplemental guidance, publishes Air Force Instructions (AFIs), Air Force Pamphlets (AFPs), or Air Force Occupational, Safety and Health Standards (AFOSH Standards), and performs program implementation and execution oversight.

1.5. MAJCOM, DRU, and ARC Surgeons. Implement and ensure the execution of the Medical Service Environmental Quality Programs within their command, and coordinate associated work load for their MAJCOM with the Armstrong Laboratory and other servicing laboratories for planning, programming, and budgeting (PPB) and execution purposes.

1.6. Air Staff, MAJCOM, ARC, FOA, DRU, and installation Aerospace Medicine Team (Flight Surgeon Office (FSO)), Bioenvironmental Engineering Services (BES), and Public Health (PH).

Provide direct mission support to Air Force commanders and collaboratively execute the Medical Service Environmental Quality Programs through:

1.6.1. Sampling, analyzing, monitoring, and surveillance of chemical, physical, radiological and biological agents.

1.6.2. Assessing and communicating human health and environmental risks, and advising on measures to manage and reduce risk.

1.6.3. Advising on human health and environmental exposure standards.

1.6.4. Collaborating and interacting with regulators, government agencies, and the public.

1.6.5. Assessing and advising on methods of preventing pollution.

1.6.6. Educating employees and informing the public of potential health and environmental threats.

1.6.7. Reviewing facility construction and modification design plans for aspects of environmental quality.

1.6.8. Assessing epidemiological information and correlating data.

1.6.9. Collecting, recording, verifying, interpreting, conducting trend analysis, and reporting data.

1.6.10. Identifying Medical Service Environmental Quality requirements for PPB.

1.7. Armstrong Laboratory (AL/CC). Provides health risk assessment, health surveillance, and environmental quality technical support, and contract management services to the Air Staff, AFMOA, MAJCOMs, ARCs FOAs, DRUs, and installations as requested. Services are provided on a customer funded basis. Armstrong Laboratory will develop, maintain, and provide access to an Air Force-wide data repository for environmental quality sampling, analysis, and monitoring data.

1.8. USAF School of Aerospace Medicine (USAFSAM). Provides environmental quality technical training and education.

1.9. Air Force Base Conversion Agency (AFBCA). Implements and ensures program execution of any necessary Medical Service related Environmental Quality Programs after base closure.

2. Implementing Guidance:

2.1. HQ AFMOA/SGP. Provides guidance and publishes AFIs, AFPs and AFOSH Standards to implement this instruction.

2.2. MAJCOMs, ARCs, FOAs, and DRUs. Publish additional policy, procedures and guidance, as necessary, to implement and successfully manage the Medical Service Environmental Quality Programs within their command and provide copies to HQ AFMOA/SGP.

3. Metric Tracking and Reporting:

3.1. Metric Criteria. Metric criteria is published in AFPD 48-1, *Aerospace Medicine Program*. MAJCOMs, DRUs, FOAs, and ARCs establish processes within their command to assess performance of Medical Service Environmental Quality Programs using information reported in accordance with AFI 32-7047, *Compliance Tracking and Reporting*.

3.2. MAJCOMs, DRUs, FOAs, and ARCs. Ensure environmental information associated with Medical Service responsibilities is provided to the Civil Engineer or Environmental Management, as appropriate, so they can comply with AFI 32-7002, *Environmental Information Management System*.

4. Resource Requirements Identification and Reporting (Reference AFI 32-7001, *Environmental Budgeting*.) BES at each level of command identify and consolidate clean-up, compliance, conservation, and pollution prevention requirements of the Medical Service Environmental Quality Programs for the Aerospace Medicine Team, programs personnel requirements through the Medical Service, and assists the Civil Engineer or Environmental Management, as appropriate, in formulating the budget for services, equipment, and training needs in accordance with AFI 32-7001. Identify and report the information necessary to fulfill the Federal Agency Pollution Abatement and Prevention Plan (commonly known as the A-106) environmental requirements of the Medical Service Environmental Quality Programs in accordance with AFI 32-7001.

5. Education and Training:

5.1. MAJCOM, DRUs, FOAs, and ARCs BES. Coordinates with members of the Aerospace Medicine Team, advocates for sufficient education and training to carry out these programs, identify edu-

ation and training requirements, and allocate the Medical Service environmental quality education and training opportunities within their command.

