

**AMENDMENT NO. 5 to
Cowlitz County Professional Services Agreement
with ICF Jones & Stokes, Inc.**

1. This Amendment No. 5 to Agreement is between Cowlitz County, Washington, ("COUNTY"), and ICF Jones & Stokes, Inc. ("CONTRACTOR") shall take effect and be in force on the below stated date of authorization as agreed to by COUNTY and CONTRACTOR.
2. COUNTY AND CONTRACTOR have entered into an Agreement for professional services, to wit: Contract-BOCC-2013-2, approved and executed by the Board of County Commissioners on May 16, 2013.
3. COUNTY is now in need of continuing or additional professional services under the original Agreement through May 1, 2018, and CONTRACTOR is amendable to extending his/her professional services to COUNTY under the same terms and conditions of the original Agreement, and as set forth below.
4. Both COUNTY and CONTRACTOR agree to modify the original Agreement as in the parties' best interests and in furtherance of the purposes and intent of this amendment, as set forth below:
 - a. Attachment A – Fifth Amended Scope of Work
 - b. Attachment B – Compensation
 - c. (none)
5. Except as provided above in this Amendment No. 5, all terms, conditions, duties, obligations and provisions of the original Agreement and any prior Amendment(s) shall remain in full force and effect.

The parties hereto have executed this agreement on this 4th day of November, 2014, and each signatory to this Amendment No. 5 warrants that he/she is duly authorized and executes this Amendment for and on behalf of the below-inscribed parties hereto.

CONTRACTOR:
ICF Jones & Stokes, Inc.

By: Steve Witt
Assistant Secretary
Title (authorized by Bylaws to sign)

BOARD OF COUNTY COMMISSIONERS
OF COWLITZ COUNTY, WASHINGTON

Michael A. Karnofski
Michael A. Karnofski, Chairman

ATTEST:

Tiffany Ostreim
Tiffany Ostreim, Clerk of Board
11-4-14

James R. Misner
James R. Misner, Commissioner
Dennis P. Weber
Dennis P. Weber, Commissioner

CONTRACT AMENDMENT FORM HAS BEEN
APPROVED BY COWLITZ COUNTY
PROSECUTING ATTORNEYS OFFICE

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APPROVED BY COWLITZ COUNTY
PROSECUTING ATTORNEYS OFFICE

PERSONAL SERVICES AGREEMENT
FIFTH AMENDED SCOPE OF WORK
COWLITZ COUNTY AND ICF/JONES & STOKES
October 24, 2014

1.0 Introduction

This amended scope of work constitutes the Fifth 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, the Third Amendment dated July 15, 2014, and the Fourth Amendment dated September 16, 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 (EISs) 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 per subtask 1.4. 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 the 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 Contractor shall prepare the SEPA EIS under the joint direction of the County and Ecology. The NEPA EIS shall be prepared under the direction of the Corps. 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 Fifth Amended Scope of Work only after receiving a written Notice to Proceed from the County. This scope of work and associated budget may also be amended if during the course of the Phase 2 work it is determined by the Agencies and Contractor that additional activities associated with SEPA and/or NEPA EIS activities will be necessary.

3.0 Work Elements

The following provides specific work activities for subtasks 4.14, 4.20, 4.21, 4.22, and 4.24 which were initially identified as part of Amendment Three. In addition, per Amendment 3 subtask 4.2, costs associated with the NEPA Off-Site Alternative are also included in Amendment 5. Budget for services associated with the general management of these tasks as well as preparation of the DEIS sections for these tasks are also amended (subtasks 1.2, 1.5, 1.6, 1.8, 5.3 and 5.4). The services and costs associated with this amendment are in addition to the services and costs identified and approved under the initial contract and Amendments 1 through 4.

4.2 Preparation of NEPA and SEPA Technical Reports The scope and cost of this subtask is revised to include analysis of, and preparation of technical report sections, for one NEPA Off-Site Alternative located in Cowlitz County, for each resource area identified under Amendment 3. Associated EIS discussions are included in this amendment as part of the revised budget for subtasks 5.3 and 5.4.

4.14 Coal Dust Exposure

This scope of work and associated costs for subtask 4.14 is in addition to activities and costs identified as part of Amendments 3 and 4. This amended scope focuses on the assessment of coal dust monitoring findings.

