PERSONAL SERVICES AGREEMENT
FOURTH AMENDMENT

Contract Number: BOCC 2013-2

THIS AGREEMENT is entered into between COWLITZ COUNTY, a political subdivision of the State of Washington, (hereinafter called "County" or "Cowlitz County") and ICF Jones & Stokes, Inc. (hereinafter called "Contractor"). This Agreement constitutes the Fourth Amendment to Contract BOCC 2013-2 dated May 16, 2013, as modified by the First Amendment to Contract BOCC 2013-2 dated June 25, 2013, the Second Amendment to Contract BOCC 2013-2 dated October 17, 2013, and the Third Amendment to Contract BOCC 2013-2 dated July 15, 2014 and amends portions of Attachment A, Scope of Work, and amends Attachment B Compensation to provide additional compensation.

This Agreement is comprised of:

☒ Attachment A –Amended Portions of Scope of Work

☒ Attachment B –Compensation inclusive of all Amendments

☒ Attachment C – General Conditions

☒ Attachment D – Special Terms and Conditions

copies of which are attached hereto and incorporated herein by this reference as if fully set forth.

The term of this Agreement shall commence on the 16th day of September, 2014 and shall, unless terminated as provided elsewhere in the Agreement, terminate on the 1st day of May, 2018.

IN WITNESS WHEREOF, the parties have executed this Agreement on this 16th day of September 2014.

ICF JONES & STOKES, INC

Jodi Young
Contract Manager

Date: September 15, 2014

COWLITZ COUNTY

Michael A. Karnofski
Chairman
Cowlitz County Board of Commissioners

ATTEST:

Tiffany Ostreim, Clerk of the Board 9-16-14

CONTRACT HAS BEEN APPROVED AS TO FORM BY COWLITZ COUNTY PROSECUTING ATTORNEY

COMPENSATION

1. ☐ **a. FIXED FEE FOR SERVICE:** For services rendered, the County shall pay to the Contractor a fixed fee of __ for the completed work set forth in Attachment A based on the Phase 1 budget attached hereto. Payments for completed tasks shall be made no more frequently than bi-monthly; ☐ quarterly; ☐ semi-annually; ☐ annually; ☐ at completion of project; ☐ other (specify) Monthly.

OR

☒ **b. HOURLY RATES:** For services rendered, the County shall compensate the Contractor at the hourly rates set forth in Attachment B-1 hereto.

Payments for completed tasks shall be made no more frequently than ☒ monthly; ☐ quarterly; ☐ semi-annually; ☐ annually; ☐ at completion of project; ☐ other (specify) .

Each request for payment shall be supported by an invoice specifying: the name and position of the Contractor's employee; number of hours worked; completed tasks for which compensation is sought and; payment amount requested. The County shall pay all proper invoices within thirty (30) days of receipt. Should the County wish to dispute an invoice, it must do so in writing within thirty (30) days of receipt. Otherwise, invoices shall be deemed accurate and payable according to the terms thereof.

In no event shall Contractor be compensated in excess of Seven Million Two Hundred Seventy Eight Thousand and One Hundred Thirty Nine Dollars ($7,278,139.00) included as Attachments B-1, B-2, and B-3 (Attachment B-1 and B-2 to Contract No. BOCC 2013-2 as amended by the Third Amended Scope of Work included) and as included in Attachment B-3 hereto.

2. AND

☒ **a.** The compensation set forth herein includes, without limitation: labor, materials, equipment, travel, telephone, computer, copiers and the like.

OR

☐ **b.** The County shall reimburse the Contractor for actual expenses incurred for travel, telephone, copiers and computer. Reimbursement for airfare, mileage, meals and/or accommodations shall be at the same rate as that applicable to county employees traveling on county business.

