Formal Task Assignment Document

2023 – 2025 SNOHOMISH COUNTY ON-CALL TASK ASSIGNMENT

Name of Project:	Supplemental Remedial Investigation Former Precision C-1 Hangar and Building		
Project Number:	Airport		
Discipline:	Engineering Services		
Task No.:	TA#1	Completion Date:	12/31/2025

The COUNTY desires to authorize services pursuant to the AGREEMENT entered into with **GeoEngineers, Inc.,** and executed on December 16, 2022, and identified as Agreement No. **OCC23/2-7.8(U)**, On-Call Consultant Services for **Environmental Site Assessment.**

All provisions in the AGREEMENT remain in effect except as expressly modified by this TASK ASSIGNMENT and are incorporated herein by reference.

ATTACHED TO THIS TASK ASSIGNMENT

- Scope of Work
- Cost Estimate with Total Hours to Perform Work
- Items unique to the project not included in the AGREEMENT and which are to be reimbursed at cost with no markup.

Original Task Assignment Total:	**$263,312.00**
Previous Task Amendment Total:	**$0.00**
Current Task Amendment Total:	**$0.00**
Total Task Assignment Not to Exceed:	**$263,312.00**

No other payment shall be allowed unless a TASK ASSIGNMENT Amendment for changed Scope of Work has been signed and authorized before work is performed.

All work under this TASK ASSIGNMENT shall be performed pursuant to the terms, conditions, specifications, and limitations contained in the AGREEMENT.

If you concur with this TASK ASSIGNMENT and agree to the items as stated above, please sign and date in the appropriate spaces below and return to the COUNTY for final action.

Tim L. Syverson Digitally signed by Tim L. Syverson
Date: 2023.07.11 09:26:42 -07'00'

Consultant Signature	*Approving Authority*
Date	*Date*

GeoEngineers
2101 4th Avenue, Suite 950
Seattle, Washington 98121
206.728.2674

June 9, 2022

Paine Field/Snohomish County Airport
3220 – 100th Street SW, Suite A
Everett, Washington 98204-1303

Attention: Andrew Rardin

Subject: Proposal for Supplemental Remedial Investigation
Paine Field/Snohomish County Airport – C-1 Hangar and Building/
Former ATS Hangar and Precision Property
Everett, Washington
File No. 5530-014-05

GeoEngineers, Inc. (GeoEngineers) is pleased to present this proposal for Supplemental Remedial Investigation services for the C-1 Hangar and Building Property (Site) at Paine Field/Snohomish County Airport (Paine Field) in Everett, Washington. Our scope of our services is based on discussions with Andrew Rardin of Paine Field, our prior work at the site in 2020 through 2023, prior work completed at the Site by others, and our experience with the investigation and cleanup of other airport and industrial facilities under the Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) and its implementing regulations.

The results of investigations completed at the Site by GeoEngineers between 2020 and 2023 indicate the presence of volatile organic compounds (VOCs) and/or metals in soil, soil vapor and groundwater at concentrations greater than the applicable MTCA cleanup levels. A remedial investigation (RI) was conducted at the Site between 2022 and 2023 under an Integrated Planning Grant (IPG) from Ecology. A Draft RI report documenting Site conditions has been submitted to Ecology for review under the IPG program. The Supplemental RI scope of work presented below is intended to address data gaps identified in the Draft RI Report to complete a MTCA-compliant Remedial Investigation and Feasibility Study (RI/FS) for Site cleanup including:

- Vertical extent of trichloroethylene (TCE) in soil beneath the C-1 Building at the location of the former trench drain
- Vertical extent of mineral spirits in soil beneath the C-1 Building at the location of the former Precision equipment/fire riser room
- Lateral extent of vinyl chloride and arsenic in groundwater south and east of the C-1 Building
- Lateral extent of TCE in soil near the location of a former aboveground storage tank (AST) in the C-1 Building storage yard

Based on our understanding of Paine Field's objectives and the applicable regulatory requirements, our scope of services is presented below.

SCOPE OF SERVICES

The tasks associated with the scope of services are as follows:

Task 1. Supplemental Remedial Investigation Work Plan and Project Planning

1. Attend a project kickoff meeting/conference call with Paine Field.
2. Prepare a Supplemental RI work plan and site safety plan prior to the start of fieldwork and submit to Paine Field for review and comment. Coordinate site access with Paine Field representatives.

