



August 1, 2017

Erik Anderson, RG  
Anderson Geological, Inc.  
PO Box 649  
Wilsonville, Oregon 97070

Via email: erik@andersongeo.com

Regarding: Proposal to Provide Industrial Hygiene Testing Services  
North Star Development Dieldrin Cleanup Project  
PBS Proposal 25513.000, Phase 0001, Task 001

Dear Mr. Anderson:

PBS Engineering and Environmental Inc. (PBS) is pleased to submit this proposal to Anderson Geological, Inc. (Anderson) to develop an exposure monitoring plan and perform exposure monitoring for dieldrin during the excavation of contaminated soils at the North Star Development project in Salem, Oregon. The purpose of these services is to verify that the proposed dust mitigation measures combined with the very low dieldrin soil concentrations will minimize worker exposures to dieldrin. Also, test results will be used to determine if airborne dieldrin may be migrating off the property.

This proposal outlines our project approach, scope of work, schedule, and budget based on our understanding of the project, information provided to us to date, and experience with similar projects.

## **SCOPE OF WORK**

### **Project Review**

PBS will review the documents associated with the assessment of soil conditions on the project, and existing work plans that cover dust mitigation measures that will be employed on the project.

### **Airborne Chemical Exposure Monitoring**

PBS will test for airborne concentrations of dieldrin both on workers (personal samples) and at the project boundaries (area samples) during a single day of excavation.

PBS will monitor dieldrin exposures in the breathing zones of up to four persons working on the project (two laborers, one excavator and one truck driver). PBS will use OVS sampling tubes and battery-operated vacuum pumps to collect the personal samples. On the two laborers, PBS will also collect total dust samples using pre-weighed 37 mm filter cassettes and battery-operated vacuum pumps. OVS samples will be analyzed for dieldrin; filter cassettes will be analyzed for total dust.

PBS will monitor airborne dieldrin concentrations in three separate locations along the project boundaries that are down-wind of the excavation operations. At each sample location, PBS will collect both an OVS sample and a filter cassette sample.

All OVS samples will be submitted under chain of custody to an AIHA accredited laboratory for dieldrin analysis by National Institute for Occupational Safety and Health (NIOSH) Method S-283 or an equivalent. All filter cassette

samples will be analyzed by National Institute for Occupational Safety and Health (NIOSH) method 500. All sample results will be compared to their corresponding NIOSH permissible exposure limits. PBS will submit two field blank OVS samples and two filter cassette field blank samples to the laboratory for archiving.

**LIMITATION OF SCOPE**

This investigation will be limited to the tests and locations indicated to determine the absence or presence of certain airborne contaminants, and is not to be considered an exhaustive industrial hygiene investigation. The site as a whole may have other exposure- or safety-related concerns that will not be characterized by this study. Further testing may be recommended.

**ASSUMPTIONS**

PBS assumes that access to the project will be unfettered and that site work can be completed during weekday hours between 8:00 am and 3:00 pm.

**DELIVERABLES**

A report will be compiled that details tests, laboratory results, and field observations, and will include photo documentation of the routine operations monitored during this study.

**COMPENSATION**

PBS proposes to provide the scope of work on a flat fee basis. The following outlines the costs associated with the scope services.

PBS Labor	\$
Reimbursable Expenses (equipment, laboratory, mileage, etc.)	
<b>Total Fees and Expenses</b>	

The fees and terms under which these services are provided will be in accordance with the attached PBS General Terms and Conditions for Professional Services (Rev. 01/2017). The Terms and Conditions and this proposal constitute the entire agreement (Agreement) between the parties and may not be changed without prior written consent of the parties.

The pricing and other information contained in this proposal document are proprietary and shall not be duplicated, used, or disclosed, in whole or in part, to other parties without the permission of PBS.

**SCHEDULE**

PBS is available to begin work on this project immediately upon receipt of a signed copy of this Agreement.

**APPROVAL**

Please indicate acceptance of this proposal by returning a signed copy of this Agreement or a purchase order incorporating the terms and conditions of this Agreement.

Erik Anderson  
Anderson Geological, Inc.  
August 1, 2017  
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Please feel free to contact me at 503.417.7597 or douglas@pbsusa.com with any questions or comments.

Sincerely,



Douglas Hancock, CIH, CSP  
Senior Project Manager  
PBS Engineering and Environmental Inc.

ACCEPTED BY:  
Anderson Geological, Inc.

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Signature of Authorized Representative

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Name (Please Print)

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Title

Date

DH:bmp

**DRAFT**

