

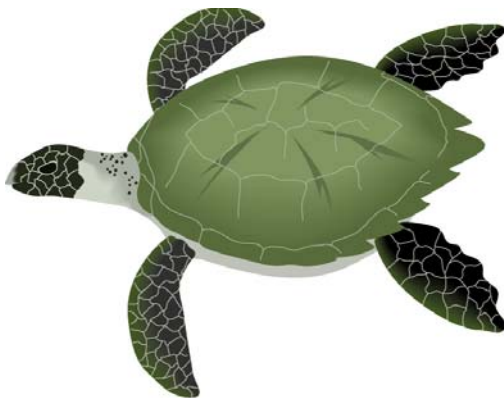


United States Air Force
15th Airlift Wing
Environmental Restoration Program

Final
WORK PLAN

FEASIBILITY STUDY AT
SITES LF01, LF23, LF24, AND AOC 18,
BELLOWS AFS AND MCTAB

BELLOWS AIR FORCE STATION
OAHU, HAWAII



APPENDIX H
Potential Applicable or Relevant and
Appropriate Requirements or
To-Be-Considered Criteria

Appendix H

Potential Applicable or Relevant and Appropriate Requirements or To-Be-Considered Criteria

This appendix presents a preliminary list of federal and state laws and regulations considered to be potential applicable or relevant and appropriate requirements (ARARs) or to-be-considered requirements (TBCs) for field activities at the Sites LF01, LF23, LF24, and Area of Concern (AOC) 18 at Bellows. The list consists of Tables F-1 (potential location-specific ARARs), F-2 (potential chemical-specific ARARs), and F-3 (potential activity-specific ARARs), and represents the complete set of potential ARARs and TBCs. The actual ARARs will be identified in conjunction with preparation of the Feasibility Study (FS) Report for the four subject sites.

This page was intentionally left blank.

TABLE H-1

Potential Location-Specific ARARs for Sites LF01, LF23, LF24, and AOC 18, Bellows

Work Plan for Feasibility Study at Sites LF01, LF23, LF24, and AOC 18, Bellows AFS and MCTAB, Oahu, Hawaii

Location	Potential ARAR	Prerequisite	Comments	ARAR Assessment
Archeological Resources	Archeological Resources Act 16 USC 470, 36 CFR 65	Alteration of terrain that threatens significant prehistoric, historical, or archeological data	The proposed activities will not alter or destroy any known prehistoric or historic archaeological features at Sites LF01, LF23, LF24, and AOC18. However, because there is always a possibility that buried historic or prehistoric remains could be discovered. Mitigation measures to protect the area would be required if such a discovery were uncovered. 15 CEVR has developed an Archaeological Monitoring Plan for Environmental Projects.	Applicable if intrusive activities disturb or uncover cultural resources
Presence of Human Remains, Funerary Objects, Sacred Objects, or Objects of Cultural Patrimony for Native Hawaiians	Native American Graves Protection and Repatriation Regulations, 43 CFR 10.4(c) and (d)	Must stop activities in the area of discovery and make a reasonable effort to secure and protect the objects discovered. Must consult with Native Hawaiian organization likely to be affiliated with the objects to determine further disposition per 43 CFR 10.5(b).	The proposed activities will not alter or destroy any known prehistoric or historic archaeological features at Sites LF01, LF23, LF24, and AOC18. However, because there is always a possibility that buried historic or prehistoric remains could be discovered. Mitigation measures to protect the area would be required if such a discovery were uncovered. 15 CEVR has developed an Archaeological Monitoring Plan for Environmental Projects.	Applicable if intrusive activities disturb or uncover graves or artifacts.
Historic Buildings	National Historic Preservation Act 16 USC 470, 36 CFR 800	Alteration of property included on or eligible for the National Register of Historic Places	Sites LF01, LF23, LF24, and AOC 18 do not include protected property.	Not ARAR
Natural Landmarks	Historic Sites, Buildings, and Antiquities Act 16 USC 461, 40 CFR 6.301	Alteration of landmarks on National Registry of Natural Landmarks	Sites LF01, LF23, LF24, and AOC 18 do not include protected landmarks.	Not ARAR
Caves	Protection of Caves, HRS 0006D	Protects caves, and the unique cultural and natural resources inside them.	Site AOC18 is a natural depression where caves may have existed prior to dumping activities.	Applicable if intrusive activities disturb or uncover caves.
Wetlands	Executive Order 11990, 40 CFR 6,	Actions that cause destruction, loss, or degradation of wetlands. Dredge	Potential remedies at Sites LF23 and LF24 could affect drainage pathways. Wetland	Applicable if intrusive

