

PSNH

Merrimack Station Clean Air Project

Balance of Plant Electrical Installation Agreement for  
the Merrimack Station Clean Air Project

by and between

PSNH as Owner

and

E.S. Boulos Company as Contractor

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**BALANCE OF PLANT ELECTRICAL INSTALLATION AGREEMENT  
FOR THE MERRIMACK STATION CLEAN AIR PROJECT**

**BY AND BETWEEN**

**NORTHEAST UTILITIES SERVICE COMPANY  
AS AGENT FOR PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE  
("Owner")**

**AND**

**E.S. BOULOS COMPANY ("Contractor")**

THIS FIXED PRICE BALANCE OF PLANT ELECTRICAL INSTALLATION FOR THE MERRIMACK STATION CLEAN AIR PROJECT is entered into as of the 23rd day of April, 2010 (the "Effective Date"), between NORTHEAST UTILITIES SERVICE COMPANY, as agent for PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE ("Owner"), a New Hampshire corporation, with offices at 780 North Commercial Street, Manchester, New Hampshire 03101, and E.S. BOULOS COMPANY ("Contractor"), a Connecticut corporation, with offices at 45 Bradley Drive, Westbrook, Maine 04092.

**WITNESSETH:**

**WHEREAS**, in July 2006, the New Hampshire State Legislature passed a law amending the New Hampshire Clean Power Act ("2006 NHCPA Amendment") that requires reductions in mercury emissions of Owner's generation facilities to a level representing 80% less than the mercury input, on an annual basis, starting no later than July 1, 2013; and

**WHEREAS**, the 2006 NHCPA Amendment requires the installation of a wet flue gas desulfurization system at the Generating Station (as hereinafter defined) as the means to achieve the mandated mercury emissions reductions; and

**WHEREAS**, Owner also seeks reductions in sulfur dioxide emissions from the Generating Station to comply with requirements of Federal Acid Rain legislation and the New Hampshire Clean Power Act ("NHCPA"), which was enacted in 2002; and

**WHEREAS**, Owner plans to undertake the Clean Air Project (as hereinafter defined) at the Generating Station to comply with the requirements of the NHCPA and the 2006 NHCPA Amendment; and

**WHEREAS**, Owner issued the RFP (as hereinafter defined) seeking proposals from qualified bidders to perform the Work (as hereinafter defined); and

**WHEREAS**, Contractor submitted a proposal in response to the RFP, and after negotiations, Owner has selected Contractor to perform the Work in reliance on Contractor's qualifications, skill and expertise in performing services similar to the Work; and

**WHEREAS**, Owner and Contractor desire to enter into an agreement for the provision of the Work (as hereinafter defined) by Contractor to Owner pursuant to the terms and conditions of this Agreement.

**NOW, THEREFORE**, in consideration of the mutual promises and covenants contained herein, and intending to be legally bound, the Parties agree as follows:

## **ARTICLE 1 DEFINITIONS**

Except as otherwise expressly provided, the following terms shall have the meanings specified in this Article 1 when capitalized and used in this Agreement. The meanings specified are applicable to both the singular and plural.

"Affiliate" shall mean, when used with reference to a specified Person, any Person that directly or indirectly controls or is controlled by or is under common control or ownership with the specified Person, including, in case of each Party, the ultimate parent company of such Party. For purposes of this definition, "control" means the power to direct the management and policies of the specified Person.

"Agreement" shall mean this Fixed Price Balance of Plant Electrical Installation Agreement for the Merrimack Station Clean Air Project, including all appendices and attachments hereto, and any and all amendments hereto agreed to in writing by the Parties.

"Approval" shall mean whenever Owner provides its approval or authorization for Contractor's proposed action, such approval or authorization represents only the consent of Owner, and shall neither relieve Contractor of its obligation to fully comply with the terms of this Agreement nor substitute Owner's judgment for that of Contractor concerning the propriety, usefulness, or suitability of such action in fulfilling Contractor's obligations concerning the Work.

"Business Day" shall mean any day other than Saturday, Sunday and the following holidays: New Year's Day; President's Day; Memorial Day; Independence Day; Labor Day; Columbus Day; Veterans Day; Thanksgiving Day; Day after Thanksgiving; and Christmas.

"Certificate of Final Completion" shall mean the certificate duly completed and executed by Contractor pursuant to Section 10.6, substantially in the form of Appendix XVI.

"Change in Law" shall mean any change in, or binding change in the judicial or administrative interpretation of, or adoption of, any Law, that (i) is enacted after the Effective Date and (ii) has a material adverse effect on Contractor's ability to perform its obligations under this Agreement; provided that a change to any federal, state or local income or franchise tax law, worker's compensation, or payroll or withholding tax law shall not constitute a change in Law hereunder.

"Change Order" shall mean a written order to Contractor pursuant to Article 6 hereof, signed by Owner and countersigned by Contractor, authorizing an addition, deletion, or revision in the Work, the Scope of Work, the Project Schedule, Progress Milestone Payment Schedule, the Guaranteed Final Completion Date for the Project, the Contract Price or any other obligation of Contractor or Owner hereunder.

"Chronic Failure" is the repeated failure (two times or more) before the end of the initial Warranty Period of any component to perform in accordance with its manufacturer's specifications.

"Claim" shall mean the assertion by Contractor or Owner of a position, right, and/or remedy and/or a demand for monetary or other relief, including the documentary submittal made by Contractor or Owner to evidence the making of a Claim.

"Clean Air Project" shall mean the project to design, procure, construct, install, commission, test and complete a fully integrated and functioning wet flue gas desulphurization system comprised of various Islands of work, at Merrimack Station.

"Consumables" shall mean fuel, electrical power, water, and such items as lubricants and air filters which, by normal industry practices, are considered consumables and are replaced on a regular basis.

"Contract Price" shall mean the sum of **REDACTED** which is the guaranteed fixed price for performing the Work and is not subject to change except as provided for in this Agreement.

"Contract Documents" shall mean this Agreement, the Specifications and any Drawings of the Work, all other exhibits, the schedules and appendices hereto, any items specifically incorporated by reference or referred to herein as a Contract Document or as otherwise agreed (including any duly executed Change Order Request and Authorization Form), and any amendments to the foregoing agreed to in writing by the Parties. The Purchase Order associated with this Agreement shall not be a Contract Document.

"Contractor" shall mean E.S. Boulos Company and its successors and permitted assigns. Contractor shall be responsible for the pre-construction site preparation and associated services in accordance with the Contract Documents.

"Contractor Representative" shall mean the representative of Contractor designated pursuant to this Agreement.

"CPR" shall mean the CPR Institute for Dispute Resolution (formerly known as the Center for Public Resources).

"Day" shall mean a calendar day and shall include Saturdays, Sundays and holidays except that, in the event that an obligation to be performed under this Agreement falls due on a day other than a Business Day the obligation shall be deemed due on the next Business Day thereafter.

"Delay Liquidated Damages" shall mean Liquidated Damages payable by Contractor to Owner, as set forth in Section 12.2, for failure to reach Final Completion as defined herein, or for failure to meet any other Critical Construction Milestone dates that are identified in Appendix IV.

"Delay Liquidated Damages" shall mean Liquidated Damages payable by Contractor to Owner, as set forth in Section 12.2, for failure to reach Critical Milestones or Substantial Completion as defined herein, or for failure to provide contract deliverables on the required schedule dates.

"Dispute" shall mean a disagreement in whole or in part between Contractor and Owner with respect to a Claim including (a) any disagreement as to whether a Claim exists or is well-founded and/or (b) any disagreement as to the nature and/or extent of scope, schedule, cost, and/or other impacts of a Claim.

"Dollars" or "\$" shall mean United States Dollars.

"Drawings" shall mean the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.



"Effective Date" shall mean the effective date of this Agreement as set forth in the first paragraph of this Agreement.

"Equipment" shall mean all of the equipment, controls, materials, apparatus, structures, supplies, special tools and other goods provided or required by the terms of this Agreement to be provided by Contractor and/or each Subcontractor in connection with the performance of the Work (except that the term "Equipment" shall not include any materials, apparatus, controls, or tools owned by Contractor or any Subcontractor that are used to complete the Work but are not contemplated under this Agreement to become part of the Clean Air Project).

"Excess Material" shall mean any soil, rock, asphalt, water (including standing, run-off and groundwater and snow), and other materials in whatever form (including waste and debris) excavated and/or removed from the Site that is not used as backfill at the Site in connection with the Work, in all cases in accordance with the terms and conditions hereof and with Law.

"Executive Sponsor" shall mean an executive officer of Contractor having overall responsibility for Contractor's performance hereunder and holding the position of Vice President or above within the corporate organization of Contractor's ultimate parent.

"FGD" shall mean the wet flue gas desulfurization System.

"Final Completion" shall have the meaning set forth in Section 10.5 hereof.

"Final Completion Date" shall mean the date on which Final Completion occurs in accordance with the provisions of Section 10.5 hereof.

"Final Test Report" shall mean Contractor's written report describing the results and procedures and documentation to substantiate that final completion has occurred in accordance with the provisions of section 10.5 hereof.

"Fixed Price" shall mean the basis for Contractor's performance of the Work whereby Contractor accepts the obligation of full performance, and the burden of all risks related thereto, including the detailed design, procurement, construction, installation, testing, and associated services, delivering an end state as defined and as set forth herein (including in the Specification) including: (a) fulfillment of all requirements and duties associated with Final Completion and (b) compliance with all requirements of Law and this Agreement, to the satisfaction of Owner.

"Force Majeure" shall mean any acts or events, but only to the extent such act or event (i) is the cause of a delay in or prevents performance or the meeting of an obligation of Contractor, a Subcontractor or Owner hereunder, (ii) is beyond the reasonable control of the Party relying upon the act or event and (iii) is reasonably unforeseeable, such as:

(a) any destruction of or damage to material items of equipment, or any interruption, suspension or interference with Contractor's, a Subcontractor's or Owner's performance hereunder, which destruction, damage, interruption, suspension or interference is caused by landslides, lightning, earthquakes, fires or explosions, floods, epidemic, abnormally severe storms such as hurricane, typhoon or cyclone, or other natural or physical disaster, acts of a public enemy, war, blockades, riots, rebellions, sabotage, insurrections, governmental actions or civil disturbances or similar events; or

(b) national, regional or local labor strikes, work stoppages, boycotts, and walkouts provided, however, that labor disputes on the Site or involving Contractor (or its Affiliates) or Subcontractor's on-Site employees shall not constitute an event of Force Majeure.

Force Majeure shall not mean any act or event to the extent resulting from the fault or negligence of any person claiming Force Majeure, or the financial inability of any Person to perform its obligations under this Agreement. Force Majeure shall not include (i) the inability to obtain labor, equipment or other materials or supplies for the Work (unless the result of a Force Majeure event), or (ii) equipment failures due to wear and tear or defects in manufacture, design, and construction.

"Generating Station" shall mean Owner's Merrimack Station, located in Bow, New Hampshire, which comprises two coal-fired electric generating units (referred to as MK1 and MK2 or Unit 1 and Unit 2), including rail lines, coal storage, steam turbines, generators, electrical transmission and other associated facilities.

"Governmental Authority" shall mean any federal, state, local or other governmental, regulatory or administrative agency, commission, department, board, or other governmental subdivision, court, tribunal, arbitral body, the New Hampshire Public Utilities Commission (and any successor agency thereto), the Environmental Protection Agency, the New Hampshire Department of Environmental Services (and any successor agency thereto), or any other governmental or quasi-government authority or any Person exercising or purporting to exercise any governmental authority or prerogative.

"Guaranteed Final Completion Date" for the Work shall mean two (2) months after Substantial Completion as such date is set in the Project Schedule.

"Hazardous Materials" shall mean any "hazardous substance" as defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (42 U.S.C. § 9601, et seq.), the Hazardous Materials Transportation Act, as amended (49 U.S.C. § 1801, et seq.), "hazardous wastes" as defined in the Resource Conservation and Recovery Act, as amended (42 U.S.C. § 9601, et seq.), or "toxic substances" as defined in the Toxic Substance Control Act, as amended (15 U.S.C. § 2601 et seq.).

"HB1673" shall mean the legislation passed by the New Hampshire Legislature in 2006, and signed into law by the New Hampshire Governor in 2006, which requires the reduction of mercury emissions at Merrimack Station via the installation of a wet flue gas desulfurization system. Passage of this law amended the New Hampshire Clean Power Act.

"Information" shall mean all documents and tangible information prepared by Contractor and delivered to Owner as part of the Work, all in whatever form or media.

"Island" shall mean the defined, logical component groups of work activities that comprise the Project.

"Key Personnel" shall mean the individuals appointed by Contractor and approved by Owner to serve as Project Executive Manager, Site Project Manager, and Executive Sponsor.

"Law" shall mean any federal, state, local or other constitution, charter, act, statute, law, ordinance, code, rule, regulation, order, consent decree, specified standard or objective criteria of any Governmental Authority, whether or not contained in any applicable Permit, which must be obtained in order for the Project to be constructed and operated lawfully; any other legislative or administrative action of the

United States of America, the State of New Hampshire, any City or Town in which the Site is located, or any other Governmental Authority; any final decree, judgment or order of a court; or any applicable engineering, construction, safety or electrical code.

"Lien" shall mean any lien, security interest, lien claim (including any statutory, contractual or other lien rights of Subcontractors), or other similar encumbrance.

"Liquidated Damages" shall mean Delay Liquidated Damages.

"Milestone Dates" shall mean those dates indicated in Appendix IV.

"NHCPA" shall mean the New Hampshire Clean Power Act, which became effective in July of 2002. This law was amended with the passage of HB1673, requiring reductions in mercury emissions.

"Notice to Proceed" shall mean a notice allowing for commencement of the Work, substantially in the form set forth in Appendix X, to be delivered by Owner to Contractor on or after the necessary insurance coverage has been secured, and the associated instruments and certificates have been delivered to Owner.

"OSHA" shall mean the United States Occupational Safety and Health Administration or any successor agency thereto.

"Other Contractors" or "Owner's Other Contractors" shall mean those contractors, other than Contractor, retained by Owner to provide services, labor, materials, equipment, and/or supplies for the Clean Air Project.

"Owner" shall mean Public Service Company of New Hampshire (acting herein through its duly authorized agent Northeast Utilities Service Company) and its successors and permitted assigns.

"Owner Delay" shall mean a delay caused by Owner's failure to meet its responsibilities under this Agreement.

"Owner's Controlled Insurance Program" or "OCIP" shall mean the commercial general liability and workers' compensation insurance program established by Owner for the Clean Air Project, as more particularly set out in Article 9 and Appendix XIV.

"Owner's Representative" shall mean the representative of Owner designated pursuant to this Agreement.

"Party" shall mean Contractor or Owner; "Parties" shall mean both Owner and Contractor.

"Permits" shall mean collectively all approvals, certificates, permits and licenses as may be required for the proper execution and completion of the Work, as required by Governmental Authorities or by Law.

"Person" shall mean a natural person, a corporation, a partnership, a limited liability company, a limited liability partnership, or any other entity.

"Pre-existing Hazardous Materials" shall mean Hazardous Materials existing at the Site, excluding any and all Hazardous Materials managed, used, stored, generated and/or otherwise brought onto the Site by Contractor, any Subcontractor and/or any of their respective agents or employees; and excluding

Hazardous Materials brought onto or released from the Site, to the extent reasonably preventable by Contractor or any Subcontractor in accordance with Prudent Industry Practice.

"Prime Rate" shall mean the rate of interest established by The Chase Manhattan Bank, as its "prime rate" with each change in such rate to be effective for purposes of this Agreement on the day that such change becomes effective.

"Program Manager" shall mean Washington Group International, Inc. and its successors and permitted assigns. The Program Manager shall be responsible for various engineering, design, procurement and construction management services as delineated in the Agreement between Program Manager and Owner. The Program Manager is authorized as Owner's agent to administer this Agreement and to provide the oversight of any and all Contractors whose work comprise the Clean Air Project to ensure the Clean Air Project functions as an integrated whole, in accordance with the Contract Documents.

"Progress Invoice" shall mean Contractor's monthly invoices for payments associated with the milestone(s) completed in accordance with Section 7.4(a).

"Project" shall be used interchangeably with "Work" and shall have the same meaning as set forth below for the definition of Work.

"Project Information" shall mean all documentation, studies, data, reports, documents, schedules, designs, plans, drawings, calculations, specifications and other confidential business or technical information (in whatever form or media) that concern or arise out of the Project, excluding Contractor's or Subcontractor's Proprietary Information.

"Project Payment Schedule" shall mean the payment schedule set forth in Appendix VIII.

"Project Safety Manual" shall mean the safety plan referenced in Appendix XXIV of this Agreement.

"Project Schedule" shall mean the definitive schedule of key dates and milestones for the Clean Air Project as they relate to execution of the Work.

"Proprietary Information" shall mean, without limitation, financial information, business plans, budgets, intellectual property, customer contracts and lists, drawings, information, know-how, specifications, drawings, sketches, models, samples, tools, computer programming including but not limited to object code and source code, models, algorithms, customized terminal applications, technical or business information, materials and documents, in any media, written or oral, in whole or in part, either non-public or proprietary in nature, concerning either Party or their respective businesses marked or identified as proprietary.

"Prudent Industry Practices" shall mean good utility practices and those practices, methods, procedures and standards generally prevailing, and as may change from time to time, that are commonly used or applied in the United States in the economical and prudent engineering, design, procurement, and construction of electric utility generation station facilities similar to the facilities comprising the Clean Air Project; provided, that Prudent Industry Practices shall also include any of the practices, methods, and acts that, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost. Prudent Industry Practices are not intended to be the optimum practice, method, or act to the exclusion of all others, but rather to be a spectrum of acceptable practices, methods, or acts generally accepted in the utility industry related to the construction of facilities associated with electric generation stations in the United States.

"Punch List Items" shall mean those finishing items with respect to the Work that must be completed by Contractor prior to the Final Completion Date, without which the Project is nonetheless commercially and reliably operable at its full tested performance level in a safe manner and in accordance with all Laws without risk of Project outage or the curtailment of power generation by the Generating Station.

"Scope of Services" shall mean the description of the services to be furnished by Contractor on a fixed price basis under this Agreement, as set forth in Appendix I.

"Scope of Supply" shall mean the description of the Equipment to be furnished by Contractor on a fixed price basis under this Agreement, as set forth in Appendix I.

"Scope of Work" shall mean, collectively, the Scope of Supply and Scope of Services.

"Site" shall mean the property on which the Generating Station is located and all other property that is adjacent or in proximity to the Generating Station on which Work shall be performed.

"Site Project Manager" shall have the meaning set forth in Section 3.19.

"Specifications" shall mean that portion of the Contract Documents consisting of the written requirements for detailed design, materials, equipment, civil, mechanical and electrical standards and workmanship for the Work, and performance of services required as part of the Work as set forth in Appendix I.

"Subcontractor" shall mean any Affiliate of Contractor and/or Third Party supplying services, materials, supplies, equipment and/or facilities, of whatever nature or tier to Contractor to meet the requirements of the Contract Documents.

"Warranty Period" shall have the meaning set forth in Article 11.

"Work" shall be used interchangeably with "Project" and shall mean collectively all of the services and duties, obligations and responsibilities required to be undertaken by Contractor and any Subcontractors pursuant to this Agreement, including, without limitation, those relating to Contractor's work to provide detailed design, procure, construct, install, commission, test, successfully coordinate and interface Work with other components of work comprising the Clean Air Project, as more particularly described in the Specifications and this Agreement. "Work" and "Project" as used in this Agreement shall only include the services of Contractor and its Subcontractors, and shall not include the activities of Owner or any other entity.

"Work Change Request and Authorization Form" shall mean the form set forth in Appendix XII to this Agreement for Contractor or Owner to request to add, delete, or otherwise alter the range of services to be performed by Contractor pursuant to this Agreement.

"Work Rules" shall mean Owner's work rules applicable to the Project and the Site.

"Work Schedule" shall mean the schedule of critical milestones specific to the Work which must be coordinated with Project Schedule.

**ARTICLE 2      RELATIONSHIP OF OWNER, PROGRAM MANAGER,  
CONTRACTOR AND SUBCONTRACTORS**

2.1 Status of Contractor. Contractor, its employees, Subcontractors and those under its control shall perform all Work as independent contractors, and shall not be deemed to be the employees or agents of Owner for any purpose whatsoever.

2.2 Status of Program Manager. (a) Program Manager, as Owner's agent, shall have the authority to act on behalf of the Owner with respect to the administration and management of this Agreement, including all matters pertaining to the Work and Contractor's performance. Any communications, instructions, reviews, approvals, orders, or directions received by Contractor from Program Manager will be given on behalf of and as agent for Owner. Contractor is obligated to respond or perform as if the same were given directly by Owner. All communications, notices, submittals (including but not limited to drawings, data, samples, schedules, invoices, progress reports, required under the Agreement to be given by Contractor to Owner shall also be given to Program Manager.

(b) Contractor acknowledges that Program Manager has not assumed any contractual duties to Contractor under this Contract, and that Program Manager's administration and management of any activities in connection with this Contract or the Project are solely for the benefit of Owner. Contractor agrees that any claims it may have for additional compensation or economic loss arising out of this Contract or its performance of the Work shall be made solely against Owner, and Contractor waives and releases for itself and on behalf of its subcontractors, any right Contractor may have to assert any claim against Program Manager.

2.3 Subcontracting. Contractor shall have the right to engage Subcontractors to perform portions of the Work, pursuant to written subcontracts between Contractor and such Subcontractors. Before the retention of any Subcontractor, Contractor shall provide Owner with 10 Business Days notice of any Work that it intends to subcontract along with a list of proposed Subcontractors. Owner shall have the right in its reasonable discretion to refuse any proposed Subcontractor. Contractor shall not make any substitution of proposed Subcontractors prior to or during the term of this Agreement without written consent from Owner, which may be granted or withheld in Owner's reasonable discretion. Neither Contractor nor any Subcontractor shall assign their respective rights or delegate their respective obligations concerning any Work under this Agreement without the written consent of Owner, which may be granted or withheld in Owner's reasonable discretion. Contractor shall be fully responsible to Owner for acts and omissions of its Subcontractors and of persons either directly or indirectly employed by them. Contractor shall direct and control the activities of all such Subcontractors, and shall remain fully bound to all terms and conditions of this Agreement, including, but not limited to, all requirements for indemnity and warranty. This Agreement shall not create any contractual relationship between Owner and any Subcontractor, unless Owner, in its sole discretion, chooses to enter into a direct contractual relationship with a Subcontractor.

2.4 Relationship With Other Forces. Owner shall have the right to place its forces or those of its contractors at the Site in areas of Work where Contractor's and/or Subcontractor's forces are working in order for Owner or its contractors to perform services and/or work not included in this Agreement. Contractor's forces shall work in harmony with all such other forces, and in accordance with Owner's schedules.

2.5 Data from Subcontractors. If requested in writing by the Owner, Contractor shall provide to Owner copies of non-proprietary portions of purchase orders for permanent, engineered material or subcontracts from all Subcontractors.