The Contractor shall prepare an assessment of the potential for coal dust exposure from data collected via field monitoring per Amendment 4, and analyze the potential for coal dust exposure as follows:

- An overview of the approach for coal dust exposure assessment that describes the purpose of the data collection program and how that data will be used in assessing the potential impacts from the proposed project.
- Use both domestic and international scientific literature studies that document/describe existing knowledge and information about coal dust emissions and their potential environmental impacts from rail operations, describe how these studies can be used to assess coal dust impacts from the project. This would also include information on the likely trace element composition of coal shipped to the export terminal.
- The literature review will also document if threshold or trigger levels have been identified for coal dust and dust deposition levels in total and incrementally and the basis (human health, nuisance, public welfare) for these levels.
- Summarize and analyze the data collected from the coal dust monitoring study conducted in Cowlitz County. The basis for this summary and analysis will come from the technical coal dust monitoring report prepared under Amendment 4.
- The data analysis will include an assessment of the fraction of ambient particulate matter concentrations and deposition amounts that are from coal dust, if collected, as well as information on coal dust particle sizes and how this changes with distances from the rail line.
- The dust analysis will include an assessment of coal dust levels, if found, associated with coal train movements and in comparison to other types of trains (freight, passenger).
- Use the information gathered from the international scientific literature on coal dust emissions and apply any adjustments needed for local characteristics (e.g., larger coal car size surface area; distance over which the coal is transported, application of topping agent, humidity and rainfall conditions) if coal dust particulates and/or deposition are collected during the monitoring activity.
- Conduct air quality modeling for both deposition and particulate matter concentrations and compare with measurements collected during the field monitoring program (Amendment 4). Assess the differences between measured and modeled results and identify if adjustments are needed for conducting a project coal dust impact assessment.
- Conduct air quality modeling, if necessary, for coal dust concentration and deposition, using any adjustments needed based on the monitoring to model comparison, for the project site. The included coal dust emission will include fugitive emissions from the coal train operation as well as coal storage piles, and from unloading rail cars and loading onto ships.
- Conduct air quality modeling, if necessary, to assess the amount of coal dust deposited and concentration in air in the near vicinity along the anticipated routes resulting from the project's estimated rail traffic in Cowlitz County and to the mine sites.
- Use the results to provide a qualitative discussion of coal dust deposition and concentration in air – resulting from operations of the proposed project - along the rail route elsewhere in Washington State and to the mine sites.

- Assess the coal dust impacts for both deposition and concentration along the rail line right-of-way in Cowlitz County and compare to the ambient air quality standards (TSP, PM-10 and PM-2.5) and any deposition trigger levels identified in the literature review.
- Determine the air concentration of the trace elements as identified in the likely coal composition identified in the literature review using the modeled coal dust. Compare these modeled trace elements (e.g., vanadium, manganese, crystalline silica) concentrations with the acceptable source impact level (ASIL) identified in WAC 173-460 which regulates some 400 air toxic substances. Concentrations below the ASIL indicate insignificant potential for adverse health effects. If concentrations are above the ASIL identify if they extend beyond the rail line right-of-way.
- Discuss potential cumulative impacts based on reasonably foreseeable changes in additional coal train activity on rail lines that would be used for the project's rail traffic in Cowlitz County. A qualitative discussion of potential cumulative impacts on rail lines from Cowlitz County to the mine sites will also be included.
- Identify possible mitigation measures that could be applied to reduce coal dust emissions. These to be identified separately for the coal train activity and for the operations at the coal terminal.

NEPA Study Area

For direct impacts, initial coal dust analysis shall include the operations of the terminal at the project site and rail activities at the site. Indirect and cumulative impacts will look at the area along the Reynolds Lead and BNSF Spurs in Cowlitz County.

SEPA Study Area

Different study areas will be included in the analysis for each SEPA Co-Lead Agency:

- Cowlitz County
For direct impacts, initial coal dust analysis shall include the operations of the terminal at the project site and rail activities at the site. Indirect and cumulative impacts will look at the area along the Reynolds Lead and BNSF Spurs in Cowlitz County.
- Washington State Department of Ecology
or direct impacts, initial coal dust analysis shall include the operations of the terminal at the project site, rail activities at the site as well as along the Reynolds Lead and BNSF Spurs in Cowlitz County. Indirect and cumulative impacts will look at a larger area, including off site rail, identified in coordination with the Agencies.

Assumptions

- Estimated coal dust emissions for the coal train and on-site coal handling and storage activities will be developed based on operations information provided by the Applicant
- Plan sheets that detail project components and their locations, including the location of rail spur line, coal piles and loading and unloading handling will be obtained from the Applicant
- Information on project timing, phasing methods and activity levels will be obtained from the Applicant
- For areas beyond the project site and study area, Contractor and the SEPA Agencies shall discuss the appropriate level of analysis (subtask 4.1). The SEPA Agencies shall direct

Contractor on the level of analysis if it is determined that an expanded study area is required per Task 4.1

Deliverables

- Deliverables for the NEPA and SEPA technical reports are described above under subtask 4.2
- EIS Sections will be prepared under subtasks 5.2 and 5.3 of this scope of work

4.20 Coal Market Assessment (formerly Greenhouse Gas Analysis)

This task contains activities related to the preparation of a Coal Market Assessment that will provide the context for the Millennium Bulk Terminals-Longview project in the broader domestic and international coal market, as well as calculating the estimated change in emissions from coal consumption due to the operation of the terminal. The Contractor proposes to use its Integrated Planning Model (IPM®) to conduct the modeling portion of this task. The following sections describe the four sub-tasks for this work.

