

IFB 270362: ADDENDUM No. 2
Amendments/Changes/ Clarification
Project: PSL Exhaust & Roof Construction

IFB ISSUE DATE: May 20, 2014
CLOSING DATE: June 17, 2014, 11:30 AM PT

IFB No. 270362 is hereby clarified and amended with the following statements:

See Drawings and JPP attached.

1. **General Provisions Supplement 3110 and 3111, NHI-PAAA, are being added by this addendum, the full language of which is hereby attached and is to be incorporated into this contract.**
2. Modify specification 011000 1.1 SUMMARY to add: **Provide separate line item pricing for two (2) core drilled 30" diameter roof penetrations called out by sheet note 4 on drawing R-M-3698 sheet 1 of 6.(See attached edited Bid Sheet)**
3. Modify specification 011000 1.4 GOVERNMENT FURNISHED PRODUCTS to add: Three (3) Exhaust Fans designated PSL-HVE-EF-001, PSL-HVE-EF-002, and PSL-HVE-EF-003.
4. Modify specification 011000 1.6 USE OF PREMISES to add: Demolition and handling of potentially contaminated ductwork must be concluded by 12:00 a.m. (midnight) due to lack of Radiological Control Technician support after than time.
5. Modify specification 011000 1.6 USE OF PREMISES to add: Exhaust outages shall be performed using two shifts to minimize outage durations and the impact to research. Coordinate shift schedules with the Battelle CM.
6. Modify specification 011000 1.1 SUMMARY part B. 4 and 1.5 WORK SEQUENCE part A.1.a to change the exhaust outage duration from ten (10) calendar days to seventeen (17) calendar days. The outage is to start on Saturday, August 16, 2014 and conclude no later than 6:00 a.m. on Tuesday, September 2, 2014. Battelle Craft Services will coordinate with the Contractor during final TAB to verify air flows at fume hoods and authorize them for use. The outage will not be considered complete until all fume hoods are authorized for use.
7. Modify specification 011000 1.10 TRAINING FOR CONTRACT PERSONNEL to add: The discovery of radiological contamination is not anticipated however, to mitigate the risks of potential impact to outage schedules, a total of four (4) sheetmetal workers per rooftop duct demolition shift shall be Battelle course 821 Radiological Worker II trained. A total of two (2) sheetmetal workers per interior exhaust duct demolition shift shall also be trained to course 821 Radiological Worker II.
The anticipated duration of course 821 is four (4) hours consisting of instruction, a written examination and practical demonstration. Five (5) working days advance notice is required for scheduling. Course 821 has a retraining cycle of two years. One (1) years after successful completion of Course 821 refresher training Course 822 is required. The anticipated duration is one (1) hour and consists of web based training and examination.
8. Revise specification 013200 CONSTRUCTION PROGRESS DOCUMENTATION part 1.3 A to read: Seven (7) calendar days after Notice of Award submit for approval a detailed Startup Schedule covering all planned activities during the first thirty (30) calendar days of the Contract.

9. Revise specification 013200 CONSTRUCTION PROGRESS DOCUMENTATION part 1.3 B to read: Twenty-one (21) calendar days after Award submit for approval a detailed Construction Schedule for the entire project from Award through project Final Completion. Incorporate building interior duct removal and replacement work Awarded under separate Contract and executed concurrently. Include a detailed written narrative(s), corresponding to the construction schedule, describing the Contractor's approach to executing the Work. The narrative(s) must demonstrate to Battelle that the Contractor has a comprehensive and achievable plan for all activities prior to and during the PSL hood and exhaust outages. Demonstrate that the Work can be accomplished within the specified timeframe. Include planned manpower and equipment requirements, procurements, fabrication capacities, Battelle support and coordination requirements, Contractor assumptions, performance risks, and risk mitigation strategies.
10. Delete specification 013200 CONSTRUCTION PROGRESS DOCUMENTATION part 1.3 C.
11. Modify specification section 014000 QUALITY REQUIREMENTS part 1.6 A.3 to add: Hold point for Battelle weld inspection required by specification section 051200 2.6 SOURCE QUALITY CONTROL.
12. Specification Section 056000 - Aluminum Fabrications Stairs (pre-engineered)- 1.3(A) Shall be revised to read "Welder Qualifications: Welds shall be made only by welders, tackers and welding operators who have been previously qualified by tests as prescribed in the Structural Welding Code, AWS D1.2 – Structural Welding Aluminum of the American Welding Society to perform the type of work required."
13. Specification Section 075423 Thermoplastic Polyolefin (TPO) Roofing. Section 2.4. Adhesive for insulating board shall be JM Green Tow-Part Urethane Insulation Adhesive. Low odor, low VOC Roofing Adhesive. Adhesive for TPE membrane shall be as currently specified (JM TPO Membrane Adhesive (Solvent Based)).
14. Specification Section 230593 – Mechanical System Testing, Adjusting and Balancing.
 - o 1.3(A): Add 3. – Northwest Engineering Services, Inc.
 - o 3.1(3) shall Read "TAB Contractor shall take pre-demolition air-flow measurements of the exhaust system as indicated on the drawings and pre-demolition lab-to-corridor differential pressure readings in laboratories affected by this project. Measurements and readings shall be used to insure airflows and pressure relationships are maintained after fans are installed and operating properly.
15. R-A-3696 – Sight screen along north edge of the build shall continue to run to the east until it is within 6'-0" of the air intake pylon. See attached.
16. R-M-3698 Sht. 1, Sheet Note 4. The contractor shall provide a separate price for this activity.
17. R-M-3698 Sht. 1 Exhaust Fan Schedule. Exhaust fans EF-001, EF-002 and EF-003 will be procured by Battelle and shipped to the successful bidders shop for contract installation. Fan will be purchased with motor and vibration isolation base. Other items required for installation shall be provided by the contractor.
18. R-A-3696 Sht. 3. Sheet Note 3 Shall Read "Exhaust duct with (4) new roof deck penetration. See R-M-3698."

