



August 19, 2025

Mr. Nitin Joshi  
City of Salem – Public Works Department  
1457 23rd Ave. SE.  
Salem, OR 97302

Re: Scope of Work Proposal  
Salem-Willamette Valley Airport  
PFAS Investigation and Support  
Contract 245003-03A

Dear Mr. Joshi:

Apex Companies, LLC (Apex) has been requested to provide the City of Salem (City) with an investigation of potential sources of per- and polyfluorinated alkyl substances (PFAS) at the Salem-Willamette Valley Airport (Airport) in Salem, Oregon. The scope of work is based on the Site Characterization Work Plan prepared by Apex for the City, dated July 28, 2025.

It is our understanding that historical practices at the Airport have included the Federal Aviation Administration-required use of aqueous film-forming foams (AFFF) for fire-fighting activities and training at the Airport fire station and possibly other locations at the airport. These historical practices may have contributed to environmental impacts to soil and groundwater at the Airport, such as the PFAS compounds that were detected in soil samples collected from a proposed hangar development project in the southern part of the Airport property. The magnitude and extent of these potential impacts have not been characterized, and the City has requested assistance with characterizing PFAS impacts in soil and groundwater. This work is also being done in parallel with a similar investigation being completed by the Oregon Military Department for the adjacent Oregon Army National Guard (ORARNG) facility.

This work will be completed in accordance with the existing Professional Services Agreement (PSA) between the City of Salem and Apex (Agreement 245003-03A). The proposed cost for this work is based on the negotiated rate schedule associated with the PSA, as detailed on the attached cost table. The total cost to complete the proposed work is \$130,814, also shown on the attached cost table. Details for each of the work tasks are described below.

We understand that this work is being conducted under legal oversight and to assist City legal counsel in providing legal services. Communications (including deliverables and emails) under this contract will be sent simultaneously to the City's Environmental Manager and the City's legal counsel.

#### **TASK 1 – PROJECT MANAGEMENT, TECHNICAL ASSISTANCE, AND MEETINGS (EXISTING)**

Apex costs for project management through the duration of this proposed work (a period of six months) are included in the existing authorization that has been provided by the City (under Purchase Order 538000-2). This purchase order is also funding the PFAS worker exposure assessment that is being completed in parallel with the site investigation, as well as support to the City regarding community outreach (identified as Tasks 2 and 3 in prior correspondence).

#### **TASK 4 – SITE INVESTIGATION**

Apex will complete a focused site investigation in accordance with the Site Investigation Work Plan. In general, the site investigation will include the installation of nine groundwater monitoring wells, the collection of soil samples from 17 locations, and the collection of soil/sediment samples at 12 selected stormwater system outfalls. The purpose of this work is to assess the nature and on-site extent of PFAS in soil and groundwater across the airport facility, specifically focused on the identification of potential source areas. The proposed scope of work has been developed as an initial phase of site characterization work; depending on the results of this initial investigation, subsequent phases of investigation and/or monitoring may be required to fully define the extent and magnitude of PFAS at and downgradient of the airport. The scope also includes collaboration with the Oregon Military Department and the work at the ORARNG facility (including the mutual sharing of collected data).

The field effort for this work will include coordination with airport management and may potentially require some of the work to be done outside of normal business hours (such as the collection of soil samples in the vicinity of the historic plane crash). The well installations will be completed in two phases: the eight shallow wells will be installed in the first phase (which is expected to take three days to complete), and the one deep well will be installed following the receipt of analytical data from the initial sampling of the shallow wells (as the deep well will be co-located with the perimeter shallow well with the relatively highest PFAS concentrations), which will take one additional day to complete. Other field efforts will include surveying the location and elevation of the groundwater monitoring wells, development and sampling of each of the monitoring wells (including the three previously-installed monitoring wells located near the landfill site at the southern end of the property), the collection of soil samples, and the collection of outfall sediment samples. These efforts are expected to take an additional six days of field effort.

Subcontracted work includes: drilling and well installation (Holt Drilling); laboratory analysis (Enthalpy Analytical); utility clearance (Alpha Locates); and investigation-derived waste disposal (ACT Enviro).

