



U.S. Fish & Wildlife Service

Engineering Evaluation/Cost Analysis for Removal of Lead-based Paint at Midway Atoll National Wildlife Refuge

Introduction

The U.S. Fish and Wildlife Service (FWS) is issuing this fact sheet about the non time-critical (NTC) removal of lead-based paint (LBP) from structures and lead-contaminated soil from Midway Atoll National Wildlife Refuge (Refuge). This fact sheet briefly summarizes the results of an Engineering Evaluation/Cost Analysis (EE/CA) conducted at the Refuge, presents the alternatives considered in the EE/CA, and identifies the Service's recommended NTC removal action. The FWS released a draft EE/CA for the site on January 19, 2011 and is inviting the public to comment. The EE/CA can be reviewed and downloaded from the Midway Atoll National Wildlife Refuge Website at <http://www.fws.gov/midway/lpa.html> (click on the Midway EE/CA Report link). Hard copies of the EE/CA are available at the FWS Division of Engineering, Region 1, 911 NE 11th Avenue, Portland, Oregon 97232 and at the FWS Papahānaumokuākea Marine National Monument office, 300 Ala Moana Blvd., Room 5-231, Honolulu, Hawaii 96850.

The FWS issues this fact sheet under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Pursuant to 40 CFR Part 300.415 (n) and 820 (a), a public comment period will be held from January 19, 2011 through February 19, 2011 during which the FWS will accept written comments on the EE/CA. After public review and comment, the FWS will issue an action memorandum to identify the selected removal action.

Background

Studies conducted by FWS and others at Sand Island between the late 1980s and 2009 have shown that Laysan albatross nestlings (chicks) exhibited symptoms of lead toxicity and that their exposure is likely related to ingestions of LBP chips and soil contaminated with LBP chips, which the birds often pick-up and place into their nests (FWS 2009). Based on these reports, existing information concerning the release or threatened release of hazardous substances, pollutants, or contaminants at Midway Atoll was compiled in a Preliminary Assessment/Site Inspection (PA/SI) report.

A Draft Engineering Evaluation/Cost Analysis (EE/CA) was completed in January 2011. The overall objective of the EE/CA is to evaluate various cleanup alternatives and provide a basis for selecting a CERCLA NTC removal action addressing the release and substantial threat of a release of lead contamination at the Refuge. A streamlined risk evaluation was also completed for the site, which recommends a preliminary cleanup goal of 75 milligrams per kilogram for lead in soil.

Cleanup Alternatives Available for Public Review

For the EE/CA, the Refuge was divided into nine (9) decision units (for map see Figure 2A in Midway EE/CA Report), which will allow the FWS to prioritize response activities at the areas presenting the highest threats and in the most cost-effective manner. The nine (9) decision units are as follows:

Decision Unit 1

Decision Unit 1 includes Buildings 619, 623, 626, 628, and 643 (Cable Buildings), and the soils surrounding the cable buildings.

Decision Unit 2

Decision Unit 2 includes Buildings 578 and 579 (Marine Barracks), and the soils surrounding the buildings.

Decision Unit 3

Decision Unit 3 includes Building 4203 (Bachelor Officer Quarters Bravo), Building 4212; the lead-contaminated soil in the vicinity of buildings 4203, 4204; the Officers Quarters buildings 415, 416, 417, 418, 419, 421, 422, 423, and 424; and residential duplexes including buildings 4209, 4210, 4211, and 414.

Decision Unit 4

Decision Unit 4 includes the Midway Mall (Building 259), Buildings 2403 and 2404, and the contaminated soils around these buildings.

Decision Unit 5

Decision Unit 5 includes Buildings 5309 (former Transmitter building) and 5303 (R2 Unit), and the contaminated soils around the structures.

Decision Unit 6

Decision Unit 6 includes Buildings 393 (SKI warehouse), 342 (hazardous materials storage) 356 (Transportation shop), 357 (Machine shop), 353 (Carpenter shop), 349 (Cold storage), 363 (Torpedo shop/recycling), and 151 (Seaplane Hangar), and the contaminated soils around the structures.

Decision Unit 7

Decision Unit 7 includes Buildings 331 (Medical Clinic/Offices), 3504 (Barracks D), 3502 (Galley), 3503 (Barracks C), 3512 (Gymnasium), and the contaminated soils around the structures.

Decision Unit 8

Decision Unit 8 includes the fuel storage tanks at the old fuel farm and the contaminated soils around the above-ground storage tanks (ASTs).