Also please note the following questions and answers:

- 1) See Key Photo. Note for black hash area Trees to be removed. Cap/re-route Irrigation. Leave Bare . No drawings of specs found in documents. Please provide both
ANSW: Match existing irrigation materials and sizes. Coordinate reinstallation prior to completion with Battelle and reroute to provide overlapping sprinkler coverage.

- 2) Same Key Photo Solid red area is staging area. The only solid red area shown on this drawing is a sidewalk is this the Staging area. If not please provide up dated key photo .

ANSW: Staging areas are indicated by red hash marks. The solid red line indicates sidewalks that are to be fenced off from the staging areas and remain open for PSL staff entrance and egress. See attached photo.

- 3) Same Key Photo 2 blue X with circle around on photo Please label what these are showing.

ANSW: Removed. See attached photo.

The above stated clarifications are the only changes being made at this time.

Failure to acknowledge receipt of this addendum with submittal of your Bid could be cause to reject your offer. All other requirements of the RFP remain as originally stated.

Thank you,

Garrett V. Hyatt

Garrett V. Hyatt
Sr. Contract Specialist
cc: File, Bidders List

Job Planning Package Click the for online help

Service Request # S707557C	Facility: PSL	Location: 500	Funding WP: P92017
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Request Subject:	Replace Exhaust Fans/Duct Work/Roof - PSL
Description:	The Work consists of a complete replacement of the Physical Sciences Laboratory (PSL) north wing roof exhaust system and complete replacement of the PSL roof surface. The new exhaust system will provide a reliable and robust laboratory venting. The new roof will replace the existing ballasted asphalt roof which is at end of life.
Justification:	
Equipment Category:	NA
Systems Affected:	Architectural-Roofs, Electrical Power, Hvac-Fmcs/Metasys, Hvac-Hv Controls, Hvac-Hv Exhaust, Piping-Compressed Air

JPP Type, Hold Points and Comments

UseCategory	Reference
Contingency Emergency Plan Hold Point:	<p><u>EMERGENCY POINT OF CONTACT</u></p> <p>PNNL single-point-contact for all Emergencies is 375-2400. All injuries and accidents (e.g., personal, property, equipment, etc.) shall be reported to your supervisor and CM immediately.</p> <p>Review building Emergency Information Posting (EIP) for emergency – signals, meaning and actions, emergency equipment location, evacuation routes and staging area.</p> <p>Employees have the right and/or responsibility to STOP WORK without fear of reprisal, when convinced a situation exists that places themselves, coworkers, or the environment in danger. If this happens "stop" put work in safe-condition; notify your supervisor and PNNL CM immediately.</p>
Additional Comments:	<p><u>PROJECT POINT OF CONTACT</u></p> <p>Construction Manager (CM) Chris Kovalchick Cell 528-4114. Construction Safety (CS) Mark Deichman Cell 531-9441. Building Engineer (BE) Mike Bruun 375-2273 or Cell 430-0880. Building Engineer (BE) Adam Gemmell 372-6984 or Cell 308-8104. Building Manager (BM) Jeff Rencken 375-6777 or Cell 521-1960. Project Engineer (PE) Steve Gourley 371-7940 or Cell 220-4638. Project Manager (PM) Brian Greenaway 371-7963 or Cell 551-8220.</p> <p>Field Services Rep. (FSR) Colin Swanson 371-6548 Cell 302-8781</p>

GENERAL REQUIREMENTS

Work Hours: Monday thru Thursday; 6:00am to 4:30 pm.

Work that requires PNNL staff to be displaced and or outages for tie-ins (e.g. electrical, piping, HVAC or demolition) activities may be required to be done after hours or on weekends. Request "Outage Request's" a minimum of 5-7 working days in advance of when they are needed to allow adequate coordination with the Facility and its occupants. Outage Request's are to be thoroughly walked down and researched by the Contractor prior to the request being forwarded to CM.

The PNNL Person-In-Charge (PIC) and contact for the project described herein, is the Construction Manager (CM) Chris Kovalchick or his delegate.

Construction work requires prior approval and must be released, through the 300-Area Core Team's Plan-of-the-Day (POD).

A security badge is required when visiting or working at DOE or PNWD facilities and/or the Hanford Site. All employees working must complete required training. Facility doors must not be left unlocked, unattended or blocked open.

Prior to entering posted Construction Areas employees shall first review, understand and comply with the JPP and contractors Job Safety Analysis (JSA) by signing the Pre-Job/Post-Job Meeting Attendance Roster.

Contractor retains responsibility for identifying work related hazards and preparing and maintaining an approved comprehensive JSA.

Hazards and/or controls contained in this JPP are not all inclusive. There is also potential for unexpected hazards and/or known hazards to change as work activities evolve. Should this occur the JSA shall be amended to incorporate the new conditions before work activities begin.