5.2. The USAF School of Aerospace Medicine. Provides environmental quality training and coordinates the Medical Service's Environmental Quality Programs training requirements.

6. Research and Development. MAJCOM, DRUs, FOAs, and ARCs BES identify Medical Service Environmental Quality Programs research and development requirements to their Civil Engineer or Environmental Manager, as appropriate, for entering into the Air Force Civil Engineering Research, Development, and Acquisition Plan as described in AFI 63-118, *Civil Engineering Research Development and Acquisition*.

7. Medical Service Environmental Quality Programs in Foreign Countries (Reference AFI 32-7006, *Environmental Programs in Foreign Countries*). Aerospace Medicine activities in foreign countries will fulfill their environmental quality responsibilities as contained herein to support the environmental quality requirements of AFI 32-7006.

8. Clean-up (Reference AFI 32-7020, *The Environmental Restoration Program*, and 48-136, *Agency for Toxic Substances and Disease Registry Programs*).

8.1. BES:

8.1.1. Provides health risk assessment technical review and input to Preliminary Assessment/Site Investigation, Remedial Investigation/Feasibility Study, and Remedial Design/Remedial Action documents.

8.1.2. Reviews data and sampling strategies for quality and appropriateness as part of the risk assessment.

8.1.3. Reviews site health and safety plans and is the Air Force's approving authority for the health portion of the plan.

8.1.4. Participates as a permanent member of the base Technical Review Committee (TRC), health risk assessment technical advisor to the Restoration Advisory Board (RAB), and consultant to the Remedial Program Manager.

8.1.5. Assists Civil Engineering, or if applicable, Environmental Management, in identifying remedial requirements and technologies, and coordinates on restoration strategies.

8.1.6. Advises on health effects, environmental standards, and assists in negotiating and establishing cleanup and exposure control standards.

8.1.7. Provides technical oversight of long-term monitoring and with appropriate agreements with Civil Engineering or Environmental Management, may perform long-term monitoring.

8.1.8. Provides assistance in communicating health and environmental risk.

8.2. FSO and PH:

8.2.1. Collaborate with the BES on health assessments and risk communication.

8.2.2. Attend TRC and other environmental restoration meetings.

- 8.2.3. Fully participate to ensure public health issues are appropriately addressed and communicated.
- 8.2.4. Assess community health outcomes and correlate morbidity and mortality to environmental findings.
- 8.2.5. Provide proactive health surveillance to detect adverse health trend.
- 8.2.6. Develop working partnership to local and state public health surveillance experts.

8.3. Air Force Program for Managing Agency for Toxic Substances and Disease Registry (ATSDR) Activities. The Medical Service is the primary Air Force point of contact for ATSDR activities. Program guidance is published in AFI 48-136.

9. Compliance (References AFI 32-7001, *Environmental Budgeting*, 32-7002, *Environmental Information Management Systems*, 32-7005, *Environmental Protection Committee*, 63-118, 63-118, *Civil Engineer Research, Development, and Acquisition*).

9.1. Sampling, Analysis, and Monitoring (SAM) (Note: Excludes SAM related to Clean-up).

- 9.1.1. Installation BES are responsible for:
 - sampling, analysis, and monitoring
 - knowing applicable SAM regulatory requirements pertinent to their installation
 - developing a SAM plan for their installation annually in conjunction with the Civil Engineer or Environmental Manager, as applicable
 - considering compliance requirements while developing the SAM plan
 - submitting the SAM plan to the MAJCOM BES for review
 - providing summaries of environmental standards exceeded to the Civil Engineer or Environmental Manager, as appropriate, and reporting to the Environmental Protection Committee, in accordance with AFI 32-7005
 - identifying compliance, discretionary, and resource requirements in the plan, identifying resources for PPB purposes necessary to execute the plan; and submitting SAM compliance requirements for inclusion to the installation's A-106 submittal.
- 9.1.2. The requester of analytical services: identifies analytical requirements to the servicing laboratory. Analytical requirements include, but are not limited to defining:
 - whether the analysis is discretionary (i.e., optional) or is to meet compliance requirements
 - the specific analytical method to include minimum detection limit to be used
 - the certification requirements, analysis and reporting suspense
 - any confirmatory analysis requirements.