The general breakdown of costs for this work is as follows:

Apex Labor	\$ 33,186
Well Drilling (Subcontracted)	\$ 49,300
Analytical Laboratory (Sub)	\$ 32,400
Other Subcontractors	\$ 13,100
Equipment and Materials	\$ 2,828
<b>TOTAL</b>	<b>\$130,814</b>

#### **TASK 5 – SITE ASSESSMENT REPORT**

Following completion of the sampling activities and receipt of the analytical results from the laboratory, Apex will prepare a summary data report to document the completed work and summarize the data. The report will be prepared in general accordance with the following outline:

1. Introduction
  - a. Purpose
  - b. Scope of Work
2. Background
  - a. Site Location and Description (including Site maps)
  - b. Site History

- c. Geology and Hydrogeology
- 3. Site Assessment Activities
  - a. Preparatory Activities
  - b. Well Installations
  - c. Soil Sampling
  - d. Outfall Sediment
  - e. Groundwater Sampling
- 4. Chemical Analysis and Results
  - a. Analysis Performed
  - b. Chemical Results
- 5. Conclusions and Recommendations
- 6. Tables
- 7. Figures
- 8. Appendices
  - a. Analytical Laboratory Testing Program and Documentation (including a quality assurance/quality control review)
  - b. Field Sampling Sheets
  - c. Well Survey
  - d. Lithologic Logs

The report will be up to 15 pages of text, excluding the figures, tables, and appendices. The report will initially be prepared as a draft for review by the City. Upon receipt of comments, a final version of the report will be prepared and submitted to the City.

Thank you for this opportunity to partner with the City of Salem.

Sincerely,



Michael Stevens, P.E.  
Principal Engineer/Program Manager

#### **ATTACHMENTS**

Proposal Cost Estimate

**Proposal Cost Estimate**  
**City of Salem**  
**Salem-Willamette Valley Airport PFAS Investigation and Support**

Task	Role	Unit Rate	Units	Extension
<b>TASK 4: SITE ASSESSMENT</b>				
Project Kickoff, Safety, Utility Locating, Coordination	Sr. Principal	\$263 /hour	4 hours	\$1,052.00
	Project Mgr	\$155 /hour	12 hour	\$1,860.00
	Geologist	\$124 /hour	6 hour	\$744.00
	Scientist 2	\$117 /hour	6 hour	\$702.00
	GIS Analyst	\$130 /hour	2 hour	\$260.00
	Admin	\$110 /hour	5 hour	\$550.00
Soil and Sediment Sampling	Sr. Principal	\$263 /hour	1 hour	\$263.00
	Project Mgr	\$155 /hour	2 hours	\$310.00
	Geologist	\$124 /hour	24 hours	\$2,976.00
Shallow Monitoring Well Installations	Sr. Principal	\$263 /hour	1 hour	\$263.00
	Project Mgr	\$155 /hour	4 hours	\$620.00
	Geologist	\$124 /hour	40 hours	\$4,960.00
Shallow Monitoring Well Development and Sampling	Sr. Principal	\$263 /hour	1 hour	\$263.00
	Project Mgr	\$155 /hour	4 hours	\$620.00
	Scientist 2	\$117 /hour	36 hours	\$4,212.00
Deep Monitoring Well Installation	Sr. Principal	\$263 /hour	1 hour	\$263.00
	Project Mgr	\$155 /hour	3 hours	\$465.00
	Geologist	\$124 /hour	14 hours	\$1,736.00
Deep Monitoring Well Development and Sampling	Sr. Principal	\$263 /hour	1 hour	\$263.00
	Project Mgr	\$155 /hour	2 hours	\$310.00
	Scientist 2	\$117 /hour	14 hours	\$1,638.00
<b>Other Direct Costs</b>				
Sampling Equipment/Materials				\$2,828.00
<b>Subcontracted Services</b>				
Utility Locating		\$700 /quote	1 quote	\$700.00
Drilling/Well Installation (3 Days)		\$49,300 /quote	1 quote	\$49,300.00
IDW Disposal		\$7,900 /quote	1 quote	\$7,900.00
Analytical Laboratory (Soil and Water)		\$32,400 /quote	1 quote	\$32,400.00
Surveying		\$4,500 /quote	1 quote	\$4,500.00
<i>Task 4 Subtotal</i>				<b>\$121,958.00</b>
<b>SITE INVESTIGATION REPORT</b>				
<b>Labor Costs</b>				
Senior Review and Technical Support	Sr. Principal	\$263 /hour	4 hours	\$1,052.00
Draft SI Report Preparation	Project Mgr.	\$155 /hour	36 hours	\$5,580.00
Final Revision based on Comments	Project Mgr.	\$155 /hour	4 hours	\$620.00
Lab Data QA and Tabulation	Geologist	\$124 /hour	6 hours	\$744.00
Figures and Logs (draft and final)	GIS Analyst	\$130 /hour	4 hours	\$520.00
QA Review (draft and final)	Editor	\$115 /hour	2 hours	\$230.00
Production	Admin	\$110 /hour	1 hours	\$110.00
<b>Other Direct Costs</b>				
None				\$0.00
<b>Subcontracted Services</b>				
None				\$0.00
<i>Task 5 Subtotal</i>				<b>\$8,856.00</b>
<b>TOTAL PROPOSED PROJECT COST</b>				<b>\$130,814.00</b>