A: Preparation of Assumptions

The Contractor shall finalize assumptions based upon meetings with the SEPA Agencies and prepare a memorandum that will provide proposed project-specific assumptions to be used in the analysis. The list below presents the types of project specific assumptions that will be made in coordination with the SEPA Agencies:

- Time frame of the analysis;
- Amount of coal exported;
- Capacity and timing of other reasonably foreseeable Pacific Northwest coal export terminals;
- The origin of the coal that may be exported by the Applicant;
- The destination of the exported coal;
- The heat and pollutant content of coal that may be exported by the Applicant;
- The average emissions rates for U.S. and international coal plants;
- Air Regulatory framework;
- Fuel Cost Assumptions for natural gas and coal;
- Shipping costs; and
- Rail transportation costs.

Sources of information for these assumptions will be from documented, accepted sources such as U.S. Environmental Protection Agency, U.S. Department of Energy - Energy Information Agency (EIA) forecasts, the International Energy Agency (IEA), and ICF standard model inputs.

Inputs for these assumptions will be documented in the assumptions memorandum prepared for this subtask. If necessary, the Contractor shall meet with the Co-Leads to discuss the assumptions memorandum. During the meeting the Contractor will be prepared to discuss the rationale for the assumptions, provide context and information to facilitate a discussion, and provide alternative assumptions as requested.

B: Definition of the Scenarios

Up to five scenarios will be run, which will include a No-Action scenario, a Proposed Action scenario, a cumulative scenario, and other scenarios as defined by discussions with the Co-Leads.

Additional scenarios, beyond five, may be run but will require an amendment to this scope of work and cost estimate.

In addition to these scenarios, up to two sensitivity analyses (i.e., changing the cost of coal) will be run for the No Action and the Proposed Action scenarios.

C: Modeling Runs and Analysis of Results

The Contractor shall conduct modeling runs using IPM® to determine the flow of coal through the proposed terminal and the expected change in emissions from the consumption of the coal. Each of the four scenarios will require a separate model run. Prior to conducting the model runs, the Contractor shall update the model inputs with the latest domestic and international inputs as outlined in subtask 4.20A of this scope of work.

Once results are available from the model runs, the Contractor shall submit preliminary results for review. The Contractor shall participate in up to three, three-hour conference calls to walk through the results and answer any questions that arise from the preliminary results.

Results from the modeling runs will be used as inputs to determine the net greenhouse gas changes. In addition, model run results may be used to confirm and support characteristics of the on-site and off-site alternatives for the NEPA EIS.

D: Preparation of a Report

The Contractor shall prepare a report that describes the analytical methodology, coal market drivers, and results of the modeling. The Contractor shall prepare draft chapters of the report, as outlined below. Following a 30-day review by the Co-Leads, the Contractor will meet with the Agencies to discuss comments and changes to the report. It is assumed that no new model runs will be required once the draft technical report is submitted for review. Based on feedback received during the conference call and written comments from the Agencies, the Contractor shall prepare a final draft of the report.

The report will include the following chapters:

- Chapter 1 Introduction and Summary (5 – 15 pages)
- Chapter 2 U.S. Coal Market and Export Terminals (30 – 35 pages)
- Chapter 3 International Coal Markets (20 – 25 pages)
- Chapter 4 Model Framework, Methods and Key Assumptions (20 – 25 pages)
- Chapter 5 Description of Proposed Action and Scenarios (10 – 15 pages)
- Chapter 6 Modeling Results for Coal Export, Consumption, and Emissions (40 – 50 pages)
- Chapter 7 Synthesis and Conclusions (5 – 15 pages)

NEPA Study Area

Up to two scenarios, plus the No Action, will be prepared and reviewed in support of the Purpose and Need and On Site Alternative design.

SEPA Study Area

Different study areas will be included in the analysis for each SEPA Co-Lead Agency:

- Cowlitz County
This task does not apply to Cowlitz County's SEPA analysis.
- Washington State Department of Ecology
Up to three scenarios, plus the No Action, will be prepared. Two sensitivity analyses will also be run for the No Action and one other scenario. Results of the coal market assessment will be used to calculate net GHG emissions, per subtask 4.21.

Assumptions

- Five IPM model runs will be performed
- Additional scenarios will require amendment to this scope of work and cost estimate
- Two sensitivity analyses will be run for the No Action and one other scenario
- Co-Leads will have a 30-day period to review the draft report

Deliverables

- Spreadsheet containing preliminary results
- Draft and Final Coal Market Technical Report
- EIS Sections will be prepared under subtasks 5.2 and 5.3 of this scope of work

4.21 Greenhouse Gas Emissions and Climate Change

This task contains activities related to the preparation of an estimate of the direct greenhouse gas (GHG) emissions from the Millennium Bulk Terminal project, as well as an assessment of the gross and net GHG emissions resulting from changes in coal transport, and end-use coal consumption due to the operation of the terminal.

