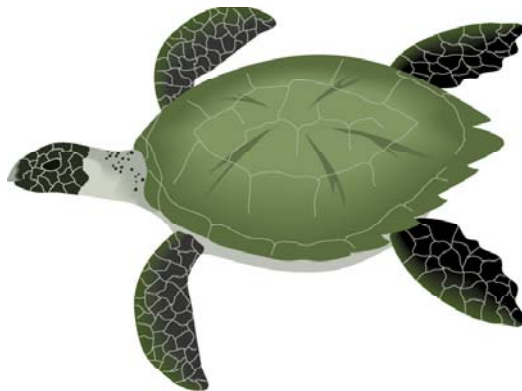




**United States Air Force
15th Air Base Wing
Environmental Restoration Program**

***Final*
WORK PLAN
FOR SITE INSPECTIONS
AT AREAS OF CONCERN 18, 20, AND 21
Bellows Air Force Station
Oahu, Hawaii**



**APPENDIX F
Investigation-Derived Waste (IDW)
Management Plan**

Appendix F

Project-Specific Investigation-Derived Waste Management Plan

1.0 Introduction

This appendix presents the “Project-Specific Investigation-Derived Waste Management Plan” (IDWMP) for the *Work Plan for Site Inspection at AOCs 18, 20, and 21, Bellows AFS, Oahu, Hawaii*.

Three types of IDW are currently anticipated: (1) IDW soil, (2) IDW water, and (3) used personal protective equipment (PPE) and disposable sampling equipment. These kinds of IDW and the general processes that will be used to manage them are described below in Sections 2.0, 3.0, and 4.0.

This Project-Specific IDWMP provides process information and limited site- or activity-specific practices for the Site Inspections (SIs) at AOCs 18, 20, and 21. This plan also addresses specific best management practices for IDW and the anticipated IDW volumes. The IDWMP will be amended, as necessary, if unaddressed conditions arise (such as when a new waste type is anticipated or waste volumes change such that a different best management practice applies).

The IDW management process for this project incorporates the U.S. Air Force’s (USAF’s) waste segregation, minimization, and management preferences as set forth in Waste Management Plan Guidelines for 15th Air Base Wing Contractors (March 1998) and guidance contained in the document Management of Investigation-Derived Waste During Site Inspections (U.S. EPA, May 1991). Waste management options in order of preference are reuse, recycling, treatment, and disposal. Onsite options are preferred over offsite/on-Base options, and on-Base options are preferred over off-Base options. However, because of the small quantities of IDW anticipated during the SI, an exception to the reuse and recycling options is incorporated into this Project-Specific IDWMP: the exception is that reuse and recycling options do not exist for IDW soil or water.

IDW generated during the SI fieldwork will be temporarily stored in the fenced IDW storage area used during the OU1 EE/CA project, located in the vicinity of Bellows IRP Site SD22 in new, State of Hawaii Department of Transportation (HDOT)-approved, 55-gallon steel drums. The temporary storage area consists of an approximately 40-foot-by-30-foot gated enclosure on an asphalt surface. All drums will be stored on wooden pallets. The enclosure will include an evaporation basin for evaporating non-hazardous IDW water.

2.0 IDW Soil

Approximately fifteen 55-gallon drums of IDW soil are expected to be generated during hollow-stem auger (HSA) drilling at AOC 18. Excavated soil from trenching at AOC 18 will be returned to the excavations. The minimal soil generated during sampling by direct-push system (DPS) drilling at AOCs 20 and 21 will be returned to the source boreholes.

IDW soil will be contained in HDOT-approved steel drums at the time it is generated. Drums will be staged at the temporary IDW storage area until the laboratory analytical results have been evaluated and an appropriate management option can be selected. Based upon previous analytical results at Site LF01, it is expected that IDW soil will not be hazardous and will contain low to non-detectable concentrations of analytes, below action levels for the chemicals of concern. In this case, the IDW soil will be returned to AOC 18 and spread on the ground surface in the vicinity of the boreholes in accordance with EPA guidance.

If analytical results indicate that the soil contains hazardous constituents at concentrations above action levels, an appropriate waste disposal plan will need to be generated taking into account the CERCLA off-site rule or other applicable regulations.

3.0 IDW Water

A maximum of approximately 200 gallons of IDW water (for all three AOCs combined) is expected to be generated during monitoring well development, purging and sampling, and use of equipment (backhoe, drilling rigs, hand tools, etc.) decontamination at the three AOCs.

IDW water derived from sampling of temporary microwells (approximately 5 gallons at each well) at AOCs 20 and 21 will be returned to the boreholes and used to hydrate bentonite during temporary microwell abandonment and borehole sealing. At AOC 18, IDW water derived from developing and purging monitoring wells, along with decontamination water, will be contained in HDOT-approved steel drums at the time it is generated. Drums will be staged at the temporary IDW storage area until the laboratory analytical results have been evaluated and an appropriate management option can be selected. Based upon previous analytical results at Site LF01, it is expected that IDW water will be below action levels for the chemicals of concern. In this case, the IDW water will be reinfiltated at AOC 18. If analytical results indicate concentrations above action levels, the water will be evaporated in the evaporation basin at the temporary IDW storage area.

4.0 Personal Protective and Disposable Sampling Equipment

IDW consisting of used PPE and spent disposable sampling equipment will be generated during the LTM program. This equipment is expected to consist of gloves (nitrile or otherwise), chemical-resistant coveralls (Tyvek® or otherwise), plastic bailers, and downhole tubing. Some or all of these materials will be generated in small quantities throughout the LTM program.

Unstained PPE and equipment will be disposed of as municipal solid waste at the time of generation. This is expected to be the primary management process for PPE and disposable sampling equipment. If equipment is stained by contact with other IDW or sampled media, it will be decontaminated, then disposed of as municipal solid waste.

5.0 References

- U.S. Department of the Air Force (USAF). March 1998. *Waste Management Plan Guidelines for 15th Air Base Wing Contractors*.
- U.S. Environmental Protection Agency (EPA). May 1991. *Management of Investigation-Derived Waste During Site Inspections*. Office of Research and Development. EPA/540/G-91/009.

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