OR

☐ **c.** Other (specify) The County, in addition to the compensation herein set forth shall provide to the Contractor the following:

Amendment 4: Cost Estimate for Millennium Bulk Terminals-Longview - NEPA and SEPA EISs

Task / *Labor Classification*	Consulting Staff						Subcontractor-Totals (See Attachments for Details)		Labor Total	Direct Expenses	Total Price
	Sr Proj Dir	Proj Dir	Tech Dir	Sr Consult III	Sr Consult I	Subtotal	T&B	Subtotal			
Task 4. Technical Analyses and Reports						$0		$0	$0		
4.1 Level and Type of Analysis						$0		$0	$0		
4.2 Preparation of SEPA and NEPA Technical Reports						$0		$0	$0		
4.3 Water (Ground, Surface, Floodplains, and Water Quality)						$0		$0	$0		
4.4 Wetlands						$0		$0	$0		
4.5 Plants and Animals (Fish, Wildlife and Vegetation)						$0		$0	$0		
4.6 Hazardous Materials						$0		$0	$0		
4.7 Earth (Soils and Geology)						$0		$0	$0		
4.8 Land and Shoreline Use (including Housing and Parks and Recreation)						$0		$0	$0		
4.9 Social and Community Effects (including Public Services, Utilities, and EJ)						$0		$0	$0		
4.10 Aesthetics, Light, and Glare (Visual Quality)						$0		$0	$0		
4.11 Historic and Cultural Resources						$0		$0	$0		
4.12 Tribal Fishing Practices/Treaty Rights						$0		$0	$0		
4.13 Air (Air Quality)						$0		$0	$0		
4.14 Coal Dust Exposure		12	40	4	8	$14,260	$117,140.00	$117,140	$131,400		
4.15 Noise and Vibration						$0		$0	$0		
4.16 Rail Transportation						$0		$0	$0		
4.17 Rail Safety						$0		$0	$0		
4.18 Vehicle Transportation						$0		$0	$0		
4.19 Vessel Transportation						$0		$0	$0		
4.20 Greenhouse Gas Analysis						$0		$0	$0		
4.21 Climate Change						$0		$0	$0		
4.22 Energy and Natural Resources						$0		$0	$0		
4.23 Environmental Health						$0		$0	$0		
4.24 Cumulative Impacts Analysis						$0		$0	$0		
Total hours	0	12	40	4	8						
ICF E&P 2014 Billing Rates	$285	$255	$230	$190	$155						
Subtotals	$0	$3,060	$9,200	$760	$1,240	$14,260	$117,140	$117,140	$131,400		
Direct Expenses											
500.00 Subcontractor										$149,071	
521.00 Meals, and Lodging										$500	
522.00 Airfares										$1,000	
523.05 Travel, Auto, incld. Mileage at current IRS rate (.56/mile)										$500	
Mark up on all non-labor costs and subcontractors: 10%										$26,821	
Direct expense subtotal										$177,892	
Total price											$309,292

ICF Other Direct Costs

Assumptions

8-Sep-14

	Cost	#	Total $	Comments
521.00 Meals, and Lodging	$250.00	2.00	$500.00	Site visits, meetings w/ agencies, WA & OR office mtgs
522.00 Airfares	$500.00	2.00	$1,000.00	Coal/GHS team, HIA team, CA team members
523.01 Computer/Faxes	$5,000.00		$0.00	
523.02 Reproductions	$200.00		$0.00	150 DEISs - 75 NEPA, 75 SEPA (50 each for distribution, remaining for agencies/team
523.03 Equipment Rental	$10,000.00		$0.00	
523.04 Postage and Delivery	$5,000.00		$0.00	Mail DVDs/CDs, other
523.05 Travel, Auto, incld. Mileage at current IRS rate (.56/mil	$250.00	2.00	$500.00	Travel to/from Lacey, Portland, Seattle, Kelso/Longview
523.06 GIS/CAD/MAC	$10,000.00		$0.00	
523.07 Surveys and Reports	$2,000.00		$0.00	
523.08 Per Diem at $175/day	$0.00		$0.00	
523.09 Project Supplies	$1,000.00		$0.00	
529.00 Other Reimbursable Expenses	$5,000.00		$0.00	