### **ARTICLE 3 CONTRACTOR'S RESPONSIBILITIES**

3.1 Contractor's Scope. Contractor shall perform and complete the Work, including supplying all Equipment and materials and furnishing all detailed design, procurement, installation and construction services, as more particularly described in the Specifications and as may be required by the Contract Documents or as reasonably necessary to achieve Final Completion of the Project in accordance with the Project Schedule and the applicable Work described in Appendix I. In addition, the Work also includes the coordination and cooperation with the integration efforts of the Project and the other work comprising the Clean Air Project.

3.2 Contractor's Fixed Price Responsibility.

Contractor shall perform the Work on a Fixed Price basis. In regard thereto, notwithstanding any statements made or information furnished by or on behalf of Owner, Contractor represents and acknowledges that:

(a) Contractor has had the opportunity to examine and review (i) the Site and its associated features, including climatic conditions, traffic conditions and topography, (ii) the Generating Station including all existing facilities and structures, (iii) existing and prospective Site obstructions, roads, rights-of-way, and (iv) potential lay-down, parking and/or storage areas in the vicinity of the Site, and notwithstanding such examination and review or any impacts of or changes in any Site condition or features, Contractor accepts the obligation to complete the Work in accordance with all requirements of the Contract Documents within the time specified in the Project Schedule and for the Contract Price.

(b) Contractor has had the opportunity to examine and review, and it has fully analyzed and assessed the (i) Specifications including plan drawings, (ii) such documentation relating to the Site as may be known and reasonably available to Contractor pertaining to technical, engineering, design, operations, maintenance, and quality assurance; environmental management, waste quantity, and Site characterization; safety programs and requirements applicable to the Work; and other information and data associated with the present status and condition of the Site and Contractor: (a) assumes and accepts all obligations and liabilities associated with, and/or arising out of the Work and Contractor is not aware of any defects, errors or omissions and/or other flaws in any such information that could result in the issuance of a Change Order; (b) Contractor accepts the obligation to complete the Work in accordance with all Agreement requirements.

(c) Contractor has made all investigations essential to a full understanding of the Work and the difficulties that will or may be encountered in the performance thereof, including requirements of Law, including requirements for Permits (whether already issued or required hereunder), and Contractor accepts the obligation to complete the Work in accordance with all requirements of the Contract Documents within the time specified in the Project Schedule for the Contract Price.

3.3 Subcontractors. Subject to Section 2.2, Contractor shall be solely responsible for the engagement and management of Subcontractors in the performance of the Work, for all Work performed by Subcontractors and for all acts and omissions of Subcontractors. Contractor will incorporate and/or require the incorporation of such Subcontractor's obligations to comply with the applicable provisions of the Contract Documents, Permits, and related agreements into all Subcontractor agreements at any tier and/or any other agreements applicable to the Work (including, but not limited to, provisions relating to Contractor's right to make unrestricted assignments to Owner, Owner's audit rights, the subcontracting plan requirements and maintenance of required insurance coverages).

Contractor also shall ensure that all Subcontractors at any tier shall be bound by the requirements, terms, conditions, and provisions of this Agreement (including, but not limited to, the provision of indemnities in favor of the Indemnified Persons and the participation in dispute resolution) insofar as the

same are applicable to the Work to be performed by such Subcontractor. Contractor shall provide a complete copy of each subcontract to Owner promptly after execution and each change order issued under such subcontract promptly after issuance.

3.4 Control of the Work. Contractor shall be solely responsible for all construction means, methods, techniques, sequences, procedures, safety and security programs, training and startup, in connection with the performance of the Work. Contractor shall perform and/or cause to be performed all services that are Contractor's responsibility under the Contract Documents, including preparing all Contractor detailed designs and drawings and corrections and notations thereto, as part of the Work, in all cases in accordance with the terms of the Contract Documents, Prudent Industry Practices and Law. Contractor shall immediately notify Owner whenever design documents, any other Construction Documents and/or the Technical Specifications are found in Contractor's view to be unclear, incorrect or conflicting. Contractor shall not undertake any Work based upon such documents until such discrepancy has been resolved by Owner. Notwithstanding any provision in this Agreement to the contrary, Contractor shall be solely responsible for the performance of the Work and neither Owner nor Program Manager shall be responsible for Contractor's safety precautions and programs incident thereto, failure to comply with applicable Law, or failure to furnish or perform the Work as required under this Agreement. Neither Owner nor Program Manager shall be responsible for the acts or omissions of Contractor or any Subcontractor.

3.5 Scheduling. Contractor shall be responsible for performing Work in accordance with Project Schedule as defined in the Specifications and this Agreement.

3.6 Clean-up. Contractor shall at all times keep Contractor's Work area free from waste materials or rubbish. As soon as practicable after the completion of the Punch List Items, Contractor shall remove all of its equipment and materials and complete removal of all waste material and rubbish from and around the Work area.

3.7 Safety. For all Work to be performed at the Site, Contractor's forces shall comply with Owner's requirements, procedures, and policies and training requirements, including among others those relating to safety, security, environmental practices and access authorization, currently in effect. Contractor shall initiate, maintain and administer safety precautions and programs to conform with applicable provisions of federal, state, and local safety and health Laws, or other requirements designed to prevent injury to persons or damage to property on, about or adjacent to the Site in accordance with Project Safety Manual. Contractor shall submit its plan to Owner for review to ensure that Contractor's safety plan is consistent with, and meets all requirements, of the Project Safety Manual as well as the Owner's Controlled Insurance Program. Contractor shall also comply with PSNH/Northeast Utilities safety requirements as set forth in Appendix XXIV, and as such requirements may be revised and/or supplemented by Owner and Program Manager specifically for the Clean Air Project and/or Project insurance.

3.8 Reasonable Access. Subject to the provisions of Section 3.15, Contractor shall permit employees and representatives of Owner, to enter onto Work area with reasonable, unescorted access to the Work; provided, however, that such employees and representatives shall comply with any safety measures that Contractor reasonably deems necessary or advisable.

3.9 Emergencies. In the event of any emergency endangering life or property, Contractor shall take such action as may be necessary to prevent, avoid or mitigate injury, damage or loss and shall immediately report any such incidents, including Contractor's response thereto, to Owner. Whenever Contractor has not taken prompt or reasonable precautions for the safety of the public or the protection of



the Work or of structures or property on or adjacent to the Site, creating an emergency requiring immediate action, then Owner, with or without notice to Contractor, if the delay required to give Contractor such notice could further endanger personnel or property, may, but shall be under no obligation to, provide reasonable protection by causing the requisite work to be performed and Equipment to be furnished or by undertaking the necessary safety, or precautionary measures; provided, however, that the taking of such action by Owner or Owner's failure to do so shall not limit the Contractor's liability. Performance of such Work or furnishing of such Equipment by Owner or its agents or employees shall be at Contractor's cost and expense.

### 3.10 Omitted Intentionally.

3.11 Permits. Contractor shall secure in a timely fashion and maintain, at Contractor's expense all Permits that are required for Contractor to perform all activities that are contemplated by this Agreement regardless of whether such Permits are specifically identified in the Scope of Work, except for Permits that Owner is required to obtain pursuant to Section 4.5. Contractor shall advise Owner of any information required in the permitting process that relates to, and/or must be supplied by, Owner as soon as possible, but in no event less than thirty (30) Days before the anticipated submittal date of an application. Contractor shall prepare all applications for Permits sufficiently in advance of the requirement thereof to perform its obligations hereunder, and Contractor shall submit the appropriate application or request, with any required supporting documentation, to the Owner no less than thirty (30) days before the anticipated submittal date, in which case Owner shall review and provide any comments on such application or request within fifteen (15) days after receipt. Contractor shall deliver to Owner copies of applications for all such Permits promptly upon submittal thereof. Contractor shall deliver to Owner certified copies of all Permits promptly upon receipt thereof. Where appropriate, such Permits shall be obtained in the name of Owner.

3.12 Compliance with Laws. Contractor shall comply with all Laws. Contractor agrees to indemnify, defend and hold the Indemnified Persons harmless from and against all fines, penalties, costs and expenses (including attorneys' fees) attributable to any failure of Contractor or a Subcontractor to comply with such Laws.

3.13 Status Reports. Contractor shall prepare and submit to Owner written monthly progress reports in the form satisfactory to Owner, as further described in the Specifications and this Agreement. Contractor shall keep such full and detailed accounts for proper financial management under this Agreement as Owner may reasonably request. Contractor shall also promptly provide to Owner other information reasonably requested by Owner or any of its authorized representatives.

3.14 Taxes. Contractor shall pay all taxes levied in connection with the performance of the Work (other than those for which Owner is responsible under Section 4.6) including, without limitation, occupational, excise, unemployment, FICA and income taxes, customs duties on imported Equipment or materials and any and all other taxes on any item or service that is part of the Work, whether such tax is normally included in the price of such item or service or is normally stated separately. Contractor shall provide Owner assistance, as reasonably requested by Owner or Owner's tax consultant, in demonstrating eligibility for any exemptions to the relevant governmental agencies. After Final Completion of the Work, and within thirty (30) Days of a request therefor, Contractor shall provide Owner or Owner's tax consultant with any information regarding quantities, descriptions, and costs of property installed at the Project that Owner or Owner's tax consultant shall deem necessary in connection with the preparation of its tax returns and tax exemption applications.

### 3.15 Owner's Right to Inspect: Correction of Defects.

(a) Owner and any of its authorized representatives shall have the right to inspect the Work at all reasonable times. Owner's inspection of (or waiver or failure to inspect) any part of the Work shall in no way affect Contractor's obligations to perform the Work in accordance with the Scope of Work and all other terms of this Agreement.

(b) In connection with the foregoing inspections, Owner may advise Contractor of any defects, deficiencies and/or discrepancies it determines in the Work; provided that Owner's failure to so advise Contractor shall not be deemed to relieve Contractor of any duty or obligation under this Agreement. Contractor shall thereafter promptly correct any such defect, deficiency or discrepancy, regardless of the stage of completion or the time or place of discovery, and regardless of whether Owner has previously accepted such Work through oversight or otherwise.

(c) Owner shall have the authority to disapprove or reject Work where in the reasonable, substantiated opinion of Owner, the Work does not conform to the requirements of this Agreement.

3.16 Assistance. Beginning with the issuance of a Notice to Proceed and continuing through to the Final Completion Date, Contractor shall provide such assistance as is reasonably requested by Owner in connection with the administration of the Clean Air Project in dealing with any governmental body in any and all matters relating to the Work.

3.17 Publicity. Contractor shall obtain Owner's prior written approval of the text of any announcement, publication, photograph, or other type of communication concerning the Work or the Clean Air Project prior to the dissemination or release of same by Contractor or its Subcontractors.

3.18 Personnel – General. Contractor shall provide and employ in connection with the Work:

(a) professional and technically competent personnel;

(b) qualified, skilled, and experienced supervising engineers and technical assistants to give direct supervision;

(c) such other professional, administrative, technical and clerical personnel as may be necessary for the proper and timely execution of the Work; and

(d) personnel reasonably determined not to be a security risk;

(e) Whenever required by Law or Power Industry Practice, Contractor agrees to employ only licensed personnel as appropriate to perform design, architectural or other professional services in the performance of the Work.

(f) If requested to do so by Owner in the exercise of Owner's sole discretion and at Contractor's own expense, Contractor shall remove from the Site any incompetent, negligent, dishonest, or disruptive personnel. Such personnel shall not be again employed at the Site or on the Work unless by the prior written permission of the Owner;

(g) Contractor shall maintain harmonious labor relations that permit Work to be performed efficiently and without disruption at the Site; and

(h) Contractor shall notify Owner as soon as Contractor becomes aware of any situation or event that could affect work efficiency or cause a Site work disruption.

3.19 Site Project Manager. Contractor has designated, pursuant to Owner's reasonable approval an individual to serve as Contractor's representative ("Site Project Manager") who shall have full responsibility for administering the Work and shall act as the single point of contact with respect to all on-Site matters on behalf of Contractor. The Site Project Manager shall be authorized to bind Contractor for all purposes under this Agreement and notices, approvals and consents given to or received from the Site Project Manager shall have the same effect as if given to or received from Contractor.

3.20 Key Personnel.

(a) The Staffing Plan includes the Key Personnel listed below, who have been assigned to the Work and shall not be removed or reassigned and/or replaced without prior written approval by Owner, which approval may be granted or withheld in Owner's sole discretion, provided however that such consent will not be unreasonably withheld. When any individual included within Key Personnel is to be assigned, reassigned or replaced for any reason, Contractor shall provide Owner with the individual's name and reason for assignment, reassignment or replacement and written qualification statements, including resumes detailing the experience of each of the proposed individuals to be considered as replacement candidates, together with such additional information and documentation as Owner may reasonably request. Owner agrees to approve or disapprove any such proposed personnel within ten (10) Business Days of the receipt of the written qualification statements and resumes, provided that before the expiration of such 10-day period, Owner may request supplemental information regarding such personnel. If supplemental information is requested, Contractor shall supply the requested information within five (5) Business Days and Owner shall have five (5) Business Days after receipt of such Information to approve or disapprove the relevant personnel. If any such personnel proposed by Contractor are disapproved by Owner, Contractor shall promptly provide Owner with the resumes of one or more alternative proposed persons, and the procedures set forth above shall apply. Upon Owner's approval of a proposed replacement member of Key Personnel, Contractor shall submit to Owner in writing the contact information for such Key Personnel and that individual's name and contact information will be substituted in lieu of the member of Key Personnel who is being replaced as applicable in the following list of Key Personnel, without further action.

Project Executive Manager:  
Office Phone:  
Cell Phone:  
Email: REDACTED  
Address:

Site Project Manager:  
Office Phone:  
Cell Phone: REDACTED  
Email:  
Address:

Executive Sponsor:  
Office Phone:  
Email: REDACTED  
Address:

(b) Key Personnel may be transferred, replaced, removed or changed only with Owner's approval and after Owner has approved Contractor's proposed replacement for any such Key Personnel in

accordance with the procedures set forth in subsection (a) above. Key Personnel making transition shall provide for appropriate overlap in duties to ensure transfer of Project knowledge. Such approval will not be unreasonably delayed. If the performance of any Key Personnel is deemed by Owner to be unsatisfactory, Owner shall have the right to request that Contractor replace such Key Personnel.

3.21 Project Documentation. Contractor shall provide to Owner manuals, drawings, and documentation in accordance with the Specifications and this Agreement. Contractor shall be responsible for the completeness and accuracy of drawings, specifications, reports, and other documents prepared or compiled by, or on behalf of, Contractor in connection with the Work and shall correct at its expense all errors or omissions therein.

3.22. Omitted Intentionally.

3.23 Utilities and Consumables. Contractor shall be responsible for obtaining and paying for utility services (excluding electricity) and Consumables (other than coal and water) required in connection with the Work through Final Completion.

3.24 Omitted Intentionally.

3.25 Omitted Intentionally.

3.26 Environmental Conditions Contractor shall ensure that appropriate steps are taken for noise and dust control associated with the Work. Contractor's forces shall comply with Owner's requirements, work protocols, procedures, and policies and training requirements related to environmental practices.

3.27 Responsibility for Work, Security and Property. Contractor shall at all times conduct its operations in a manner to minimize the risk of loss, theft, or damage by vandalism, sabotage, or any other means. Contractor shall establish and implement a security program and shall cooperate with Owner on all security matters. Contractor shall provide barriers and/or security, as appropriate, to provide adequate safety for the public and personnel working on Site. Contractor's plan shall ensure that Work does not (i) cause entry upon lands, other than the Site, in their natural state unless authorized by Owner, (ii) damage, close, or obstruct any utility installation, highway, road, railroad or other property until permits therefore have been obtained, (iii) disrupt or otherwise interfere with the operation of any pipeline, telephone or electric transmission line, ditch, or structure unless otherwise specifically authorized by this Agreement or (iv) damage or destroy cultivated and planted areas and vegetation, such as trees, plants, shrubs and grass adjacent to the Site that, as determined by Owner, do not interfere with the performance of the Agreement, (v) interfere in any way with Owner's operation of the Generating Station.

In the event Contractor and/or Contractor's employees are given access to any of Owner's computer equipment, Contractor agrees not to use such equipment and/or information for any purposes other than that contemplated in this Agreement. Contractor further agrees to keep confidential any information it obtains in the course of performing Work under this Agreement. Contractor agrees to cause its employees to comply with applicable provisions of Owner's information security policy as they pertain to Owner's employees.

3.28 Commercial Activities. Contractor shall not establish any commercial activity or issue concessions or permits of any kind to third parties for establishing commercial activities on land owned or controlled by Owner. Contractor shall not allow its employees to engage in any commercial activity on the Site.

3.29 Illumination. When any Work is performed at night or where daylight is obscured, Contractor shall, at its expense, provide artificial light sufficient to permit Work to be carried on efficiently,

satisfactorily, and safely without disruption to residents near the Site. During such time periods, access to Site shall also be clearly illuminated to the extent required by Contractor for performance of the Work. All wiring for electrical light and power shall be installed and maintained in a safe manner

3.30 Explosives. The use of explosives by Contractor is expressly prohibited without the prior consent of Owner.

3.31 Omitted Intentionally.

3.32 Procurement. Contractor shall provide procurement services and handling of all services, materials, equipment and construction equipment needed for the Work, including, without limitation, locating, negotiating, inspecting, expediting, shipping, unloading, receiving, verifying customs clearance and claims.

3.33 Quality Assurance. Contractor shall implement a quality assurance program covering the Work pursuant to this Section. Contractor shall submit such quality assurance program to Owner for its review and comment in accordance with the Specifications and this Agreement.

3.34 Omitted Intentionally.

3.35 Omitted Intentionally.

3.36 Compliance with Permit Restrictions. Contractor acknowledges that Owner may be required to make commitments to municipalities near the Site regarding traffic, noise and lighting associated with construction of the Project. Contractor will abide by any such restrictions upon written notice from Owner of their applicability.

3.37 Non-Discrimination; Supplier Diversity; Subcontracting Plan Requirements. Contractor shall comply with the requirements in Appendix XXV with respect to (a) non-discrimination; (b) Small Diverse Business Concerns (as defined below) and (c) Contractor's subcontracting plan. "Small Diverse Business Concern" includes, but is not limited to, Small Disadvantaged Business Concerns, Minority Owned Small Business Concerns, Woman Owned Small Business Concerns, Veteran Owned Small Business Concerns, Veteran Owned Business Concern, Service-Disabled Veteran Owned Business Concern and Historically Underutilized Business Zone (HUBZone) Small Business Concern.

3.38 Contractor Information. Contractor shall provide Owner with all Information necessary for Owner's use and understanding of the Work and the installation, operation, maintenance and repair thereof, and to allow Owner to satisfy any requirement of Law. Except for Information deemed to be proprietary to Contractor under the terms of this Agreement, all Information supplied or delivered to Owner pursuant to this Agreement shall be the property of Owner. Contractor may retain for its records only, copies of any Information furnished to Owner, and unless otherwise agreed to by the Parties, shall treat such Information in accordance with the requirements applicable to Owner's Proprietary Information.

## **ARTICLE 4 OWNER'S RESPONSIBILITIES**

4.1 Omitted Intentionally.

4.2 Payment. Owner shall pay the Contract Price and other sums required to be paid by it to Contractor pursuant to the terms of this Agreement in accordance with the provisions of Article 7 hereof.

4.3 Access to Site. Owner shall provide Contractor and Subcontractors with reasonably unrestricted access to the Site until the Final Completion Date (including, without limitation, access to roads and any staging areas). Owner specifically reserves the right to limit Contractor's access, noise, illumination and truck unloading to the extent necessary, in Owner's sole discretion, to preserve existing relationships with area municipalities and local residents. Owner also specifically reserves the right to limit or reasonably condition Contractor's access to the Site in accordance with Owner's security threat response plan and the Site security threat plan, and may require Contractor to prepare a security threat response plan, to be approved by Owner. Thereafter, Owner may impose reasonable restrictions on access to the Site by Contractor subject to a schedule agreed upon by Owner and Contractor.

4.4 Disclosure of Information. Owner has provided Contractor with certain non-proprietary information, data, and documents that pertain to the design requirements, construction, and/or operation of certain facilities to be installed by Contractor. Owner may provide updates or revisions to such information, data or documents and if Owner does so, Contractor shall consult with Owner and work to minimize any impacts on the Project Schedule and/or Contract Price that result from such updates or revisions.

4.5 Owner Approvals, Certificates, Permits and Licenses. Owner shall secure and pay for all approvals, certificates, permits and licenses for which Owner is responsible, as identified as the Owner's responsibility in Appendix V.

4.6 Owner Taxes. Contractor's billing rates are exclusive of any present or future Federal, state, county, municipal or other sales, use, excise or similar tax applicable to Work accepted by Owner. Owner shall for a period of three (3) years following Final Completion pay to Contractor as additional compensation any such taxes that Contractor is obligated by Law to collect for all Work accepted by Owner. Owner may, however, direct Contractor to withhold such payment and to contest the amount of any such tax. Contractor shall fully cooperate with Owner in any such contest. Owner shall reimburse Contractor for any interest or penalties actually paid by Contractor as a result of Owner's exercise of its rights to contest any tax. Notwithstanding the obligations of Owner set forth above, Owner shall not be required to pay any taxes levied against Contractor's income or payroll.

4.7 Omitted Intentionally.

4.8 Omitted Intentionally.

4.9 Approval of Drawings. Owner shall have the right but not the obligation to review, comment on and/or approve plans, calculations, specifications and drawings to be developed or performed by or on behalf of Contractor with respect to the Work. Owner's review of, provision of comments on and/or approval of, or the failure to review, provide comments on and/or approval of, such plans, calculations, specifications and/or drawings shall not relieve Contractor of any of its obligations or liabilities hereunder, and Owner does not assume any responsibility for such obligations or liabilities as a result of such provision or lack of provision of review, comments and approval. Upon Owner's request, Contractor shall provide copies of all such plans, calculations, specifications and drawings to the Owner at no cost to Owner.

## **ARTICLE 5 COMMENCEMENT OF WORK**

5.1 Commencement of Work. Contractor shall diligently commence performance of the Work in accordance with this Agreement upon the issuance of a Notice to Proceed, but not until such time, which shall not occur until this Agreement has been executed. Contractor shall not file for schedule relief after

unqualified acceptance of the Notice to Proceed, and base such request upon the date of the issuance of such Notice to Proceed.