If work conditions change or are different than described, STOP WORK, put in safe-condition; notify your supervisor and PNNL CM immediately.

Contractor must submit Material Safety Data Sheets (MSDS) to the CM, prior to bringing chemicals onto the jobsite and/or into a PNWD facility. The PNNL CM will provide copies to Construction Safety for approval.

Contractor retains responsibility for disposal of non-regulated waste, and construction debris (e.g., conduit, sheetrock, steel, etc.). Regulated waste (e.g., epoxy, lead, waste water, etc.) will be managed and coordinated by PNNL through the FSR, in advance.

Flammable materials used as a part of this project, shall be removed from

	<p>the facility at the end each shift; unless otherwise approved by PNNL.</p> <p>All temporary power cords shall be run overhead, or protected to prevent damage or trip hazard. All extension cords shall be GFCI protected.</p> <p>Housekeeping is required periodically throughout the day, and at the end of each shift.</p> <p>Changes must be approved by PNNL and shall be marked (redlined) on the drawings; PNNL may also choose to generate an Engineering Change Notice (ECN) if different than shown.</p> <p>Contractor shall maintain control of, and access to, the work area at all times. Contractor also retains responsibility for planning, supervising and controlling the work.</p> <p>Observe signs and/or postings at entrances. Employees must read the Hazard Awareness Summary(s) prior to entry. Compliance is mandatory.</p> <p>Energized electrical work is not allowed. All electrical safe-to-work checks must be performed under the provisions of an Energized Electrical Work Permit (EEWP).</p> <p>All penetrations are classified as Class I or Class II. A Blind Penetration Permit is required for all Class II penetrations and must be coordinated, through the CM, in advance. See Contract Specifications for specific details.</p> <p>Where a fall hazard exists the Contractor shall develop a Fall Protection Plan to address hazards and controls.</p>
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Work

Operating Requirements to communicate to Contractor	Yes	Specify Requirements	
			<p>(A) The PSL is an operational facility. The contractor's work needs to be planned in such a manner to protect the safety of PNNL employees and vendors requiring access to the facility.</p> <p>(B) Temporary dust walls may be required. Walls shall be constructed to enclose the work area(s). All plastic sheeting shall be fire retardant with</p>

			<p>factory markings and or factory documentation meeting NPFA 701Fireproof.</p> <p>(C) The Contractor shall protect equipment and instruments that may be sensative to dust/dirt as directed by the PNNL CM.</p> <p>(D) Vendor: Vendors may be required to assist in assembly, disassembly of equipment. Vendors are strictly delegated to 'Hands-Off' assistance unless proper training i.e. LOTO, and any additional training required is obtained prior to performing any 'Hands-On' work.</p> <p>(E) The Contractor shall take reasonable precautions to prevent the release of air contaminants to the environment from construction and demolitin activities.</p>
Other Design Basis Documents:	Yes		
Specific Design Information:	The Contract Documents; General Provisions, CESH, Div. 1 Specifications, Job Planning Package, contract drawings and technical specifications outline all work to be performed.		
Work to be Performed By:	Off-site Contractor		

Lock and Tag Requirements

<p>Personal, Controlling Organization, Written Instructions</p>	<p>Instructions: Employees that participate in Lockout/Tagout (LOTO) shall be trained as authorized workers, or approved equivalent.</p> <p>NOTE: Written instructions, if applicable, must be formalized by using the PNNL F&O LOTO Written Instructions Form.</p>
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	<p>A lockbox may be used in situations where other methods are cumbersome, unsafe or infeasible. In this situation key(s) for the Controlling Organization (CO) locking device(s) are secured in the lockbox by the authorized worker using his/her authorized worker lockout. Items placed in a lockbox are not limited to keys; other items may be used (e.g., valve handles, fuses, etc.) to control isolating devices.</p> <p>PNNL Lockout/Tagout protocol – the (CO) applies their DANGER - Do Not Operate LOTO(s) being first-on. When notified by the CM that the LOTO evolution and/or work activities are complete the CO will remove their LOTO(s) being last-off.</p> <p>NOTE: All electrical safe-to-work checks must be performed under the provisions of an Energized Electrical Work Permit (EEWP).</p> <p>Authorized Worker (AW) protocol – the AW shall over-lock the (CO) using his/her authorized worker LOTO. Perform safe-to-work checks per EEWP and proceed with the work activities. When complete worker(s) shall notify their supervisor and CM, and remove their LOTO.</p>
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Permits and Plans

Asbestos Work Plan, Blind Penetration Permit - Class II ([link](#)), Energized Electrical Work Permit ([link](#)), Fall Protection Work Plan ([link](#)), Hot Work Permit, Job Safety Analysis, Richland Building Permit, Work Place Exposure Assessment

Other permits:

Job Site Prep

Documented Pre-job Meeting	Yes	
Barriers	Yes	<p>The Contractor shall use caution tape and postings as necessary to prevent unauthorized access to the work area. Danger Do Not Enter tape shall be utilized, when work activities pose an imminent danger to life or health.</p> <p>The Contractors is responsible to maintain the integrity of the barricades throughout the job.</p>
Communication Eqpt	Yes	Cellular phones shall be used.
Postings	Yes	<p>Post activities and specific hazards as necessary (e.g., asbestos work, energized work, overhead work, testing etc.).</p> <p>All work areas shall be posted with a Construction Area sign. CM will provide Construction Area signs.</p>