SAM compliance requirements include, but are not limited to: permit requirements; sample collection method, preservation, storage, shipping, and chain of custody; analytical methods which meet required detection limits; laboratory certification; holding times; interpretation of results; periodic quality assurance/quality control procedures; forms/formats; and other reporting requirements.

9.1.3. Agreements and contracts with servicing analytical and consultative service laboratories (i.e., AL/OE or other):

9.1.3.1. Must identify analytical methods, certifications, accreditations, forecast sample results turn around time, provide analytical cost estimates, and notify submitters within 48 hours of sample receipt if unable to provide the analytical service. Data provided must meet format requirements of the Air Force repository at Armstrong Laboratory.

9.1.3.2. Can be used for SAM and consultative services with coordination and consent of the MAJCOM, FOA, or DRU BES.

9.2. Compliance Assessment (Reference AFI 32-7045, *Environmental Compliance Assessment and Management Program*). MAJCOM, DRU, FOA, and Installation BES provides technical support to the Environmental Compliance Assessment and Management Program (ECAMP). MAJCOM, DRU, and FOA BES will identify BES participation in ECAMP pre-assessment activities, in their supplement to AFI 32-7045.

9.3. Hazardous Waste (Reference AFI 32-7042, *Solid and Hazardous Waste Compliance, 40 CFR 279*). BES:

9.3.1. Characterizes hazardous waste (to include used oil) and develops a hazardous waste analysis plan for the installation. Updates the hazardous waste analysis plan every three years as a minimum, or as necessary to meet compliance. Reviews and identifies inappropriate analysis requirements/techniques to the contracting authority before analysis contracts are awarded. Determines hazardous waste sampling requirements.

9.3.2. Collects, prepares, and arranges for the transport of hazardous waste samples to an approved laboratory for analysis. Interprets all analytical results and advises generators and waste managers of waste characteristics.

9.3.3. Coordinates and is responsible for developing and maintaining the installations hazardous waste stream inventory.

9.3.4. Completes health sections of the hazardous waste profile sheets and maintains copies.

9.3.5. Provides, or arranges for, hazardous waste safety and health training (as specified in 40 CFR 264.16, 265.16, 262.34) to Air Force employees and identifies worker requirements for use of personal protective equipment.

9.3.6. Reviews plans for construction or modification of hazardous waste treatment, storage, or disposal facilities.

9.3.7. Conducts annual surveys of industrial processes and waste storage facilities to assess compliance with applicable worker and environmental protection requirements.

9.3.8. Resource Conservation and Recovery Act (RCRA) Corrective Action Process. BES perform the same functions and have the same responsibilities under the RCRA Corrective Action Process as outlined in paragraph 8., Clean-up, of this instruction.

9.4. Surface, Ground, and Waste Water (Reference AFI 32-7041, *Water Quality Compliance*).

(Note: Excludes Clean-up SAM) BES:

9.4.1. Performs storm water, point and non-point ambient water discharge, injection well discharge (ground water) characterization and compliance monitoring, develops and maintains

stream emission inventories, and conducts special investigations to identify waste management practices and to meet federal, state, and local water quality compliance regulations. Excludes routine monitoring of industrial and domestic waste water treatment processes.

9.4.1.1. (Added-440AW) BES and Civil Engineering Flight (CEV) will jointly perform a stormwater exposure survey annually. The survey will verify or update the base drainage conditions and potential sources of pollution identified in the Stormwater Pollution Prevention Plan.

9.4.2. Permanently identifies all environmental monitoring points and maintains a master record of all locations.

9.4.2.1. (Added-440AW) The master record of all environmental monitoring points is shown on Attachment 2, **Table A2.1.**, Site Description and Sample Numbers and Attachment 3, **Table A3.1.**, Parameters Codes.

9.4.3. Performs trend analysis on emissions and reports results to the Environmental Protection Committee, installation commander, and the installation Civil Engineer or Environmental Management, as applicable.

9.4.4. Monitors and assesses the impact of Air Force activities and discharges on surface and ground water quality, human health, and the environment.

9.4.5. Advises commanders and activities on: the monitoring programs and of opportunities to modify operations or facilities to meet compliance requirements, reduce risks and prevent pollution.

9.4.6. Reviews installation construction and facility modification plans for surface and ground water emission compliance and for opportunities to reduce pollution emissions.