5.2 Schedule. Within ten (10) Days after the Effective Date, Contractor shall prepare and submit to Owner for review and approval, a proposed Work Schedule in accordance with the requirements of the Contract Documents. Owner makes no representation or warranty that the Contractor shall be able to complete the Work in accordance with such Work Schedule or that Other Contractors shall perform in accordance with their schedules. Contractor shall promptly furnish Owner, on an ongoing basis, with any scheduling information requested by Owner for the Work. Contractor shall perform the Work in compliance with the Project Schedule, which shall be adjusted periodically to reflect actual progress of the Work, provide the reports contemplated by Section 3.13 hereof, and provide any further information and attend such meetings as Owner may reasonably request to verify actual progress and predict future progress. Contractor shall promptly notify Owner in writing of any anticipated departure from the Project Schedule and at any time that Contractor has reason to believe that the Guaranteed Final Completion Date for the Work will not be met. Contractor will specify in said notice the corrective action planned by Contractor; provided, however, that such notice shall not relieve Contractor of any of its obligations under this Agreement. If Contractor and/or any Subcontractor(s) shall experience any delay not otherwise excused under Section 6.2 or under other provision of this Agreement, Contractor shall, at no additional cost to Owner, add such personnel and/or crew(s), work such overtime and/or additional shifts, establish expedited, priority treatment for the acquisition, fabrication and delivery of the materials, equipment and supplies necessary to complete the Work (and/or acquire the same elsewhere), and perform such other act(s) as may be necessary to complete the Work within the time set forth in the Project Schedule. Nothing contained in this Agreement shall relieve Contractor of its obligation to perform the Work in compliance with the Project Schedule.

5.3 Expediting. For delay that is excused under Section 6.2 or under other provisions of this Agreement, Owner shall have the authority to expedite Contractor and its Subcontractors in the performance of the Work (e.g., by adding additional personnel and/or work shifts, working additional overtime hours, or by establishing expedited, priority treatment for the acquisition, fabrication and delivery of the materials, equipment, and supplies) and Contractor shall provide Owner with all information reasonably requested by Owner to enable it to do so. Owner shall pay Contractor for the actual incremental costs incurred by Contractor to expedite the Work pursuant to this Section 5.3.

## **ARTICLE 6 CHANGE ORDERS**

6.1 Change Orders. No changes to the Work (including, but not limited to, changes in the Scope of Work, either Guaranteed Final Completion Date or Contract Price) shall be made except in accordance with a duly issued Change Order executed by both Parties authorizing such.

6.2 Request by Owner. Owner may submit a written request to Contractor to alter, add to or deduct from the Scope of Work. Within ten (10) Days following receipt of such request, or, if such ten (10) Day period shall prove impracticable, as soon as practicable thereafter undertaking diligent efforts, Contractor shall submit to Owner a detailed written estimate of the adjustment to the Scope of Work, Guaranteed Final Completion Dates, Project Schedule, Project Payment Schedule, Contract Price or other terms and conditions of this Agreement, if any, that would result from the changed Work. Contractor shall furnish such additional information as Owner may request in support of such estimate. If Owner then elects to proceed with the changed Work, it shall issue a Change Order to Contractor authorizing such modification to the Scope of Work, Guaranteed Values, Guaranteed Final Completion Dates, Project Schedule, Project Payment Schedule, Contract Price or other terms and conditions of this Agreement as shall have been

agreed to by Owner and Contractor. In the event the Parties are unable to initially agree on the adjustment to the Contract Price applicable to a Change Order, but Owner nevertheless desires Contractor to proceed with the Work that is the subject of the Change Order, Owner may direct Contractor to proceed with such changed Work while the Parties negotiate in good faith an appropriate adjustment to the Contract Price.

6.3 Request by Contractor. Contractor shall provide Owner written notice of any condition or event (other than a Force Majeure, event of an Owner Delay or a Change in Law, which shall be governed by Section 6.5 below) that Contractor is aware of and reasonably believes will require any modification in or change to the Scope of Work, Guaranteed Final Completion Dates, Project Schedule, Project Payment Schedule, Contract Price, or any other obligation of Contractor under this Agreement. Such notice must be issued within five (5) Days following actual knowledge of such condition by Contractor and such notice shall describe such condition or event in detail. Within ten (10) Days following delivery of such notice, or, if such ten (10) Day period shall prove impracticable, as soon as practicable thereafter undertaking diligent efforts, Contractor shall specify adjustments to the Scope of Work, Guaranteed Final Completion Dates, Project Schedule, Project Payment Schedule, Contract Price, or any other obligation of Contractor under this Agreement so requested. Following receipt of such notice Owner shall determine whether any changes to the Scope of Work, Guaranteed Final Completion Dates, Project Schedule, Project Payment Schedule, Contract Price, or any other obligation of Contractor under this Agreement shall be effected and, if so, shall issue a Change Order with respect to such change. If Owner elects not to approve any such changes, Contractor shall not be relieved of any of its obligations under this Agreement and shall not effect any change to the Work.

6.4 Price and Project Payment Schedule Adjustments for Change Order Work. The price of any Work ordered by a Change Order pursuant to Section 6.2 or 6.3 herein shall be on a Unit price (in accordance with the Units set forth in Appendix VIII) or a fixed price basis with a corresponding adjustment to the Contract Price. The price of Work covered by a Change Order shall be added to or subtracted from, as may be appropriate, the Contract Price. Any increase in the Contract Price shall be paid in progress payments in accordance with Section 7.4. Each Contract Price adjustment shall be accompanied by a modified Project Payment Schedule reflecting such adjustment. As requested by Owner, Contractor shall furnish invoices, time sheets and other information reasonably requested to support such costs. Owner shall have the right to audit any direct costs billed on a cost reimbursable basis.

(a) In no event shall Contractor commence or undertake any portion of the Work for which it contends that any extra compensation or adjustment to the Project Schedule is or will be owed or due without prior written authorization in the form of a Change Order from Owner issued in accordance with this Article 6, and such prior written authorization shall be the only valid basis for payment of any extra compensation to, or adjustment of any Project Schedule requirement for the benefit of, Contractor.

(b) At no time and under no circumstances shall the Work be delayed by Contractor due to a Claim or Dispute between the Parties concerning the cost or time required to accomplish a potential, actual or asserted change or addition to the Work or any other matter relating to a proposed or executed Change Order.

(c) Any Claims by Contractor for increased compensation or extension of completion deadlines shall be waived unless Contractor: (i) complies with the procedures for changes and additions set forth in this Article 6; (ii) provides written notice containing a detailed statement of the basis for the Claim to Owner within five (5) Days from the date of the event giving rise to such Claim and (iii) within ten (10) Days after the event giving rise to such Claim or at such later date as the information becomes available to Contractor, Contractor submits to Owner appropriate detailed supporting documentation justifying the basis for the Claim and proposed Change Order. Contractor's entitlement to an adjustment in the Project Schedule, if any, under



Change Orders issued by Owner pursuant to this Article 6 shall be evaluated based on those Critical Path activity(ies) affected by such Change. Notwithstanding the foregoing, nothing in this Article shall expand any time period for the giving of notices provided in Section 19.5.

6.5 Changes for Force Majeure; Change in Law; Owner Delay.

(a) Contractor shall give written notice to Owner as soon as practicable but no later than ten (10) Days after the discovery of the occurrence of any Force Majeure, Change In Law or Owner Delay event, which notice shall describe such event and its effect, including without limitation, the anticipated length of delay in the Project Schedule and any anticipated additional costs, if any, occasioned by reason of such event and shall substantiate same in a detailed manner to the reasonable satisfaction of Owner. In the event that it is impracticable to specify the length of such delay, the amount of such additional costs, or such other effects of the Force Majeure, Change In Law or Owner Delay event at the time the notice referred to in the preceding sentence is delivered or if the circumstances of the Force Majeure or Owner Delay event materially change, Contractor shall provide Owner with periodic supplemental detailed written notices during the period the Force Majeure, Change In Law or Owner Delay event continues which include such information, as practicable. Such supplemental notices shall include all other relevant information concerning the Force Majeure or Owner Delay event. Contractor agrees to bear its own delay costs occasioned by a Force Majeure, Change in Law or Owner Delay event for the first thirty (30) aggregate Day period from the occurrence and during the continuance of the Force Majeure, Change in Law and/or Owner Delay event.

(b) If the Force Majeure, Change in Law or Owner Delay event continues beyond the thirty (30) aggregate day period, Contractor shall be entitled to recover delay costs occasioned by the Force Majeure, Change in Law or Owner Delay event for each day after such thirty (30) aggregate day period in accordance with this Article 6. Owner shall, within ten (10) Days following receipt of a notice that specifies the length of delay or additional costs occasioned by the Force Majeure, Change in Law or Owner Delay event, issue an appropriate Change Order extending the Guaranteed Final Completion Date for the time lost by reason of the duration of the Force Majeure, Change in Law or Owner Delay event (beyond such thirty day period, if applicable, and only to the extent that such Force Majeure, Change in Law or Owner Delay event results in actual and unavoidable delay beyond such thirty day period) and providing for the payment of such additional costs. For such purpose, Owner shall maintain a record of the number of days, or parts thereof, upon which, on account of delay caused by a Force Majeure, Change in Law or Owner Delay event, it is impossible to proceed with Work on the Critical Path. If only a portion of the Work is delayed on account of delays caused by a Force Majeure, Change in Law, or Owner Delay, the portion of the Work affected and the time lost by reason thereof shall be determined by Owner in Owner's reasonable judgment. Owner's reasonable judgment with respect to such duration and/or the effect of the Force Majeure, Change in Law or Owner Delay shall be binding as between the Parties and any surety or issuer of any bond, guaranty, or letter of credit. In the event Owner does not accept Contractor's Force Majeure, Change In Law or Owner Delay proposal, the propriety of a Change Order occasioned by the Force Majeure, Change In Law or Owner Delay event may be submitted to dispute resolution under Article 18 hereof. Contractor shall use its best efforts to reschedule its Work to mitigate the effect of actual or claimed Force Majeure, Change in Law or Owner Delay condition and to eliminate such condition as soon as possible. However, unless Owner agrees to pay all direct incremental costs of such measures, Contractor shall not be required to subcontract Work or to work additional hours or shifts that, but for the delay, would not have been required to meet the Project Schedule for completing all or any portion of the Work. Contractor shall not be compensated for delay time unless it provides notice to Owner in accordance with the terms of this Article.

6.6 Work by Others; Subcontractors. Owner may at its option contract with one or more Other Contractors for the performance of work that would otherwise result in a Change Order hereunder; *provided* such work shall be of a nature so as to have no effect on any Warranty. Contractor shall have no warranty responsibility for such work performed by Other Contractors pursuant to this Section 6.6. Contractor shall reasonably cooperate with Other Contractors, and Owner shall ensure that such work by Other Contractors will be performed so as to not unreasonably interfere with Contractor's activities or achievement of completion deadlines.

## **ARTICLE 7 CONTRACT PRICE; PAYMENTS TO CONTRACTOR**

7.1 Contract Price. Contractor agrees to perform the Work in compliance with all requirements, terms, conditions and provisions of the Contract Documents for the Contract Price. Payments of the Contract Price shall be paid or shall be caused to be paid by Owner directly to Contractor in accordance with the provisions of this Article 7. The Contract Price (or so much of it as is actually paid pursuant to this Agreement for Contractor's timely and proper performance of the Work) is Contractor's complete compensation for the timely and proper performance of the Work and includes, without limitation, (i) furnishing (including shipping and transportation costs) necessary Equipment, materials, supplies, labor, and services (including intellectual property rights as set forth in Section 3.38) called for hereunder, or necessarily implied, for the performance of the Work; (ii) the cost of performing all Work; (iii) all federal, state, and local taxes (except for Owner Taxes as provided in Section 4.6); (iv) any duties, fees, and royalties imposed with respect to any Equipment, materials, labor or services, (v) the cost to Contractor, and to all Persons performing Work by, through, or on behalf of Contractor at any tier, of all job, indirect, overhead, and general and administrative expenses; (vi) the profits of Contractor, and of all Persons performing Work by, through, or on behalf of Contractor at any tier; (vii) the costs and expenses of whatsoever kind or nature incurred by, through, or on behalf of Contractor in consequence of Owner supplementing or withdrawing or temporarily shutting down all or any portion of the Work pursuant to Article 16; and (viii) the costs and expenses of whatsoever kind or nature incurred by, through, or on behalf of Contractor in consequence of Contractor's obligations to warrant its performance and to save, indemnify, hold harmless, and defend the Indemnified Persons and each of them as provided for herein. All costs and expenses incurred in connection with the Work that cause the Contract Price to be exceeded, other than those contemplated by Article 6 or otherwise provided for in this Agreement for which an adjustment to the Contract Price is permitted, shall be paid by Contractor without reimbursement by Owner.

### 7.2 Omitted Intentionally.

7.3 Contractor's Billing Rates. If Owner directs Contractor to perform Work on a unit price or time and materials basis (including, but not limited to, Work performed on a time and materials basis as a change or addition to the Scope of Work described in this Agreement), Contractor shall be compensated at the billing rates set forth in Appendix VIII to this Agreement.

### 7.4 Terms of Payment.

#### (a) Invoicing

- (i) Appendix VIII-2 includes a Schedule of Values that allocates a portion of the Contract Price to each component of the Work. Owner and Contractor agree that the amounts allocated to each component of Work are for purposes of percent complete payments only and that there may not be a specific correlation between the cost of completion of the Work up to that time and the dollar amount allocated thereto.

Contractor's percentage completion of the respective components of Work (as listed in the Schedule of Values) shall be used as the basis for the preparation of Progress Invoices; provided, however, that the amount invoiced in the monthly Progress Invoices for each particular component of Work when added to the sum of all prior amounts invoiced for such component(s) shall not exceed the cumulative applicable lump sum contract value(s) for such component(s).

On or before the tenth (10th) Day of each month during the performance of the Work, Contractor shall submit to Owner a completed Progress Invoice. The Progress Invoice shall include a list of the component(s) of Work completed and/or those partially completed through the last day of the previous month in accordance with invoice support documentation requirements of Appendix IX. Further, each Progress Invoice shall contain a certification by the Contractor that: (i) the stated percentage completed of component(s) of Work has (have) been achieved, (ii) the quality of all Work for which payment is requested is in accordance with the terms of this Agreement, (iii) the Contractor is entitled to payment of the amount invoiced, (iv) title to all materials and Equipment invoiced has passed or will pass in accordance with the terms of this Agreement, and (v) all of its Subcontractors have been paid in full for Work performed and supplies furnished as reflected in the immediately preceding invoice and its Subcontractors have been or will be paid in accordance with the terms of their subcontracts for the proceeds of the amount invoiced, and (vi) upon receipt of the amount invoiced, the Work will be free of Subcontractor's Liens for the Work invoiced. Each Progress Invoice shall include a conditional release or waiver of all Liens in connection with the Work (including releases or waivers for all labor, services, material and equipment for which a Lien could be filed), with respect to the period of time covered by such Invoice. Such conditional releases or waivers shall become effective upon receipt by Contractor of payment from Owner with respect to such Invoice.

Owner shall review each such Progress Invoice and within sixty (60) Days after receipt thereof, Owner shall pay to Contractor in current funds, the amount specified therein that is undisputed, by wire transfer to the account specified in writing by Contractor or by such other means mutually agreed by the Parties. Contractor agrees that it shall not include in any Progress Invoice sums attributable to Work that Owner or Contractor has rejected.

(ii) Invoices for Work shall be provided in accordance with Appendix IX.

(iii) Owner may at any time require that invoices covering materials and equipment furnished or labor and services be accompanied by certified or sworn statements, releases or waivers of Lien and other documents. If such documents are requested, the invoice will not be paid until the later of sixty (60) days after receipt of the invoice or fifteen (15) days after receipt of documentation acceptable to Owner. Notwithstanding anything herein to the contrary, Owner may, before paying any invoice, demand a release or waiver of Lien on any item included in the sworn statement or invoice, as the case may be, and may withhold from any payment to Contractor an amount sufficient to cover all items for which a release or waiver of Lien is not produced by Contractor.

(iv) Owner shall pay Contractor the charges indicated in properly itemized and supported invoices for Work performed by Contractor and accepted by Owner in accordance with the terms of this Agreement, less any adjustments for prepayment, defective Work, or disputed items.

(v) Each invoice shall be certified in writing as correct by Contractor Representative and shall be itemized to fully describe each element of cost charged to Owner.

(vi) Upon notice and a reasonable opportunity to cure, Owner may withhold payment of all or part of any invoice to such extent as may be necessary to protect itself from loss caused by:

- defective Work not remedied;
- Claims filed or reasonable evidence indicating probable filing of Claims by other parties against Contractor or Owner in connection with the Work;
- failure of Contractor to make payments properly to Subcontractors for material, labor or equipment;
- unsatisfactory prosecution of the Work by Contractor; or
- failure of Contractor to perform any of its obligations under this Agreement.

When the above-listed grounds are removed or Contractor provides a surety bond in an amount and from a company satisfactory to Owner that will protect Owner in the amount withheld, payment will be made of the amounts withheld. When deemed reasonable by Owner, Owner may use such funds to rectify the situation giving rise to the withholding of funds.

(vii) Owner shall pay each invoice or provide written objections to all or any portion of each invoice for the Work within sixty (60) days after receipt by Owner. If Owner disputes a portion of an invoice, Contractor may submit a revised invoice for the undisputed amount and Owner shall pay such undisputed portion within sixty (60) days after receipt by Owner of the revised invoice.

(viii) Owner shall not be liable for payment of any Invoice Contractor fails to submit within 180 days of performance of associated work.

(b) Subcontractor Invoicing. Contractor shall promptly pay each Subcontractor when due the amount to which said Subcontractor is entitled. Contractor shall, by an appropriate agreement with each Subcontractor, require each Subcontractor to make payments to its subcontractors in a similar manner. Contractor, for itself and Subcontractors at any tier, shall suffer no Liens to exist upon the Site. Contractor shall indemnify, hold harmless and defend Owner from any and all Liens filed in connection with the Work, arising from Contractor's non-payment of its Subcontractor's undisputed invoicing, including all expenses and attorneys' fees incurred in discharging any Liens or similar encumbrances. If a Lien of any nature should at any time be asserted or filed against the Work or the Equipment, Contractor shall promptly notify Owner and at Contractor's own expense, immediately take any and all action necessary to cause any such Lien to be released or discharged, or, if permitted by Law, secure and file a security bond covering the amount of such Lien, regardless of the action Contractor may then be taking with respect to such claim. If Contractor shall fail to so discharge such Lien and is unable to post a security bond covering the same, it shall promptly provide Owner with an irrevocable letter of credit or security bond in favor of Owner in an amount equal to 100% of the amount of such Lien. Contractor shall pay any and all costs and expenses, including, but not limited to attorneys' fees and expenses incurred or suffered by Owner in connection therewith.

(c) Set offs. Contractor Representative and Program Manager will be responsible for negotiating setoffs from the Contractor for various items including, but not limited to, the following:

- Loss due to Work that is defective, not suitable, or of poor quality and/or fails to conform to Agreement requirements, if not remedied by Contractor.
- Unsatisfactory Work performed by Contractor's Subcontractor.
- Payments made by Owner on behalf of Contractor.

(d) Contractor's Adjustments to Invoices Invoices shall be subject to adjustments within six (6) months after the invoice date or the date that Contractor achieves Final Completion, whichever is later, but not beyond that time, for errors and omissions.

(e) Unvouchered Liabilities ("UVLs") Contractor shall be responsible for submitting unvouchered liabilities via email to hitchma@nu.com for Owner on the 25th of each month in the format acceptable to Owner). The UVLs shall include the following:

- All invoices submitted to Owner for the current month or unpaid invoices from previous months.
- An estimate of all Work performed but not invoiced for that month or previous months.

7.5 Omitted Intentionally.

7.6 Omitted Intentionally.

7.7 Omitted Intentionally.

7.8 Omitted Intentionally.

## **ARTICLE 8 TITLE AND RISK OF LOSS**

8.1 Clear Title. Contractor guarantees that legal title to all Equipment to be provided as part of the Work, shall pass from Contractor to Owner immediately upon payment from Owner to Contractor for Work that involves such Equipment, excluding payments associated with Final Completion. Contractor shall execute and deliver all appropriate instruments, if any, necessary to evidence transfer of title and take such actions as Owner reasonably requests to protect and perfect Owner's interests. Contractor also warrants that at the time of Final Completion of the Work, Owner shall have good and marketable title to all Equipment supplied and installed by Contractor or any Subcontractor, free and clear of all Liens. Contractor guarantees that legal title to and ownership of the Work and Equipment, whether incorporated in the Work or not, shall have passed to Owner free and clear of any and all Liens, claims, security interests or other encumbrances

8.2 Risk of Loss. Except to the extent that losses are: (i) covered by the Owner-provided insurance as set forth in Article 9 and (ii) in excess of the applicable deductible amount for which Contractor is liable pursuant to Article 9, despite the passage of title as set forth in Section 8.1, Contractor shall at all times bear risk of loss and full responsibility for the costs of replacement or repair resulting from any damage to, or loss or destruction of the Work or the Project, including but not limited to any materials, Equipment, spare parts, supplies and maintenance equipment (including temporary materials, and supplies) on the Site or located off-Site, in transit, or otherwise, and included within the Scope of Supply, or any other Work completed until the date of Final Completion. Equipment in storage but not yet incorporated into the Work shall be stored in secured areas. Contractor shall bear the responsibility of preserving, safeguarding and maintaining such Equipment and any other Work completed. Any Equipment or any Work lost, damaged, stolen or impaired before Final Completion and not covered by insurance shall be replaced promptly by Contractor at its own expense.

## ARTICLE 9 INSURANCE

9.1 Owner Insurance. Owner shall, at no cost to Contractor, provide “builder’s risk-all risks” property insurance or self-insurance for all materials, equipment, and/or supplies placed at the Site, at Contractor’s, a Subcontractor’s or one of Owner’s Other Contractor’s New Hampshire laydown facility, or at some other New Hampshire location in the vicinity of the Site pending installation, that are or will become property of Owner; provided that Contractor shall be solely responsible for the deductible of up to One Hundred Thousand Dollars (\$100,000.00) per occurrence. The insurance coverage shall not extend to Contractor’s consumables, materials, equipment, tools, machines, or vehicles. Contractor’s liability for such insurance deductibles shall not limit its other obligations under this Agreement.

9.2 Owner Controlled Insurance Program. Contractor shall participate in Owner’s Controlled Insurance Program (OCIP) and require all Subcontractors to do so as well. Prior to commencement of the Work, Owner shall purchase and maintain, at its cost, such insurance as specified below for Owner, Contractor, Subcontractors of all tiers, and such other persons as Owner may designate in connection with the performance of the Work as insured parties and with limits not less than those specified below for each coverage. Coverages shall be maintained by Owner, unless otherwise terminated pursuant to Section 9.8, and remain in force through Final Completion, or, at Owner’s option, such later date as Owner determines in its sole discretion. Owner shall provide the Contractor and Subcontractors with a separate Workers’ Compensation policy or a Certificate of Insurance evidencing such workers’ compensation coverage and a Certificate of Insurance evidencing such Commercial General Liability coverage.

9.3 The policies set forth in Section 9.4 below and as further described in Appendix XIV shall cover only the activities of the Contractor and Subcontractors performed at the Site and in accordance with this Agreement. Off-site fabricators, vendors, suppliers, material dealers, janitorial services, truckers, and others whose sole function is to transport, pickup, deliver or carry materials, supplies, tools, equipment, parts or other items to or from the Site, or who do not perform any actual on-site labor, will not be covered by the OCIP.