$2,000.00

SubContractor: T&B

Labor Rate ($/hr):	$162		$108		$61		$56		Total Subconsultant Hours	Subtotal Subconsultant Labor
Personnel Title:	Principal		Scientist III		Associate Scientist		Technician II			
	hours	cost	hours	cost	hours	cost	hours	cost		
Subtask 4.13 Coal Dust Exposure	414	$67,068	241	$26,028	284	$17,324	120	$6,720	1,059	$ 117,140.00
		$0		$0		$0		$0	0	$ -
		$0		$0		$0		$0	0	$ -
		$0		$0		$0		$0	0	$ -
		$0		$0		$0		$0	0	$ -
		$0		$0		$0		$0	0	$ -
		$0		$0		$0		$0	0	$0.00
		$0		$0		$0		$0	0	$0.00
									1,059	
		$67,068		$26,028		$17,324		$6,720	**Subtotal =**	**$ 117,140.00**
									Expenses =	**$149,071.00**
									TOTAL =	**$ 266,211.00**

Expenses Itemization	**Amount**
Transporation	$5,425.00
Lodging	$6,600.00
Meals	$3,105.00
Equipment	$12,280.00
Laboratory	$105,400.00
Shipping	$1,000.00
SUBTOTAL EXPENSES	$133,810.00
Handling (10%)	$13,381.00
T&B Equipment	$1,880.00
Total	**$149,071.00**

MBTL Amendment 4
9/8/2014

PERSONAL SERVICES AGREEMENT
FOURTH AMENDED SCOPE OF WORK
COWLITZ COUNTY AND ICF/JONES & STOKES
September 8, 2014

1.0 Introduction

This amended scope of work constitutes the Fourth Amended Scope of Work to the Professional Services Agreement BOCC 2013-2 dated May 16, 2013, as amended by the First Amendment dated June 25, 2013, the Second Amendment dated October 22, 2013, and the Third Amendment date July 15, 2014 between Cowlitz County and ICF Jones & Stokes, Inc. (Contractor).

The Contractor shall, in a timely manner, perform such services and accomplish such tasks including the furnishing of all materials and equipment necessary for full performance thereof, as are identified and designated as the Contractor's responsibilities throughout this Agreement including, but not limited to, all such services and tasks necessary to conduct environmental review and prepare Environmental Impact Statements (EIS) under the State Environmental Policy Act (SEPA) and the National Environmental Policy Act (NEPA) as more specifically detailed and described below (the "Services"). The Contractor shall in a timely manner perform all Services pursuant to and in compliance with the Project Schedule set forth in subtask 1.4 of the original Professional Services Agreement. The Contractor shall promptly notify the County of any information the Contractor obtains which could result in a change to the Services to be provided and, in such event the Contractor shall not proceed with any additional analysis or work until authorized by the County. The Contractor shall promptly notify the County of any information the Contractor obtains that could result in a delay to the Schedule according to which the Services must be performed.

2.0 Scope of Work Summary

Millennium Bulk Terminals–Longview, LLC (the Applicant), proposes to construct and operate a marine terminal for export of coal to be located in Cowlitz County, Washington. The project will require completion of EISs to comply with SEPA and NEPA.

The Cowlitz County Department of Building and Planning (County), U. S. Army Corps of Engineers (Corps), and Washington State Department of Ecology (Ecology) entered into a Memorandum of Understanding (MOU) to work cooperatively as co-lead agencies for the completion of the SEPA and NEPA EISs. The Corps is the Federal lead agency for the EIS under NEPA and the County and Ecology are co-lead agencies (SEPA Agencies) for the EIS under SEPA. The County is the nominal lead for SEPA. This scope of work covers both the SEPA and NEPA EISs.

The County, Ecology, and the Corps are collectively referred to herein as the "Agencies." In the event the MOU is terminated the phrase "Agencies" throughout this scope of work and any related scopes of work and contracts shall mean Cowlitz County, and the Contractor, shall proceed to complete the SEPA EIS under the exclusive direction of the County.

It is anticipated the majority of the analysis in the SEPA and NEPA EIS documents will overlap. Where the content of the NEPA and SEPA EIS documents overlap, the County, Corps, and Ecology will collaborate and share information; seeking consensus on data collection, study areas, methodologies, and other issues to be used in preparing the NEPA and SEPA documents. To the extent that a consensus cannot be reached amongst the Agencies, the County and Ecology will determine the scope, content, and timing of the SEPA EIS; while the Corps will determine the scope, content, and timing of the NEPA EIS.

