

SCOPE OF WORK

Naturally Occurring Asbestos Evaluation

Introduction

This Scope of Work is part of a Notice to Proceed for AKDOT&PF contract number _____, which concerns an engineering/geologic evaluation for the presence of naturally occurring asbestos (NOA) at or near the project site for AKDOT&PF Project: _____. This information is provided as guidance in designing a site investigation for projects where the presence of NOA is suspected, or is known but without sufficient detail.

Purpose

The purpose of this work is to investigate and characterize the potential for naturally occurring asbestos (NOA) in [describe project location] for the [specify project]. Naturally occurring asbestos is a known carcinogen. Information regarding the volume and concentration of asbestos fibers is needed prior to the construction contract to protect workers from potentially harmful exposure and to coordinate management of NOA at the project site.

Description of Work

The scope of this work includes office research, detailed geologic mapping, sample collection, and laboratory analysis of samples to determine the presence and concentration of NOA in or immediately adjacent to the project area. Figure [] attached, delineates the project limits, proposed alignment, existing or proposed right-of-way, proposed cross-section(s) of the design, and survey limits (if applicable). [Also identify specific areas where focused study is required, if known.]

Records Review

The following specific information sources shall be researched for this task order: [Select from the following and add any other information you have concerning the project area.]

1. Alaska Department of Natural Resources/Division of Geological and Geophysical Surveys Geology individual maps, reports, database information and other information as available.
2. The following attachments will be supplied or made available to the Contractor by the AKDOT&PF Contract Manager:
 - a. Base map for the area to be assessed [Check with Right of Way for ROW Drawings and information.]
 - b. Relevant AKDOT&PF files [e.g., proposed project layout, plans, cross-sections, etc.]
 - c. Boring logs and reports, if available, from AKDOT&PF Materials Sections
 - d. Aerial photography [Supply copies of AKDOT&PF photos or provide instruction to the Contractor as to how they can obtain them.]
3. Copy pertinent files or sections of files, aerial photographs, maps and other work products for incorporation into the Final Report.

Pre-Field Work

The Contractor and assigned field staff shall participate in a Pre-Field Work Meeting meeting and site visit with the Contract Manager prior to commencement of the work. Health and safety considerations for this work will be addressed at a preliminary meeting prior to the start of work. Notify the AKSOT&PF Contract Manager at least 24 hours before the commencement of any investigative or field work.

Engineering/Geologic Evaluation

Conduct an engineering/geologic evaluation under the supervision of an engineer registered in Alaska. Conduct a geologic evaluation using a geologist with training and/or experience in recognition of NOA-bearing rock. Follow specific guidelines in conducting the evaluations in accordance with applicable state and federal law for NOA evaluations and including at a minimum the following elements:

1. Evaluation of existing geological maps and studies of the site and surrounding area;
2. Identification and description of geologic units, rock and soil types, and features that could be related to the presence of ultramafic rocks, serpentine, or asbestos mineralization;
3. Offsite geologic evaluation of adjacent property (may require a right of entry permit);
4. General description of the property and proposed use.
5. Detailed site characterization, including a physical site inspection;
6. Development of geologic maps of the site and vicinity;
7. A subsurface investigation to evaluate the nature and extent of geologic materials in the subsurface where vertical excavation is planned;
 - a. Methods of subsurface investigation may include, but are not limited to borings, test pits, trenching, and geophysical surveys;
8. Classification of rock and soil types must conform to the nomenclature of the Alaska Geotechnical Procedures Manual;
9. A description of sampling procedures used;
10. A description of the analytical procedures used, which may include mineralogical analyses, petrographic analyses, chemical analyses, or analyses for asbestos content; and photomicrographs of collected rock samples.

Plot information obtained in the records review and field review on a map of the project area defined in this Task Order or as determined by the Contract Manager.

The geologic evaluation will consider all earth materials, including rock outcrops, residual soils, alluvial/colluvial soils, sediments, etc., including both natural soils and rock deposits, any fill material and any borrow source or material site that may contain NOA. The geologist will interpret the potential for NOA within and/or adjacent to the identified areas and determine, with supporting documentation, the extent and specific locations for collection of soil or rock samples, if any.

Sample Collection and Testing Requirements

The purpose of the engineering/geologic evaluation, sample collection, and testing, is to determine the presence of NOA in the earth materials on and in the vicinity of the site, to measure asbestos content in soil, sediment or rock samples and to determine appropriate health & safety and material management protocols.

Described the locations and rationale for sample collection in detail in a work plan. Selection of sample locations will be governed by the results of the engineer/geologic evaluation and plotted on a geologic map and/or project drawings as appropriate. Provide geographic location coordinate data for each sampling location in latitude/longitude or project coordinates.

Collect samples, label them, and handle them using staff trained in the appropriate protocol for California Air Resources Board Method 435 (Determination of Asbestos Content in Serpentine Aggregate). Of these samples, ten percent (10%) are to be further analyzed using Transmission Electron Microscopy (TEM).

NOA Site Evaluation Report

Prepare the NOA Site Investigation report in accord with contract provisions. Prepare the report following the guidelines for geologic reports in the Alaska Geotechnical Procedures Manual. Attachments to the report must include the geologic map of the project area indicating sample locations, cross-sections of the areas where excavation is proposed, photographs to document sample collection, and any other pertinent information.

Task Schedule

- Notice to Proceed: The TO shall be conducted in accordance with the agreed Completion Schedule but no case before the Notice to Proceed is issued by the Contract Manager.
- Pre-Work Meeting
- Pre-Work Site Visit
- Office Research and File Review
- Field Work
- Sample Testing and Analysis
- Report Preparation