Personnel Requirements

Special Training Requirements	Yes	Asbestos Awareness Training, Fall Protection (Course 701), GERT (Course 817), Hands On Fire Extinguisher
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		Training (off-site), Hot Work Fire Watch Training (Course 679), Hot Work Permit Training (Course 988), Lock & Tag - Authorized Worker (Course 692), Rad Worker I
Security Clearance Requirements	Yes	1 (no clearance)

Work Activity

Step #	Potential Hazards/Control Methods
	Define Work Activity
1.	<p>None Specified</p> <p>The Construction Manager will perform a pre-job with the Contractor, PNNL Radcon, PNNL Operations and PNNL S&H prior to work commencing.</p> <p>The remainder of the work steps are NOT required to be performed in sequence.</p>
2.	<p>None Specified</p> <p>Temporary Staircase to Access PSL Roof:</p> <p>Install a temporary staircase to access the PSL roof. Provide an approved means of accessing the PSL roof OTHER THAN ladders (fixed or otherwise). The existing fixed ladder to the roof shall not be used for construction access.</p>
3.	<p>Asbestos / Asbestos Work Permit</p> <p>ASBESTOS ABATEMENT</p> <p>The gray coatings on the ductwork and insulation are ACM. Contractor shall identify method of abatement. coordinate with the PNNL CM prior to duct demolition at these locations.</p> <p>A) Only Washington State Labor & Industries licensed asbestos abatement contractors utilizing trained and certified personnel, with an approved (Asbestos Work Plan) shall perform abatement work. Contractor shall be responsible for coordinating all required regulatory notifications beyond submittal of the initial Notice of Intent.</p> <p>(B) When applicable, contractor will make the proper notifications to Benton Country Air Authority (BCAA) at least 10-days before performing asbestos abatement work.</p> <p>(C) Collect asbestos waste, scraps, debris, and contaminated clothing in 6 ml sealed and labeled, impermeable bags or containers. All waste shall be double bagged. Each bag should be twisted and sealed "pigtail" style using duct tape, or equal.</p> <p>All ACM MATERIALS SHALL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH COUNTY, STATE AND FEDERAL REGULATIONS.</p> <p>(D) Label all asbestos waste, scraps, debris, and containers. Labels must comply with the requirements of WAC 296-62-07721 subsection (6)(a). See below.</p>

DANGER
 CONTAINS ASBESTOS FIBERS
 AVOID CREATING DUST
 CANCER AND LUNG DISEASE HAZARD
 AVOID BREATHING AIRBORNE ASBESTOS FIBERS

(E) Contractor shall provide an inventory/record of the abated items. Provide the inventory/record to the PNNL Construction Manager.

Nanomaterial / Per Contractors JSA

NANOPARTICLE MITIGATION

EXHAUST DUCT DEMOLITION/DISPOSAL FROM FUME HOOD TO HEPA FILTERS (filtered system) and EXHAUST DUCT DEMOLITION/DISPOSAL FROM FUME HOOD TO EXHAUST FANS (un-filtered system)

The following graded controls shall be followed:

1. Contractor staff conducting duct demolition will receive a PNNL Nanomaterial Safety prejob.
2. PNNLs Nanomaterial SME will be available to address and resolve contractors inquires.
3. A Risk Assessment/Workplace Exposure Assessment (WEA) will be prepared for this work.
4.
 - FILTERED DUCT WORK: Only ducting prior to the HEPA filters will be considered potentially contaminated with nanomaterials.
 - NON-FILTERED DUCT WORK: All ducting from the fume hood to the exhaust fan will be considered potentially contaminated with nanomaterials.
5. The ventilation system will remain operational until work passes the HEPA housing on the filtered system and to the exhaust fans on the un-filtered systems.
6. Duct demolition will use low vibration tools and methods.
7. Duct parting will be pancaked at earliest convenience.
8. Duct parting will attempt to stay away from low points.
9. Pre-HEPA demolition (filtered system) and all non-filtered system demolition will be fogged, atomize, sprayed with a fixative. Use Fiberlock Technologies Fiberset PM 7475-Clear or equivalent.
10. A poly drape will be placed under the cut area.
11. Materials that fall back into the hood will be wet-wiped or tacky cloths.
12. Wet wipes will be used to clean duct cuttings and dusts.
13. Environmental conditions, especially high winds, may limit outdoor demolition.

14. Waste (wipes/drapes/PPE) will be placed in a plastic bag and pick-up arranged with the facility FSR.

15. Hand and face washing prior to consuming foodstuff and end of shift/breaks.

Beryllium / Per Contractors JSA

BERYLLIUM MITIGATION

EXHAUST DUCT, HEPA HOUSING, FANS DEMOLITION:

~~(NOT required for Auxiliary Supply Duct work Demolition)~~ - ER 5-28-14 MD 5/28/14

5.

Prior to working above fume hoods the work area shall have Housekeeping performed. This shall consist of a 'wet' wipedown of fume hood top and all duct work to be removed. A solution of Simple Green and water shall be used for the 'wet' wipe down.

Prior to breaching normally inaccessible spaces (e.g., interstitial spaces i walls, between floors, above ceilings, behind/under casework, inside switchgear, inside power panels, lighting panels, control panels, etc.) the WS&H review will determine whether any additional beryllium characterization is required prior to conducting the work.