9.5. Air Emissions (Reference AFI 32-7040, *Air Quality Compliance*).

9.5.1. BES:

9.5.1.1. Is responsible for air emissions surveys and inventories, and compliance monitoring, unless the MAJCOM has assigned responsibilities differently. Provides technical oversight of contract monitoring and inventory efforts. Verifies and interprets air monitoring results. Reports results, trends, and compliance status to the installation commander, Environmental Protection Committee and the installation Civil Engineer or Environmental Management, as applicable.

9.5.1.2. Maintains copies of the base air emission inventory.

9.5.1.3. Advises Air Force activities on process modifications and opportunities to reduce air emissions.

9.5.1.4. Reviews construction and modification plans for air emission compliance and for opportunities to reduce emissions.

9.5.2. Armstrong Laboratory (AL/OE) provides air quality monitoring consultant services and is the Air Force central depository for installation air emission inventories.

9.6. Potable Water (References AFI 32-1066, *Plumbing Systems*, 32-1067, *Water Systems*, 32-7041, *Water Quality Compliance*).

9.6.1. AF/SG is the Air Force's office of primary responsibility for potable water quality, compliance with the Safe Drinking Water Act (SDWA), and publishing the Air Force's implementing policy.

9.6.2. HQ AFMOA/SGP develops Air Force policy for the Safe Drinking Water Act and publishes implementing guidance.

9.6.3. BES:

9.6.3.1. Performs potable water surveillance in peacetime and in contingency (including wartime) operations for the protection of public health and regulatory compliance.

9.6.3.2. Informs the installation commander, through the Chain of Command and provides prompt notification to the Civil Engineer or Environmental Management, as appropriate, of potable water issues that could impact public health or result in open enforcement actions from regulatory agencies.

9.6.3.3. Provides guidance for potable water monitoring and quality standards.

9.6.3.4. Performs sampling for contaminants, ensures analysis by State approved methods and laboratories, conducts sanitary surveys and vulnerability assessment of potable water systems, monitors aircraft watering points, interprets all analytical results, maintains system records, performs trend analysis, and reports reportable occurrences and results to the installation commander and the Environmental Protection Committee.

9.6.3.5. Assist in public notification of potable water issues.

9.6.3.6. Conducts, in conjunction with Civil Engineering, an installation wide cross-connection hazard survey every five years, or as determined by the State.

9.6.3.7. Conducts engineering reviews of repairs and modifications to potable water systems, and determines and conducts SAM as necessary. Reviews construction and modification plans and drawings to assess and advert health hazards to the water system.

9.6.3.8. Advises commanders on ground water protection opportunities, physical modifications to enhance water treatment and distribution systems, and alternative management practices to meet compliance requirements and enhance water quality.

9.6.3.9. Deploys to contingency sites where potable water is of significant concern as determined by the MAJCOM SG.

9.7. Hazardous Material (HAZMAT) Emergency Planning and Response (Ref. AFI 32-4002, *Hazardous Materials Emergency Planning and Response Compliance*). BES:

9.7.1. Supports installation HAZMAT emergency planning (Preparedness and Prevention), and emergency response in accordance with AFI 32-4002.

9.7.2. Collects, prepares, arranges for transport, analyzes, and interprets results of environmental samples to support installation HAZMAT emergency planning and response requirements.

9.7.3. As a member of the installation HAZMAT emergency planning team:

9.7.3.1. Supports hazard identification, vulnerability analysis, capability assessment, and risk management planning for contingencies.

9.7.3.2. Identifies the types and amounts of HAZMAT on the installation that exceed the

threshold planning quantity as required by federal, state, and local regulations (e.g., Emergency Planning and Community Right-to-Know Act (EPCRA)).

9.7.3.3. Provides technical assistance on evacuation planning and in-place sheltering to minimize adverse health and environmental impact during HAZMAT incidents.

9.7.4. Provides, during installation HAZMAT responses, oversight and technical consultation to protect and assess impact to human health and the environment.

9.7.5. As a member of the HAZMAT post-emergency response team (advisory group), oversees protection of worker and public health during clean-up and remediation activities and provides expertise in establishing clean-up standards.

9.7.6. Assists the commander in identifying HAZMAT releases and reporting releases in excess of the reportable quantity to the appropriate federal, state, and local agencies.