This scope of work addresses Phase 1 and Phase 2 of the SEPA and NEPA process. Phase 1 has been completed, and generally included initial mobilization, project management, expanded scoping under SEPA (including the preparation of scoping reports for SEPA and NEPA), and a portion of the project refinement phase, which included a review of the Applicant's existing conditions reports.

Phase 2 includes development of approaches and methods, technical analysis, and preparation of the Draft SEPA and Draft NEPA EISs. A subsequent amendment to this scope of work, following the release of the Draft EISs for public comment, will include activities related to the review and response to public comments provided during the public comment period(s) for the Draft SEPA and Draft NEPA EISs, comment processing, and preparation of the Final EISs.

The Contractor may commence work on the services for this Fourth Amended Scope of Work only after receiving a written Notice to Proceed from the County.

3.0 Work Elements

The following outlines specific work elements for subtask 4.14 which was initially identified as part of Amendment Three. Budget for services associated with the general management of this subtask as well as preparation of the EIS Technical Report and the SEPA DEIS section for this subtask is not included in Amendment 4. The services and costs associated with this amendment are in addition to the scope and services identified and approved under the initial Personal Services Agreement and Amendments 1 through 3.

4.14 Coal Dust Exposure

This subtask entails a thirty-day coal dust measurement effort at one site in Cowlitz County along the BNSF main line tracks during the relatively dry months of September and October 2014.

Ambient air particulate concentrations will be measured at the site, looking at several particle size ranges including PM_1, $PM_{2.5}$, PM_{10}, and TSP and above. Ambient air measurements will consist of integrated 24-hr samples using filter-based methodologies and continuous monitoring using an optical particle monitoring device. Sampling will include the collection of $PM_{2.5}$ samples on media suitable for speciation using microscopy. Conventional filters will be analyzed for metals and total gravimetric concentration. Key components of this sampling effort will be conducted on both sides of the BNSF main line, measuring both upwind and downwind concentrations.

In addition, separate short duration air "grab" samples will be conducted during the passing of coal trains, as well as during the passage of at least one standard freight train. Samples will be obtained downwind of the trains' passage during clearly definable wind conditions. These

samples will be analyzed using microscopy for particle size and composition, with the primary goal of identifying exactly what proportion of the air sample is due to coal dust. Concurrent with this sampling effort will be a similar effort to measure particle deposition at several distances from the rail line. Continuous meteorological measurements will be made throughout the study period to verify downwind flow and document temperature, humidity and atmospheric stability conditions, all of which can potentially influence particle movement.

As part of the monitoring effort, rail activity will be documented, with particular emphasis on coal train activity. Rail activity will be monitored over the full 24-hour day.

Planning and Selection of Monitoring Sites

Integral to the success of the measurement program is proper planning. During the planning phase the Contractor will be establishing an initial measurement plan, assessing the monitoring methodology for conducting the measurements and reassessing the methods to optimize and focus the data collection efforts to what is needed to have the required data for analysis. Throughout this process there will be a trade-off between automation of techniques and providing a manual collection effort, both with the goal to obtain the needed data in a manner that meets the schedule and budget. Summarized below are the tasks to be performed during planning:

Step 1 – Prepare a summary of the desired results from the field data collection program. This will help fine tune the measurement program needed to collect the required data.

Step 2 – Perform a site survey of up to 2 locations identified by Cowlitz County as potential monitoring sites. The site survey will identify the most appropriate location that allows:

- Location associated with faster train speeds, with minimum braking (some braking adds sand to the braking process, which will increase silica levels), preferably adjacent to grade crossings and/or publicly-owned facilities
- Meteorology conducive to upwind/downwind sampling in as predictable a manner as possible
- Power to operate the needed equipment
- Security for equipment during potential "non-attended" time periods
- Cellular service for appropriate voice and data communications
- Appropriate fetch for sampling on both the "upwind" and "downwind" sides of the track
- Permission for access and operations 24-hours per day, including potential parking for an RV
- Collection of coal samples that may have fallen. These samples will be used for the initial characterization by the laboratory to verify the specifics of the coal dust signature
- Contact of local law enforcement agencies to make them aware of the activities that will be performed, if located on public property or right of way