Task 2. Supplemental Remedial Investigation

The goal of this task is to address data gaps identified in the 2023 Draft RI Report to complete the MTCA-compliant RI for site cleanup.

1. Mark proposed drilling and sample collection locations and notify public utilities to mark utilities in the vicinity of the proposed exploration locations. A private vendor will locate underground utilities at the proposed boring locations.
2. Observe hollow-stem auger (HSA) drilling as follows:
    a. Observe HSA drilling of up to eight (8) borings outside the C-1 Building (within and surrounding the C-1 Building storage yard) to depths up to 30 feet below ground surface (bgs) (approximately 4 days of drilling activities). Obtain soil samples at 2.5- to 5-foot-depth intervals in the borings.
    b. Observe HSA drilling of up to two (2) borings inside the C-1 Building at the location of the former trench drain to depths up to 30 feet bgs (assume 1 day of drilling activities). Obtain soil samples at 2.5- to 5-foot-depth intervals in the boring.
    c. Observe HSA drilling of one (1) boring inside the C-1 Building in the former Precision equipment room/fire riser room, if accessible, to a depth of up to 25 feet bgs (assume 1 day of drilling activities). Obtain soil samples at 2.5- to 5-foot-depth intervals in the boring.
3. Field screen soil samples from the borings for evidence of petroleum hydrocarbons and VOCs using visual, water sheen and headspace vapor screening methods. Visually classify the samples in general accordance with ASTM International (ASTM) D 2488 and maintain a detailed log of each boring.
4. Submit selected soil samples for laboratory chemical analysis. Up to three soil samples per boring will be collected and submitted for laboratory chemical analysis for the following analytes on standard turnaround (typically 5 to 7 business days): gasoline-range total petroleum hydrocarbons (TPH-G) by NWTPH-Gx; diesel- and heavy-oil-range total petroleum hydrocarbons (TPH-D and TPH-O, respectively) by NWTPH-Dx Method; chlorinated VOCs by U.S. Environmental Protection Agency (EPA) 8260; and Resource Conservation and Recovery Act (RCRA) metals by EPA 6000/7000 series. Samples to be selected for analysis will be based on field observations and sample depth in relation to depth to groundwater.

5. Install permanent 2-inch polyvinyl chloride (PVC) monitoring wells in up to six of the eight borings completed outside the C-1 Building if sufficient groundwater is encountered during drilling. Construct the wells with the well screens extending between approximately 15 and 30 feet bgs, or the depth where groundwater is observed during drilling. Develop the monitoring wells.
6. Collect groundwater samples from each new monitoring well and 5 existing monitoring wells (assume 11 wells total) for four consecutive quarterly monitoring events. This scope of work assumes up to 44 total groundwater samples will be collected and submitted for analyses for the contaminants of concern on a standard turnaround (typically 5 to 7 business days): TPH-G by NWTPH-Gx; TPH-D and TPH-O by NWTPH-Dx Method; chlorinated VOCs and chlorinated benzenes by EPA 8260; total and dissolved arsenic by EPA Method 200.8. In addition, to document baseline groundwater conditions, up to 16 selected groundwater samples will also be analyzed for ferrous iron by Standard Method (SM) 3500-Fe B; total manganese by EPA 6010D; nitrate and nitrite by EPA 353.2; sulfate by ASTM D516-16; sulfide by SM 4500-S2; total organic carbon by SM 5310B; and dissolved ethene and methane by RSK 175.
7. Complete soil vapor, indoor and outdoor air sampling at the C-1 Precision Building at other locations to evaluate and document potential risks to users of the building, if requested by Paine Field. This scope of work assumes sampling as follows: sub-slab soil vapor at up to four (4) locations in the Hangar Building; indoor air at up to four (4) locations; and outdoor air at up to two (2) locations surrounding the building. Sub-slab soil vapor sampling will require drilling through the building slab which will be completed by a subcontractor. This sampling is assumed to be completed in two field days.
8. Submit the soil vapor, indoor and outdoor air samples to an Ecology-accredited laboratory for chemical analysis of the following on standard turnaround time: VOCs including chlorinated solvents and benzene, toluene, ethylbenzene and xylene (BTEX) by EPA Method TO-15; air-phase petroleum hydrocarbons (APH) by Massachusetts Method MA-APH; naphthalene by EPA Method TO-17; and helium by ASTM D-1946.
9. Investigation derived wastes (IDW; decontamination rinse water and any soil spoils) will be drummed and temporarily stored on site. For the purpose of estimating costs, we assume the investigation-derived soil spoils will be considered F002-listed waste under the Washington State Dangerous Waste Regulations (DWRs) if detectable concentrations of halogenated volatile organic compounds (HVOCs) are present in the IDW, and that a contained-in determination waiver will be required for disposal. The estimated costs for disposal assume the waste will qualify for a contained-in determination for disposal at a Subtitle D landfill.