9.4 Owner assumes no obligation to provide insurance other than that indicated below. Nothing contained herein shall be deemed to place any responsibility on Owner for ensuring that the insurance provided by OCIP is sufficient for the conduct of Contractor’s or its Subcontractor’s business or performance of the Work. The provision of insurance by Owner through the OCIP will in no way relieve or limit or be construed to relieve or limit Contractor or Subcontractors of any responsibility, liability, or obligation imposed by the Contract Documents or by the law, including without limitation any indemnification obligations which any party has to Owner thereunder.

**a. Worker’s Compensation Insurance:**

Workers’ Compensation Insurance in Statutory Limits of the Worker’s Compensation Laws of the State of New Hampshire, and other extensions, with Coverage B-Employer’s Liability of not less than limits of \$1,000,000 - Each Accident, \$1,000,000 - Policy Limit and \$1,000,000 - Each Employee. Coverage under the Broad Form All States extension is also included.

**b. Liability Insurance (Excluding Automobile and Professional Liability)**

Liability Insurance providing coverage not less than a Commercial General Liability insurance policy and insuring Owner, Contractor, and Subcontractors of all tiers and such other persons or interests as Owner may designate in connection with the performance of the Work, and providing contractual liability coverage and personal injury liability coverage for claims arising out of the Work hereunder, for personal injury, bodily injury and property damage, in policy or policies of insurance such that the total available limits to all insureds combined will not be less than \$2,000,000.00 (Two Million Dollars) per occurrence and \$4,000,000.00 (Four Million Dollars) aggregate, provided that Owner, in its sole discretion, may decide the size of any deductible, so long as Contractor shall not be liable to pay more than the first \$2,500.00 (Two Thousand Five Hundred Dollars) of the deductible for each property damage occurrence.

An excess liability policy will also be maintained with limits of not less than \$25,000,000.00 (Twenty-five Million Dollars), which policy will be excess over primary general liability and the Employer's Liability under the Workers' Compensation.

Contractor shall be liable, at its expense, to a maximum of \$2,500.00 (Two Thousand Five Hundred Dollars) for each Property Damage occurrence to the extent losses payable are attributable to its acts or omissions or the acts or omissions of its Subcontractors of any tier or any other entity or person for whom it may be responsible.

#### 9.5 Cooperation.

Contractor and each of its Subcontractors of any tier for whom insurance is provided by Owner pursuant to this Article shall:

- a. Furnish to the OCIP Administrator, its designee or the insurance carriers all information and documentation which the OCIP Administrator may require from time to time in connection with the issuance of any policies, pursuant to Appendix XIV, in such form and substance as the OCIP Administrator may prescribe;
- b. **FURNISH TO THE OCIP ADMINISTRATOR, THEIR DESIGNEES OR THE INSURANCE CARRIERS, CERTIFIED PAYROLL REPORTS AS REQUIRED ONCE A MONTH ON THE PAYROLL REPORT FORM PROVIDED BY THE INSURANCE CARRIERS AND/OR THE OCIP ADMINISTRATOR, AND PAYROLL RECORDS AS REQUIRED (ASSISTING THE CARRIERS IN THESE AUDITS) AND SEGREGATE THEIR RESPECTIVE REPORTS RELATING TO THE WORK FROM THEIR RECORDS RELATING TO ANY OTHER WORK WHICH THEY MAY BE PERFORMING AND**

**FOR WHICH INSURANCE IS NOT PROVIDED BY  
OWNER PURSUANT TO THIS SPECIFICATION;**

- c. After issuance of a Notice to Proceed by Owner, and after OCIP Enrollment Forms have been received by the OCIP Administrator, the OCIP Administrator may conduct Initial Audits of the Contractor's and Subcontractors' insurance records and information provided in OCIP Enrollment Forms at intervals to be determined by the OCIP Administrator. After the Initial Audits, the OCIP Administrator will notify Owner and Contractor of discrepancies between the Enrollment Insurance Cost Information and the Contractor's estimated Total Insurance Cost stated in its Insurance Information Form.
- d. Promptly comply with the recommendations of the insurance carriers so that said insurance carriers will continue to provide the coverage to be maintained by Owner pursuant to this Article at a reasonable premium.

**IF CONTRACTOR OR ANY OF ITS SAID  
SUBCONTRACTORS OF ANY TIER SHOULD FAIL TO  
COMPLY WITH THEIR RESPECTIVE OBLIGATIONS,  
UNDER PARAGRAPH 9.4 HEREIN, OWNER MAY  
WITHHOLD ANY PAYMENTS DUE TO CONTRACTOR  
UNTIL SUCH TIME AS CONTRACTOR AND ITS SAID  
SUBCONTRACTORS OF ANY TIER SHALL HAVE  
PERFORMED THEIR SAID OBLIGATIONS. OWNER MAY  
ALSO CHARGE BACK TO CONTRACTOR ANY PREMIUM  
INCREASES OR SURCHARGES DUE TO CONTRACTOR'S  
OR SUBCONTRACTOR'S FAILURE TO COOPERATE WITH  
FIELD AUDITS UNDERTAKEN BY OCIP ADMINISTRATOR,  
OWNER'S REPRESENTATIVE OR INSURANCE CARRIER.**

9.6 Claims.

Contractor and its Subcontractors of any tier shall assist and cooperate in every manner possible in connection with the adjustment of all claims arising out of the operations conducted under, or in connection with, the Work and shall cooperate with the insurance carrier or carriers of Owner and Contractor, its Subcontractors of any tier in all claims, demands and litigation that arise out of said operations and which the said insurance carrier or carriers are called upon to adjust or defend.

9.7 Insurance Manual.

The OCIP Administrator shall formulate and publish procedures and services related to the insurance coverages to be provided pursuant to Section 9.4 herein in an Insurance Manual. Contractor shall fully comply with, and shall require its Subcontractors of any tier to fully comply with all of said procedures and services, including, but not limited to, completion of all necessary applications for coverage, prompt and full compliance with all audit requests and claim reporting procedures, and the prompt and full compliance with



safety, loss prevention and loss control programs implemented by or at the request of Owner. Owner shall require that Owner's Other Contractors at any tier include this Supplementary Condition in their subcontracts and require that each subcontractor at any tier do likewise.

#### 9.8 OCIP Coverages.

While Owner may at any time provide coverage beyond the scope required in Section 9.4, the Owner makes no warranty or representation that such broad coverage will remain in effect throughout the duration of the Work. Nor does Owner warrant or represent that the OCIP coverages constitute an insurance portfolio that adequately addresses all the risk faced by Contractor or Subcontractor(s).

**CONTRACTOR AND SUBCONTRACTORS OF EVERY TIER SHALL REVIEW THE OCIP POLICIES AND OTHER POLICIES MADE AVAILABLE AND SATISFY THEMSELVES AS TO THE EXISTENCE, EXTENT AND ADEQUACY OF THE OCIP COVERAGES AND OTHER COVERAGES THAT MAY BE APPLICABLE PRIOR TO THE COMMENCEMENT OF WORK UNDER THEIR CONTRACT, AND SHALL SUPPLEMENT SUCH COVERAGES AT CONTRACTOR'S OWN EXPENSE IF DEEMED NECESSARY TO DO SO.**

In addition, Owner shall have the right, at its sole discretion, to terminate the insurance coverage provided under the OCIP for Contractor and/or any Subcontractors, at any time following 30-days notice to Contractor. If Owner cancels the OCIP insurance coverage pursuant to this Section 9.8 for Contractor and/or any Subcontractors, Contractor and/or any Subcontractors who are affected by such termination shall obtain the insurance coverages that are specified in Appendix XIV.

#### 9.9 Contractor-Provided Insurance Outside the OCIP.

Notwithstanding the OCIP, Contractor shall, at all times during the period in which the Agreement is in force and effect, provide and maintain insurance and shall require all Subcontractors to provide and maintain insurance of the type, coverages and in limits as set forth below and in Appendix XIV to insure claims arising from off-site work, which means Work performed under the Contract that is not performed at or from the Site, and claims involving the automobiles, tools and equipment of the Contractor and Subcontractors of any tier. Such insurance shall name the Owner and the Program Manager and their respective directors, officers, employees, agents, representatives and affiliates as additional insureds, as their interests may appear, and any other parties required to be named as insureds and shall be in form and through issuing companies acceptable to the Owner, except that such companies shall be licensed to do business in the State of New Hampshire and shall have and maintain an A.M. Best Rating of not less than A-(VII), or otherwise acceptable to Owner. Such insurance shall provide coverage for all costs of defense. The submitted policy shall, in addition, provide the following coverage either in the original policy or by endorsement substantially as follows and subject to Owner's approval, acting through its OCIP Administrator, as to form:

- (i) It is agreed that Owner's and Program Manager's respective affiliates, officers, directors, employees, representatives and agents, shall

be additional insureds hereunder, and that coverage is provided for all operations, uses, occupations, acts and activities of the insured under the Agreement and under any amendments, modifications, extensions or renewals of Agreement regardless of whether liability is attributable to the insured or a combination of the insured and the additional insured;

- (ii) The policy shall not be canceled or reduced in coverage until after Owner has been given thirty (30) days prior written notice by registered mail addressed to Owner;
- (iii) The coverage provided by the policy is primary coverage and any other insurance carried by Owner is excess coverage to the entire limit of primary or excess liability carried by Contractor;
- (iv) In the event of one of the named insureds incurring liability to any other of the named insureds, this policy shall provide protection for each named insured against whom a claim is or may be made, including claims by other named insureds in the same manner as if separate policies had been issued to each named insured; nothing contained herein shall operate to increase the insurance company's limit of liability;
- (v) Notice of occurrences or claims under the policy arising from work on the project shall be made to the person designated by Owner in addition to whomever is designated by Contractor to receive notice.
- (vi) Each liability policy shall contain a Cross Liability Endorsement.

The insurance may be provided in policy or policies, primary and excess, including the so-called umbrella or catastrophe form. Liability covered shall be to the limits as stated below, unless, prior to commencement of the Work, written approval is granted by Owner, acting through its OCIP Administrator, for variance from those limits.

**.1 Workers' Compensation Insurance**

Workers' Compensation Insurance in Statutory Limits of the Worker's Compensation Laws of the State of New Hampshire, and other extensions, with Coverage B-Employer's Liability of not less than limits of \$1,000,000 - Each Accident, \$1,000,000 - Policy Limit and \$1,000,000 - Each Employee. Coverage under the Broad Form All States extension must be included.

**.2 Automobile Liability Insurance**

Automobile Liability Insurance covering all owned, non-owned and hired automobiles, trucks and trailers of the respective parties is required to be provided and maintained. Owner, Program Manager and their respective affiliates shall be named as additional insureds. Such insurance shall provide coverage not less than that of the Standard Comprehensive Automobile Liability policy in limits not

less than, as respects Contractor and all tiers of Subcontractors, \$5,000,000.00 (Five Million Dollars) Combined Single Limit each occurrence for Bodily Injury and Property Damage.

Contractual Liability, if not provided in the policy form, is to be provided by endorsement.

### .3 General Liability

General Liability insurance for operations AWAY FROM THE SITE of Contractor or any tier of Subcontractor (including products liability for any product manufactured, assembled or otherwise worked upon away from the Project Site unless such manufacturing, assembly or otherwise is called for by the Contract Documents between Owner and Contractor), under a form providing coverage not less than that of Standard Commercial General Liability insurance policy, 1993 ISO ("Occurrence Form") for operations of the party required to furnish same, including hazards of operations (including explosion, collapse and underground coverage), elevators, independent Contractors, products and completed operations, for claims arising out of the Work hereunder for personal injury, bodily injury and property damage in policy or policies of insurance such that the total available limits combined shall not be less than \$5,000,000.00 (Five Million Dollars). Owner and affiliates shall be named as additional insureds.

(vii) Contractor's insurance provided pursuant to this Section 9.9 shall insure Contractor's indemnity obligations under this Agreement.

### 9.10 Required Contractor Insurance.

(a) Contractor and Subcontractors shall provide the following coverages (as applicable) in accordance with the terms and requirements set out in Appendix XIV: (i) Contractor and any Subcontractor that performs a professional service shall provide Errors and Omission coverage; (ii) Contractor's Pollution Liability coverage to the extent applicable (for example, if the Work will require fuel or other hazardous material storage facility on-Site); and (iii) Transit/Cargo Insurance covering any shipment of equipment to the Site or New Hampshire lay-down area in connection with this Agreement.

(b) Certificates to evidence all policies of required insurance shall be provided to Owner prior to commencement of any Work, or in the case of Subcontractors, to Contractor prior to Contractor's retention thereof. Evidence of each Subcontractor's Workers' Compensation coverage (unless exempted by Law) must also be provided to Owner upon request of Owner, prior to commencement of any Work by such Subcontractor. By the Effective Date, Contractor shall sign the Appendix XIV Attachment XIV-2 Contractor Acknowledgement & Certification of Subcontractor Insurance and shall comply with the requirements and obligations stated therein.

(c) Additional Insureds. Each policy required (except Worker's Compensation and Professional Liability, if a required coverage) will name as additional insured Owner, the Program Manager, and their respective officers, directors, agents, employees, representatives, affiliates and assigns.

(d) The foregoing insurance coverage shall be primary to any other coverage available to Owner or its Affiliates, and shall not be deemed to limit Contractor's liability under this Agreement.

(e) Owner and Contractor waive all subrogation rights against each other and their officers, directors, agents, or employees under all insurance coverage, including builder's risk insurance, OCIP, and any Contractor- or Subcontractor-provided insurance during and after the term of this Agreement. Contractor and Owner hereby waive all rights of subrogation against each other and against Subcontractors and Owner's Other Contractors enrolled in the OCIP and under other insurance coverage, in connection with any and all events, occurrences, claims, losses, and/or payments resulting from, arising out of, or relating to the Work and or this Agreement. Contractor shall cause each of its Subcontractors in their respective subcontracts to waive all rights of subrogation against Owner, against Contractor, Owner's Other Contractors and other Subcontractors enrolled in the OCIP and under all other insurance coverage, in connection with any and all events, occurrences, claims, losses, and/or payments resulting from, arising out of, or relating to the Work and or this Agreement.

#### 9.11 Maintenance of Insurance Coverage.

Contractor or Subcontractor shall maintain the insurance coverage (or equivalent) required under any Contractor- or Subcontractor-provided insurance that is issued on a claims-made basis for six (6) years after termination of this Agreement. Contractor and Subcontractors shall maintain the insurance coverage (or equivalent) required under any Contractor- or Subcontractor-provided insurance that is issued on an occurrence-basis for three (3) years after termination of this Agreement.

### **ARTICLE 10 COMPLETION**

#### 10.1 Omitted Intentionally.

#### 10.2 Substantial Completion for the Installation of the Electrical Balance of Plant Systems:

Substantial Completion shall be deemed to be satisfied upon the last to occur of the following requirements: (i) Completion of all Work associated with this Agreement, (ii) Completion of all Testing associated with the scope of Work, (iii) Turn over of all systems and equipment associated with the scope of Work, (iv) Generation of Punch List in a manner reasonably satisfactory to Owner and in accordance with the Agreement.

10.3 Notice of Substantial Completion. Once Contractor has performed all of the requirements set forth in Section 10.2 hereof with respect to the Balance of Plant Electrical Installation, Contractor shall so certify to Owner by submitting a Certificate of Substantial Completion in the form set forth in Appendix XV to Owner. Within ten (10) Days following receipt of such Certificate of Substantial Completion, Owner shall notify Contractor in writing whether, to Owner's knowledge, Contractor has met the requirements of Section 10.2 and, if Contractor has not met the requirements, Owner shall state its reasons for disagreement in reasonable detail. In the event Owner fails to respond within the ten (10) Day period, Substantial Completion shall be deemed to have occurred. Any such notification shall not be deemed to waive any rights of Owner against Contractor under this Agreement. Substantial Completion of the Balance of Plant Electrical Installation, if accepted by Owner, shall relate back to the date of the Certificate of Substantial Completion (which shall be deemed to be the date the Balance of Plant Electrical Installation has been successfully completed). If Owner determines that Contractor has not met Substantial Completion as stated in its written notice to Contractor in accordance with this Section 10.3, Substantial Completion shall not be deemed to have occurred. If Owner determines that Contractor has not met Substantial Completion, Contractor shall promptly take such corrective action as will cause Substantial Completion to occur and upon completion of such corrective action shall issue to Owner another Certificate of Substantial Completion. Any dispute regarding such notice shall be resolved in accordance with the procedure set forth in Article 18.

10.4 Punch List. Approximately 30 days prior to the date on which Contractor expects to achieve Final Completion, Contractor shall submit to Owner a list of Punch List Items (a "Punch List"). Within ten (10) Days following receipt of the Punch List, Owner shall notify Contractor in writing either that it accepts the Punch List or Owner shall state its reasons for disagreement with the Punch List in reasonable detail; provided, however, that Owner's acceptance or rejection of the Punch List shall not relieve Contractor of its responsibility to complete the Punch List Items and all other applicable requirements of the Agreement. Any and all Punch List Items must be completed to the reasonable satisfaction of Owner and in accordance with this Agreement prior to the date that Contractor submits its Certificate of Final Completion. Any dispute regarding the Punch List shall be resolved in accordance with the procedure set forth in Article 18. Notwithstanding any other provision of this Agreement to the contrary, if the completion of any Punch List Items requires that the Generating Station or Clean Air Project be shut down or its output curtailed, Owner shall have the option of completing such Punch List Items itself at Contractor's cost and expense.

10.5 Final Completion. Final Completion shall be deemed to occur upon the last to occur of the following requirements: (i) Completion of all Work required under the Contract Documents including all Punch List Items; (ii) Owner has received and accepted the final "as-built" drawings; (iii) Owner has received from Contractor a final certificate of Contractor certifying that waivers of all Liens by Contractor and Subcontractors relating to the Work have been obtained by Contractor and delivered to Owner; (iv) Contractor has removed all of its equipment and materials and completed removal of all waste and rubbish from around the Site; and (v) Contractor has performed all other provisions and delivered all items required by this Agreement then to be performed or delivered in a manner reasonably satisfactory to Owner and in accordance with the Agreement.

10.6 Notice of Final Completion. Once Contractor has completed all of the requirements set forth in Section 10.5 hereof with respect to the Work, Contractor shall so certify to Owner by submitting a Certificate of Final Completion to Owner. Within ten (10) Days following receipt of such Certificate of Final Completion, Owner shall notify Contractor in writing whether, to Owner's knowledge, Contractor has met the requirements of Section 10.5 and, if Contractor has not met the requirements, Owner shall state its reasons for disagreement in reasonable detail. Any such notification shall not be deemed to waive any rights of Owner against Contractor under this Agreement. Final Completion, if accepted by Owner, shall relate back to the date of the Certificate of Final Completion. If Owner determines that Contractor has not met Final Completion as stated in its written notice to Contractor in accordance with this Section 10.6, Final Completion shall not be deemed to have occurred. If Owner determines that Contractor has not met Final Completion, Contractor shall promptly take such corrective action as will cause Final Completion to occur and upon completion of such corrective action shall issue to Owner another Certificate of Final Completion. Any dispute regarding such notice shall be resolved in accordance with the procedure set forth in Article 18.

10.7 Long-Term Obligations. It is expressly understood and agreed by the Parties that nothing in this Article 10 shall in any way modify or alter Contractor's obligations under Articles 11 and 12 hereof.

## **ARTICLE 11 WARRANTY**

11.1 General (a) Contractor warrants that (i) all material and each component of Equipment installed as part of the Work shall be new and unused when installed (unless otherwise specified by Owner), of high quality and free from defects or deficiencies in materials, design, workmanship, or title and suited to its intended application, purpose and function, (ii) the Work shall be performed free from defects and deficiencies and performed in accordance with the requirements and provisions of this Agreement, including but not limited to, the Scope of Work and Prudent Industry Practices, (iii) the Work performed will satisfy all requirements of this Agreement, (iv) that the installation and testing of any and all material

and Equipment as part of the Work shall be in accordance with the manufacturer's requirements, and (v) that all Work shall be performed in accordance with all Laws and all standards and practices applicable to the engineering profession and the construction industry.

(b) Contractor warrants that all Equipment and services provided or delivered to Owner hereunder, shall be supplied in accordance with the requirements in the Specifications and shall be free from defects in design, materials and workmanship for a period of two (2) years from the date that Final Completion actually occurs.

11.2 Design Defects Contractor warrants that the design (including all designs, plans, drawings, specifications, data and other information supplied pursuant to or utilized in the Work) provided by Contractor or any Subcontractor shall be free of defects and errors and, subject to the warranty periods provided in Article 11.1 and the remedies for any performance guarantees provided herein, Contractor shall correct the defect or error and, at Contractor's cost and Owner's option, replace or repair any defective Work affected by such error or defect in a timely manner.

### 11.3. Services

- (a) Contractor warrants that any and all services performed or provided by, through, or on behalf of Contractor as a part of or in connection with the Work shall:
  - (i) be performed by personnel who are fully qualified and competent and whose recommendations, guidance and performance reflect professional knowledge, judgment, and performance generally accepted and appropriate in the utility and construction industry; and
  - (ii) comply with and conform to the provisions of this Agreement.

11.4. Equipment, Materials and Supplies. During the Warranty Period, Contractor warrants that all equipment, materials and supplies furnished by, through, or on behalf of Contractor for use or consumption in the course of or for incorporation into the Work (including warranty repairs) shall:

- (a) be free from defects in title (including any Liens), material and workmanship; and
- (b) comply with and conform to all provisions of this Agreement and of Law.

### 11.5 Remedy.

(a) If the warranties set forth in this Article 11 are breached within the applicable Warranty Period and Owner has provided written notice to Contractor thereof, Contractor shall correct the defective workmanship, equipment or material or design, as the case may be, promptly and at no cost to Owner (and at Contractor's sole cost). Contractor shall provide a service representative to begin assessment for implementation of corrective action on the applicable Work or Equipment within (i) three (3) Days of receipt by Contractor of Owner's written notice of a breach in Exigent Circumstances (as defined below in this Section 11.5), or (ii) five (5) Days of receipt by Contractor of Owner's written notice of any other breach. Contractor shall be directly responsible to Owner, at Contractor's expense, for all corrective action notwithstanding any failure of a Subcontractor or Vendor to provide or honor any warranty or guarantee. Exigent Circumstances shall be where a breach of warranty that (A) affects safety of personnel or Equipment, (B) results in a violation of Law, or (C) causes deterioration in performance of the Generating Station. The expense of refinishing, uncovering, or of removal and replacement, as the case may be, and

of making good other Work affected by such removal and replacement shall be borne by Contractor and no extension of time or increase in the Contract Price will be allowed in connection therewith.

(b) Contractor shall consult with Owner and use its best efforts to perform remedial actions (or, for enforcing third party warranties, use its best efforts to cause remedial actions to be performed) in a manner and at a time so as to minimize the disruption of the normal operations of the Generating Station, and Contractor shall coordinate all of its repair and other warranty activities with Owner. Contractor specifically acknowledges the crucial nature of the Clean Air Project to the operations and reliability of the Generating Station and shall take all actions necessary to preserve the operations and reliability of the Generating Station, to avoid (if at all possible) or minimize the interruption of service of the Generating Station, and to promote the public safety.