ICF will conduct two GHG analyses. The first analysis takes into account the coal market analysis (subtask 4.20); and the second analysis will be limited to the direct and indirect (i.e., emissions associated with on-site use of electricity) within Cowlitz County boundaries and for transportation to and from the facility. The following sections describe this work.

In addition, a general qualitative discussion related to climate change impacts on the proposed project, as well as potential climate change effects resulting from the proposed project, will be discussed.

A: Scope of GHG Analysis

The Contractor shall participate in a meeting with the Co-Leads, during which time the scope of the GHG analysis and assumptions will be confirmed. Many of these elements overlap with assumptions and decisions for the coal market analysis (subtask 4.20) and will be coordinated with the technical team and Co-Lead Agencies.

- The GHG emissions analyzed will include: transportation, facility construction, facility operations, and end-use combustion.

- Geographic scope of the analysis. Both domestic and international GHG emission sources will be included. Domestic transport will include transport from the coal mine to the proposed Project; overseas transport will be limited to transport to overseas ports in South Korea, Taiwan, Japan, and China (note: the analysis will exclude transport from overseas ports to combustion facilities).
- Time horizon of the analysis will be from 2018 to 2038.
- Type and number of U.S. and Pacific Basin competing coals to model.
- Approach for presentation of the results summarized in one-page overview document and powerpoint slides.

Prior to the meeting with the Co-Leads, the Contractor will also prepare a list of data and information needs for the analysis.

B: Analysis of Project Construction and Operation GHG Emissions

Direct emissions from the proposed Project will include those associated with its construction and operation. The Contractor will estimate GHG emissions for construction and operation of the proposed Project and the no build and off-site alternatives based on fuel and electricity use information as defined for the coal market analysis. Operation emissions will be estimated over the lifetime of the proposed Project. Indirect emissions will include those from electricity usage and vehicle transportation at the facility.

C: Analysis of Net Transportation, Project Construction and Operation, and Combustion GHG Emissions

GHG emissions from construction and operation of the proposed Project, and changes in transportation and end-use coal consumption will be estimated and included in the Climate section, and referenced in the Cumulative Effects section of the EIS. The objective is to evaluate net GHG emissions as a result of construction and operation of the terminal. GHG emissions will be assessed over the project time period. To capture net GHG emissions for the U.S. coal that would likely be transported from the proposed Project and the displacement of coal from other origins on the international market, the GHG analysis will make use of results from the Coal Market Assessment (task 4.20), referred to as the “coal market analysis” throughout the rest of this scope of work.

This analysis will categorize coal emission sources into three broad stages: transportation, operations, and combustion). The Contractor will use outputs from the coal market analysis to calculate net emissions from transportation (including transport of coal from mines to the terminal and from the terminal to markets) and combustion for the different coal types and U.S. natural gas.

In addition, existing NEPA environmental documents related to mines and mining extraction in the Powder River and Unita Basins, which were previously approved and dopted, will be reviewed and referenced in the climate change discussion.

D: Qualitative Discussion of Climate Change Impacts

This task will include qualitative discussion of:

- General potential climate change impacts on the terminal; and
- General potential climate change impacts from increased global GHG emissions.

General discussion of potential climate change impacts on proposed project

The Contractor will prepare a high-level, qualitative discussion of climate change impacts on the terminal. The basis of this discussion will be existing information contained in scientific literature and past studies.

- The Contractor will prepare a brief summary of information on historical climate (i.e., over last 30 to 50 years) and projected climate in the near- (i.e., 20 years) and mid-term (i.e., 40 to 50 years) for relevant climate variables: sea level rise, temperature, precipitation, and wind. The Contractor will use readily-available sources such as the U.S. Global Change Research Program’s 2014 National Climate Assessment for the United States, and the U.S. Geological Survey’s National Climate Change Viewer.
- The Contractor will briefly describe the potential for both gradual changes in seasonal temperature and precipitation and sea level rise, as well as projected changes in extremes (e.g., heat waves, extreme downpours, storm surge).
- To handle uncertainty in projections, the Contractor will select scenarios that represent the high and low ends of the range of future changes across multi-model ensemble climate change projections, and will identify the extent to which model projections differ for specific climate variables.
- The Contractor will identify high-level relationships between climate variables and impacts in the action area by comparing historical climate information and existing information on how related infrastructure is sensitive to climate impacts to projected climate changes.

General discussion of potential climate change impacts from increased global GHG emissions

The Contractor will prepare a high-level qualitative discussion on the general potential climate change impacts and potential impacts to Washington State based on existing literature.

E: Preparation of EIS Section text and Detailed Appendix Report

The Contractor will summarize the overall approach, the methods used, key data sources, and results, and include a discussion on the factors contributing to the net GHG results in a technical report. The report will also include an overview of the key life-cycle stages and resulting net GHG emissions.