Decision Unit 9

Decision Unit 9 includes the remaining structures that are in use at Midway and the remaining contaminated soils. This Decision Unit is broad based and includes storage buildings, pump house, lift stations, and other ancillary structures.

Alternatives were developed for each decision unit and are described in detail in the EE/CA. Removal technologies and options were identified based on site contaminants, characteristics, and removal action objectives. These were screened for effectiveness, implementability, and relative costs. The recommended alternative for all decision units is Alternative 3. The alternatives that were developed for decision units 1 - 9 are summarized below. For the complete

description of alternatives for a specific decision unit refer to the Midway EE/CA Report at <http://www.fws.gov/midway/lpa.html>, (click on the Midway EE/CA Report link).

- Alternative 1 – No action.
- Alternative 2 – Abatement of LBP and/or asbestos siding from specified buildings and the demolition* of the remaining structures with excavation of contaminated soils and the installation of a soil barrier (geomembrane) and a soil cap. On-site disposal of the contaminated soils and demolition debris in the consolidation unit.
- Alternative 3 – Abatement of LBP and/or asbestos siding from specified buildings and the demolition* of the remaining structures with excavation of contaminated soils and the installation of a soil barrier (geomembrane) and a soil cap. On-site disposal of the demolition debris and soil using ex-situ soil stabilization methods (use of Portland cement-type mixture to solidify soils in a concrete monolith) in the consolidation unit.
- Alternative 4 – Abatement of LBP and/or asbestos siding from specified buildings and the demolition* of the remaining structures and the installation of a soil barrier (geomembrane) and soil cap. On-site disposal of the demolition debris in the consolidation unit.
- Alternative 5 – Abatement of LBP and/or asbestos siding from specified buildings and the demolition* of the remaining structures with excavation of contaminated soils and the installation of a soil barrier (geomembrane) and a soil cap. Off-site disposal of the demolition debris and soil.
- Alternative 6 – (only applicable to Decision Units 1 & 6) Abatement of LBP and/or asbestos siding from specified buildings and the demolition* of the remaining structures with excavation of contaminated soils and the installation of a soil barrier (geomembrane) and a soil cap. On-site disposal of the building debris in the consolidation unit and on-site disposal of soils using ex-situ soil stabilization methods in a containment cell constructed near the Decision Unit.

*Demolition of structures is only applicable to Decision Units 1 & 2

How to Comment

The EE/CA can be reviewed and downloaded from the Midway Atoll National Wildlife Refuge Website at <http://www.fws.gov/midway/lpa.html> (click on the Midway EE/CA Report link). Hard copies of the EE/CA are available at the FWS Division of Engineering, Region 1, 911 NE 11th Avenue, Portland, Oregon 97232 and at the FWS Papahānaumokuākea Marine National Monument office, 300 Ala Moana Blvd., Room 5-231, Honolulu, Hawaii 96850.

The FWS invites your comments on the cleanup alternatives for each decision unit. Three issues that the FWS is particularly seeking comments on:

1. The proposed cleanup level of 75 mg/kg for lead in soil (Appendix C, Streamlined Risk Evaluation in Midway EE/CA Report).
2. Schedule and cleanup priorities as the FWS will not be able to address the entire site in the first year of cleanup. (Removal actions for all Decision Units (1 – 9) are expected to take six (6) years).

3. The removal of historic buildings in Decision Unit 1 and Decision Unit 2 (Sections 8.1 and 8.2 in Midway EE/CA Report).

Comments must be received or postmarked by February 19, 2011. Please submit written comments about the cleanup alternatives to Carlton Morris, FWS Project Manager, at U.S. Fish and Wildlife Service, Division of Engineering, 911 NE 11th Avenue, Portland, Oregon 97232, or email carlton_morris@fws.gov.

The FWS will consider all public comments received and prepare written responses for significant comments.

For More Information, Contact:

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Information Repositories:

U.S. Fish and Wildlife Service
Division of Engineering
911 NE 11th Avenue
Portland, Oregon 97232

U.S. Fish and Wildlife Service
Papahānaumokuākea Marine National Monument
300 Ala Moana Blvd, Room 5-231
Honolulu, Hawaii 96850

On The Web:

The following documents:

- Midway EE/CA Report
- Midway EE/CA Fact Sheet
- Midway Atoll Administrative Record

can be found online at:

Midway Atoll National Wildlife Refuge
<http://www.fws.gov/midway/lpa.html>