(c) Any corrective work (including without limitation, any repaired or replaced item) shall be warranted for an extended period of one year beyond the expiration of the then-applicable warranty. If, after written notification of such defect in workmanship, equipment or materials, Contractor shall unreasonably delay in diligently commencing, continuing or completing corrective action, then Owner may correct such defect(s) and Contractor shall be liable for all necessary costs, charges and expense incurred by Owner in connection therewith, and shall forthwith pay to Owner an amount equal to such costs, charges and expenses within thirty (30) Days after receipt of verifiable invoices certified by Owner.

(d) A repair, addition, adjustment, correction or replacement shall be deemed to be completed upon receipt by Owner of a written notice of completion from Contractor unless Owner within ten (10) days thereafter furnishes Contractor with a statement of reasons as to why such repair, addition, adjustment, correction or replacement is not complete.

(e) If Chronic Failure of components occurs during the Warranty Period, Contractor will investigate the root cause of the failure and repair or replace or adjust to correct the root cause of the Chronic Failure in order to satisfy the requirements of this Agreement. The Contractor will provide technical substantiation to the Owner that such repair or replacement is effective; however, if such failure should recur, Contractor, with Owner's concurrence, shall make further repair, adjustment or replacement as deemed appropriate by Owner. The warranty period for any and all components experiencing Chronic Failure shall automatically be extended for a period of one (1) year beyond the expiration of the then-applicable warranty period for each such failure.

(f) If any defect in Contractor's design, materials or workmanship is hidden or concealed and not discoverable by Owner's reasonably careful inspection during the initial Warranty Period, the applicable warranty period shall be extended to a period of four (4) years from Final Completion.

(g) In the event any adjustment, repair, addition, correction or replacement made by Contractor pursuant to this warranty is ineffective in remedying the defective condition in question, Owner shall so notify Contractor in writing prior to the expiration of the applicable Warranty Period, and Contractor shall proceed to conduct efforts consistent with its obligation under the root cause provision of Section 11.5(e) above.

11.6 Subcontractor Warranties. Without in any way derogating Contractor's own representations, warranties and guarantees with respect to all of the Work and the Equipment, Contractor shall obtain for the benefit of Owner the same warranties and indemnities specified in this Agreement, including long-term warranties against defects in Equipment obtainable from Subcontractors without additional compensation to such Subcontractor and, at the end of Contractor's warranty period, shall and hereby assigns to Owner all warranties and/or guarantees relating to the Equipment that Contractor receives from any and all of the Subcontractors for the benefit of Owner. Contractor will also notify Owner of the

availability of additional warranties offered by Subcontractors at an additional cost. Owner may purchase these additional warranties by Change Order. Contractor shall cooperate with Owner in Owner's enforcement of such additional warranties.

11.7 Conditions of Warranty. Owner shall give Contractor written notice of a defect within a reasonable period after the defect becomes apparent to Owner. Contractor shall use best efforts to have third party warranties of equipment and/or materials provide for the cost of removal and reinstallation of such equipment and/or materials, and, to the extent permitted under applicable Law and Owner's rules, provide for temporary and/or permanent replacements for such equipment and/or materials to ensure uninterrupted service to the Generating Station. Regarding Contractor's warranties, if it is necessary to remove any equipment and/or materials from the Site in order for Contractor to repair, modify or replace the same, Contractor shall provide the personnel and equipment necessary for such removal and reinstallation at its own expense, and, to the extent permitted under applicable Law and Owner's rules, Contractor shall furnish temporary and/or permanent replacements for such equipment and/or materials to ensure uninterrupted service of the Clean Air Project and the Generating Station. Owner shall provide reasonable access to the Site for such services. Any cost of shipment of repaired, modified, or replacement equipment or materials, to or from Contractor's plant or any other off-Site facility shall be borne by Contractor in connection with performance of Contractor's warranty obligations. Owner shall retain title to such equipment and/or materials, but Contractor shall bear the risk of loss with respect to such equipment and/or materials; provided that if Contractor, or Owner acting at Contractor's request, removes any equipment and/or materials from the Site and installs a permanent replacement, title to and risk of loss of (i) such replacement shall pass to Owner upon installation, free and clear of any Liens; and (ii) such replaced equipment and/or materials shall pass to Contractor at the time of removal from the Site, subject to any rights retained by Owner for insurance purposes and/or the settlement of any other claims and/or issues. Contractor shall use best efforts to have third party warranties contain these provisions (with the third party being substituted for Contractor). In addition to its other warranty obligations, Contractor shall reimburse Owner for Owner's direct incremental costs to provide Contractor access to equipment and/or materials needing to be repaired or replaced due to Contractor's defective Work and to restore facilities disturbed by such access.

## **ARTICLE 12 LIQUIDATED DAMAGES**

12.1 Guarantee of Timely Completion Contractor and Owner recognize the importance of timely completion of the Work, and accordingly, time is of the essence with respect to this Agreement. Except to the extent that any delays are excused pursuant to Article 6 or other provision of this Agreement, Contractor hereby guarantees that Final Completion shall occur not later than the Guaranteed Final Completion Date in this Agreement.

12.2 Liquidated Delay Damages. Liquidated Delay Damages shall be applied for:

(a) Schedule Delays Caused by Contractor.

For failure to achieve (i) the Critical Milestones by their respective Critical Milestone Dates (as identified in Appendix IV), Contractor acknowledges and agrees that Owner will suffer substantial damages, which may include additional interest and financing charges on funds to finance the Work, 'idle plant' costs, other losses of revenue, project supervision, construction management and other operating costs, but the full nature and extent of such damages is extremely difficult to quantify. For failure to achieve the Critical Milestones by the respective applicable dates, Contractor shall be assessed and shall pay to Owner Liquidated Damages as follows:



- (i.) Except to the extent that any delays are excused pursuant to Article 6 or other provision of this Agreement, if Contractor does not achieve the completion of Final Completion by the applicable date specified in Appendix IV, Contractor shall pay to Owner Liquidated Damages in an amount equal to <REDACTED> Dollars (<REDACTED>) for each Day or portion of Day of delay after the specified Completion Date for such Milestone.
- (ii.) Except to the extent that any delays are excused pursuant to Article 6 or other provisions of this Agreement, if Contractor does not achieve the completion of any other critical milestone by applicable dates specified in Appendix IV, Contractor shall pay to Owner liquidated damages in an amount equal to <REDACTED> (<REDACTED>) for each Day or portion of Day of delay after the specified completion date for each milestone.

(b) The aggregate amount of Delay Liquidated Damages paid by Contractor to Owner pursuant to this Section 12.2 shall not exceed ten percent (10%) of the Contract Price. Except for Contractor's indemnity obligations under Section 17.1, Contractor's payment of Delay Liquidated Damages shall be Owner's sole remedy for such delay in achieving Critical Milestones and/or Final Completion. Accrued Delay Liquidated Damages under this Section 12.2 shall be due and payable within thirty (30) Days of receipt of Owner's written request. Contractor's failure to pay accrued Delay Liquidated Damages within thirty (30) days of receipt of any Owner's written request therefor shall be considered an event of default. Late payments of such amounts will bear annual interest at the Prime Rate plus 3%.

12.3 Omitted Intentionally.

12.4 Omitted Intentionally.

12.5 Omitted Intentionally.

12.6 Omitted Intentionally.

12.7 Omitted Intentionally.

12.8 Setoff: Payment of Liquidated Damages. The obligation of Contractor to pay Liquidated Damages hereunder shall at Owner's election (subject to Contractor's rights under Article 18) be subject to setoff against any amounts that (i) are due and owing or (ii) become due and owing by Owner to Contractor under this Agreement.

12.9 Liquidated Damages Not Penalty. The Parties acknowledge and agree that because of the unique nature of the Project and the requirements under state law, it is difficult or impossible to determine with precision the amount of damages that would or might be incurred by the Owner as a result of Contractor's failure to achieve Critical Milestones by the applicable Critical Milestone Dates. It is understood and agreed by the Parties that if Owner shall be damaged by failure of Contractor to meet such obligations (i) it would be impracticable or extremely difficult to fix the actual damages resulting therefrom, (ii) any sums that would be payable under Article 12 are in the nature of Liquidated Damages, and not a penalty, and are fair and reasonable and (iii) such payment represents a reasonable estimate of fair compensation for the losses that may reasonably be anticipated from such failure. The Liquidated Damages for delay are Owner's sole and exclusive remedy for Contractor's failure to achieve one or more Critical Milestones by the applicable date(s), except as otherwise provided in Article 16 for a default by Contractor. Nothing in this Article 12, including the payment of Liquidated Damages as set forth herein, shall waive or otherwise release Contractor from its obligations to perform in accordance with the Contract Requirements.

### **ARTICLE 13 LIMITATIONS ON LIABILITY**

**13.1. Maximum Liability.** Except as provided in section 13.3 below, Contractor's liability to Owner under this Agreement, whether based upon breach of any express or implied warranty, tort, contract, strict liability, or otherwise, shall not exceed the aggregate amount of Contract Price for the Work. Maximum Liability shall not include any of the Contractor indemnities contained in Article 17 or Section 3.12.

**13.2 Consequential Damages.** EXCEPT AS PROVIDED IN SECTION 13.3 BELOW, NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT, NEITHER PARTY SHALL BE LIABLE, WHETHER BASED ON CONTRACT OR TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY), UNDER ANY WARRANTY OR OTHERWISE, RELATING TO THIS AGREEMENT, FOR ANY CONSEQUENTIAL, INDIRECT, SPECIAL, OR INCIDENTAL LOSS OR DAMAGE, INCLUDING, BUT NOT LIMITED TO, ANY DAMAGE TO, OR ANY LOSS OF USE OF PROPERTY, LOSS BY REASON OF PLANT SHUTDOWN OR SERVICE INTERRUPTION, COSTS OF CAPITAL OR EXPENSES THEREOF, LOSS OF PROFITS OR REVENUES OR THE LOSS OF USE THEREOF, NON-OPERATION OR INCREASED EXPENSE OF OPERATION, OR COST OF PURCHASED OR REPLACEMENT POWER (INCLUDING ADDITIONAL EXPENSES INCURRED IN USING EXISTING POWER FACILITIES).

IN ADDITION, NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT, OWNER SHALL NOT BE LIABLE TO CONTRACTOR, WHETHER BASED ON CONTRACT OR TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY), UNDER ANY WARRANTY OR OTHERWISE, RELATING TO THIS AGREEMENT, FOR COSTS OF CAPITAL OR EXPENSES THEREOF, LOSS OF OTHER BUSINESS OPPORTUNITIES INCLUDING ANTICIPATED REVENUES FROM OTHER PROJECTS FOREGONE TO UNDERTAKE THIS AGREEMENT, CONTRACTOR'S INCREASED FINANCE COSTS, OR ANY LOSS OR DAMAGE THAT IS SPECULATIVE IN NATURE.

**13.3** Notwithstanding the foregoing, in no event shall: (i) the limitation of liability set forth in section 13.1 apply to liability of Contractor for bodily injury, personal injury, Contractor's warranty obligations and/or indemnity obligations or (ii) the limitation of liability set forth in section 13.2 apply to liability of Contractor for bodily injury, personal injury and/or indemnity obligations resulting from any claim by a Person other than Owner or an Affiliate of Owner. Any liability of Contractor or Subcontractors under this Agreement shall be the amount in excess of any insurance proceeds received from the OCIP coverage provided by Owner. The parties understand and agree that the liability of Contractor to Owner under this Agreement, at law, and/or in equity shall not be limited by the amount of insurance coverage required or made available by Contractor or a Subcontractor pursuant to the provisions of Article 9 or Appendix XIV.

**13.4** Contractor waives all claims against Owner for any liability or loss in connection with: (i) payment of all federal, state and local taxes or contributions imposed or required under unemployment insurance, social security and income tax laws with respect to contractor's work under this agreement; (ii) all losses in connection with any claims for lost wages, severance pay, pensions or other benefits with respect to Contractor's work under this agreement; and (iii) except to the extent covered by the OCIP or Owner-provided builder's risk - all risks property insurance, all claims for liability for damage to Contractor's personal property or injury to Contractor or its personnel in connection with this Agreement.

## **ARTICLE 14 CONTRACTOR'S REPRESENTATIONS**

Contractor represents and warrants that:

14.1 Corporate Standing. It is a corporation duly organized, validly existing and in good standing under the laws of the State of Connecticut and is qualified to do business in all jurisdictions in which the nature of the business conducted by it makes such qualification necessary.

14.2 No Violation of Law: Litigation. It is not in violation of any applicable Law promulgated, or judgment entered by any federal, state, local or governmental authority which violations, individually or in the aggregate, would affect its performance of any obligations under this Agreement. There are no legal or arbitration proceedings or any proceeding by or before any governmental or regulatory authority or agency, now pending or (to the best knowledge of Contractor) threatened against Contractor that, if adversely determined, could have a material adverse effect on the financial condition, operations, prospects or business, as a whole, of Contractor, or its ability to perform under this Agreement.

14.3 Consents: Licenses. It is the holder of all federal, state, local or other governmental consents, licenses, permits, or other authorizations required to permit it to operate or conduct its business now and as contemplated by this Agreement.

14.4 No Breach. None of the execution and delivery of this Agreement, the consummation of the transactions herein contemplated or compliance with the terms and provisions hereof will conflict with or result in a breach of, or require any consent under, the organizational documents of Contractor, or any applicable law or regulation, or any order, writ, injunction or decree of any court, or any agreement or instrument to which Contractor is a party or by which it is bound or to which it is subject, or constitute a default under any such agreement or instrument.

14.5 Authorization. Contractor has all necessary power and authority to execute, deliver and perform its obligations under this Agreement; and the execution, delivery and performance by Contractor of this Agreement have been duly authorized by all necessary action on its part; and this Agreement has been duly and validly executed and delivered by Contractor and constitutes the legal, valid and binding obligation of Contractor enforceable in accordance with its terms, except as the enforceability thereof may be limited by bankruptcy, insolvency, reorganization or moratorium or other similar laws relating to the enforcement of creditors' rights generally and by general equitable principles.

14.6 Qualifications. It has: (i) examined this Agreement thoroughly and become familiar with their terms and (ii) full experience and proper qualifications to perform the Work.

## **ARTICLE 15 OWNER'S REPRESENTATIONS**

Owner represents and warrants that:

15.1 Company Standing. It is a public utility corporation duly formed, validly existing and in good standing under the laws of the State of New Hampshire and is or will be qualified to do business in all jurisdictions in which the nature of the business conducted by it makes such qualification necessary.

15.2 Litigation. There are no legal or arbitration proceedings or any proceedings by or before any governmental or regulatory authority or agency, now pending or (to the best knowledge of Owner) threatened against Owner that, if adversely determined, would have a material adverse effect on the financial condition, operations, prospects or business, as a whole, of Owner.

15.3 No Breach. None of the execution and delivery of this Agreement, the consummation of the transactions herein contemplated or compliance with the terms and provisions hereof will conflict with or result in a breach of, or require any consent under, the organizational documents of Owner, or any applicable law or regulation, or any order, writ, injunction or decree of any court, or any agreement or instrument to which Owner is a party or by which it is bound or to which it is subject, or constitute a default under any such agreement or instrument.

15.4 Authorization. Owner has all necessary power and authority to execute, deliver and perform its obligations under this Agreement; and the execution, delivery and performance by Owner of this Agreement has been duly authorized by all necessary action on its part; and this Agreement has been duly and validly executed and delivered by Owner and constitutes the legal, valid and binding obligation of Owner enforceable in accordance with its terms, except as the enforceability thereof may be limited by bankruptcy, insolvency, reorganization or moratorium or other similar Laws relating to the enforcement of creditors' rights generally and by general equitable principles.

## **ARTICLE 16    DEFAULT AND TERMINATION**

16.1 Default by Contractor. Each of the following shall constitute a default by Contractor under this Agreement:

(a) Termination for Contractor's Inability to Perform. If any of the events following occur:

- (i) any proceedings are instituted by or against Contractor seeking to adjudicate Contractor as a bankrupt or insolvent;
- (ii) Contractor makes a general assignment for the benefit of its creditors;
- (iii) a receiver is appointed on account of the insolvency of Contractor;
- (iv) Contractor files a petition seeking to take advantage of any other law relating to bankruptcy, insolvency, reorganization, winding up or composition or readjustment of debts; or
- (v) commencement of any legal proceeding against Contractor that, in Owner's opinion, may interfere with Contractor's ability to perform in accordance with this Agreement and, in the case of any such proceeding instituted against Contractor (but not by Contractor) such proceeding is not dismissed within thirty (30) Days of such filing,

the Owner may without prejudice to any other right or remedy Owner may have, terminate this Agreement effective immediately upon written notice of such termination to Contractor.

(b) Termination for Contractor's Failure to Perform. In the event that Contractor

- (i) fails, neglects, refuses or is unable at any time during the course of the performance of the Work to provide sufficient material, equipment, services, or labor to timely perform the Work,
- (ii) fails to make prompt payment of undisputed invoices due to Subcontractors for materials or labor, or otherwise repudiates or is in default with respect to any of its obligations to any Subcontractor,
- (iii) disregards or breaches any Laws,

- (iv) makes any false or misleading representation or warranty furnished hereunder or in any certificate or notice to Owner,
- (v) fails to correct any defective Work during performance of the Work or within the applicable Warranty Period of which it is advised in writing by Owner or any representative of Owner,
- (vi) otherwise is in default under a provision of this Agreement, and, if Contractor fails to diligently commence best efforts to correct such condition within fifteen (15) Days thereof and to complete the correction of such condition within thirty (30) Days (or such longer period as Owner, in its sole judgment, may permit),

then Owner may, without prejudice to any other right or remedy Owner may have under this Agreement and without notice to any surety or issuer of any bond, guaranty, or letter of credit, at Law or in equity, and after giving Contractor seven (7) Days notice thereof specifying the basis for the default and providing an opportunity to cure such default, terminate this Agreement and obtain the materials, Equipment and/to services that were to be provided by Contractor from another contractor and Contractor shall be liable for the amounts specified in Section 16.1(f) below..

(c) Termination for Contractor's Failure to Achieve Final Completion by the Guaranteed Final Completion Date. In the event Contractor fails to achieve Final Completion by its Guaranteed Final Completion Date, Contractor shall deliver to Owner within fourteen (14) Days a plan setting forth in detail Contractor's planned corrective action to achieve Final Completion at the earliest practical date (the "Final Completion Remedial Plan"). Contractor shall update the Final Completion Remedial Plan on a weekly basis and immediately upon the occurrence of any material change in the corrective action planned or the target date for Final Completion. If Contractor fails to achieve Final Completion within sixty (60) days after the original Guaranteed Final Completion Date or fails to achieve Final Completion within fifteen (15) Days after the date established in the Final Completion Remedial Plan, Owner may, without prejudice to any other right or remedy Owner may have under this Agreement, at Law or in equity and after giving Contractor seven (7) Days notice thereof, terminate this Agreement. This Subsection (c) shall not apply to the extent that any delay is excused pursuant to Article 6 or other provision of this Agreement.

(d) Owner's Rights. In the event that Owner elects to terminate this Agreement pursuant to Section 16.1(a) 16.1(b), or 16.1(c) hereof, Owner may employ any other person, firm or other entity (sometimes hereinafter referred to as "Replacement Contractors") to complete the Work by whatever method Owner may deem expedient, and may undertake such expenditures as in Owner's sole judgment will accomplish timely completion of the Work (including, without limitation, the entry into contracts without prior solicitation of proposals). In such event, Contractor shall not be entitled to receive any further payments under this Agreement except for payments for Work performed prior to such termination in accordance with the terms of this Agreement. In the event any termination under this Section 16.1 is subsequently determined by a court of competent jurisdiction to have been made without cause, such termination shall be deemed a termination for convenience under Section 16.2, and Contractor's rights under Section 16.2 shall be the sole and exclusive remedy concerning such termination.

(e) General Obligations. If Owner elects to terminate this Agreement pursuant to Section 16.1(a), 16.1(b) or 16.1(c), Contractor shall, at Owner's request and at Contractor's sole expense, perform the following services relative to the Work so affected:

- (i) Contractor shall immediately cease performing applicable Work, unless (i) otherwise directed by Owner or (ii) cessation would result in the violation of any Law or place at risk any portion of the

applicable Work or the health or safety of the public, Contractor, Subcontractor, Owner or any of their respective employees or other personnel or the environment;

(ii) Provide Owner or any Replacement Contractor with the right to make reasonable arrangements to use any and all of Contractor's equipment located at the Site purchased to be incorporated into the Work or to be used during the performance of the Work, or to rent or purchase such other equipment rented or brought to the Site for the purpose of performing the Work;

(iii) Prepare for Owner a written detailed inventory of all Equipment in use, in route to the Site, in storage at the Site or manufactured away from the Site, and on order;

(iv) Upon Owner's request and to the extent that title has not transferred earlier pursuant to this Agreement, Contractor shall promptly transfer title and deliver to Owner completed or partially completed Work and Contractor shall execute and deliver such documents and take all such actions as Owner may require for the purpose of vesting in Owner such ownership, rights and benefits of Contractor with respect to the applicable Work;

(v) Assign to Owner, or to any Replacement Contractor, all subcontracts and other contractual agreements (including warranties) as may be designated by Owner, all of which subcontracts and contractual agreements shall be so assignable, and make available all issued permits, licenses, authorizations, approvals, patents and other proprietary rights in accordance with Section 3.10 then held by Contractor pertaining to the Work;

(vi) Deliver to Owner all completed and in process documentation and other completed and in process deliverable work product;

(vii) Owner may elect to enter into the places of manufacture of Contractor and Subcontractors and, for purpose of completing the Work or enforcing these provisions, take possession of all materials and equipment belonging to or under the control of Contractor and may use them to finish the Work;

(viii) Remove from the Site all waste and rubbish and all such equipment as Owner may request; and

(ix) Deliver to Owner all detailed design and other information, including but not limited to all documents identified in Section 10.2(g), as may be reasonably requested by Owner for the completion the Work, subject to Contractor's reasonable requirements to protect proprietary information; and

(x) Supply any proprietary components needed for the completion the Work in accordance with the Scope of Work.

(f) Contractor Payment Obligations.

(i) If Owner terminates this Agreement pursuant to Sections 16.1(a), 16.1(b), or 16.1(c), Owner shall determine the total expenses incurred and accrued in completing all fixed price and/or lump sum components and/or in correcting any previously paid components of the Work including, without limitation, any costs of accelerated or expedited construction methods incurred in an attempt to mitigate delay, charges for administering subcontracts, and attorneys' fees and expenses of litigation associated with the termination and any other losses or damages suffered by Owner as the result of such termination. If such expenses exceed the balance of the fixed Contract Price or lump sum components of the Work that is unpaid at the time of termination, then Contractor shall be liable for

and shall pay to Owner the amount of such excess within thirty (30) Days following receipt of Owner's demand for such payment. If Contractor fails to make such payment, Owner shall be entitled to set off other amounts due to Contractor under this Agreement or under any other agreement between Contractor and Owner against such amount of excess and/or any other amount owed by Contractor under this Agreement.