Step 3 – Meetings and coordination to convey information and fine tune the planning. This will include:

- An initial conference call with Co-Lead Agencies
- Coordination of efforts for the site survey between the Contractor and the Co-Lead Agencies

- Following the site survey, the results will be summarized and discussed with the Co-Lead Agencies to determine the final site selection and implications on types of measurements to be made

Step 4 – Finalize the equipment selection and sampling methodologies based on the results of the site survey. Any operational and logistical limitations observed during the survey will help define the final sampling techniques and how each sampler will be operated, as well as define placement of the meteorological equipment, deposition sampling and air sampling systems. Initial information on the type of camera required will be determined based on the lighting at each of the prospective sites. This will help decide if a low-lux camera will work or if IR will be required. The final sampling plan will then be developed that details the measurements to be made, documentation of the activities, transfer of samples to the laboratories, analysis schedule of the samples to both provide quick feedback on initial samples as well as the long term analyses.

Train Monitoring

Key information will be collected on all of the trains passing at the Cowlitz site. The Contractor will use automated methods of documenting the train parameters, using security grade video recording. This automated documentation will be supplemented by human observation for at least 16 hours of the day, scheduled if possible around peak traffic. Included in the documented train parameters will be:

- Unique identification of the train (number, etc.)
- Date/time of train passage
- Direction of travel
- Speed of train (using radar)
- Type of train (coal, freight, passenger)
- Length of train (calculated from the speed and duration of passage)
- Number of engines
- Number of cars
- Number of cars with coal
- Coal cars being loaded versus unloaded
- Visual documentation of the train passage using video (either visible or IR). This will also provide a backup record to fill in missed parameters above.

The information above will be used to determine the origin of the train and if a surfactant was applied to the transported coal. This step will be coordinated the Co-Lead Agencies who will assist with obtaining information related to coal shipments, shipment schedule, and surfactant.

The Contractor will work with Cowlitz County to obtain permission for 24-hour operations. Additionally, appropriate local law enforcement agencies will be notified of the activities at the site as a proactive step in minimizing any possible interruptions in sampling by law enforcement activities.

Deposition Sampling

The purpose of the deposition sampling will be to catch the material that settles to ground level. It is anticipated that these particles will be of a larger size than the air sampling. During the

planning phase the Contractor will explore the different methods to determine which may be most appropriate for the site and/or types of materials expected. Potential methods include dust fall jars, coated petri dishes or a "tacky" settling plate. During the site survey the Contractor will test several methods while observing trains passing and return the samples to the laboratory to help in the assessment of methods. It is assumed that:

- Sampling will be conducted at a position located 50 feet from the track one on the anticipated "upwind" side of the tracks, and at 10, 50, and 100 feet on the "downwind" side of the tracks. Upwind and downwind designation will be based on prevailing meteorology. The collection of the upwind sample will help establish the baseline (no impact) samples.

- In order to isolate train passage events, the deposition sampling will have individual media used for each train passage. These media will be exposed upon the train arrival and then covered following passage. Depending on the results of the sample collection during the site survey, this may be modified if not enough sample is collected during just one passage.

During the planning phase, various methods of automating the sample collection process, such as remote triggering of media opening/closing, will be developed.

Air Quality Monitoring

Air quality monitoring will be conducted at both sides of the tracks, providing monitoring of both "upwind" and "downwind" conditions, at 120 – 160 feet from the rail line. A review of prevailing wind directions will be conducted during the site survey and the locations will be designated appropriately. Emphasis will be placed on assuring data recovery at the designated "downwind" location.

Mini-Vol samplers, manufactured by Airmetrics, will be utilized for collection of 24-hour filter-based samples of $PM_{2.5}$ and PM_{10}. As they contain their own power supply, they can be sited anywhere there is adequate exposure and freedom from vandalism (on a fencepost, tripod or power pole for example). Two Mini-Vols will be used at each monitoring location, sampling for $PM_{2.5}$, and PM_{10}, determined by the impactor employed in the sampler. Teflon® filters will be used for the sampling, with one blank sample taken for each ten ambient samples collected. Calibrations of all of the equipment will be performed using certified flow standards.