TABLE H-1

Potential Location-Specific ARARs for Sites LF01, LF23, LF24, and AOC 18, Bellows

Work Plan for Feasibility Study at Sites LF01, LF23, LF24, and AOC 18, Bellows AFS and MCTAB, Oahu, Hawaii

Location	Potential ARAR	Prerequisite	Comments	ARAR Assessment
	Dredge and Fill Permits, Section 404 of Clean Water Act 40 CFR 230.10, CFR 320-330	or fill activities in surface waters including wetlands. Under USCOE Nationwide Permit 38, wetlands may be disturbed to allow for cleanup of hazardous or toxic wastes.	indicators are not present at Site LF01 or AOC 18.	activities disturb wetlands
Wetlands	40 CFR 6.302(a)	Activities affecting wetlands. Requires actions taken to avoid adverse effects on wetlands and prohibits discharges to wetlands.	Potential remedies at Sites LF23 and LF24 could affect drainage pathways. Wetland indicators are not present at Site LF01 or AOC 18.	Applicable if intrusive activities disturb wetlands
Coastal Zone	Coastal Zone Management Act 16 USC 451, 15 CFR 930.30	Activities affecting the coastal zone including wetland, floodplain, estuary, beach, dunes, reef, and fish and wildlife habitat in the coastal zone. Federal activities must be consistent with state coastal zone management plan (see next item).	Sites LF23 and LF24 are located in the coastal zone.	Applicable if intrusive activities affect coastal zone
Coastal Zone, Wetlands	Section 6217 of Coastal Zone Management Act Reauthorization and Amendments, HRS Chapter 205A	Activities affecting structure of land and water use controls; provides federal consistency determinations for wetland-related activities.	Sites LF23 and LF24 are located in the coastal zone.	Applicable if intrusive activities disturb wetlands
Shoreline, Coastal Resources	Shoreline Management Act Chapter 25 of Revised Ordinances of Honolulu (ROH)	Protects coastal resources that include rare, threatened, or endangered species	Military lands are included within the SMA, but may be exempt.	Relevant and Appropriate (if not exempt)
Critical Habitat of Endangered or Threatened Species	Endangered Species Act 16 USC 1531, 40 CFR 402	Activities affecting species listed as endangered or threatened, or their critical habitat. Action must not threaten continued existence of listed species or destroy critical habitat. Consultation required with USFWS.	At Bellows, endangered or threatened species include green sea turtle, hawksbill turtle, Hawaiian stilt, Hawaiian owl, Hawaiian duck, Hawaiian coot, and Hawaiian monk seal.	Relevant and Appropriate if intrusive activities affect critical habitat
Habitat of Endangered or Threatened Species	Hawaii Endangered & Threatened Species Regulations	Activities affecting species listed as endangered or threatened, or their critical habitat. Prohibits the taking, harassment, harming, or killing of	Taking of endangered or threatened species not associated with study or potential remedies of Sites LF01, LF23, LF24, or AOC 18	Relevant and Appropriate if the site includes protected or

TABLE H-1

Potential Location-Specific ARARs for Sites LF01, LF23, LF24, and AOC 18, Bellows

Work Plan for Feasibility Study at Sites LF01, LF23, LF24, and AOC 18, Bellows AFS and MCTAB, Oahu, Hawaii

Location	Potential ARAR	Prerequisite	Comments	ARAR Assessment
	13 DOH 122 & 124	endangered or threatened species of flora and fauna.		sensitive habitat.
Indigenous Wildlife, Endangered and Threatened Wildlife, and Introduced Wild Birds	Hawaii Conservation Regulations HAR Title 13, Part II, Chapter 124	Taking of all wild species in the state including native, introduced, and pest species regulated by DLNR	Taking of wildlife birds or mammal species not associated with site study or potential remedies	Not ARAR

TABLE H-2

Potential Chemical-Specific ARARs for Sites LF01, LF23, LF24, and AOC 18, Bellows

Work Plan for Feasibility Study at Sites LF01, LF23, LF24, and AOC 18, Bellows AFS and MCTAB, Oahu, Hawaii