(ii) Notwithstanding any such termination pursuant to Section 16.1(a), 16(b) or 16.1(c), Contractor shall continue to have all obligations (including warranty obligations for Work prior to such termination) to Owner under this Agreement, at Law, or in equity as if no termination had occurred. Contractor shall remain obligated to satisfy any obligations directly or indirectly arising out of or resulting from Contractors' default(s) and/or breach(es).

## 16.2 Termination for Convenience.

(a) Owner shall have the right to terminate this Agreement, and/or all or any portion of the Work for any reason or no reason, for Owner's convenience, upon at least three (3) Days prior written notice to Contractor specifying when such termination becomes effective. Upon such effective date, Contractor shall immediately cease performing the applicable Work, unless (i) Owner directs otherwise or (ii) cessation would result in the violation of any Law or place at risk any portion of the Work or the health or safety of the public, Owner, Contractor, Subcontractor or any of their respective personnel or other personnel working at the Site. Contractor shall also: (i) cancel or assign subcontracts and/or purchase orders to Owner; (ii) turn over all completed and in process documentation and other completed and in process work products to Owner; (iii) document the status of in process and planned Work for Owner; (iv) commence demobilization of any affected forces; and, (v) if requested by Owner, promptly remove from the Site all materials and equipment that have not been either fully or partially paid for by Owner.

Contractor shall also provide a written, detailed inventory of all materials and equipment in storage at the Site, in route to the Site, in storage or manufactured away from the Site, and on order from Subcontractors. Upon Owner's request and to the extent that title has not transferred, Contractor shall promptly transfer title and deliver to Owner completed or partially completed Work (including drawings, designs or other work product generated by the Work) and/or contract rights of Contractor relating to the Work, and Contractor shall execute and deliver such documents and take all such actions as Owner may require for the purpose of vesting in Owner such ownership, rights and benefits of Contractor with respect to the Work. If and as Owner so authorizes or permits in writing, Contractor shall sell at a price approved by Owner, or Contractor may retain at a price mutually agreed, equipment, materials, and supplies used in the Work. The proceeds of any such sale or the price agreed upon between Contractor and Owner, as applicable, shall be paid by, or credited to, Owner in such manner as Owner may direct for Owner's purposes. Within seven (7) Days of such effective date, Contractor shall promptly settle the liabilities and Claims arising out of the termination of subcontracts and purchase orders. After termination, Contractor shall cooperate with Owner to the fullest extent for the purpose of allowing Owner or its designee to fully perform all functions previously performed by Contractor under this Agreement.

(b) In the event of a termination for convenience under this Section 16.2, as full and final compensation for Contractor's services hereunder, Owner shall pay to Contractor, upon Contractor's satisfaction of all Agreement requirements, as applicable, with particular attention to the requirements, terms, conditions, and provisions of this Section 16.2, the sum of:

- (i) a percentage of the Contract Price equivalent to the percentage of the Work completed in compliance with this Agreement and based on the Project Schedule

through the effective date of termination, *less* that portion of the Contract Price previously paid to Contractor;

- (ii) reasonable demobilization expenses; provided further, that in no event shall Contractor be entitled to overhead expense and/or lost profits related to the demobilization; plus
- (iii) reimbursement of liabilities and claims arising out of the cancellation of subcontracts and orders not assigned to Owner pursuant to Section 16.2(a), *provided* that Owner has (i) approved any such Subcontractors and (ii) issued a Notice to Proceed with respect to the portion of the Project to which such subcontracts and orders relate;

*provided* that the payment due Contractor under this Section 16.2(a), when aggregated with all other previous or pending payments to Contractor hereunder, shall not exceed the Fixed Contract Price. Contractor shall promptly settle, on commercially reasonable terms, the liabilities and claims arising out of the cancellation of subcontracts and orders not assigned to Owner pursuant to Section 16.2(a). Contractor shall use its best efforts to minimize all such costs of termination. As a condition to Owner's obligation to reimburse Contractor for such costs, Contractor shall provide Owner with an itemized accounting of all termination costs.

(c) Notwithstanding any such termination for convenience pursuant to this Section 16.2, Contractor shall continue to have all obligations (including warranty obligations for Work prior to such termination) to Owner under this Agreement, at Law, or in equity as if no termination for convenience had occurred. Owner shall have the right to set off other amounts due to Contractor under this Agreement and/or to invoice Contractor for such amounts. Owner's payment of the sums required to be paid pursuant to this Article 16 shall result in full satisfaction of Owner's obligations to Contractor.

### 16.3 Suspension of the Work.

(a) General. Owner may at any time or from time to time, and for any reason, suspend performance of the Work or any portion thereof by giving notice to Contractor (a "Suspension Notice"). Such suspension shall continue for the period (the "Suspension Period") specified in the Suspension Notice. Notwithstanding any date for resuming Work stated in the Suspension Notice, at any time after the effective date of the suspension, Owner may require Contractor to resume performance of the Work within five (5) Days after Owner's notice to resume Work. Upon receipt from Owner of any Suspension Notice, Contractor shall, unless the notice requires otherwise:

- (i) Immediately discontinue the Work as directed by the Suspension Notice, as soon as the Work is brought to a safe condition;
- (ii) Place no further orders or subcontracts for Equipment with respect to suspended Work other than to the extent required in the Suspension Notice or as otherwise directed by Owner;
- (iii) Promptly make every reasonable effort to obtain suspension upon terms satisfactory to Owner of all subcontracts, to the extent they relate to performance of Work suspended; and
- (iv) Continue to protect and maintain the Work, including those portions that have been suspended.



(b) Extension of Time. In the case of any suspension under this Section 16.3, the Guaranteed Final Completion Date and the Project Schedule shall be extended by a period reasonably necessary to account for the time lost due to the suspension to the extent that the suspension has a material adverse effect on such Schedule, particularly Critical Path events.

(c) Compensation to Contractor. Owner will reimburse direct incremental costs incurred by Contractor with respect to the Work as a result of such suspension. All claims by Contractor for compensation under this Section 16.3 shall be invoiced to the Owner on a monthly basis, as they occur. Payments by Owner under this Section 16.3 shall be made in accordance with Section 7.4 hereof.

16.4 Right to Shut Down. Without prejudice to any other rights that Owner may have under this Agreement at Law, or in equity, if, in the sole and exclusive judgment of Owner:

(a) Contractor fails to strictly comply with any requirement(s) or provision(s) of the Specifications and/or Law with respect to the Work; and/or

(b) any acts or omissions of Contractor (i) result in or are reasonably likely to result in a disruption of the operation of the Generating Station or of service to Owner's customers, and/or (ii) result in a condition that violates any Law or places at risk any portion of the Work or the health or safety of public, employees of Owner, Contractor, a Subcontractor or other contractor or the environment,

then Owner shall have the right, at its sole and exclusive discretion, to immediately and temporarily shut down Contractor's operation(s) affected thereby unless and until Owner is assured to its reasonable satisfaction that subsequent operations will comply strictly with such requirements, terms, conditions, and provisions, and Owner shall not be liable by reason thereof for any Claim or Dispute or extra compensation or time extension or payment reimbursement resulting therefrom or otherwise. The provisions of this Section 16.4 are in addition to any rights that Owner may otherwise have under this Agreement, at Law, and/or in equity.

16.5 Right to Supplement or Withdraw. In the sole and exclusive judgment of Owner, and without prejudice to any other rights that Owner may have under this Agreement, at Law, or in equity, if Contractor should fail at any time to perform the Work with promptness and diligence according to the requirements of this Agreement, or if Contractor should refuse or fail at any time to supply personnel, supervision, or equipment, materials, or supplies of the proper quantity or quality for the Work, then (i) Owner, by itself or through any other contractor(s), subcontractor(s), or supplier(s), after giving written notice thereof to Contractor and a reasonable opportunity to cure, may supplement the Work by providing such additional labor and/or equipment, materials, and/or supplies as it deems necessary to rectify Contractor's default or to complete the Work by the date fixed for its completion; or (ii) Owner may, after giving written notice thereof to Contractor, withdraw any portion of the Work designated by Owner that, in Owner's sole and exclusive judgment, Contractor will be unable to complete by the date fixed for such completion, due consideration having been given to the progress of the Work at the date such notice is given, and complete the Work on such withdrawn portion by itself or through any other contractor(s), subcontractor(s), or supplier(s). With respect to any Work supplemented or withdrawn by Owner:

(a) Contractor shall fully cooperate with Owner and with any other contractor(s), subcontractor(s), and supplier(s), as applicable, and carefully fit and coordinate its own Work with the work of Owner and any other contractor(s), subcontractor(s), and supplier(s).

(b) If the cost to Owner of completing any fixed price, lump sum or previously paid component of the withdrawn portion of the Work, including any and all amounts previously paid to Contractor on such

component, Claims, losses, damages, Owner overhead and supervision expenses, reasonable attorneys' fees and expenses of litigation, if any, and other associated costs and expenses of whatsoever kind or nature is more than the earned value of the Work on such component properly performed by Contractor in compliance with all requirements of this Agreement prior to the effective date of withdrawal (based on a percentage completed methodology), Contractor shall pay such excess to Owner together with the amount(s) of all other damage(s) suffered by Owner as a result of Contractor's failure to perform or, at Owner's sole and exclusive discretion, Owner may withhold such amount(s), in whole or in part, from any payment otherwise due and payable to Contractor. The cost(s) and expense(s) incurred by Owner and the amount(s) of Claim(s), damage(s), and loss(es) incurred by reason of Contractor's default(s) and/or breach(es) and/or violation(s) shall be certified by Owner and, as certified, shall control as between the Parties and any surety or issuer associated with any bond, guaranty, or letter of credit. Contractor shall not be entitled to receive, and hereby irrevocably waives and releases, any further payment(s) on account of such withdrawn Work.

(c) Contractor shall reimburse Owner in full for any fixed price, lump sum or previously paid component of the Work that is supplemented pursuant to the provisions of this Section 16.5. Owner shall have the right to set off against other amounts due to Contractor hereunder and/or to invoice Contractor for such amount. Owner shall have no obligation to Contractor by reason of such supplementation or otherwise, including any warranty obligation. Notwithstanding such supplemental services, Contractor shall continue to have all obligations (including warranty obligations) to Owner under this Agreement, at Law, and in equity as if no supplementation had occurred, and Contractor shall comply with the provisions of this Section 16.5 applicable to supplementation.

(d) For Work that is withdrawn pursuant to this Section 16.5, as of the effective date of withdrawal, Owner shall have no further obligation to Contractor with respect to the withdrawn portion of the Work. As of such effective date, Contractor shall: (i) cooperate with Owner to the fullest extent for the purpose of allowing Owner or its designee to fully perform such withdrawn Work; and (ii) have no other obligation to Owner with respect to the withdrawn portion of the Work except for satisfying any and all obligations directly or indirectly arising out of, resulting from, or related to Contractor's default(s) and/or breach(es) and/or violation(s), complying with all requirements, terms, conditions, and provisions of this Section 16.5 and such other obligations that Contractor has under this Agreement as by their terms, expressed or implied, are to continue after completion of the Work, including Contractor's warranty and indemnity obligations, which obligations shall not be reduced by reason of Owner's withdrawal of Work pursuant to this Section 16.5.

(e) Owner's judgment forming the basis for any action taken or to be taken under this Section 16.5 shall be initially binding as between the Parties and any surety or issuer of any bond, guaranty, or letter of credit, provided that Contractor may submit a dispute concerning such judgment for resolution in accordance with the dispute resolution provisions of Article 18. Owner's cost in supplementing or withdrawing and completing or abandoning a portion of the Work shall be certified by Owner and, as certified, shall be initially binding as between the Parties and any surety or issuer of any bond, guaranty, or letter of credit, provided that Contractor may submit a dispute concerning such certified cost for resolution in accordance with the dispute resolution provisions of Article 18.

(f) The provisions of this Section 16.5 are in addition to any rights that Owner may otherwise have under this Agreement, at Law, or in equity with respect to the facts and circumstances that give rise to supplementing and/or withdrawal of the Work or any portion thereof.

## **ARTICLE 17 INDEMNITIES**

17.1 General. Contractor agrees to defend, indemnify, and hold Owner and Program Manager, and their Affiliates and their respective officers, directors, trustees, employees, subcontractors, agents, consultants and shareholders (collectively, the "*Indemnified Persons*") harmless from, any liability, obligation, loss, cost, damage, judgment, adjudication, arbitration decision, penalty (including fees and fines), tax, or expense (including court costs, attorneys' fees and/or enhanced oversight expenses) from (i) all third party claims, obligations and liabilities (and all costs and expenses including attorneys' fees incurred in connection therewith) to the extent arising out of or related to any negligence, gross negligence, recklessness, or willful misconduct of Contractor, and (ii) all claims for death, disease, bodily injury and/or property damage including, without limitation, claims from Contractors' employees and Subcontractors' employees that may arise in connection with the Work or that occur during Contractor's performance of the Work, regardless of conditions of the Site, including all costs and expenses including attorneys' fees incurred in connection therewith.

17.2 Contractor shall indemnify, defend and hold harmless each Indemnified Person from any and all liabilities, penalties, damages, Claims, actions or proceedings, including, *inter alia*, any unlawful employment practice of Contractor, including employment discrimination, wrongful discharge, termination of employment or violation of state or federal statutes or regulations relating to employment practices, OSHA violations, environmental violations, etc., that (i) are caused by the acts or omissions of Contractor, its employees, agents, Subcontractors, or those under its or their control, or (ii) arises out of or is in any way connected with the performance of this Agreement or the Work.

17.3 Contractor shall indemnify, defend and hold harmless each Indemnified Person from any and all liabilities, penalties, damages, Claims, actions or proceedings as a result of or relating to any allegation that any portion or all of the Work, or any use thereof for any purpose constitutes an infringement of any patent, copyright, trademark or other proprietary interest except to the extent that such liabilities, penalties damages, Claims, actions and/or proceedings arise from plans, specifications or other material or documents provided by Owner. If an Indemnified Person provides Contractor a notice of a Claim of infringement and/or if the use of all or any portion of material, equipment or Information used in connection with the Work is enjoined due to a Claim of infringement, Contractor shall promptly and at its sole expense either (i) procure for Owner the right to continue using the affected property or (ii) replace the affected property with non-infringing and functionally equivalent property, (iii) modify the affected property so that it becomes non-infringing and functionally equivalent, or (iv) take such other action as is necessary to ensure Owner's uninterrupted use of the affected property.

17.4 Contractor shall also cause any Subcontractor working at the Site, to the extent not prohibited by Law, to indemnify, defend and hold all Indemnified Persons and Contractor and their respective principals, officers, partners, agents and employees harmless from all claims, damages, fines, penalties, liabilities, actions, or proceedings that may arise in connection with Subcontractor's performance of the Work, including, but not limited to, claims from any Subcontractor employees, to the same extent required of Contractor by this Article 17.

17.5 Contractor's and all Subcontractor's obligations to indemnify and hold Indemnified Persons harmless shall not be limited by a limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or Subcontractor under worker's compensation acts, disability benefit acts or other employee benefit acts. Where personal injury, death, disease or loss of or damage to property arises from a cause or causes attributable jointly to the negligence of one or more of Owner, Contractor, and/or any Subcontractor, each indemnitor's

duty of indemnification shall be in proportion to its allocable share of such negligence.

17.6 (a) Owner and Contractor hereby waive all rights of subrogation against each other, and against all Contractors and Subcontractors enrolled in the OCIP, in connection with any and all events, occurrences, claims, losses and/or payments arising from or in connection with the performance of the Work.

(b) Contractor shall cause each of its Subcontractors, in their respective subcontracts, to waive all rights of subrogation against Owner, and against Contractor, all Other Contractors and all other Subcontractors enrolled in the OCIP, in connection with any and all events, occurrences, claims, losses and/or payments arising from or in connection with the performance of the Work.

(c) All insurance provided by Contractors and/or Subcontractors shall be endorsed to waive the insurer's rights of subrogation against Owner. All insurance provided by Contractors and/or Subcontractors enrolled in the OCIP shall be endorsed to waive the insurer's rights of subrogation against all Other Contractors and other Subcontractors enrolled in the OCIP.

## **ARTICLE 18 DISPUTE RESOLUTION**

18.1 Negotiation Between Executives. The Parties shall attempt in good faith to resolve any dispute arising out of or relating to this Agreement and/or the Work, promptly by negotiation between executives who have authority to settle the controversy and who are at a higher level of management than the individuals with direct responsibility for administration of this Agreement. Any Party may give the other Party written notice of any dispute not resolved in the normal course of business. Such notice shall include: (a) a statement of that Party's position and a summary of arguments supporting that position; and (b) the name and title of the executive who will be representing that Party and of any other Person who will accompany the executive. Within fifteen (15) days after delivery of the notice, the receiving Party shall respond with: (i) a statement of that Party's position and a summary of arguments supporting that position; and (ii) the name and title of the executive who will represent that Party and of any other Person who will accompany the executive. Within thirty (30) days after delivery of the initial notice, the executives of both Parties shall meet at a mutually acceptable time and place, and thereafter as often as they reasonably deem necessary, to attempt to resolve the dispute. All reasonable requests for information made by one Party to the other will be honored. All negotiations pursuant to this Article 18 are confidential and shall be treated as compromise and settlement negotiations for purposes of applicable Law and rules of evidence.

18.2 Mediation. If the Dispute has not been resolved by negotiation within forty-five (45) days after the disputing Party's notice, or if the Parties failed to meet within thirty (30) days, each as contemplated in Section 18.1, the Parties shall endeavor to settle the dispute by mediation under the then current CPR Mediation Procedure; provided, however, that if one Party fails to participate as provided herein, the other Party can initiate mediation prior to the expiration of the forty-five (45) days. Unless otherwise agreed, the Parties will select a mediator from the CPR Panels of Distinguished Neutrals.

18.3 Arbitration. Any Dispute arising out of or relating to this Agreement or the Work, including the breach, termination or validity thereof, which has not been resolved by a non-binding procedure as provided herein within ninety (90) days of the initiation of such procedure, shall be finally resolved by arbitration in accordance with the then current CPR Rules for Non-Administered Arbitration by a sole arbitrator, for disputes involving amounts in the aggregate under Three Million Dollars (\$3,000,000), or three arbitrators, for disputes involving amounts in the aggregate equal to or greater than Three Million Dollars (\$3,000,000), of whom each Party shall designate one in accordance with the "screened" appointment procedure provided in CPR Rule 5.4; provided, however, that if either Party will not participate in a non-binding procedure, the

other may initiate arbitration before expiration of the above period. The arbitration shall be governed by the Federal Arbitration Act, 9 U.S.C. §§ 1-16, and judgment upon the award rendered by the arbitrator(s) may be entered by any court having jurisdiction thereof. The place of arbitration shall be Manchester, New Hampshire.

18.4 Powers of Arbitrator(s). The arbitrator(s) are not empowered to award damages in excess of compensatory damages and each Party expressly waives and foregoes any right to punitive, exemplary or similar damages unless a statute requires that compensatory damages be increased in a specified manner. All costs of the arbitration shall be paid equally by the Parties, unless the award shall specify a different division of the costs. Each Party shall be responsible for its own expenses, including attorney's fees. Both Parties shall be afforded adequate opportunity to present information in support of its position on the dispute being arbitrated. The arbitrator may also request additional information from the Parties.

18.5 Deferral. The Parties to the Dispute may agree to defer such arbitration proceeding, without prejudice to either Party, pending the resolution of a particular Claim.

18.6 Continued Performance. Unless otherwise directed by Owner, Contractor shall continue performance of the Work in conformance with the requirements of this Agreement notwithstanding the existence of any Claim, Dispute and/or proceeding between the Parties. Nothing herein shall prejudice, impair or otherwise prevent Owner from receiving equitable relief, including an order for specific performance and/or an injunction, from an appropriate governmental authority, pending the conclusion of any mediation and/or arbitration proceeding.

18.7 Compelled Arbitration. Each Party will proceed in good faith to conclude the arbitration proceeding as quickly as reasonably possible. If a Party refuses to participate in an arbitration proceeding as required by this Agreement, the other Party may petition any Governmental Authority having proper jurisdiction for an order directing the refusing Party to participate in the arbitration proceeding. All costs and expenses incurred by the petitioning Party in enforcing the terms of this Section 18.7 will be paid for by the refusing Party.

18.8 Related Parties.

(a) Owner shall have the right, but not the obligation, to join or otherwise require others (including any Subcontractor, any other contractor working on the Project and/or any of their respective subcontractors) to participate as parties and/or witnesses, in the sole discretion of Owner, in any dispute resolution proceeding hereunder (including any negotiation between executives, mediation and/or arbitration). If Owner, in its sole discretion, exercises such right, then such additional party and/or parties shall be an equal participant in, and subject to all rules and requirements of, such proceeding; provided that if such additional participation involves an arbitration proceeding for disputes involving amounts in the aggregate equal to or greater than Three Million Dollars (\$3,000,000), then Owner shall appoint one of the three arbitrators, and one arbitrator shall be jointly appointed by Contractor and all of such additional parties, in each case pursuant to the screened procedure referenced in Section 18.3.

(b) Owner shall have the right, but not the obligation, to require Contractor to join or otherwise participate as a party and/or witness, in the sole discretion of Owner, in any dispute resolution proceeding (including any negotiation between executives, mediation and/or arbitration) involving the Project, including any such proceeding between Owner and any other contractor. If Owner, in its sole discretion, exercises such right, then Contractor shall act in good faith, coordinate and cooperate with Owner and the other parties to the proceeding, and otherwise proceed as though such proceeding involved a Dispute under this Agreement. Contractor hereby consents to being so joined and waives and releases, to the fullest extent permitted by Law,

any objection, right or other claim that Contractor cannot be compelled or otherwise has no obligation to participate in any such proceeding. Contractor shall solely bear all costs and expenses incurred in connection with such participation.

(c) If Contractor refuses to comply with this Section 18.8 in whole or in part, Owner may petition any Governmental Authority having proper jurisdiction for an order directing Contractor to so comply. All costs and expenses incurred by Owner in enforcing such participation will be paid by Contractor.

18.9 Subcontractors. Without limiting the provisions of Article 15, Contractor shall incorporate and require the incorporation of the provisions of this Article 18, specifically referencing Owner's right under Section 18.8(a), into all agreements with Subcontractors at any tier. Without limiting the provisions hereof, each Subcontractor shall (a) consent to being joined as a party and/or a witness in any dispute resolution proceeding hereunder and/or related hereto; and (b) waive and release, to the fullest extent permitted by Law, any objection, right or other claim that such Subcontractor cannot be compelled or otherwise has no obligation to participate in any such proceeding, as a party, witness or otherwise. If a Subcontractor refuses to comply with this Article 18 in whole or in part, Owner may petition any Governmental Authority having proper jurisdiction for an order directing such Subcontractor to so comply. All costs and expenses incurred by Owner in enforcing such participation will be paid by such Subcontractor.