For Beryllium samples to be taken on any power/lighting panel, control panel or control box a scheduled 'Outage' shall be performed on each panel, control box for samples to be taken and panel or control box returned to service. Outages shall be planned for off work hours or weekends to accomodate research activities.

Radiological / Per Contractors JSA

DEMOLITION OF EXHAUST DUCT, HEPA HOUSINGS AND FANS

NOTE: RPT RESTRICTIONS AND REQUIRMENTS

The RPT must be present during any breach in duct work to perform surveys for contamination.

There will be NO RPT support after mid-night.

6.

Contractor shall have a CORE TEAM consisting of at lease four (4) persons with Rad Worker 2 training for each shift worked during demolition activities in the case that contamination is found and the work needs to be performed under a Radiation Work Permit (RWP).

Personnel performing this work shall have a minimum Radiological Worker 1 Training and a PNNL Personnel Dosimeter(TLD) not a Hanford TLD.

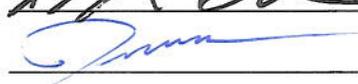
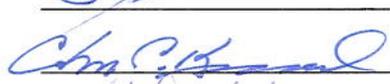
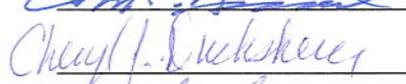
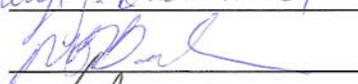
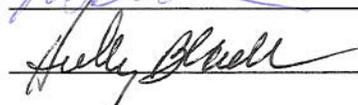
B) The RPT must be present during any breach in duct work. Prior to removing exhaust duct, filter housings and fans, break the mechanical connections and seal the open ends with plastic or metal cover and seal with duct tape or similar means.

Attach a pan below the open exhaust duct to catch any debri that may fall out of duct. If any debri is present in the pan must be surveyed by the RPT prior to removal.

Dispose of removed exhaust duct, housings, fans in the PNNL supplied container located on the West side of PSL.

	Document size of each removed spool/damper and their mechanical fasteners, rings, etc. and provide to the CM and FSR. ONLY Exhaust Duct, filter housing, fans, fasteners/rings shall be disposed of in the provided containers. All other demolished Supply Duct or construction debris shall be disposed of off site.
7.	Crane/Hoisting and Rigging / PNNL Hoisting and Rigging Manual CRITICAL LIFTS Some of the lifts associated with this project may be 'Critical Lifts'. The PNNL Hoisting and Rigging Manual shall be strictly adhered to for all hoisting and lifting work activities. Special requirements are involved with 'Critical Lifts' reference the PNNL Hoisting and Rigging Manual for planning and documentation requirements.
8.	Blind Penetration-Class 2 / Blind Penetration Permit - Class 2 Falls from elevations > 6 ft. / Fall Protection Work Plan Manual Lifting / Per Contractors JSA Crane/Hoisting and Rigging / PNNL Hoisting and Rigging Manual Welding cutting grinding / Welding cutting & grinding permits Exposed electrical energy >50v / Lock and tag DEMOLITION AND NEW WORK Perform the demolition and new work in strict accordance with the Contract Documents, design drawings, technical specifications, JPP/WEA and the Contractor's approved Job Safety Analysis (JSA).
9.	None Specified TESTING, TRAINING, CLEANING AND CLOSEOUT DOCUMENTS: Verify that all testing, training, cleaning and air balancing has been completed per the Contract Documents. Forward all closeout documents as required by the Contract Documents.

Approvals

Building Engineer		Date: 5/28/14
Building Engineer #2		Date: 5/28/14
Building Manager		Date: 5-28-14
Construction Manager		Date: 5-27-14
Bin. Chemical Emissions SME Environmental Compliance Rep		Date: 5-27-14
Radiological Control		Date: 5/27/14
RPE Radiation Protection Support Manager		Date: 5-28-14

Safety: Industrial Hygiene

S.S. [Signature]

Date: 05/27/14

Safety: Occupational

M. [Signature]

Date: 5/27/14

IFB 270362
PSL Exhaust and Roof Construction
Taxable Bid Sheet

Bid Price _____

2- 30" Dia. Core Drilled Holes (Addendum #2) _____

WSST (8.3%) _____

Total Bid Price _____



GENERAL PROVISIONS SUPPLEMENT
Nuclear Hazards Indemnity Agreement and
Price-Anderson Amendments Act
For the Pacific Northwest National Laboratory
Operated by Battelle Memorial Institute

This General Provisions Supplement is in addition to the General Provision provided with this contract. This Supplement is provided because work to be performed or goods to be delivered under this contract have been identified by Battelle as qualifying for certain liability protections under the Atomic Energy Act, as well as certain responsibilities under the Price-Anderson Amendments Act. This Supplement is incorporated into the contract with the same force and effect as all other general provisions applicable to this contract.

Nuclear Hazards Indemnity Agreement (cl. 3110C – Mar. 2009)

This clause applies when the Contract may involve risk of public liability from a nuclear incident.