Media	Potential ARAR	Prerequisite	Comments	ARAR Assessment
Surface Water	Clean Water Act, Ambient Water Quality Criteria 40 CFR 131	Health-based criteria evaluated in conjunction with designated use of surface water to establish water quality criteria. Applies to U.S. waters.	Surface water is present adjacent to Sites LF23 (Waimanalo Stream) and LF24 (Waimanalo Bay). Surface water is not present at the Sites LF01 or AOC 18; however, groundwater at these sites may ultimately discharge to surface water.	Relevant and appropriate
Surface Water	Hawaii Water Quality Standards 11 DOH 54	Narrative objectives and numeric standards. Applies to all fresh, brackish, and salt water. Certain waters, such as natural lakes and anchialine ponds, have a no-discharge policy.	Surface water is present adjacent to Sites LF23 (Waimanalo Stream) and LF24 (Waimanalo Bay). Surface water is not present at the Sites LF01 or AOC 18; however, groundwater at these sites may ultimately discharge to surface water.	Relevant and appropriate
Groundwater	Hawaii DOH Action Levels for Groundwater, Revised 11/96	Conservative, default screening criteria for contaminant release sites	Tier 1 action levels are non-drinking water standards and are based on state surface water standards or MCLs for drinking water (if state surface water standards are not available). Tier 2 action levels can be calculated to incorporate a limited set of site-specific data, and Tier 3 action levels are based on a complete risk assessment.	TBC
Groundwater	Hawaii DOH Environmental Action Levels (EALs) for Groundwater, <u>Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater</u> , Interim Draft, 12/03	Updated conservative, default screening criteria for contaminant release sites	Tier 1 EALs are based on chronic surface water goals if the site is within 500 feet of surface water (LF23, LF24, and AOC18). If the site is more than 500 feet from surface water (LF01) Tier 1 EALs are based on acute surface water goals. Tier 2 EALs can be calculated to incorporate a limited set of site-specific data, and Tier 3 EALs are based on a complete risk assessment.	TBC
Groundwater	Hawaii Underground Injection Control Standards 11 DOH 23	Aquifers containing >5,000 mg/L total dissolved solids and seaward (makai) of UIC line are exempted as underground sources of drinking water.	Sites LF01, LF23, LF24, and AOC 18 are seaward of the UIC.	TBC

TABLE H-2

Potential Chemical-Specific ARARs for Sites LF01, LF23, LF24, and AOC 18, Bellows

Work Plan for Feasibility Study at Sites LF01, LF23, LF24, and AOC 18, Bellows AFS and MCTAB, Oahu, Hawaii

Media	Potential ARAR	Prerequisite	Comments	ARAR Assessment
		Federal MCLs will not apply to sites with high TDS or seaward of UIC line.		
Drinking Water	Safe Drinking Water Act Maximum Contaminant Level (MCL)s 40 CFR 141 and Secondary MCLs 40 CFR 143	Water that is delivered to any user of a public water system	Groundwater is not a potential source of drinking water because of salinity.	Not ARAR
Drinking Water	Safe Drinking Water Act MCL Goals.	A non-enforceable concentration of a drinking water contaminant that is protective of adverse human health. To Be Considered only.	Groundwater is not a potential source of drinking water because of salinity.	Not TBC
Soil	Hawaii DOH Tier 1 Action Levels for Soil, Revised 11/96	<p>Conservative, default screening criteria for all contaminant release sites.</p> <p>Action levels vary if drinking water is threatened. Tier I soil action levels are set at 10⁻⁶ cancer risk and HI of 1 for non-carcinogens and using a residential exposure scenario.</p> <p>Tier 2 standards can be calculated to incorporate a limited set of site specific data and Tier 3 standards are a complete risk assessment.</p>	Soil is a medium of concern at Sites LF01, LF23, AOC18, and LF24.	TBC
Soil	Hawaii DOH Environmental Action Levels (EALs) for Soil, <u>Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater</u> , Interim Draft, 12/03	Updated conservative, default screening criteria for contaminant release sites. Soil EALs are based on direct/indirect exposure to soil, protection of groundwater quality, and theoretical saturation limits for liquid chemicals.	Soil is a medium of concern at Sites LF01, LF23, AOC18, and LF24.	TBC
Soil	EPA Region IX Preliminary Remediation Goals (PRGs), October	Conservative, human-health risk-based screening criteria for evaluating many constituents	PRGs may be a useful screening tool for determining soil areas that may need remediation.	TBC