## **ARTICLE 19 MISCELLANEOUS PROVISIONS**

19.1 Entire Agreement. This Agreement contains the entire understanding of the Parties with respect to the subject matter hereof and reflects the prior agreements and commitments with respect thereto. There are no other oral understandings, terms or conditions and neither Party has relied upon any representation, express or implied, not contained in this Agreement.

19.2 Amendments. No change, amendment or modification of this Agreement shall be valid or binding upon the Parties hereto unless such change, amendment or modification shall be in writing and duly executed by both Parties hereto.

19.3 Joint Effort. Preparation of this Agreement has been a joint effort of the Parties and the resulting document shall not be construed more severely against one of the Parties than against the other.

19.4 Captions; Interpretation. The captions contained in this Agreement are for convenience and reference only and in no way define, describe, extend and/or limit the scope of intent of this Agreement or the intent of any provision contained herein. Reference to a given Article, Section or Appendix is reference to an Article, Section, or Appendix of this Agreement, unless otherwise specified.

19.5 Notice. Any notice, demand, offer, or other instrument required or permitted to be given pursuant to this Agreement shall be in writing signed by the Party giving such notice and shall be hand delivered or sent by registered letter, overnight courier, telefax, or telex to the other Parties at such address as set forth below.

(a) If delivered to Owner:

PSNH  
Michael Hitchko  
Project Manager  
PSNH – Merrimack Station  
97 River Road  
Bow, NH 03304

PSNH

Rick Osak  
Sourcing Manager  
107 Selden Street  
Berlin, CT 06037

URS Washington Division

Dennis Pennline, Project Manager  
510 Carnegie Center  
Princeton, New Jersey 08540

(b) If delivered to Contractor:

E S Boulos Company  
45 Bradley Drive  
Westbrook, Maine 04092  
Attn: Denis St. Pierre, Director

Each Party shall have the right to change the addressee and/or place to which notice shall be sent or be delivered by similar notice sent in like manner to the other Party. The effective date of any notice issued pursuant to this Agreement shall be as of the addressee's receipt of such notice.

19.6 Severability. The invalidity of one or more phrases, sentences, clauses, sections or articles contained in this Agreement shall not affect the validity of the remaining portions of the Agreement so long as the material purposes of this Agreement can be determined and effectuated.

19.7 Confidentiality.

(a) Except as otherwise required to be disclosed by Owner for the development or financing of the Project, each Party agrees to hold in confidence for a period of six (6) years from the date of receipt, any confidential information supplied by the other Party and designated in writing as confidential by such other Party, including this Agreement ("Confidential Information"). Contractor further agrees, to the extent requested by Owner, to require its Subcontractors, vendors, suppliers and employees to enter into appropriate nondisclosure agreements relative to such Confidential Information, prior to the receipt thereof.

(b) Each Party acknowledges that it may be necessary to disclose Proprietary Information to the other. The Parties intend that the designation of Contractor's Information as Proprietary Information shall be limited to Information that has unique commercial value and was developed independently from the Work. Except to the extent described in Section 19.7(c) below, or as otherwise agreed to by the Parties, each Party agrees not to disclose to Third Parties or to publish any Proprietary Information of the other that is disclosed, reduced to writing, and conspicuously marked as "Proprietary Information". However, if Owner, within one hundred eighty (180) days of receipt of Proprietary Information, disputes the proprietary nature of such Information by written notice to Contractor, the Parties shall consult to resolve such Dispute. Each Party shall advise its employees, consultants and those under its control of these requirements for confidentiality with regard to Proprietary Information.

(c) Owner shall have the right, without Contractor's approval, to disclose Contractor's Proprietary Information to the limited extent required (i) for financing, acquisition or conveyance of ownership share,

licensing, construction, operation, maintenance or repair of the facility at which the Work is performed, and (ii) to comply with any Law. If Owner discloses Contractor's Proprietary Information to any Governmental Authority, Owner shall, to the extent it does not violate or fail to comply with any such request or order, advise Contractor prior to disclosure and, at Contractor's sole expense, cooperate in any effort by Contractor to minimize the amount of Proprietary Information disclosed, secure confidential treatment of such Proprietary Information, or seek permission from such Governmental Authority to revise the Proprietary Information in a manner consistent with Contractor's interests, the interests of Owner, and in a manner that meets the requirements of the applicable Governmental Authority.

(d) Any Information transmitted to either Party will not be deemed Proprietary Information if that Information is:

(i) In the receiving Party's possession without restriction on disclosure prior to disclosure hereunder;

(ii) At the time of disclosure, generally available to the public without restriction on disclosure;

(iii) After disclosure, generally available to the public without restriction on disclosure, by publication or otherwise, through no fault of receiving Party; or

(iv) After the time of disclosure, received from a Third Party who imposes no obligation of confidentiality and who, insofar as the receiving Party can reasonably determine, did not acquire any such Information directly or indirectly from the other party subject to requirements of confidentiality.

(e) Contractor shall notify Owner as soon as possible in writing if any Proprietary Information provided to Owner has been downgraded to a non-proprietary status.

(f) The provisions of this Section 19.7 shall also apply to information that a Party identifies and establishes in writing to the other as having been obtained from Third Parties under agreements for confidentiality.

(g) Contractor shall preserve and protect from damage or loss all Project Information in its care, custody or control for a period of six (6) years following Final Completion of the Work ("Document Retention Period") or return such Project Information to Owner in a form acceptable to Owner. Contractor shall use its best efforts to include equivalent provisions in its agreements with Subcontractors under which Subcontractors agree to comply with these requirements concerning preservation of Project Information. Contractor shall not destroy any Project Information (except for preliminary or draft versions) prior to the expiration of the Document Retention Period absent Owner's prior written consent. Preliminary or draft versions of Project Information may be destroyed (in a secure fashion that protects against information access from destroyed media remnants) as appropriate upon completion of subsequent drafts or final versions. All Project Information supplied by or on behalf of Owner or Owner's Other Contractors to Contractor shall remain the exclusive property of Owner, regardless of where it is stored. Owner reserves the right to access Project Information at any time while such Project Information is in Contractor's possession and such Project Information shall be provided to Owner on a timely basis whenever requested. Contractor agrees to access or disclose Project Information in its possession only for the purposes of performing the Work and to operate or maintain its Project Information systems. Contractor will take appropriate and Owner-approved measures and precautions to protect against unauthorized access or disclosure of Project Information.

(h) In the event that Contractor is requested or required by legal or regulatory authority to disclose any Project Information, Contractor shall promptly notify Owner of such request or requirement prior to



disclosure so that Owner may seek an appropriate protective order or other limitation on disclosure and/or waive compliance with the requirements concerning Project Information under this Agreement. In addition, Contractor agrees to furnish only that portion of the Project Information that it reasonably determines, in consultation with counsel, is consistent with the scope of the demand, and to exercise reasonable efforts to obtain assurance that confidential treatment will be accorded such Project Information.

(i) The provisions of this Section 19.7 shall survive the termination of this Agreement and shall bind the Parties and their successors and assigns for a period of six (6) years after initial disclosure of Proprietary Information. The Parties acknowledge and agree that the breach or threatened breach of this Section 19.7 on the part of a Party will cause irreparable harm, injury and damages to the Party which shall entitled the Party to seek injunctive relief, without first posting a bond, to secure the enforcement of this Section 19.7.

#### 19.8 Assignm ent.

(a) Without the prior consent of Contractor, Owner may assign all or part of its right, title, and interest in this Agreement to any affiliate of Owner, any successor to Owner's business and assets (whether by merger, acquisition or otherwise) and to any financially responsible entity that agrees to be bound by the term hereof.

(b) Contractor shall not assign this Agreement in whole or in part except upon written consent of Owner, which may be granted or withheld in Owner's sole discretion; *provided* that the foregoing shall not preclude Contractor from engaging Subcontractors in accordance with Section 2.2. Any purported sale, assignment or other transfer of this Agreement, in whole or in part, or of any of the Work to be performed hereunder, without the prior written consent of Owner shall be null, void, and of no force or effect and shall be, at the sole and exclusive election of Owner, grounds for immediate termination of this Agreement, in whole or in part, by reason of an Event of Default. Contractor shall not assign its rights to any monies due but unpaid under the terms of this Agreement.

19.9 No Waiver. Any failure of any Party to enforce any of the provisions of this Agreement or to require compliance with any of its terms at any time during the dependency of this Agreement shall in no way affect the validity of this Agreement, or any part hereof, and shall not be deemed a waiver of the right of such Party thereafter to enforce any and each such provision.

#### 19.10 Governing Law; Relief.

(a) This Agreement and the rights and duties of the Parties hereunder and thereunder shall be governed by and construed, enforced and performed in accordance with the laws of the State of New Hampshire, without regard to its principles governing conflicts of law.

(b) Contractor acknowledges and agrees that Owner would be damaged irreparably in the event any of the provisions of this Agreement are not performed in accordance with their specific terms or otherwise are breached. Accordingly, Contractor agrees that Owner shall be entitled to an injunction or injunctions to prevent breaches of the provisions of this Agreement and to enforce specifically the terms and provisions of this Agreement in any action instituted in connection herewith, in addition to any other remedy to which it may be entitled under the terms of the Agreement,, at Law, or in equity.

(c) THE PARTIES HEREBY CONSENT TO THE EXCLUSIVE JURISDICTION OF THE COURTS OF THE STATE OF NEW HAMPSHIRE FOR THE PURPOSES OF ALL LEGAL PROCEEDINGS ARISING OUT OF OR RELATING TO THIS AGREEMENT, AND THE TRANSACTIONS CONTEMPLATED HEREBY. EACH PARTY HEREBY IRREVOCABLY

WAIVES AND RELEASES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, (i) ANY OBJECTION TO THE VENUE OF ANY SUCH PROCEEDING BROUGHT IN SUCH A COURT; AND (ii) ANY CLAIM THAT ANY SUCH PROCEEDING BROUGHT IN SUCH COURT HAS BEEN BROUGHT IN AN INCONVENIENT FORUM.

**(d) CONTRACTOR HEREBY WAIVES AND RELEASES ITS RIGHT TO CLAIM A TRIAL BY JURY WITH RESPECT TO ANY ACTION BY OR AGAINST OWNER ARISING HEREUNDER.**

19.11 Successors and Assigns. This Agreement shall be binding upon the Parties hereto, their successors and permitted assigns.

19.12 Appendices. All Appendices and Attachments referenced in this Agreement shall be incorporated into this Agreement by such reference and shall be deemed to be an integral part of this Agreement.

19.13 Obligations. Nothing contained in this Agreement shall be construed as constituting a joint venture or partnership between Contractor and Owner.

19.14 Assistance. Contractor shall provide such assistance as Owner may reasonably request in connection with the Project. Contractor agrees that it will make available to Owner information relating to the status of the Work, the status of any required licenses and permits, and such other matters as Owner may reasonably request. Contractor shall promptly respond to requests for information regarding the qualifications, experience, past performance, and financial condition of Contractor and its Affiliates. Contractor shall furnish such consents to assignment, certifications and representations and opinions of in-house counsel, as may be reasonably requested by Owner in connection with any financing.

19.15 Further Assurances. Contractor and Owner agree to provide such information, execute and deliver any instruments and documents and to take such other actions as may be necessary or reasonably requested by the other Party that are not inconsistent with the provisions of this Agreement and that do not involve the assumptions of obligations other than those provided for in this Agreement, in order to give full effect to this Agreement and to carry out the intent of this Agreement.

19.16 Priority. In the event of any conflict, ambiguity or inconsistency within the various provisions of this Agreement, the Appendices and other incorporated or associated documentation, the order of precedence shall be as follows, except as otherwise designated in advance and in writing by Owner:

- (i) the body of this Agreement;
- (ii) the Specifications;
- (iii) the Appendices; and
- (iv) any documents furnished or issued by Owner to Contractor in accordance with this Agreement (including duly executed Change Order Request and Authorization Forms).

In addition, the more stringent requirements concerning a particular task or activity that are set out in the Specifications shall be deemed to apply in the event of any inconsistency, conflict, or ambiguity between or among two or more requirements therein.

19.17 Omitted Intentionally.

19.18 Third Party Beneficiary. Contractor agrees that nothing in this Agreement creates any contractual relationship between (1) Program Manager and Contractor, (2) between Owner and any

Subcontractor, or (3) between any Persons other than Owner and Contractor. Contractor agrees that nothing in any agreement between Owner and Program Manager creates any rights in favor of Contractor and neither Contractor nor any Subcontractor is a third party beneficiary of any such agreement or of any obligations of the Program Manager.

19.19 Omitted Intentionally.

19.20 Presumption of Authority. Owner may conclusively presume and rely upon any instrument executed, or instruction given, by the Site Project Manager acting as Contractor and such instrument or instruction shall be authorized, regular and binding upon Contractor without any need for inquiry by Owner.

19.21. Omitted Intentionally.

19.22 Right to Audit. (a) Owner shall have the right, directly or through its designated representatives, to inspect, audit and make copies of all of Contractor's and any Subcontractor's books, records, correspondence, receipts, vouchers and memoranda relating to or affecting this Agreement and or the Work. Contractor and any Subcontractors shall preserve all such records for a period of six (6) years following Final Completion or final payment, whichever is later, and shall provide access to the principal office of Contractor or Subcontractor, as the case may be, in the United States for such audit during normal business hours. Contractor shall provide for such right to audit by Owner in all subcontracts with Subcontractors relating to this Agreement.

(b) Verification; Access. Without limiting any of its rights and remedies hereunder, at Law, and/or in equity, Owner, directly and/or through its designated representatives, shall have (i) the right to conduct verification such as counting employees at the Site, witnessing the distribution of payroll, and verifying information and amounts through interviews and written confirmation with Contractor employees, field and agency labor, and Subcontractors; and (ii) reasonable access to Contractor's facilities, including the right to interview all current or former employees and to discuss matters pertinent to the performance of this Agreement.

19.23 Survival. All agreements, representations, warranties and covenants made by the Parties herein and in the certificates or other documents delivered pursuant hereto shall be considered to have been relied upon by the other Party and shall survive Final Completion. All requirements, terms, conditions, and provisions that by their nature are incapable of being performed within the period of performance hereof shall survive cancellation, termination, or expiration of this Agreement, including, but not limited to, all of Contractor's non-disclosure obligations, warranties, and indemnities for the benefit of Owner.

19.24 Rights and Remedies Cumulative. Any right(s) and remedy(ies) of Owner as set forth in any provision of this Agreement is (are) cumulative and is (are) in addition to any other right(s) and remedy(ies) of Owner under any other provision of this Agreement, and otherwise at Law or in equity.

19.25 Multiple Counterparts. This Agreement may be executed in multiple counterparts, each of which shall constitute an original.

[End of Page]

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed as of the date first written above.

E.S. BOULOS COMPANY

By: Denis R St. Pierre  
Name: DENIS R ST PIERRE  
Title: DIRECTOR

NORTHEAST UTILITIES SERVICE COMPANY,  
Acting as Agent for Public Service Company of New Hampshire

By: Elizabeth A. Maldonado  
Name: Elizabeth A. Maldonado  
Title: Director-Purchasing

# Clean Air Project Public Service Company of New Hampshire

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## Appendix II

### Introduction

Northeast Utilities Service Company (NUSCO), on behalf of Public Service Company of New Hampshire, (Owner) has hired URS Energy and Construction as Program Manager to oversee the complete engineering, design, procurement, construction and commissioning of an FGD System to reduce mercury and sulfur emissions from two Babcock and Wilcox pressurized, cyclone fired units at the Generating Station. The Generating Station's Unit 1 (MK1) was installed in 1960 and has a gross generation of 122 MW; Unit 2 (MK2) was installed in 1968 and has a gross generation of 336 MW. The Generating Station currently controls sulfur emissions by burning lower sulfur coal blends. MK1 and MK2 were originally designed to burn 3% sulfur coals and now burn 1 to 1.4 percent sulfur coal blends. MK1 and MK2 have been retrofit with Selective Catalytic Reduction systems (SCR) for NO<sub>x</sub> control and supplemental precipitators for particulate control. A wet FGD system will be installed to provide mercury capture to meet the requirements of New Hampshire Law.

The New Hampshire State law requires the installation of a wet flue gas desulfurization system at coal generating facilities to achieve the mandatory mercury emissions reductions no later than July 1, 2013. The legislation amends the New Hampshire Clean Power Act (NHCPA) (also known as the Multiple Pollutant Reduction Program, RSA 125-O), which was enacted in July of 2002. Also relevant to this Project, the NHCPA mandates a reduction in the sulfur dioxide credits available to the Generating Station to comply with Federal Acid Rain requirements; thus, reductions in SO<sub>2</sub> emissions are also critical to the Generating Station.

The project has been approved by PSNH management and the construction air permit modeling/application is in preparation with an anticipated approval by the end of 2008. Construction is scheduled to start in 2008 with project completion by the end of 2012.

## **Appendix III**

**Omitted Intentionally**



## Merrimack Station – Clean Air Project

### Project Milestone Schedule

### BOP Electrical Installation

#### Appendix IV

- 1.) BOP Electrical Installation - Contract Award and Notice to Proceed ..... 0'F9857H98'2
- 2.) Mobilize.....0'F9857H98'2
- 3.) Engineering & Design Deliverables.....per Appendix I, Attachment G
- 4.) Design Schedule – BOP Electrical Installation Drawings IFC Issue Date

Drawings	IFC Issue date
All Drawings (except as noted below) Final Conduit & Cable Listing Termination drawings Truck Wash Electrical Drawings	With Award < REDACTED > < REDACTED > < REDACTED >

#### 5.) Equipment Fabrication Delivery Milestones

Item	Date
Medium Volt Switchgear	< REDACTED >
Low Volt Switchgear	< REDACTED >
Low Volt MCC's (9)	< REDACTED >
Cable Bus	< REDACTED >
DC System	< REDACTED >
UPS	< REDACTED >
DCS – I/O Cabinets DCS – DCS Equipment & Software	< REDACTED > < REDACTED >
CEMS (shelter & probes)	< REDACTED >

## 6.) Area Availability Dates

Item	Date
Cable Bus Bridge Installed	< REDACTED >
FGD Building Electrical Room Ready to Receive Equipment	< REDACTED >
Unit # 1 Booster Area Steel Released	< REDACTED >
Unit # 2 Booster Area Steel Released	< REDACTED >
Ductwork & Duct Support Steel to unit 1 & 2 Stacks Released	< REDACTED >
Service Water Cable Bridge Installed	< REDACTED >
Service Water Pump House Erected	< REDACTED >
Service Water Pump House Equipment Installed	< REDACTED >
Truck Wash Building Erected	< REDACTED >
Truck Wash Equipment Installed	< REDACTED >
Booster Fan Enclosure Complete	< REDACTED >
FGD Building Released for Tray Installation	< REDACTED >
L4 & L5 Conveyor Tray Available	< REDACTED >
Gypsum Tray Available	< REDACTED >
WWT Available for Electrical Work	< REDACTED >
Limestone Silo to L2 Conveyor Available	< REDACTED >

Item	Date
Chimney Elevator Available	< REDACTED >
Estimated Unit #1 Tie-in Outage Start	< REDACTED >
Estimated Unit #2 Tie-in Outage Start	< REDACTED >
Estimated Unit #1 Available for Outage Work	< REDACTED >
Estimated Unit #2 Available for Outage Work	< REDACTED >

**7.) Work by Other Project Contractors and Plant**

Item	Dates
Duct & Steel Erect @ Booster Fans including Booster Fan Enclosure	< REDACTED >
Conveyor L-3 Erection	< REDACTED >
Conveyor L-5 Erection	< REDACTED >
Duct & Steel Erection East of Boiler House	< REDACTED >
FGD Building Erection	< REDACTED >
Absorber Erection	< REDACTED >
Gypsum Storage Building Erection	< REDACTED >
Unit #1 Spring 2010 Outage	< REDACTED >
Unit #2 Fall 2010 Outage	< REDACTED >

### 8.) Construction Completion Dates

Critical milestone with associated LD's	Item	Date
X	Low Volt & Medium Volt Switchgear Construction Turnover Complete	< REDACTED >
X	DC & UPS Construction Turnover Complete	< REDACTED >
X	FGD DCS Construction Turnover Complete	< REDACTED >
X	WWT DCS Construction Turnover Complete	< REDACTED >
X	Low Volt MCC's Construction Turnover Complete	< REDACTED >
	CEMS Complete & Checked Out (Construction Turnover)	< REDACTED >
	Unit #2 Booster Fans (Including Lube Oil System) Construction Turnover Complete	< REDACTED >
	Unit #1 Booster Fan (Including Lube Oil System) Construction Turnover Complete	< REDACTED >
X	Service Water System Construction Turnover Complete	< REDACTED >
	Quench Water System Construction Turnover Complete	< REDACTED >
	Truck Wash Construction Turnover Complete	< REDACTED >
	Complete Outage Work Unit 1	< REDACTED >
	Complete Outage Work Unit 2	< REDACTED >
	Substantial Completion (completion of T&M start-up support)	< REDACTED >
	Final Completion	< REDACTED >

## APPENDIX V

# List of Approvals, Licenses and Permits

## List of Approvals, Licenses and Permits

### Air Permitting

The Owner will obtain a New Hampshire temporary permit, under Env-A 607, which will be issued by the New Hampshire Department of Environmental Services – Air Resources Division, prior to the commencement of construction of the scrubber. The application for this permit must include a demonstration of compliance with National Ambient Air Quality Standards (NAAQS).

### Water Permitting –Preliminary Overview

**National Pollution Discharge Elimination System (NPDES) Permit:** The Owner will submit an application to EPA for a major permit modification. The application must include all changes to wastewater management, water usage, chemical usage, etc as well as analytical data.

#### **Stormwater Permitting:**

- For Construction: A temporary NPDES general permit will be obtained by the Owner from the EPA regarding management of stormwater impacts during construction. The permit process requires a Stormwater Pollution Prevention Plan, which must be submitted and approved prior to construction activity.
- For Operation: Management of routine stormwater must be accounted for via an individual NPDES permit or a multi-sector general permit from the EPA, which requires a Stormwater Pollution Prevention Plan which will be obtained by the Owner.

**Construction Dewatering:** A temporary NPDES general permit from the EPA will be obtained by the Owner if necessary for any discharges to surface waters from construction dewatering activities.

**Section 401 Water Quality Certification:** The Owner will submit to the Department of Environmental Services (DES) to certify that all discharges associated with federally issued permits for the Project comply with state surface water quality standards.

**Site Specific (Alteration of Terrain) Permit:** A temporary permit from DES will be obtained by the Owner. This permit typically dovetails with EPA's stormwater permits and must include pre- and post-runoff plans, calculations, treatment methods, etc.

**Wetlands Permit:** The Owner will obtain a permit if needed, depending on construction activities and proximity to wetlands and the river. The permit must be procured prior to construction activity in the regulated areas. Extensive disturbance of jurisdictional areas could also require permitting from the Army Corps of Engineers.

**Shoreland Protection:** Depending on construction activities, certification may need to be submitted that the Project will meet or exceed certain development standards. These permits will be obtained by the Owner.

