

STATEMENT OF WORK  
Midway NWR Engineering Evaluation / Cost Analysis  
7/31/2009

**1. GENERAL:** Historic structures at Midway NWR were painted with Lead-Based Paint (lbp). This paint has peeled off of the buildings and now exists in the sandy soil surrounding the buildings. In a recent Environmental Risk Assessment (ERA) performed at Midway, it was found Laysan Albatross and other bird species are at risk of lead poisoning through ingestion of paint chips.

In order to develop the best course of action to remediate the lead hazard in soil, the FWS will hire a contractor to prepare an Engineering Evaluation / Cost Analysis (EE/CA) to remediate the lead in soil.

**2. DEFINITIONS:** None

**3. SCOPE:** This Engineering Evaluation / Cost Analysis will provide the FWS with several engineering alternatives and associated cost to remediate the lead paint in soils surrounding many buildings on Midway NWR. The recently performed ERA has provided a Site Description and primary cleanup goal for lead in soils in order to protect Laysan Albatross chicks.

This EE/CA will follow the Environmental Protection Agency (EPA) established guidance process "Guidance on Conducting Non-Time Critical Removal Actions under CERCLA". The goal of the remediation is to minimize or remove the hazard of lead paint in soils to Refuge resources.

The primary scope of this project is the preparation of the EE/CA. This shall involve a technical review of the draft ERA performed by the FWS Carlsbad office. The contractor will review the sampling schedule, sampling methods, analytical results, soil concentration calculations and clean-up level recommendations.

This EE/CA will be performed using existing site characterization data. Knowledge of resources and logistics at Midway NWR is imperative. A minimum of three remediation alternatives will be evaluated and described. A cost analysis will be provided for each alternative. A time schedule for each alternative will be included in the EE/CA report. Remediation alternatives will be rated and ranked.

The contractor will provide a draft copy of the report to the FWS for review and comments. The final report will be formatted in compliance with the CERCLA process.

**4. PLACE/DELIVERY AND PERIOD OF PERFORMANCE:** The draft EE/CA shall be delivered within 12 weeks of award. The final report shall be delivered 4 weeks after receiving FWS comments. Final report shall include 3 hard copies and an electronic version.

**5. INSPECTION AND ACCEPTANCE:** Work will be subject to the observation and inspection by U.S. Fish and Wildlife Service personnel. Acceptance of work is contingent on receiving final reports with all required attachments.

**6. GOVERNMENT FURNISHED EQUIPMENT OR MATERIALS/INFORMATION:** None

**7. AVAILABILITY:** None

**8. TECHNICAL COORDINATOR:** Contract Technical Representative is Jeremy Fleming, Regional Environmental Compliance Coordinator at 503-231-2097, or e-mail at [jeremy\\_fleming@fws.gov](mailto:jeremy_fleming@fws.gov).

September 9, 2009

U.S. Fish and Wildlife Service  
Contracting and General Services  
911 NE 11th Avenue  
Portland, Oregon 97232

Attention: Karl Lautzenheiser

Subject: Task Order Proposal/RFQ #101819Q716  
Engineering Evaluation/Cost Analysis for Lead in Soil  
Midway Atoll National Wildlife Refuge  
File No. 0758-145-00

## INTRODUCTION

GeoEngineers, Inc. (GeoEngineers) has prepared the following task order proposal for completion of an Engineering Evaluation/ Cost Analysis (EE/CA) for the Midway Atoll National Wildlife Refuge (Refuge or site) for the U.S. Fish and Wildlife Service (FWS).

This scope of services was prepared in response to Request for Quote (RFQ) #101819Q716 and is based on our conversations with the FWS, our experience at the Refuge, and in accordance with the terms of General Services Administration (GSA) Contract GS-10F-0342K.

## BACKGROUND

Historical structures at the site typically were painted with lead-based paint. The FWS is currently contracting the abatement of lead-based paint (LBP) for existing structures at the Refuge. This abatement process does not address potential LBP residues on or in the ground surrounding existing buildings. Furthermore, LBP residues may exist within shallow soil in the vicinity of structures that have been demolished in the past. Lead in soil represents a potential hazard to populations of nesting birds, particularly to burrowing species such as the Bonin Petrel, as well as the albatross, Laysan Duck and Laysan Finch

It is our understanding that the FWS recently completed an ecological risk assessment (ERA) that evaluated lead in soil related to Laysan Albatross chicks. Based on our conversations with the FWS, the preliminary cleanup goal for lead in soil for protection of Laysan Albatross chicks is 100 milligrams per kilogram (mg/kg).

## SCOPE OF SERVICES

With preliminary site characterization data and a potential lead cleanup level in place, cleanup alternatives and costs should be evaluated using the Environmental Protection Agencies (EPA's) EE/CA process. An EE/CA approach allows for relatively rapid screening of alternatives and costs related to a proposed remedial action. An EE/CA is part of the Comprehensive Environmental Response and Liability Act (CERCLA) for non-time critical removal actions.