- A. Authority. This clause is incorporated into this Contract pursuant to the authority contained in subsection 170d of the Atomic Energy Act of 1954, as amended (hereinafter called the Act).
- B. Definitions. The definitions set out in the Act shall apply to this clause.
- C. Financial Protection. Except as hereafter permitted or required in writing by the Department of Energy (DOE), the Contractor will not be required to provide or maintain, and will not provide or maintain at Government expense, any form of financial protection to cover public liability, as described in Paragraph D.2 below. DOE may, however, at any time require in writing that the Contractor provide and maintain financial protection of such a type and in such amount as DOE shall determine to be appropriate to cover such public liability, provided that the costs of such financial protection are reimbursed to the Contractor by DOE.
- D. Indemnification.
1. To the extent that the Contractor and other persons indemnified are not compensated by any financial protection permitted or required by DOE, DOE will indemnify the Contractor and other persons indemnified against (a) claims for public liability as described in Paragraph D.2 of this clause; and (b) such legal costs of the Contractor and other persons indemnified as are approved by DOE, provided that DOE's liability, including such legal costs, shall not exceed the amount set forth in section 170t of the Act in the aggregate for each nuclear incident or precautionary evaluation occurring within the United States or \$500 million in the aggregate for each nuclear incident occurring outside the United States, irrespective of the number of persons indemnified in connection with this contract.
 2. The public liability referred to in Paragraph D.1 of this Clause is public liability as defined in the Act which (a) arises out of or in connection with the activities under this Contract, including transportation; and (b) arises out of or results from a nuclear incident or precautionary evacuation, as those terms are defined in the Act.
- E. Waiver of Defenses.
1. In the event of a nuclear incident, as defined in the Act, arising out of nuclear waste activities, as defined in the Act, the Contractor, on behalf of itself and other persons indemnified, agrees to waive any issue or defense as to charitable or governmental immunity.
 2. In the event of an extraordinary nuclear occurrence which—
 - a. Arises out of, results from, or occurs in the course of the construction, possession, or operation of a production or utilization facility; or
 - b. Arises out of, results from, or occurs in the course of transportation of source material, by-product material, or special nuclear material to or from a production or utilization facility; or
 - c. Arises out of or results from the possession, operation, or use by the Contractor or a subcontractor of a device utilizing special nuclear material or by-product material, during the course of the contract activity; or
 - d. Arises out of, results from, or occurs in the course of nuclear waste activities, the Contractor, on behalf of itself and other persons indemnified, agrees to waive:
 - (i) Any issue or defense as to the conduct of the claimant (including the conduct of persons through whom the claimant derives its cause of action) or fault of persons indemnified, including, but not limited to—
 - (a) Negligence;
 - (b) Contributory negligence;
 - (c) Assumption of risk; or
 - (d) Unforeseeable intervening causes, whether involving the conduct of a third person or an act of God;
 - (ii) Any issue or defense as to charitable or governmental immunity; and
 - (iii) Any issue or defense based on any statute of limitations, if suit is instituted within 3 years from the date on which the claimant first knew, or reasonably could have known, of his injury or change and the cause thereof. The waiver of any such issue or defense shall be effective regardless of whether such issue or defense may otherwise be

deemed jurisdictional or relating to an element in the cause of action. The waiver shall be judicially enforceable in accordance with its terms by the claimant against the person indemnified.