9.7.7. Identifies appropriate occupational health related training requirements for HAZMAT responders.

9.8. Asbestos Management (Ref. AFI 32-1052, *Facility Asbestos Management*). BES:

9.8.1. Supports asbestos management in accordance with AFI 32-1052.

9.8.2. Monitors ambient and background air outside of work enclosure during maintenance and abatement procedures involving asbestos-containing materials (ACM) and performs clearance sampling following abatement actions. Interprets analytical results to ensure proper protection of Air Force personnel and the public, and adequate clean-up after removal. If ambient air monitoring or clearance sampling are performed by a contractor, reviews and interprets contractor's analytical results, and approves re occupancy. Monitors worker exposures during maintenance and abatement procedures accomplished by government employees.

9.8.3. Conducts or arranges for SAM, and oversees SAM in support of the Installation Asbestos Facility Survey. Evaluates facilities and determines requirements for ACM repair, maintenance, or removal. Consults with Base Civil Engineer and assists in determining the in-place management or abatement measures necessary to reduce or eliminate a hazard.

9.8.4. Reviews all asbestos removal or abatement contracts to ensure proper requirements are identified, and to ensure the protection of Air Force personnel.

9.9. Lead-Based Paint (LBP) (Reference 29 CFR 1926).

9.9.1. Chief, Aerospace Medicine:

9.9.1.1. Ensures a coordinated epidemiological evaluation of children with elevated blood lead levels.

9.9.1.2. Establishes and chairs the Lead Toxicity Investigation (LTI) team and ensures appropriate clinical follow-up of positive pediatric lead results and provides risk communication as needed.

9.9.2. BES:

9.9.2.1. Conducts inspections and evaluations of facilities to assess LBP hazards with the Base Civil Engineer (BCE).

9.9.2.2. Carries out sampling and testing to assess hazard potential in facilities. Determines if

LBP hazard exist.

9.9.2.3. Consults with BCE and assists in determining the in-place management or abatement measures necessary to reduce or eliminate a hazard.

9.9.2.4. Performs air sampling and personnel monitoring on DoD employees, not contract employees, to quantify lead exposure in facilities during maintenance and repair activities which disturb LBP. Conducts, or arranges for and oversees, the collection of clearance sampling after activities disturbing LBP and interprets analytical results.

9.9.2.5. Assists in conducting investigations of incidents of possible lead exposure.

9.9.3. Public Health (PH):

9.9.3.1. Investigates incidents of possible lead exposure and performs appropriate notifications.

9.9.3.2. Provides lead exposure prevention education program that includes instructions to occupants of military family housing, facility managers, inspectors, etc., on potential LBP hazards and lead-toxicity symptoms.

9.9.3.3. Coordinates with local public health authorities on lead exposure environmental assessments to be conducted in non governmental housing.

9.9.3.4. Monitors and ensures follow-up of patients with elevated blood-lead levels.

9.10. Tank Compliance (Reference AFI 32-7044, *Storage Tank Compliance*). BES:

9.10.1. Provides human health and environmental risk assessment support in accordance to AFI 32-7044.

9.10.2. Provides surveillance during above ground and below ground tank entries to ensure protection of worker health and the environment and compliance with applicable standards. Advises the Civil Engineer, or Environmental Management, as appropriate, when leaks are suspected from industrial process tanks. Evaluates health risks and provides environmental sampling and analysis support when contamination is suspected from above ground and below ground tanks.

9.11. Radon Assessment:

9.11.1. BES:

9.11.1.1. Assesses radon levels in Air Force owned structures, performs monitoring, interprets results, works with BCE to mitigate those structures found to be above the action level, and conducts post-mitigation monitoring.

9.11.1.2. In collaboration with the other members of the Aerospace Medicine Team, assists in communicating risks to Air Force employees and the public.

9.11.2. FSO and PH:

9.11.2.1. Collaborates with BES to assess the potential public health impacts and perform risk communication.

9.11.2.2. Coordinates health surveillance data with surrounding communities public health personnel to ascertain health impact in the community.