Task 3. Reporting

The goal of this subtask is to complete a MTCA-compliant Supplemental RI Report to incorporate the findings of the Supplemental RI into the existing RI report. The draft and Final Supplemental RI reports will be provided to Paine Field for review and comment.

1. Interpret field and chemical analytical data for the Supplemental RI. Discuss preliminary results with Paine Field.
2. Prepare Draft and Final Supplemental RI Report. Provide electronic copy of the draft report for review by Paine Field and its agents. Assume one round of comments and revision. Provide an electronic copy of final report, and a hard copy upon request.

Task 4. Project Management and Consultation

For this task we have assumed professional labor equivalent to approximately 15 precent of the total proposed project labor hours.

1. Provide supporting environmental consulting or input to Paine Field related to the project. Attend meetings and/or conference calls with the project team, as requested, to facilitate project work.
2. Communications, meetings and consultation related to the findings of the Supplemental RI.
3. Perform project management, administration, budget tracking and invoicing.

SCHEDULE, TERMS AND BUDGET

We will work with the Paine Field project team to identify a schedule for planning and implementation of the Supplemental RI and reporting that meets your needs.

Our estimated fee for the scope of services outlined above is $263,312, as detailed in the attached Table 1, Time-and-Expense Detailed Cost Estimate.

Our services will be provided, and our charges invoiced, in accordance with the terms described in our 2023-2025 On-Call Consultant Services Agreement [Number OCC23/2-7.8(U)] with Snohomish County that forms a part of this proposal. We understand that the work will be completed under a new Task Assignment.

There are no intended third-party beneficiaries arising from the services described in this proposal and no party other than the party executing this proposal shall have the right to legally rely on the product of our services without prior written permission of GeoEngineers.

We appreciate the opportunity to assist you with this project. Please call if you have any questions regarding this proposal.

Sincerely,
GeoEngineers, Inc.

Jacob M. Letts, LG, LHG
Project Manager

Tim L. Syverson, LHG
Associate

JML:TLS:tlm

Attachment:
Table 1. Time-and-Expense Detailed Cost Estimate

Table 1

Time-and-Expense Detailed Cost Estimate

Snohomish County Paine Field
C-1 Hangar/Former ATS Hangar Property - Supplemental Remedial Investigation Services
GeoEngineers, Inc.
2023-2025 Snohomish County On-Call Consultant Services

Description	TS Associate	JL Senior 1	KA Project Scientist 1	HM CAD Technician	Administrator 2	Total Hours	Total Labor Cost
Task 1 - Supplemental RI Work Plan and Project Planning	10	40	40		20	110	$17,870
Task 2 - Supplemental Remedial Investigation	20	100	300		10	430	$68,601
Task 3 - Reporting	20	80	40	40	10	190	$30,662
Task 4 - Project Management and Consultation	50	50	10		20	130	$23,852
Labor Hours	**100**	**270**	**390**	**40**	**60**	**860**	**$140,984**
Labor Rate (Max rate from Snohomish Co fee schedule 2023-2025)	$215.00	$184.68	$148.81	$111.12	$119.00		
Cost	$21,500	$49,864	$58,036	$4,445	$7,140		$140,984

Reimbursables

Type	Unit Cost	Number	Cost Total
Mileage (approved rate)	$0.655	500	$328
GPR/Utility Locate Vendor	$2,000	1	$2,000
Concrete Coring and Restoration Vendor	$7,000	1	$7,000
Drilling Vendor	$50,000	1	$50,000
Sampling Equipment Vendor	$3,000	1	$3,000
Chemical Analytical Lab Vendor	$50,000	1	$50,000
IDW Disposal Vendor	$10,000	1	$10,000
Total (Labor + Expenses)			**$263,312**

CONTRACT COMPLIANT
Initial GM Date 6/29/23