NEPA Study Area

A general, qualitative discussion related to climate change impacts on the proposed project, as well as potential climate change effects resulting from the proposed project, will be discussed.

SEPA Study Area

Different study areas will be included in the analysis for each SEPA Co-Lead Agency:

- Cowlitz County
GHG emissions from construction and operation of the proposed project, on site within Cowlitz County
- Washington State Department of Ecology

GHG emissions from construction and operation of the proposed project, and changes in transportation and end-use coal consumption (in Asia) will be estimated.

Assumptions

- No fieldwork will be required
- No climate modeling work will be undertaken; the analysis will use existing climate information and projections.
- ICF will not evaluate GHG emissions from induced coal mine construction.
- Climate change discussion will be limited to a high level, up to 10-page discussion
- Additional assumptions to be completed following discussions and agreements with the Co-Lead Agencies

Deliverables

- Draft and Final GHG Technical Report and Qualitative Assessment of Climate Change Impacts
- EIS Sections will be prepared under subtasks 5.2 and 5.3 of this scope of work

4.22 Energy and Natural Resources

The existing conditions and evaluation of potential impacts will be discussed in a quantitative manner for direct impacts and a qualitative manner for indirect impacts, for the study area as described below. For the energy and natural resources analysis, the Contractor will address different energy types and sources that will be used by the proposed MBTL project during construction and ongoing operations. The Contractor will also identify any shading of nearby properties that could interfere with solar power, as a result of constructing and/or operating the proposed MBTL project. Should this occur, the Contractor will identify the properties that will be affected and the degree that this is likely to occur. The Contractor will also address what kinds of energy conservation features are included in the plans for the proposed MBTL site, as well as identify other proposed measures to reduce or control energy impacts, if any.

NEPA and SEPA Study Areas:

The energy and natural resource analysis will be the same for both NEPA and SEPA. For direct impacts, the extent of impact evaluation will be the project site. For indirect impacts (e.g., shading of nearby properties that could interfere with solar power), the extent of impact evaluation will be the project site as well as the area within a 0.25-mile distance from project site boundaries.

Assumptions:

- The Applicant will identify energy types and sources that will be used for both construction and operation of the MBTL site, as well as how the energy will be used.
- The Applicant will provide plan sheets that adequately identify the dimensions of the proposed MBTL facility so that the Contractor can adequately identify any shading of nearby properties that could potentially interfere with solar power.
- The Applicant will identify what kinds of energy conservation features that will be included in the plans for the proposed MBTL site, as well as other proposed measures to reduce or control energy impacts.

- The Applicant will provide to the Contractor the information listed above within the identified project schedule.

Deliverables:

- Deliverables for the NEPA and SEPA technical reports are described under subtask 4.2
- EIS Sections will be prepared under subtasks 5.2 and 5.3 of this scope of work

4.23 Health Impact Assessment

No changes to scope of work identified per Amendment 3 of this Personal Services Agreement

4.24 Cumulative Impacts

When describing the environmental effects of a proposal, both NEPA and SEPA require the lead agencies to evaluate cumulative effects, along with direct effects and indirect effects. In general terms, the EIS should look at how the effects of the proposal will contribute towards the total effect of development in the region over time.

Although cumulative effects are not specifically defined under SEPA, a cumulative effect is defined under NEPA¹ as:

“the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions.”²

Cumulative effects can be positive as well as negative, depending on the resource element (e.g., air quality, fish, etc.) being evaluated. It is possible that some resource elements can be negatively affected and others positively affected by the same proposed project. Most cumulative effects analyses will identify varying levels of beneficial and adverse effects, depending on the resource elements and the specific actions. The Contractor will ensure that the cumulative effects analysis will include an analysis of both positive and negative effects on the various resource elements.

The Contractor will prepare an analysis of cumulative effects that will include the construction and operation of the proposed terminal, upland materials handling, storage facilities and rail facilities, as well as the proposed mitigation measures. Cumulative effects will be addressed in the technical reports for each resource element where they are applicable. The Contractor will then extract the cumulative effects discussion from each technical report and combine these effects into an overall cumulative effects analysis for the NEPA and SEPA EISs. Ultimately, the Contractor will prepare an EIS chapter for each EIS (NEPA and SEPA) which will include the full cumulative effects (impacts) analysis. The scope of work and cost estimate for this subtask covers the cumulative effects analysis for each technical report and the preparation of the appropriate section for each technical report (as identified per Amendment 3 of this Personal

¹Per the Council on Environmental Quality's (CEQ) regulations implementing the procedural provisions of the National Environmental Policy Act (NEPA).

²40 CFR Section 1508.7

Services Agreement). The preparation of two EIS chapters (NEPA and SEPA) are also included as part of this subtask.