10. Conservation (Reference AFI 32-7061, *Environmental Impact Analysis Process*, 32-7062, *Air Force Comprehensive Planning*, 32-7063, *Air Installation Compatible Use Zone Program*, 32-7064, *Integrated Natural Resources Management*, 32-7065, *Cultural Resources Management*, 32-7066, *Environmental Baseline Surveys*). BES:

- 10.1. Provides technical assistance to the base Environmental Planning Functions (EPF) in the areas of environmental impact, standards, health effects, monitoring capabilities, controls, and compliance.
- 10.2. Conducts reviews of environmental impact statements and proposals for construction projects and mission changes for human health and environmental impact.
- 10.3. Provides technical support to assist in ensuring environmental constraints have been identified in base comprehensive plans as required by AFI 32-7062.
- 10.4. Assists in evaluating specific noise events to support the Air Installation Compatible Use Zone Program in accordance with AFI 32-7063.
- 10.5. Provides environmental and facility data consistent with environmental baseline surveys (EBS) in accordance with AFI 32-7066.

11. Pollution Prevention (Reference AFI 32-7001, *Environmental Budgeting*, 32-7080, *Pollution Prevention Programs*, 63-118, *Civil Engineer Research, Development, and Acquisition*). BES:

- 11.1. Identifies hazardous materials and their authorized users. Is a member of the installation's cross-functional hazardous material "pharmacy/cell" for control of hazardous materials as implemented locally.
- 11.2. Inventories hazardous chemical usage and storage to support reporting requirements of the Pollution Prevention Act, Toxic Release Inventory, and state reporting requirements of Executive Order 12856.
- 11.3. Participates in pollution prevention opportunity assessments. Reviews material substitution and process modifications to ensure identification, assessment, and appropriate management of potential health and environmental hazards.

ALEXANDER M. SLOAN, Lt General, USAF, MC
Surgeon General

Attachment 1**GLOSSARY OF REFERENCES, ABBREVIATIONS, AND ACRONYMS*****References***

AFPD 32-70, *Environmental Quality*

AFPD 48-1, *Aerospace Medicine Program*

AFI 32-1052, *Facility Asbestos Management*

AFI 32-1053, *Pest Management*

AFI 32-1066, *Plumbing Systems*

AFI 32-1067, *Water Systems*

AFI 32-4001, *Disaster Preparedness Planning and Operations*

AFI 32-4002, *Hazardous Materials Emergency Planning and Response Compliance*

AFI 32-7001, *Environmental Budgeting*

AFI 32-7002, *Environmental Information Management System*

AFI 32-7005, *Environmental Protection Committee*

AFI 32-7006, *Environmental Programs in Foreign Countries*

AFI 32-7020, *The Environmental Restoration Program*

AFI 32-7040, *Air Quality Compliance*

AFI 32-7041, *Water Quality Compliance*

AFI 32-7042, *Solid and Hazardous Waste Compliance*

AFI 32-7044, *Storage Tank Compliance*

AFI 32-7045, *Environmental Compliance Assessment Management Program*

AFI 32-7047, *Compliance Tracking and Reporting*

AFI 32-7060, *Interagency Intergovernmental Cooperation*

AFI 32-7061, *Environmental Impact Analysis Process*

AFI 32-7062, *Air Force Comprehensive Planning*

AFI 32-7063, *Air Installation Compatible Use Zone*

AFI 32-7064, *Natural Resources Management*

AFI 32-7065, *Cultural Resources Management*

AFI 32-7066, *Environmental Baseline and Surveys*

AFI 32-7080, *Pollution Prevention Programs*

AFI 40-201, *Radiation Protection*

AFI 48-101, *Aerospace Medical Program*

AFI 48-136, *Agency for Toxic Substances and Disease Registry (ATSDR) Programs*

AFI 63-118, *Civil Engineering Research, Development, and Acquisition*

Executive Order 12856, *Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements*

29 CFR, *Labor*

40 CFR, *Protection of Environment*

Abbreviations and Acronyms

A-106—Office of Management and Budget (OMB) circular for reporting environmental requirements established by Executive Order 12088

