



EDi No. 291



21. USACE, Eagle Nest Wastewater Lagoons Phase II Environmental Assessment

22. Year Completed Professional Service: 2009 Year Completed Construction: (if applicable) n/a Eagle Nest, Colfax County, New Mexico 87718

Contract Role: [X] Prime Contractor [ ] Subcontractor

CAGE Code: ID1U3 DUNS Number: 61.680.5073

23 a. Project Owner/Customer: 23 b. Point of Contact Name: 23 c. POC Contact Info:

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Key Personnel:

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24. (Include scope, size, and cost) Brief Description of Project and Relevance to this Contract:

Awarded Price: \$44,228.06 Final/Projected Cost: \$44,228.06 Award Date: 06.24.2009 Contract No.: W912PP-09-P-0090 Period of Performance: 06.24.2009 - 12.31.2009 Final or Projected Schedule: 12.31.2009 Contract Type: [ ] Firm Fixed Price [X] Cost Reimbursement [ ] Time and Materials [ ] Cost Plus Fixed Fee [ ] Cost Plus Award Fee [ ] Performance Based Type of Work Performed: 541620, Environmental Consulting Services % of Work Self Performed: 60% % of Work by Subcontractors: 40%

Contracting Officer (if applicable): Contracting Agency & Address: Contracting Officer Contact Info:

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Background

The Village of Eagle Nest, in Colfax County, New Mexico, operated a wastewater treatment plant just north of Eagle Nest Lake from about 1979 to 1999. This former wastewater treatment plant was comprised of two aeration lagoons and a pumping station. The former wastewater treatment plant is located on the property of Eagle Nest Lake State Park.

A Phase II Environmental Site Assessment (ESA) was managed by the USACE and performed by Environmental Dimensions, inc. (EDi). The project was funded by and tasked to the USACE Albuquerque District by the U.S. Environmental Protection Agency (EPA) Region 6 Targeted Brownfields Assessment (TBA) program.

The New Mexico Environmental Department (NMED) has required the Village of Eagle Nest to decommission two former wastewater lagoons as a condition of its 1999 discharge plan. Characterization was needed for the wastes that would be generated during site decommissioning. Sludge contaminants were unknown, and the lagoon liners and liner coatings may contain hazardous constituents. Given the age of the structures on site, there were concerns that the pump house, transformer, and electrical panel may have asbestos-containing material (ACM) and lead-based paint (LBP). Soil and groundwater near the lagoons could have been contaminated if the lagoon liners leaked.

This ESA included a site investigation to characterize the sludge, liners, and structure materials and determine if nearby soil and groundwater were contaminated and would require removal during site decommissioning. No ACM or LBP was found in any of the structure materials, so those materials can be recycled or disposed as non-hazardous waste. The liners are

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hazardous due to their lead content, so they need to be disposed as hazardous waste. Soil near the lagoons does not appear to be contaminated, so no extra soil needs to be excavated from beneath the lagoons unless obvious tears are found in the linings after sludge removal. It is unclear if nearby groundwater is contaminated, but removal of the lagoons as a potential contamination source can only improve the quality of the shallow groundwater.

Sludge disposal options are limited by pathogen and lead concentrations. Land application of the Class B sludge on a nearby tract of rangeland is probably the most feasible option. The land application rate would be restricted by the cumulative pollutant loading rate for lead. In addition to the controlled sludge application rate, land application of Class B sludge must meet the site restrictions of 40 CFR 503.32(b)(5), one of the ten vector attraction reduction options in §503.33(b)(1) through (b)(10), and may meet the Alternative 1 pathogen requirements of §503.32(b)(2) if seven geometrically dispersed sludge samples have a fecal coliform density of less than 2,000,000 MPN/g. The NMED Groundwater Bureau requires a Notice of Intent to dispose of wastewater sludge by land application per 20 New Mexico Administrative Code 6.2.3106.E.



*North Lagoon looking on the Village of Eagle Nest*

**Scope of Work**

The scope of work for Contract Number W912PP-09-P-0090 with the USACE was to perform a Phase II ESA of the two former wastewater lagoons in Eagle Nest, New Mexico, in order to assess media contamination and determine possible disposal pathways for the various wastes that would be generated during site closure. This Phase II ESA was performed in accordance with ASTM E1903-97 (Reapproved 2002), Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process (ASTM 2002). The general scope of this investigation was to include the following activities:

- ❑ A document review to determine past land uses and environmental conditions at the site and the surrounding area,
- ❑ A site investigation to determine what hazardous materials may be present in the shed near the lagoons,
- ❑ A site investigation to determine what hazardous materials may have been used in the lagoon liners and what contaminants are present in the remaining sludge, and
- ❑ A site investigation to determine whether hazardous contaminants have migrated to the soil and groundwater beneath the lagoons. Soil and groundwater between the lagoons and the lake were sampled to determine whether overland or subsurface flow may have transported hazardous contaminants to those media.

The environmental database search extended at least one-quarter mile outward from the lagoons. Search distances met or exceeded the requirements of ASTM E1527-05, Standard Practice for Environmental Site Assessments (ASTM 2005). Closure activities to be evaluated in this report include burial of the sludge in place in the northern and southern lagoons or sludge removal and land application, if the sludge analysis permitted.

**Findings and Conclusions**

This Phase II ESA was conducted in accordance with ASTM E1903-97 (Reapproved 2002), and the scope of work provided in the USACE contract. There were no deviations from the ASTM guide for Phase II ESAs.



*South Lagoon overlooking nearby Eagle Nest Lake*



USACE Eagle Nest Phase II Waster Water Lagoon EA (concluded)

Recognized Environmental Conditions

The purpose of this ESA was to evaluate media contamination and determine possible disposal pathways for the various wastes that would be generated during site closure.

25. Firms/Subcontractors involved with this Project:

	(1) Firm Name	(2) City and State	(3) Role
a.	ARS Analytical, LLC	P.O. Box 49 Port Allen, LA	Analytical Laboratory Subcontractor
b.	Finrock Engineering Services Debbie Finrock, PE, CHMM 505.286.6458	24 Doc Holiday Road Edgewood, NM 87015-8259	Phase II EA Report & Project Oversight
c.	Geomechanics Southwest, Inc. Branden Sanders, Operation Mgr.	416-B Menaul Blvd., NW Albuquerque, NM 87107	Drill Rig for Sampling & Borings
d.	Havona Environmental Cissy Puma 505.232.9533 • 505.256.8237 (f)	P.O. Box 35848 Albuquerque, NM 87176	Asbestos and Lead Sampling