The purpose of an EE/CA is to select an alternative to minimize or eliminate any release or threat of release of a hazardous substance into the environment or impact on public health and welfare as outlined in 40 CFR 300.415(b)(2)(i)-(viii). The EE/CA will be prepared utilizing the EPA "Guidance on Conducting Non-Time-Critical Removal Actions under CERCLA." The purpose of a removal action is to "abate, prevent, minimize, stabilize, mitigate or eliminate the release or the threat of a release" (40 CFR 300.415). The EE/CA for a removal action is intended to:

- Satisfy environmental review requirements for removal actions;
- Satisfy administrative record requirements for documentation of removal action selection; and
- Provide a framework for evaluating and selecting alternative technologies.

To meet those purposes the EE/CA will identify objectives for the removal action and evaluate the effectiveness, implementability, and cost of various alternatives that may satisfy these objectives. The primary source of data used to evaluate site conditions and potential human health and ecological risks at the site, and to develop removal action alternatives, is the draft ERA prepared by the FWS.

Our proposed scope of work includes the following two tasks: 1) ERA technical review; and 2) EE/CA preparation.

#### **TASK 1 – ERA TECHNICAL REVIEW**

We understand that the FWS Environmental Contaminants Division has completed a draft ERA for lead in soil at the site. Prior to the completion of the EE/CA, GeoEngineers will conduct a technical peer review of the ERA. Our review will include a review of sample collection methods, analytical results, background soil concentration calculations, risk assessment methodologies and a review of the proposed cleanup value.

In addition, under this task, GeoEngineers will work with the FWS on establishing acceptable remediation cleanup goals and defining the remedial action area for the site. We have assumed that the remedial action area will only address the remediation of lead in soil and not LBP remaining on existing structures.

We anticipate that the ERA technical review will not require onsite work at Midway at this time.

#### **TASK 2 – EE/CA PREPARATION**

Upon agreement with the FWS on the remedial action area, GeoEngineers will complete an EE/CA in general accordance with CERCLA guidance. The EE/CA will document the existing data collected and analyzed to perform the site characterization and risk assessment, it will present the results of the ERA, provide an analysis of lead in soil response alternatives, and recommend an appropriate response action for the cleanup of lead in soil based on the response action effectiveness, implementability and cost.

The format of the EE/CA will be completed in accordance with EPA's Guidance for Conducting Non-Time-Critical Removal Actions under CERCLA. Our EE/CA will be completed in general accordance with the following outline, as provided in the CERCLA guidance.

- Executive Summary

- Site Characterization
  - a. Site description and background
  - b. Previous removal actions
  - c. Source, nature and extend of contamination
  - d. Analytical data
  - e. Streamlined risk evaluation
- Identification of removal action objectives
  - a. Statutory limits on removal actions
  - b. Determination of removal scope
  - c. Determination of removal schedule
  - d. Planned remedial activities
- Identification and analysis of removal action alternatives
  - a. Effectiveness
  - b. Implemenatability
  - c. Cost
- Comparative analysis of removal action alternatives
- Recommended removal action alternative
- References
- Appendices
  - a. Tables
  - b. Figures
  - c. Analytical data (if applicable)

### **SCHEDULE AND PERSONNEL**

GeoEngineers is prepared to begin work immediately upon your authorization. GeoEngineers estimates that the technical review can be completed within four weeks of authorization to proceed. It is anticipated that the draft EE/CA can be completed in approximately 12 weeks of the completion of the ERA technical review.

The project will be managed by Joey Hickey, a senior project manager with GeoEngineers. Sean Ragain, will provide senior oversight of the project and will also provide final technical review. Sean and Joey will be supported by other GeoEngineers staff as needed during the project.

### **TERMS AND BUDGET**

We are prepared to begin work related to the above scope of services upon receipt of a delivery order from the FWS. We propose to conduct our services on a time-and-expense basis in accordance with the terms of GSA Contract GS-10F-0342K. The estimated total cost of the project is \$85,000. The estimated

U.S. Fish and Wildlife Service

September 9, 2009

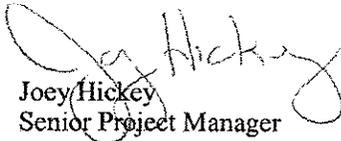
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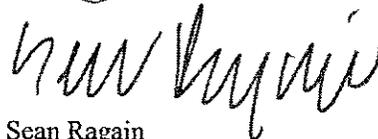
total will not be exceeded without prior written approval from the FWS. We will keep the FWS informed of project status and advise you if it appears appropriate to modify the scope and budget.

We appreciate the opportunity to provide you with this proposal and look forward to working with you on this project. If you have questions or require additional clarification on any aspect of this proposal, please do not hesitate to contact Joey Hickey or Sean Ragain at (503) 624-9274.

Yours very truly,

GeoEngineers, Inc.

  
Joey Hickey  
Senior Project Manager

  
Sean Ragain  
Senior Principal

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Two copies submitted

c: Jeremy Fleming – FWS

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