- e. The term extraordinary nuclear occurrence means an event that DOE has determined to be an extraordinary nuclear occurrence as defined in the Act. A determination of whether or not there has been an extraordinary nuclear occurrence will be made in accordance with the procedures in 10 CFR Part 840.
 - f. For the purposes of that determination, "offsite" as that term is used in 10 CFR Part 840 means away from "the contract location" which phrase means any DOE facility, installation, or site at which contractual activity under this contract is being carried on, and any Contractor-owned or controlled facility, installation, or site at which the Contractor is engaged in the performance of contractual activity under this contract.
3. The waivers set forth above:
- a. Shall be effective regardless of whether such issue or defense may otherwise be deemed jurisdictional or relating to an element in the cause of action;
 - b. Shall be judicially enforceable in accordance with its terms by the claimant against the person indemnified;
 - c. Shall not preclude a defense based upon a failure to take reasonable steps to mitigate damages;
 - d. Shall not apply to injury or damage to a claimant or to a claimant's property which is intentionally sustained by the claimant or which results from a nuclear incident intentionally and wrongfully caused by the claimant;
 - e. Shall not apply to injury to a claimant who is employed at the site of and in connection with the activity where the extraordinary nuclear occurrence takes place, if benefits therefore are either payable or required to be provided under any workmen's compensation or occupational disease law;
 - f. Shall not apply to any claim resulting from a nuclear incident occurring outside the United States;
 - g. Shall be effective only with respect to those obligations set forth in this clause and in insurance policies, contracts or other proof of financial protection; and
 - h. Shall not apply to, or prejudice the prosecution or defense of, any claim or portion of claim which is not within the protection afforded under (i) the limit of liability provisions under subsection 170e of the Act, and (ii) the terms of this agreement and the terms of insurance policies, contracts, or other proof of financial protection.
- F. Notification and Litigation of Claims. The Contractor shall give immediate written notice to Battelle of any known action or claim filed or made against the Contractor or other person indemnified for public liability as defined in Paragraph D.2. Except as otherwise directed by the Battelle Contracts Representative, the Contractor shall furnish promptly to Battelle, copies of all pertinent papers received by the Contractor or filed with respect to such actions or claims. Battelle and DOE shall have the right to, and may collaborate with, the Contractor and any other person indemnified in the settlement or defense of any action or claim and shall have the right to—
1. require the prior approval of Battelle for the payment of any claim that DOE be required to indemnify hereunder; and
 2. appear through the Attorney General on behalf of the Contractor or other person indemnified in any action brought upon any claim that DOE may be required to indemnify hereunder; take charge of such action, and settle or defend any such action. If the settlement or defense of any such action or claim is undertaken by Battelle or DOE, the Contractor or other person indemnified shall furnish all reasonable assistance in effecting a settlement or asserting a defense.
- G. Continuity of DOE Obligations. The obligations of DOE under this Clause shall not be affected by any failure on the part of the Contractor to fulfill its obligation under this Contract and shall be unaffected by the death, disability, or termination of existence of the Contractor, or by the completion, termination or expiration of this Contract.
- H. Effect of Other Clauses. The provisions of this clause shall not be limited in any way by, and shall be interpreted without reference to any, other clause of this contract, including the clause entitled "Disputes" provided, however, that this clause shall be subject to the clauses entitled "Covenant Against Contingent Fees," "Officials Not to Benefit," and "Examination of Records by the Comptroller General," and any provisions that are later added to this Contract as required by applicable Federal law, including statutes, executive orders and regulations, to be included in Nuclear Hazards Indemnity Agreements.
- I. Civil Penalties. The Contractor and its subcontractors and supplier who are indemnified under the provisions of this clause are subject to civil penalties, pursuant to section 234A of the Act, for violations of applicable DOE nuclear-safety related rules, regulations, or orders. If the Contractor is a not-for-profit contractor, as defined by section 234Ad.(2), the total amount of civil penalties paid shall not exceed the total amount of fees paid within any 1-year period (as determined by the Secretary) under this contract.
- J. Criminal Penalties. Any individual director, officer, or employee of the Contractor or of its subcontractors and suppliers who are indemnified under the provisions of this Clause are subject to criminal penalties, pursuant to 223(c) of the Act, for knowing and willful violation of the Atomic Energy Act of 1954, as amended, and applicable DOE nuclear safety-related rules, regulations or orders which violation results in, or, if undetected, would have resulted in a nuclear incident.
- K. Inclusion in Subcontract. The Contractor shall insert this clause in any subcontract that may involve the risk of public liability, as that term is defined in the Act and further described in Paragraph D.2 above. However, this clause shall not be included in

subcontracts in which the subcontractor is subject to Nuclear Regulatory Commission (NRC) financial protection requirements under section 170b of the Act or NRC agreements of indemnification under section 170c or k of the Act for the activities under the subcontract.

Price-Anderson Amendments Act (cl. 3111 - Nov 2008)

This clause applies when the Contract may involve risk of public liability from a nuclear incident.

In addition to applicable Quality and ES&H contract clauses and requirements, the following shall apply:

A. Indemnification for Nuclear Safety Violations

1. **Applicability.** The provisions of this clause shall be applicable if the Contractor's products or services are subject to the Nuclear Hazards Indemnity provisions of section 170 of the Atomic Energy Act of 1954, as amended, and the U.S. Department of Energy's Procedural Rules for DOE Nuclear Activities as described in Title 10, Code of Federal Regulations, Part 820 (10 CFR Part 820), or could otherwise have any effect on nuclear or radiological safety.
2. The Contractor assumes full responsibility and shall indemnify, hold harmless, and defend Battelle, its directors, officers, and employees from any civil liability, if any, under §234A of the Atomic Energy Act of 1954, as amended, or the implementing regulations, arising out of the activities of the Contractor, its subcontractors, suppliers, agents, employees, and their officers, or directors. The Contractor's obligation to indemnify and hold harmless shall expressly include attorney fees and other reasonable costs of defending any action or proceeding instituted under §234A or DOE's implementing regulations.