TABLE H-2

Potential Chemical-Specific ARARs for Sites LF01, LF23, LF24, and AOC 18, Bellows

Work Plan for Feasibility Study at Sites LF01, LF23, LF24, and AOC 18, Bellows AFS and MCTAB, Oahu, Hawaii

Media	Potential ARAR	Prerequisite	Comments	ARAR Assessment
	2004	associated with contaminated sites.		
Soil	EPA Soil Screening Guidance OSWER 9355.4-14FSA, June 1996	Numeric, risk based, screening levels for soil using a future residential scenario. Generic screening levels provided most common contaminants at NPL sites. Generic levels use conservative default assumptions and are more stringent than site-specific levels. Includes methodology for developing site-specific screening levels.	Soil is a medium of concern at Sites LF01, LF23, AOC18, and LF24.	TBC
Soil	TSCA, PCB Regulations 40 CFR 761	Cleanup standards for current releases of PCBs. Historic release cleanup levels are set on a case-by-case basis.	It is believed that there are no current sources of PCBs at Sites LF01, LF23, LF24, or AOC 18.	Not ARAR
Air	Clean Air Act, National Primary and Secondary Ambient Air Quality Standards, 40 CFR 50	Standards for ambient air quality standards	Air is not a medium of concern at Sites LF01, LF23, LF24, or AOC 18.	Not ARAR

TABLE H-3

Potential Action-Specific ARARs for Sites LF01, LF23, LF24, and AOC 18, Bellows

Work Plan for Feasibility Study at Sites LF01, LF23, LF24, and AOC 18, Bellows AFS and MCTAB, Oahu, Hawaii

Action	Potential ARAR	Prerequisite	Comments	ARAR Assessment
Discharge to Surface Waters	Clean Water Act, National Pollution Discharge Elimination System (NPDES), 40 CFR 122 HRS Chapter 342D, HAR Chapters 11-54 and 11-55	Discharge of pollutants to US or state waters from a point source	Point-source discharges are not believed to exist at Sites LF01, LF23, LF24, or AOC 18.	Not ARAR
Discharge to Publicly Owned Treatment Plant	Clean Water Act, National Pretreatment Standards 40 CFR 403	Effluent standards for discharges to publicly owned treatment works (POTWs)	Activities at Sites LF01, LF23, LF24, or AOC 18 are not anticipated to include discharges to POTWs.	Not ARAR
Stormwater Runoff from Construction Activities	Stormwater Regulations under Clean Water Act, NPDES 40 CFR 122.26	Construction activities including clearing, grading, and excavation activities that disturb 5 acres or more	Surface soil excavation at Site LF24 is planned during the FS investigation; remedies may also include clearing, grading, or excavation at each site. However, it is not anticipated that these activities will disturb 5 acres or more at any sites.	Applicable if clearing, grading, or excavation activities disturb 5 acres or more
Solid Waste Disposal	Solid Waste Disposal Act 40 CFR 241	Establishes procedures and minimum requirements for land disposal of solid waste	If solid wastes are stored or disposed offsite, all RCRA regulations must be obeyed.	Applicable
Solid Waste Disposal	Hawaii Solid Waste Pollution Act HAR 19 342H	Regulates discharge, deposit, injection, dumping, spilling or leaking of solid waste onto land or in water	If solid wastes are stored or disposed offsite, all state regulations must be obeyed.	Applicable
Hazardous Waste Generation, Handling, Storage, and Disposal	RCRA, Hazardous Waste Regulations 40 CFR 260 – 268 Hawaii Hazardous Waste Management Act, HRS Title 19, Chapter 342	Establishes procedures for identifying, handling, storing, transporting, and disposing of hazardous wastes	Characterization of wastes generated during a study or a remedial action would be conducted to determine if such wastes are hazardous.	To be determined. Substantive requirements would apply to wastes managed onsite, and substantive and procedural portions of requirements would apply to hazardous wastes transported offsite.

