



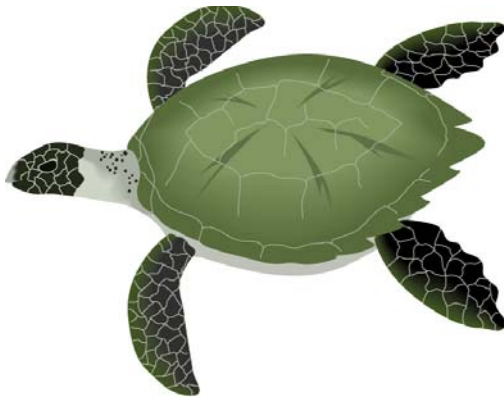
United States Air Force  
15th Airlift Wing  
Environmental Restoration Program

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*Final*  
WORK PLAN

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

BELLOWS AIR FORCE STATION  
OAHU, HAWAII



APPENDIX C  
Supplemental Project-Specific  
Quality Assurance Project Plan  
Information

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# Appendix C

## Supplemental Project-Specific Quality Assurance Project Plan

The *Installation-Wide Quality Assurance Project Plan for Multiple Projects at 15 ABW Installations in Hawaii, Version 2.0 (IWQAPP)* (CH2M HILL, November 19, 2002), together with the *Air Force Center for Environmental Excellence Quality Assurance Project Plan, Version 3.1 (AFCEE QAPP, Version 3.1)* (AFCEE, August 2001), establishes the quality assurance/quality control (QA/QC) protocols and procedures that govern sampling and analytical activities for projects at 15th Airlift Wing (15 AW) installations. Unless otherwise noted below, all field staff and subcontractors participating in the Feasibility Study (FS) at Bellows Sites LF01, LF23, LF24, and Area of Concern (AOC) 18 will be expected to comply with the procedures specified in the IWQAPP. In addition, unless otherwise noted below, all samples will be preserved and analyzed in accordance with the AFCEE QAPP, Version 3.1.

The subsections in this appendix contain the following project-specific information that supplements the IWQAPP.

- **Section C.1, Media and Site-Specific Analytical Methods**, contains the analytical methods required for each medium, including sample counts by individual site
- **Section C.2, References**, contains the references for materials used in this QAPP.

### C.1 Media- and Site-Specific Analytical Methods

A summary of the analytical methods by media that will be used during the Bellows FS project, and the approximate number of samples to be collected, are provided in Table C-1. QA/QC specifications are provided in the IWQAPP. Planned QC samples are discussed in the Project-Specific FSP (Appendix B).

### C.2 References

CH2M HILL. November 19, 2002. *Installation-Wide Quality Assurance Project Plan for Multiple Projects at 15 ABW Installations in Hawaii, Version 2.0 (IWQAPP)*. Prepared for the Air Force Center for Environmental Excellence, Environmental Services Office, Environmental Restoration Division (AFCEE/ERD), Brooks City-Base, Texas and for the 15th Air Base Wing CES/CEVR, Hickam Air Force Base, Honolulu, Hawaii. [Online:] [http://projects.ch2m.com/hnl\\_afcee/General/IWQAPP2\\_Version2.pdf](http://projects.ch2m.com/hnl_afcee/General/IWQAPP2_Version2.pdf) (November 19, 2002).

U.S. Department of the Air Force, HQ Air Force Center for Environmental Excellence (AFCEE). Technical Services Quality Assurance Program. August 2001. Quality Assurance Project Plan, Version 3.1 (AFCEE QAPP, Version 3.1). Appendix C in *Guidance for Contract Deliverables (GCD)*. [Online:] <http://www.afcee.brooks.af.mil/er/qfw.htm> (November 13, 2001).

TABLE C-1

Approximate Number of Samples by Medium and Analytical Method

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

Medium	TCLP Metal	Total Metals (SW6010B, SW7471A)	Dissolved Metals (SW6010A, SW7000 series)
Surface Soil	19	--	--
Groundwater (DPS)	--	--	8
Interstitial Pore Water	--	--	5
Crab Tissue <sup>1</sup>	--	6	--
Surface Water <sup>1</sup>	--	--	2
Groundwater (Monitoring Well)	--	--	36
<b>TOTAL SOIL</b>	<b>19</b>	<b>0</b>	<b>0</b>
<b>TOTAL CRAB TISSUE</b>	<b>0</b>	<b>6</b>	<b>0</b>
<b>TOTAL WATER</b>	<b>0</b>	<b>0</b>	<b>51</b>

**Notes:**

<sup>1</sup> Crab tissue will be collected. Surface water sample collection is conditional based on the results of DPS groundwater and interstitial pore water sampling at Site LF24.

Sample counts include 10% field duplicates and 5% matrix spike/matrix spike duplicates.