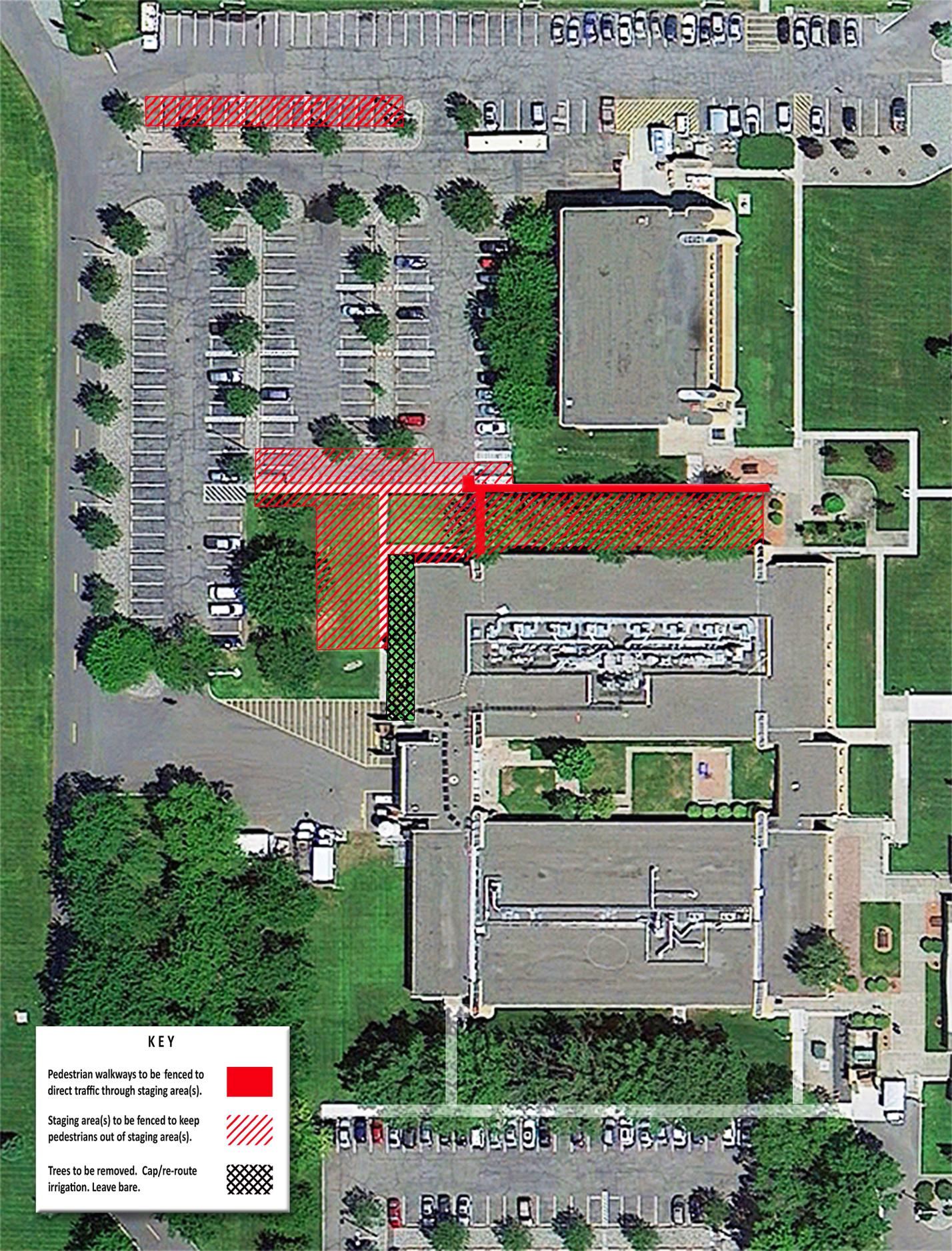
B. Nuclear Safety Regulations

1. **Applicability.** The provisions of this clause apply to any activity carried out pursuant to this contract by the Contractor, its subcontractors, suppliers, and employees that has the potential to result in a risk of harm to an individual from radiation or radioactive material, or the potential to affect a DOE nuclear facility or radiological activity. The term "individual" as used in this clause includes, without limitation, general employees, radiological workers, embryo/fetus of a declared pregnant worker, minors, and members of the public. The requirements of this clause do not apply to activities that are regulated, and either indemnified or subject to financial assurance provisions, through a license by the Nuclear Regulatory Commission or a State under an Agreement with the Nuclear Regulatory Commission (an Agreement State), including activities certified by the Nuclear Regulatory Commission under §1701 (42 USC §2297(f)) of

the Atomic Energy Act of 1954, as amended. Other specific applicability exclusions are identified in 10 CFR §820 and related Department of Energy regulations.

2. The Contractor shall comply, as applicable, with the requirements of Title 10, Code of Federal Regulations, Part 835, "Occupational Radiation Protection" (10 CFR Part 835). The Contractor's programs and associated documents are subject to review at all times by Battelle.
3. The Contractor shall: (1) comply, as applicable with the requirements of Title 10, Code of Federal Regulations, Part 830 "Nuclear Safety Management," including Subpart A, Quality Assurance Requirements or a quality assurance program that meets the stated requirements of 10 CFR 830.120, and (2) implement, document, and maintain such programs (e.g., administrative controls, procedures, and technical work documents) as necessary to ensure compliance with the QA requirements section of this contract. The Contractor's programs and associated documents are subject to review at all times by Battelle.
4. The Contractor shall: (1) comply with all applicable requirements of Title 10, Code of Federal Regulations, Part 708, "Contractor Employee Protection" (10 CFR 708), and (2) implement, document, and maintain such programs as necessary to ensure compliance with this requirement. The Contractor's programs and associated documents are subject to review at all times by Battelle.
5. The Contractor shall (1) comply with all applicable requirements of newly promulgated Department of Energy nuclear safety requirements in Title 10, Code of Federal Regulations, and (2) implement, document, and maintain such programs as necessary to ensure compliance with these requirements. The Contractor's programs and associated documents are subject to review at all times by Battelle.
6. If any noncompliance or deficiency occurs in the programs or activities subject to this clause, or a lack of appropriate or timely corrective action by the Contractor, causes a potential violation of nuclear safety requirements, then the Contractor may be subject to enforcement actions under the Atomic Energy Act, 10 CFR 820 and/or other provisions of this contract.
7. Where reporting of a potential violation of a nuclear safety regulation to the DOE is necessary, the Contractor shall report through Battelle.

The Contractor shall include the provisions of this clause, including this paragraph, in all lower-tier Contracts for any activity subject to the applicability requirements in Paragraphs A.1 and B.1.



KEY

Pedestrian walkways to be fenced to direct traffic through staging area(s).



Staging area(s) to be fenced to keep pedestrians out of staging area(s).



Trees to be removed. Cap/re-route irrigation. Leave bare.