ACM—Asbestos Containing Material

AF—Air Force

AFBCA—Air Force Base Conversion Agency

AFI—Air Force Instruction

AF/CE—Air Force Civil Engineer

AF/SG—Air Force Surgeon General

AFOSH—Air Force Occupational Safety and Health

AFP—Air Force Pamphlet

AFPD—Air Force Policy Directive

AFR—Air Force Regulation

AL/OE—Armstrong Laboratory, Occupational and Environmental Health Directorate

ARC—Air Reserve Components

ATSDR—Agency for Toxic Substances and Disease Registry

BCE—Base Civil Engineer

BES—Bioenvironmental Engineering Services

CE—Civil Engineering

CFR—Code of Federal Regulations

DRU—Direct Reporting Units

EBS—Environmental Baseline Survey

ECAMP—Environmental Compliance Assessment and Management Program

EPCRA—Emergency Planning and Community Right to Know Act

EPF—Environmental Planning Function

EM—Environmental Management

FOA—Field Operating Agencies

FSO—Flight Surgeon Office

GOCO—Government Owned Contractor Operated

HAZMAT—Hazardous Materials

HQ AFMOA/SGP—Headquarters Air Force Medical Operations Agency, Director

HQ AFMOA/SGPA—Headquarters Air Force Medical Operations Agency, Aerospace Medicine Division

LBP—Lead-Based Paint

LTI—Lead Toxicity Investigation

MAJCOM—Major Command

OSD—Office of the Secretary of Defense

PH—Public Health

PPB—Planning, Programming, and Budgeting

QA/QC—Quality Assurance/Quality Control

RAB—Restoration Advisory Board

RCRA—Resource Conservation and Recovery Act

SAF/MIQ—Deputy Assistant Secretary of the Air Force (Environment, Safety, and Occupational Health)

SAM—Sampling, Analysis, and Monitoring

SDWA—Safe Drinking Water Act

USAFSAM—United States Air Force School of Aerospace Medicine

ATTACHMENT 2 (ADDED-440AW)

SITE DESCRIPTION AND SAMPLE NUMBERS

Table A2.1. Site Description and Sample Numbers

SITE DESCRIPTION	SITE LOCATION (lat & long)	SAMPLE SITE ID	FREQUENCY	PARAMETERS (SEE TABLE 2 FOR CODE)
B St., Main Gate, Water from Off Base Swamp	425553875424 001	0370-NS-001	Quarterly	M
Intersection of A St., and 1st Ave. at fence	425611875430 002	0370-NS-002	*	M
Manhole just prior to Utah Ditch, Boiler Blow-down Outfall	425609875414 003	0370-NS-003 (WDNR WPDES OUTFALL #3)	Quarterly and some parame- ters annually	Quart: B,L,J 1. Ann: K,C,D,E,A
Utah Ditch Entry & Exit of Base	425614876406 004	0370-NS-004	Quarterly	H
Aircraft Parking Ramp Drainage	425607875402 005	0370-NS-005	Quarterly	H
South Side of Base Open Drainage	425557875402 006	0370-NS-006	Quarterly	H
Concrete Paved Ditch Section	425612875413 007	0370-NS-007	*	M
Ditch behind Ball Field (off base)	425614875422 008	0370-NS-008	Quarterly	M
Discharge at drainage ditch north of base gas station	425552875410 010	0370-NP-010 (WDNR WPDES OUTFALL #1)	Quarterly and some parame- ters annually	Quart: A, L Ann: C,F,G
Discharge at drainage ditch north of JP4 Tank	425552875405 011	0370-NP-011 (WDNR WPDES OUTFALL #2)	Quarterly and some parame- ters annually	Quart: A, L Ann: C,F,G

* Not monitored quarterly, sampling site identifiers maintained for future use as required.

- Operational chemical parameters and record of water treatment additives checked by operators monthly. Records are kept in Heating Plant, Bldg 215.

ATTACHMENT 3 (ADDED-440AW)

PARAMETERS CODES

Table A3.1. Parameters Codes

	PARAMETERS	PRESERVATIVE	COMPLIANCE STANDARD	LABORATORY
A	Oil & Grease	Sulfuric Acid	15 mg/L	Armstrong Laboratories
B	Total Suspended Solids (TSS)	none	40 mg/l (daily max)	Armstrong Laboratories
C	BOD5	none		Armstrong Laboratories
D	Total Phosphorus	Sulfuric Acid		Armstrong Laboratories
E	Ammonia Nitrogen	Sulfuric Acid		Armstrong Laboratories
F	PAH	none		Armstrong Laboratories
G	BTEX	Hydrochloric Acid		Armstrong Laboratories
H	Visual	none	no obvious pollution	At site
I	Dissolved Oxygen	none	1 mg/l	At site
J	Temperature	none	to be determined by WDNR	At site
K	pH	none	6-9	At site
L	Flow	none	600 gal/day for boiler blowdown	At site
M	Incident Dependent	-----	-----	-----