Identification of Reasonably Foreseeable Future Planned Actions and Permitted Projects

For the cumulative effects analysis, the Contractor and the Agencies will work together to identify reasonably foreseeable future planned actions or permitted projects based on geographic and temporal boundaries defined by the Agencies for the analysis. A different list of future planned actions and permitted projects may be considered for the NEPA and SEPA analyses. These potential actions/projects may include, but are not limited to, the following:

- Past uses onsite (i.e., Reynolds Metals Aluminum Smelter and Chinook)
- Current cleanup taking place onsite as a result of past uses
- Other terminals on the coasts of Washington and Oregon where new facilities are proposed for development
- Gateway Pacific Terminal, Cherry Point, WA, coal facility
- Coyote Island Project, Boardman, OR, coal facility
- Future projects at Port of Kalama, Port of Longview, Port of Woodland, Port of Grays Harbor, Port of Vancouver, Port of Tacoma and Port of Seattle
- SR 432 Rail Realignment and Highway Improvements Project
- Other Cowlitz County and City of Longview development projects and roadway improvements
- BNSF future projects
- WSDOT passenger rail project
- Columbia River dredging project
- Projects on the lower Columbia River and Columbia River Gorge (WA and OR)

Once the Agencies have agreed on a list of reasonably foreseeable future planned actions or permitted projects, and the geographic/temporal boundaries, the Contractor will prepare a description for each action/project for the cumulative effects analysis. These descriptions will be obtained via internet research, interviews with project proponents (where applicable), as well as information obtained from Agencies and the Applicant. The descriptions prepared for each action/project will be referred to when preparing the analysis of cumulative effects for each resource element and will be presented in the combined cumulative effects analysis EIS chapter.

Preparation of Cumulative Effects Analyses

The discussion for each resource element, where there this an impact identified (per subtasks 4.3-4.23), will consider each reasonably foreseeable future planned action or permitted project in its cumulative effects analysis. A description of the cumulative effects study area for each resource element is identified in Amendment 3 of this Personal Services Agreement. Prior to beginning the analysis, the Contractor shall review the study area boundaries with the Agencies.

Development of a Single Cumulative Effects Analysis Chapter

As stated above, a cumulative effects analysis will be prepared in the technical reports for each resource element and will consider each reasonably foreseeable future planned action or permitted project identified for the NEPA and SEPA EISs. As the technical reports are completed, the cumulative effects analyses will be combined into a single cumulative effects analysis chapter for both the NEPA and SEPA EISs. The cumulative effects chapters will include the following components:

- A definition for a cumulative effect;
- An explanation of why an analysis of cumulative effects is needed in an EIS (i.e., the analysis is required under both NEPA and SEPA);
- A list of reasonably foreseeable future planned actions or permitted projects considered in the NEPA and SEPA cumulative effects analysis;
- A project description for each future planned action or permitted project;
- A complete analysis of cumulative effects, presented by resource element, that takes into consideration each reasonably foreseeable future planned action or permitted project identified for the NEPA and SEPA EISs; and
- A summary of the cumulative effects analysis.

NEPA and SEPA Study Area

The NEPA and SEPA study areas that will be considered for the cumulative effects analysis for each resource element are described in ICF's Personal Services Agreement dated June 12, 2014, under Sections 4.3 through 4.23.

Assumptions

- Prior to beginning the analysis, the Contractor shall review the study area geographic and temporal boundaries with the Agencies.
- The Contractor and the Agencies will agree on a list of reasonably foreseeable future planned actions or permitted projects that will be considered in the cumulative effects analysis. A different list of planned actions and permitted projects may be considered for the NEPA analysis and the SEPA analysis.
- Per the Corps' direction, when considered in accordance with applicable laws and regulations, many of the activities of concern to the public, such as rail traffic, coal mining, shipping coal overseas, and the burning of exported coal in other countries, are outside the NEPA lead agency's (i.e., the Corps') control and responsibility and, therefore, cumulative effects associated with these actions will not be analyzed in the NEPA EIS.
- The cumulative effects analysis will be based on the best available science/data. If the Agencies decide that additional modeling and/or research (including field work) is needed, a separate scope and cost proposal will need to be prepared for this effort.

Deliverables:

Deliverables for the individual NEPA and SEPA technical reports prepared for each resource element are described under Subtask 4.2 of ICF's Personal Services Agreement dated June 12, 2014. Deliverables for the cumulative effects analysis report are listed below.