Collocated with the downwind Mini-Vol samplers will be DustTrak DRX Aerosol Monitors, providing continuous, high time resolution (10-sec averages) measurements of particulate concentrations that will provide detailed information on the impact of the train-passage on baseline ambient concentrations. The DustTrak DRX desktop monitor is a battery operated, data-logging, light-scattering laser photometers that gives real-time aerosol mass readings, simultaneously measuring both mass and size fraction for PM_1, $PM_{2.5}$, PM_{10}, and TSP. The 24-hr Mini-Vol data will be used to perform reference calibrations for the different cutpoints, calibrating the optics for the specific particulate composition at each site.

Two additional Mini-Vol samplers will be used to collect 24-hr $PM_{2.5}$ samples on a media suitable for a speciated analysis using microscopy. One of these samplers will be collocated with the "downwind" measurements above, and one will be placed at an equal distance on the "upwind"

side of the tracks. This will allow for an accurate determination of the contribution of coal to downwind concentrations.

During train passages, ambient air samples will be collected using the Air-O-Cell. This collection media will allow an ambient air sample to be collected over a very short time duration, e.g., the passage of a train. The sample is collected using a "slit" type inlet with an adhesive media below the slit to capture and hold the sampled particles. The Air-O-Cell has a D50 cut point of 2.5 microns, but this is not the same as the PM2.5 specification; the Air-O-Cell collects particles 2.5 microns and greater. This will allow the laboratory analysis to characterize and speciate ambient air samples above 2.5 microns.

Meteorological Monitoring

A portable wind measurement system will be set up adjacent to the primary air monitoring location. 4-m vector wind speed and direction, scalar wind speed and direction, temperature, relative humidity, and solar radiation will be recorded and reported in both 60-min and 30-sec averages using a Campbell Scientific data logger.

Laboratory Analysis

Several types of laboratory analyses will be performed in order to extract the needed size, speciation and concentration information from the collected samples. For the deposition samples using the dust fall jars, plates or similar media, as well as any of the active Air-O-Cell samples, a specialized laboratory will perform the analyses. The Contractor will work closely with the laboratory during the planning phase to do undergo preliminary analysis of bulk samples as well as dust fall samples collected when trains pass. This will aid in the selection of the proper collection methods and help in the estimation of the total laboratory support needed during the actual field data collection program.

Analyses that will be performed by the laboratory will include the following:

- Polarized Light Microscopy (PLM) – This provides an analysis of the particle size distribution and speciation of particles larger than 2 to 4 microns with a size distribution through 11 bin ranges. These bins are optimized over the size range of the observed particles to provide a meaningful particle count and mass estimation. The analysis process is dynamic in the sense that the size range analysis is adjusted to capture an appropriate representation of the sample material. The analysis provides the particle count, estimated mass distribution and mineral category evaluation.

- Scanning Electron Microscopy (SEM) – This provides an analysis of the particle size distribution and speciation of particles down to about 0.1 microns. It is anticipated that most samples will be analyzed using the PLM method, with only the $PM_{2.5}$ samples analyzed by SEM for verification and identification of the small particles.

Elemental and gravimetric analysis of the MiniVol filter samples will be conducted by a specialized laboratory in the Pacific Northwest. Elemental analysis will be done using XRF. For the gravimetric analysis, the laboratory will conduct both the pre- and post-sampling weighing of the filters.

Preparation of Coal Dust Methodology and Findings Report

Results from the study will be presented in a report summarizing measurement and analytical results. This report will be the foundation for future EIS analyses related to coal dust exposure and health. It is anticipated this report will be used as an appendix to the Coal Dust Exposure EIS Technical Report.

Assumptions

- One site will be selected in Cowlitz County
- Cowlitz County will identify initial potential sites
- Cowlitz County will assist with obtaining permissions
- Co-Lead Agencies will assist with obtaining information related to train traffic, coal train schedules, and surfactant application
- Co-Lead Agencies will assist with obtaining permission from the BNSF, as appropriate
- Monitoring will begin no later than October 1, 2014 and will last for 30 days
- At least 14 days of usable data will be collected

Deliverables

- Coal Dust Monitoring Methodology and Findings Report

End of Scope