TABLE H-3

Potential Action-Specific ARARs for Sites LF01, LF23, LF24, and AOC 18, Bellows

Work Plan for Feasibility Study at Sites LF01, LF23, LF24, and AOC 18, Bellows AFS and MCTAB, Oahu, Hawaii

Action	Potential ARAR	Prerequisite	Comments	ARAR Assessment
Land Placement of Hazardous Waste	RCRA, Land Disposal Restrictions 40 CFR 268	Prohibits land placement of certain hazardous wastes unless treated to specified criteria	Land disposal of hazardous wastes is not planned.	Not ARAR
Municipal Solid Waste Landfill	Closure and Post-Closure Care HAR 11-58.1-17	All municipal solid waste landfill units must install a final cover system designed to minimize infiltration and erosion. The cover system must have: - Permeability less than or equal to the bottom liner or no greater than 1 x 10 ⁻⁵ cm/sec, - A minimum 18-inch earthen infiltration layer, and - A minimum 6-inch earthen erosion layer capable of sustaining plant growth. An alternative cover system may be approved by the HDOH director. A notice regarding the presence of the landfill must be placed in the deed. The cover, leachate collection, groundwater monitoring, and gas monitoring systems must be maintained for 30 years.	The capping requirements for landfills may be considered in guiding the design of cover improvements for the sites. Cover, infiltration, permeability, and landfill gas requirements are not applicable or relevant and appropriate because the sites were last used from 30 to 60 years ago.	TBC
Municipal Solid Waste Landfill	Post-Closure Care HAR 11-264-117	Post-Closure Care lasts for 30 years unless otherwise decided by the HDOH director	Not applicable or relevant and appropriate because there has never been formal closure of the sites. CERCLA five-year reviews will satisfy the intent of the requirement.	TBC
Municipal Solid Waste Landfill	Planning Post-Closure Care HAR 11-264-118	A written Post-Closure Care plan is needed describing planned monitoring and maintenance activities and frequency.	Not applicable or relevant and appropriate because there has never been formal closure of the sites. The Record of Decision will contain the information to satisfy the intent of the requirement.	TBC
PCB Handling	TSCA, PCB Regulations	Establishes cleanup and disposal	It is believed that there are no current sources of PCBs at Sites LF01, LF23, LF24, or	Not ARAR

TABLE H-3

Potential Action-Specific ARARs for Sites LF01, LF23, LF24, and AOC 18, Bellows

Work Plan for Feasibility Study at Sites LF01, LF23, LF24, and AOC 18, Bellows AFS and MCTAB, Oahu, Hawaii

Action	Potential ARAR	Prerequisite	Comments	ARAR Assessment
	40 CFR 761	standards for PCBs	AOC 18.	
Worker Safety	Occupational Safety and Health Act 29 USC 651-678	Regulates worker health and safety	Will apply to site workers	Applicable
Worker Protection	Hawaii Occupational Safety and Health Standards HAR Title 12, Chapter 99	Requires procedures for the protection of employees against exposure to health and safety risks during hazardous substance cleanup operations	Could apply if hazardous substances are encountered	Applicable
Transportation of Hazardous Materials	Hazardous Materials Transportation Act 49 CFR 171-177	Established standards for packaging, labeling, and transportation of hazardous materials	Could apply if hazardous materials are encountered and transported offsite	To be determined. Substantive and procedural portions of requirements would apply to hazardous wastes transported offsite.
Habitat Restoration	40 CFR 1508.20, USFWS Mitigation Policy (46 FR 7644 to 7663, 1981)	Permit activities that could affect habitats for federally protected species	Potential remedies at Sites LF01, LF23, LF24, or AOC 18 may affect habitat	Applicable
Modification of Surface Waters	Fish and Wildlife Coordination Act 16 USC 1531-666	Requires consultation with USFWS when a Federal entity proposes or authorizes any modification of a stream or other water body. If impacts cannot be avoided, mitigation will be required for protection of fish and wildlife resources.	Potential remedies at Sites LF23 or LF24 may affect surface waters. No surface water is present at Site LF01 or AOC 18.	Relevant and appropriate
Site Vegetation Clearing and Grading	Hawaii Noxious Weed Rules, HAR Title 4, Subtitle 6, Chapter 68	Establishes criteria for designation, control, or eradication of noxious weeds	Potential remedies at Sites LF01, LF23, LF24, or AOC 18 may require vegetation clearing and disposal. Remedies should implement procedures to prevent additional spreading of noxious weed species.	Applicable when site work involves movement/disposal of cleared vegetation.