- Draft and Final NEPA and SEPA technical report sections for each resource area as identified in Amendment 3 of this Personal Services Agreement
- Draft and Final NEPA and SEPA combined cumulative effects analysis chapters

End of Scope

Amendment 5: Cost Estimate for Millennium Bulk Terminals-Longview - NEPA and SEPA EISs

Task	Labor Classification	Consulting Staff												Subtotal	Subcontractor (see attached for details)	Production Staff				Subtotal	Labor Total	Direct Expenses	Total Price	Total Hours
		Sr Proj Dir	Proj Dir	Tech Dir	Sr Tech Analyst	Mng Consult	Sr Consult III	Sr Consult II	Sr Consult I	Assoc Consult III	Assoc Consult II	Assoc Consult I	Asst Consult			BergerABAM	Editor	Support Editor	Invoicing					
Task 1. Contract Management														\$0						\$0	\$0		\$248,702	1,235
1.1 Project Management and Communications Plan														\$0						\$0	\$0			0
1.2 Meetings with Agencies and MBTL			120			40								\$39,000						\$0	\$39,000			160
1.3 Kick Off Meeting														\$0						\$0	\$0			0
1.4 Project Schedule and Deadlines for Deliverables														\$0						\$0	\$0			0
1.5 Quality Assurance/Quality Control		40	80											\$31,800						\$0	\$31,800			120
1.6 Records/Administrative Records Management								120						\$18,600				240		\$27,600	\$46,200			360
1.7 Invoicing and Progress Reports						40								\$6,400	\$ 1,619.28			40		\$2,800	\$12,819			80
1.8 Project Management and Coordination		45	200			80	190							\$116,725	\$ 2,157.60					\$0	\$118,883			515
1.9 Template and Style Sheets														\$0						\$0	\$0			0
Task 2. Public Outreach														\$0						\$0	\$0			0
2.1 Public Involvement Plan														\$0						\$0	\$0			0
2.2 Project Website														\$0						\$0	\$0			0
2.3 Scoping and DEIS Comment Period Meetings														\$0						\$0	\$0			0
2.4 Agency and Tribal Consultation														\$0						\$0	\$0			0
2.5 Comment Management														\$0						\$0	\$0			0
2.6 Scoping Report														\$0						\$0	\$0			0
2.7 General Media Communications Support														\$0						\$0	\$0			0
Task 3. Project Refinement														\$0						\$0	\$0			0
3.1 Evaluation of Data Resources to Describe Existing Conditions														\$0						\$0	\$0			0
3.2 Wetlands and Upland Vegetation														\$0						\$0	\$0			0
3.3 Aquatic Habitat and Species														\$0						\$0	\$0			0
3.4 Near Shore Benthic Biota														\$0						\$0	\$0			0
3.5 Threatened and Endangered Species/ESA Section 7														\$0						\$0	\$0			0
3.6 Terrestrial Wildlife														\$0						\$0	\$0			0
3.7 Hydrology														\$0						\$0	\$0			0
3.8 Water Quality														\$0						\$0	\$0			0
3.9 Geology and Soils														\$0						\$0	\$0			0
3.10 Hazardous Materials														\$0						\$0	\$0			0
3.11 Socioeconomic/Environmental Justice														\$0						\$0	\$0			0
3.12 Land Use/Parks and Recreation														\$0						\$0	\$0			0
3.13 Aesthetics, Light and Glare														\$0						\$0	\$0			0
3.14 Cultural Resources (including Tribal Fishing Rights)														\$0						\$0	\$0			0
Task 4. Technical Analyses and Reports														\$0						\$0	\$0		\$991,896	5,656
4.1 Level and Type of Analysis														\$0						\$0	\$0			0
4.2 Preparation of SEPA and NEPA Technical Reports		50	260		160	40	280	420	160	112	400	188		\$361,550	\$ 25,797.68	100	160			\$39,400	\$426,748			2,330
4.3 Water (Ground, Surface, Floodplains, and Water Quality)														\$0						\$0	\$0			0
4.4 Wetlands														\$0						\$0	\$0			0
4.5 Plants and Animals (Fish, Wildlife and Vegetation)														\$0						\$0	\$0			0
4.6 Hazardous Materials														\$0						\$0	\$0			0
4.7 Earth (Soils and Geology)														\$0						\$0	\$0			0
4.8 Land and Shoreline Use (including Housing and Parks and Recreation)														\$0						\$0	\$0			0
4.9 Social and Community Effects (including Public Services, Utilities, and E.I.)														\$0						\$0	\$0			0
4.10 Aesthetics, Light, and Glare (Visual Quality)														\$0						\$0	\$0			0
4.11 Historic and Cultural Resources														\$0						\$0	\$0			0
4.12 Tribal Fishing Practices/Treaty Rights														\$0						\$0	\$0			0
4.13 Air (Air Quality)														\$0						\$0	\$0			0
4.14 Coal Dust Exposure			64		152			152			188	184		\$119,680						\$0	\$119,680			740
4.15 Noise and Vibration														\$0						\$0	\$0			0
4.16 Rail Transportation														\$0						\$0	\$0			0
4.17 Rail Safety														\$0						\$0	\$0			0
4.18 Vehicle Transportation														\$0						\$0	\$0			0
4.19 Vessel Transportation														\$0						\$0	\$0			0
4.20 Coal Market Assessment		10				40	160				288	98		\$90,130						\$0	\$90,130			594
4.21 GHG/Climate Change		224	40			40	248				216	472		\$201,600						\$0	\$201,600			1,240
4.22 Energy and Natural Resources								40						\$6,600						\$0	\$6,600			40
4.23 Environmental Health														\$0						\$0	\$0			0
4.24 Cumulative Impacts Analysis			104	24	48	12	120	204	80	40	40	40		\$129,620	\$ 17,518.76					\$0	\$147,139			712
Task 5. Draft NEPA and SEPA EISs														\$0						\$0	\$0		\$84,100	420
5.1 SEPA Proposed Action/NEPA Purpose and Need														\$0						\$0	\$0			0
5.2 NEPA and SEPA Alternatives Development														\$0						\$0	\$0			0
5.3 Preparation of Administrative NEPA and SEPA Draft EISs			60				80	100						\$47,000						\$0	\$47,000			240
5.4 Preparation of NEPA and SEPA Draft EISs			60				80	40						\$37,100						\$0	\$37,100			180
5.5 Print and Distribution of Draft NEPA and SEPA EISs														\$0						\$0	\$0			0
Total hours		369	988	24	360	292	1,158	804	512	152	916	724	472					40	240					
ICF E&P 2014 Billing Rates		\$285	\$255	\$230	\$225	\$210	\$190	\$165	\$155	\$140	\$130	\$115	\$100					\$210	\$115	\$70	\$115			
Subtotals		\$105,165	\$251,940	\$5,520	\$81,000	\$61,320	\$220,020	\$132,660	\$79,360	\$21,280	\$119,080	\$83,260	\$47,200	\$1,207,805	\$47,093.32	\$21,000	\$18,400	\$2,800	\$27,600	\$69,800	\$1,324,698			
Direct Expenses																								
500.00 Subcontractor																					\$1,500			
521.00 Meals, and Lodging																					\$1,500			
522.00 Airfares																					\$2,500			
Direct expense subtotal																					\$5,500			
Total price																						\$1,330,198		7,311

SubContractor: BergerABAM

Personnel Title:	Labor Rate (\$/hr):		\$227.88		\$155.76		\$265.38		\$157.20		\$148.56		\$106.74		\$112.50		\$77.88		\$90.87		\$90.87		\$100.95		\$101.00		\$68.64		\$124.53		Total Subconsultant Hours	Subtotal Subconsultant Labor
	Strategic Advisor	Project Manager	Senior Public Involvement Specialist	Aesthetics Team Lead	Land Use Team Lead	Aesthetics and Visual	Aesthetics and GIS	Land Use Planning	Land Use Planning	Pubic Involvement	Graphics and Web Design	Senior Technical Editor	Word Processing	Senior Administrative Assistant	hours	cost	hours	cost	hours	cost	hours	cost	hours	cost	hours	cost	hours	cost	hours	cost		
Subtask 1.2 Meetings with Agencies		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0	0	\$-
Subtask 1.3 Kickoff Meetings		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0	0	\$-
Subtask 1.7 Invoicing and Progress Reports		\$0	4	\$623		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0	12	\$ 1,619.28
Subtask 1.8 Project Management and Coordination	4	\$912	8	\$1,246		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0	12	\$ 2,157.60
Subtask 2.1 Public Involvement Plan		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0	0	\$-
Subtask 2.2 Project Website		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0	0	\$-
Subtask 4.1 Level and Type of Analysis		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0	0	\$-
Subtask 4.2 Preparation of Technical Reports		\$0	12	\$1,869		\$0	20	\$3,144	40	\$5,942	40	\$4,270	40	\$4,500	20	\$1,558	20	\$1,817		\$0	20	\$2,019	4	\$404	4	\$275		\$0		\$0	220	\$ 25,797.68
Subtask 4.8 Land and Shoreline Use		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0	0	\$-
Subtask 4.10 Aesthetics, Light, and Glare		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0	0	\$-
Subtask 4.24 Cumulative Impacts Analysis	4	\$912	8	\$1,246		\$0	20	\$3,144	20	\$2,971	20	\$2,135	20	\$2,250	20	\$1,558	20	\$1,817		\$0	8	\$808	4	\$404	4	\$275		\$0		\$0	148	\$ 17,518.76
		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0	0	\$-

	8	\$1,823	32	\$4,984	0	\$0	40	\$6,288	60	\$8,914	60	\$6,404	60	\$6,750	40	\$3,115	40	\$3,635	0	\$0	28	\$2,827	8	\$808	8	\$549	8	\$996	Subtotal =	\$ 47,093.32
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Expenses Itemization	Amount
Transportation	\$1,000.00
Lodging	
Meals	
Equipment	
Reproduction	
Graphics	
Postage	
Miscellaneous	\$500.00
Total	\$1,500.00

Expenses =	\$1,500.00
TOTAL =	\$ 48,593.32

MBTL Amendment 5
23-Oct-14