**Other Environmental Permits: The Owner will obtain all other environmental permits not specifically addressed elsewhere in this Agreement.**

### Site Permitting:

#### **Local Site Review / Building Permit**

The Project will be subject to the Town of Bow Planning Board approval prior to commencing construction. This approval will be obtained by the Owner.

A building permit(s) issued by the Town of Bow will be required prior to commencing construction of all buildings and facilities. The Party responsible for the design activity shall obtain the necessary permit. Example: Foundation permit for building to be obtained by Party responsible for designing the foundation - Owner; Steel Framing permit for building to be obtained by Party responsible for designing the steel framing - Contractor.

### Spill Prevention, Control, and Countermeasure (SPCC) Regulation

The Generating Station's existing SPCC Plan will be revised by the Owner to address any oil storage containers associated with the Project that have individual capacities greater than 55 gallons each. The SPCC Plan must be revised before beginning operations.

### **Federal Aviation Administration**

Form 7460-1, Notice of Proposed Construction or Alteration will be submitted by the Owner to the FAA office having jurisdiction (Burlington, MA). First, Form 7460-1 must be completed for each structure identified by the FAA. Structures of interest to the FAA can be as low as 20 feet in height although the instructions on the application form specify 200 feet and higher. Temporary structures as well as permanent ones must be included. For example, the crane(s) for erection may need to be included. In addition, a topological site map must be submitted with the form. This submittal initiates an aeronautical study by the FAA. Approximately 75 days later, after review by the FAA, a letter is issued with a determination by the FAA identifying any potential impact.

## **Appendix VI**

**Omitted Intentionally**



## **Appendix VII**

### **National Maintenance Agreement**

Attachment VII-1, National Maintenance Agreements Policy Committee, Letter of Understanding, Rev. 0, 06-30-08

Attachment VII-2, National Maintenance Agreement, Rev. 0, 09-15-08



1501 LEE HIGHWAY, SUITE 202 • ARLINGTON, VIRGINIA 22209-1109  
TELEPHONE: (703) 841-9707 • FAX: (703) 524-3364 • www.nmapc.org

Stephen R. Lindauer  
Impartial Secretary/CEO

June 30, 2008

Mr. Dennis Pennline  
Project Manager  
URS Washington Division  
510 Carnegie Center  
Princeton, NJ 08540

Dear Mr. Pennline:

Please find enclosed an executed and accepted copy of your organization's "Letter of Understanding, Construction Manager Participation" for work at the Public Service of New Hampshire Merrimack Station Project in Bow, New Hampshire.

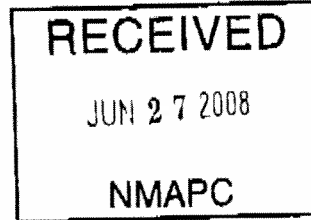
You must make sure that the contractors and subcontractors being used, are signatory to the National Maintenance Agreements, have applied for appropriate extensions and have permission for their use prior to being granted the work. Also, our office would appreciate a list of those contractors your organization intends to utilize for the work at this facility as soon as reasonably possible.

Thank you for your interest, feel free to contact the NMAPC office regarding any questions you may have about the program and its policies.

Very truly yours,

Stephen R. Lindauer  
Impartial Secretary/CEO

SRL/pl  
Attachment  
Cc: NMAPC



Stephen R. Lindauer  
Impartial Secretary/CEO

1501 LEE HIGHWAY, SUITE 202 • ARLINGTON, VIRGINIA 22209-1109  
TELEPHONE: (703) 841-9707 • FAX: (703) 524-3364 • www.nmapc.org

Letter of Understanding  
Construction Manager Participation

The undersigned, as Construction Manager, recognizes and understands that Owner and Contractor participation in the National Maintenance Agreements Program is predicated on the principles espoused by the National Maintenance Agreements Policy Committee, Inc. ("NMAPC") which include economy, efficiency and harmonious labor relations.

The undersigned acknowledges its responsibility to act as agent for the Owner to ensure that contractors and their subcontractors working on the following project Merrimack Station, Bow, NH have applied for and are in possession of the appropriate National Maintenance Agreement(s) with permission by the appropriate International Union(s), at the time work is awarded, for their use at the project, as required in Article XXVII-Administrative Procedures of the Agreement(s).

The undersigned agrees to monitor the performance of signatory contractors working at the project to ensure that each Contractor/Subcontractor is operating under the terms and conditions of the National Maintenance Agreement(s).

The undersigned agrees that it will not cause or require any Contractor/Subcontractor to perform work or operate in a manner which is not in compliance with the terms of the National Maintenance Agreement(s) or the policies and decisions of the NMAPC, including any decision or award rendered pursuant to Article VI-Grievances of the Agreement(s). If in a Step 4 proceeding under Article VI of a National Maintenance Agreement it comes to the attention of the NMAPC that the Construction Manager may have violated its duties or obligations under this paragraph, the undersigned agrees that the alleged violation may be heard by the NMAPC under the procedures of Article VI of the National Maintenance Agreement(s) beginning at Step 4, and that any finding and/or award by the NMAPC will be final and binding upon the Construction Manager as well as the Contractor/Subcontractor.

It is further agreed that the undersigned will facilitate and insure that all Contractors/Subcontractors will conduct a pre-job conference as stipulated in Article I, Section 3, as well as Article XXVII, Section I of the National Maintenance Agreement(s).

It is understood that any questions regarding the application, interpretation, and modification of the National Maintenance Agreement(s) and the policies and procedures of the National Maintenance Agreements Program will be submitted to the NMAPC for proper determination, as required in Article XXVII-Administrative Procedures of the Agreement(s).

Signed this 25th day of June on behalf of:

Accepted:

Dennis Pennline  
(Construction Manager)

510 Carnegie Center  
Princeton, NJ 08540  
(Address)

Stephen R. Lindauer  
Impartial Secretary/CEO  
NMAPC Inc.

By: Dennis Pennline, Project Manager  
(Name & Title)

Date: 6/27/08

Date: June 25, 2008

Revised: 3-15-07

**Building a Partnership of Safety, Productivity, Quality, and Strength**

## ARTICLE I - NATIONAL MAINTENANCE AGREEMENT

### Pre-Job Conference Acknowledgement Form

Work shall be performed under the terms of the National Maintenance Agreements and / or their equal under similar National Maintenance Agreements.

Contractor must be in possession of permission for their use by the affected union(s) prior to beginning the awarded Work. Contractors are required to furnish a copy of the first and signature pages of such agreements to the Program Manager prior to commencing the Work.

Contractors are to assign Work to the appropriate crafts according to the recognized and traditional jurisdiction.

The following is a requirement of all National Maintenance Agreement Projects and is also required by the National Maintenance Agreement Policy committee:

The employers (contractor and subcontractors) are required to conduct a pre-job mark-up conference, including craft work assignments, for each project performed under the National Maintenance Agreement. It is the responsibility of the Employer (contractor and subcontractors) to notify the appropriate Building Trades Council having jurisdiction, as well as all International Unions with which it is a party to a National Maintenance Agreement of the time and place of the pre-job mark-up conference. A pre-job mark-up conference outline can be obtained from the NMAPC office and / or any participating International Union.

Prior to the start of Work, Contractor denoted below shall furnish: (1) this completed form signifying that they have held a pre-job mark-up conference with the representative(s) of the appropriate Building Trades, and (2) a copy of the NMA Approval or Extension letter granting permission to use the N.M.A from each affected International Union. Site extension requests may be filed on line at [www.NMAPC.org](http://www.NMAPC.org).

\_\_\_\_\_  
Contractor Name

\_\_\_\_\_  
Signature of Contractor's Representative

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title Contractor's Rep

\_\_\_\_\_  
Signature – Building Trades President

\_\_\_\_\_  
Date

To be completed by Building Trades President

- Additional Pre-Job Conferences Required, or  
 All Pre-Job Conferences have been completed

The specific National Maintenance Agreement Requirements are set forth in Article I.

E.S. BOULOS COMPANY REV. 1 4.15.10 BEST & FINAL

Project Name: Merrimack Station - Clean Air Project

BOP Electrical Installation

Appendix VIII-1, Pricing Summary- Lump Sum




No.	Cost Item	Amount in Words	Amount in Figures
1	Mobilization		
2	Demobilization		
3	Small Tools and Consumables		
4	Transportation		
5	Field Labor Costs, Including Fringes		
6	Permanent Plant Materials (Exempt from Sales/Use Tax on Permanent Materials)		
7	Shop Labor Costs Applicable to Materials Preparation		
8	Construction Equipment		
9	Lower Tier Subcontractors		
10	Duty and Customs Clearance Fees		
11			
<b>Subtotal Base Bid - Technical Price</b>			
12	Cost Credit for Owner's Provided Insurance Program [OCIP]		
13	Sales / Use Tax on Rental Equipment and Consumable Supplies		
<b>Total Base Bid Proposal Price - Technical &amp; Commercial</b>			
14	100% Performance & Payment Bonds [If Required]		
15	10% Irrevocable Letter of Credit [If Required]		
16	Parent Company Guarantee [If Required] (N/A)		
17	Start Up Support Assistance Based on T & M Basis		

16.) How many craft Work Hours are included? (This figure includes supervisory, management, engineering and safety entire project.)

17.) What is the Peak Number of Craftsmen that will be utilized?

18.) What Work Week is Included? 4-10's, 5-8's, 5-10's, 6-8's, 6-10's, 7-8's, 7-10's?

19.) How many Shifts will be worked per Day? [1, 2, 3]

A	B	C	D	F	H	J	L	N	O	P	
1	 <b>Public Service of New Hampshire</b> The Northeast Utilities System										
2	<b>Merrimack Station, Clean Air Project</b>						BOP Electrical Installation				
3	E.S. Boulos Co.		Appendix VIII-2, Schedule of Values – Lump Sum - BEST & FINAL			Rev. 3 4/15/10					
4											
5	<b>COST CODE</b>	<b>DESCRIPTION OF WORK UNITS</b>	<b>QNT. **</b>	<b>UNIT OF MEAS</b>	<b>Sub-contracts \$</b>	<b>Materials \$</b>	<b>Field Labor Work Hours</b>	<b>Field Labor \$</b>	<b>Construt. Equip. \$</b>	<b>Tax \$</b>	<b>Total \$</b>
6											
7		<b>BMS</b>									
8											
9	E00	<b>CABLE BUS</b>									
10		Yard - 4000A BUS FROM FGD SUBSTATION TO 001A/B (MED VOLT SWGR)									
11		Yard - 3000A BUS From FGD SUBSTATION TO 001A									
12											
13											
14	E01	<b>MEDIUM VOLTAGE SWITCHGEAR-INDOOR</b>									
15		FGD - 4.16KV DOUBLE ENDED SWGR -63KA, 4000A (SWGR-001A & 001B)									
16		FGD - 4.16KV/480V XFMR 2000/2666KVA (XFMR-002A)									
17		FGD - 4.16KV/480V XFMR 2000/2666KVA (XFMR-002B)									
18		FGD - 4.16KV/480V XFMR 2000/2666KVA (XFMR-004A)									
19		FGD - 4.16KV/480V XFMR 2000/2666KVA (XFMR-004B)									
20											
21		WWT - 4.16KV/480V XFMR 1000/1333KVA (XFRM-003A)									
22		WWT - 4.16KV/480V XFMR 1000/1333KVA (XFRM-003B)									
23		Total									
24	E02	<b>480V SWITCHGEAR-INDOOR</b>									
25		FGD - 480V SWITCHGEAR 3200A 100KA (002A & 002B)									
26		FGD - 480V SWITCHGEAR 3200A 100KA (004A & 004B)									
27											
28		WWT - 480V SWITCHGEAR 1600A 100KA (003A & 003B)									
29											
30	E03	<b>480V MOTOR CONTROL CENTERS-INDOOR</b>									
31		FGD - MCC 480V 1600A - 10 stacks 002A1									
32		FGD - MCC 480V 1600A - 12 stacks 002B1									
33		FGD - MCC 480V 1600A - 11 stacks 002B2									
34		FGD - MCC 480V 1600A - 12 stacks 004A1									
35		FGD - MCC 480V 1600A - 12 stacks 004B1									
36		FGD - MCC 480V 1600A - 12 stacks 004B2									
37											
38		TT1 - MCC 480V 1600A - 10 stacks 004B3									
39											
40		WWT - MCC 480V 1600A - 7 stacks 003A1									
41		WWT - MCC 480V 1600A - 7 stacks 003B1									
42											
43	E04	<b>MISC. ELECTRICAL PANELS</b>									
44		FGD - 125V DC PANELBOARD (DCSWBD-001)									
45		FGD - 125V DC Battery Charger (BATCHG - 001)									
46		FGD - 125V DC Battery Charger (BATCHG - 002)									
47		FGD - 125V DC Battery (DCBATT - 001)									
48		FGD UPS EQUIPMENT (UPS - 001) (LVBPXFMR - 001) BYPENCL - 001)									
49		ALL - 120/208V Lighting Panelboards and Transformers									
50		ALL - 120V DC Panel Board 100A									
51		ALL - 120VA UPS Panel (UPS Pnl - 001)									
52											
53	E06	<b>CEMS</b>									

A	B	C	D	F	H	J	L	N	O	P
54	Chimney - CEMS Pre-Fab Shelter ( 10' x20' Grade Level )									
55	Chimney - CEMS UMBILICAL CABLES									
56	Chimney - CEMS PLC									
57										
58	<b>E07 DCS</b>									
59	FGD - Network Cabinet and Redundant Controller									
60	FGD - I/O Cabinets (7+1 Extended)									
61	FGD - Operator Work Stations (2)									
62										
63	WWT - Network Cabinet (Redundant Controller)									
64	WWT - I/O Cabinets (4 Cubicles)									
65	WWT - Operator Work Stations (1)									
66										
67	SW - Network Cabinet (Redundant Controller)									
68	SW - I/O Cabinets (1 Cubicle)									
69										
70	BF - Remote I/O Cabinets (BF - 1) & (BF - 2)									
71										
72	GYP - DW - Remote I/O Cabinets									
73										
74	PLANT - DCS Cabinets (BMS LOGIC - 2 Cabinets)									
75	PLANT - Operator Work Stations (2)									
76	PLANT - Network Switch Cabinet ( 1 )									
77										
78	<b>E08 Weather and Fire Seals</b>									
79	WWT - Weather Seals									
80	WWT - Fire Seals									
81	SW - Weather Seals									
82	SW - Fire Seals									
83	BF - Weather Seals									
84	BF - Fire Seals									
85	FGD - Weather Seals									
86	FGD - Fire Seals									
87	PLANT - Weather Seals									
88	PLANT - Fire Seals									
89										
90	<b>E11 CONDUIT (EXPOSED)</b>									
91	FGD - RGS Conduit 3/4"									
92	FGD - RGS Conduit 1"									
93	FGD - RGS Conduit 1 1/2"									
94	FGD - RGS Conduit 2"									
95	FGD - RGS Conduit 3"									
96	FGD - RGS Conduit 4"									
97	FGD - RGS Conduit 5"									
98	FGD - Flex Conduit 3/4" - 1									
99	FGD - Flex Conduit 1 1/2"-2"									
100	FGD - Flex Conduit 3									
101	FGD - Flex Conduit 4" - 5"									
102										
103	<b>E11-1 CONDUIT (EXPOSED)</b>									
104	WWT - RGS Conduit 3/4"									
105	WWT - RGS Conduit 1"									
106	WWT - RGS Conduit 1 1/2"									
107	WWT - RGS Conduit 2"									
108	WWT - RGS Conduit 3"									
109	WWT - RGS Conduit 4"									
110	WWT - RGS Conduit 5"									
111	WWT - Flex Conduit 3/4" - 1									
112	WWT - Flex Conduit 1 1/2"-2"									

REDACTED

	A	B	C	D	F	H	J	L	N	O	P
113		WWT - Flex Conduit 3									
114		WWT - Flex Conduit 4"- 5"									
115											
116	E11-2	<b>CONDUIT (EXPOSED)</b>									
117		SW - RGS Conduit 3/4"									
118		SW - RGS Conduit 1"									
119		SW - RGS Conduit 1 1/2"									
120		SW - RGS Conduit 2"									
121		SW - RGS Conduit 3"									
122		SW - RGS Conduit 4"									
123		SW - RGS Conduit 5"									
124		SW -Flex Conduit 3/4" - 1									
125		SW -Flex Conduit1 1/2"-2"									
126		SW - Flex Conduit 3									
127		SW - Flex Conduit 4" - 5"									
128											
129	E11-3	<b>CONDUIT (EXPOSED)</b>									
130		BF - RGS Conduit 3/4"									
131		BF - RGS Conduit 1"									
132		BF - RGS Conduit 1 1/2"									
133		BF - RGS Conduit 2"									
134		BF - RGS Conduit 3"									
135		BF - RGS Conduit 4"									
136		BF - RGS Conduit 5"									
137		BF - Flex Conduit 3/4" - 1									
138		BF - Flex Conduit1 1/2"-2"									
139		BF - Flex Conduit 3									
140		BF - Flex Conduit 4" - 5"									
141											
142	E11-4	<b>CONDUIT (EXPOSED)</b>									
143		TW - RGS Conduit 3/4"									
144		TW - RGS Conduit 1"									
145		TW - RGS Conduit 1 1/2"									
146		TW - RGS Conduit 2"									
147		TW - RGS Conduit 3"									
148		TW - RGS Conduit 4"									
149		TW - RGS Conduit 5"									
150		TW - Flex Conduit 3/4" - 1									
151		TW - Flex Conduit1 1/2"-2"									
152		TW - Flex Conduit 3									
153		TW - Flex Conduit 4" - 5"									
154											
155	E11-5	<b>PIPE BRIDGE CONDUIT (EXPOSED)</b>									
156		Pipe Bridge - RGS Conduit 3/4"									
157		Pipe Bridge - RGS Conduit 1"									
158		Pipe Bridge - RGS Conduit 1 1/2"									
159		Pipe Bridge - RGS Conduit 2"									
160		Pipe Bridge - RGS Conduit 3"									
161		Pipe Bridge - RGS Conduit 4"									
162		Pipe Bridge - RGS Conduit 5"									
163		Pipe Bridge - Flex Conduit 3/4" - 1									
164		Pipe Bridge - Flex Conduit1 1/2"-2"									
165		Pipe Bridge - Flex Conduit 3									
166		Pipe Bridge - Flex Conduit 4"- 5"									
167		CONDUIT - supports (allowance)									
168											
169	E12	<b>UNDERGROUND CONDUIT (PVC)</b>									
170		Underground - PVC SCHEDULE 40 4"									
171		Underground - PVC SCHEDULE 40 3"									

REDACTED



	A	B	C	D	F	H	J	L	N	O	P
172		Underground - PVC SCHEDULE 40 2"									
173											
174	E13-1	<b>BOXES (FGD)</b>									
175		FGD - NEMA 4X PULL BOX, 18W X 12H X 6D									
176		FGD - NEMA 4X TERM BOX W/ 2-12 PT TERM. BLOCKS12W X 12H X 6D									
177		FGD - NEMA 4X PULL BOX 24W X 24H X 12D									
178		FGD - NEMA 1 PULL BOX 16 X 12 X 8									
179		FGD - NEMA 1 TERM BOX									
180		FGD - NEMA 1 PULL BOX 24 X 24 X 12									
181											
182	E13-2	<b>Boxes (SW)</b>									
183		SW - NEMA 4X PULL BOX, 18W X 12H X 6D									
184		SW - NEMA 4X TERM BOX W/ 2-12 PT TERM. BLOCKS12W X 12H X 6D									
185		SW - NEMA 4X PULL BOX 24W X 24H X 12D									
186		SW - NEMA 1 PULL BOX 16 X 12 X 8									
187		SW - NEMA 1 TERM BOX									
188		SW - NEMA 1 PULL BOX 24 X 24 X 12									
189											
190	E13-3	<b>Boxes (TW)</b>									
191		TW - NEMA 4X PULL BOX, 18W X 12H X 6D									
192		TW - NEMA 4X TERM BOX W/ 2-12 PT TERM. BLOCKS12W X 12H X 6D									
193		TW - NEMA 4X PULL BOX 24W X 24H X 12D									
194		TW - NEMA 1 PULL BOX 16 X 12 X 8									
195		TW - NEMA 1 TERM BOX									
196		TW - NEMA 1 PULL BOX 24 X 24 X 12									
197											
198	E13-4	<b>Boxes (WWT)</b>									
199		WWT - NEMA 4X PULL BOX, 18W X 12H X 6D									
200		WWT - NEMA 4X TERM BOX W/ 2-12 PT TERM. BLOCKS12W X 12H X 6D									
201		WWT - NEMA 4X PULL BOX 24W X 24H X 12D									
202		WWT - NEMA 1 PULL BOX 16 X 12 X 8									
203		WWT - NEMA 1 TERM BOX									
204		WWT - NEMA 1 PULL BOX 24 X 24 X 12									
205											
206	E13-5	<b>Boxes (BF)</b>									
207		BF - NEMA 4X PULL BOX, 18W X 12H X 6D									
208		BF - NEMA 4X TERM BOX W/ 2-12 PT TERM. BLOCKS12W X 12H X 6D									
209		BF - NEMA 4X PULL BOX 24W X 24H X 12D									
210		BF - NEMA 1 PULL BOX 16 X 12 X 8									
211		BF - NEMA 1 TERM BOX									
212		BF - NEMA 1 PULL BOX 24 X 24 X 12									
213											
214	E14	<b>FUSED DISCONNECT SWITCHES</b>									
215		FUSED DISCONNECT 480V 30A NEMA 4									
216		FUSED DISCONNECT 480V 60A NEMA 4									
217		FUSED DISCONNECT 480V 100A NEMA 4									
218		FUSED DISCONNECT 480V 200A NEMA 4									
219		FUSED DISCONNECT 480V, 30A, NEMA 12									
220		FUSED DISCONNECT 480V 60A NEMA 12									
221		FUSED DISCONNECT 480V 100A NEMA 12									
222		FUSED DISCONNECT 480V 200A NEMA 12									
223											
224	E15	<b>TRAY QUANTITIES</b>									
225		FGD - Tray - 6" width									
226		FGD - Tray - 9" width									
227		FGD - Tray - 12" width									
228		FGD - Tray - 18" width									
229		FGD - Tray - 24" width									
230		FGD - Tray - 30" width									

REDACTED

	A	B	C	D	F	H	J	L	N	O	P
231		FGD - Tray - 36" width									
232		FGD - TRAY BARRIER - 6" Alum									
233		FGD - TRAY - FITTINGS									
234		FGD - Tray Cover									
235											
236	E15-2	WWT - Tray - 12" width									
237		WWT - Tray - 18" width									
238		WWT - TRAY BARRIER - 6" Alum									
239		WWT - TRAY - FITTINGS									
240		WWT - Tray Cover									
241											
242	E15-3	BF - Tray - 12" width									
243		BF - Tray - 18" width									
244		BF - Tray - 24" width									
245		BF - TRAY BARRIER - 6" Alum									
246		BF - TRAY - FITTINGS									
247		BF - Tray Cover									
248											
249	E15-4	SW - Tray - 6" width									
250		SW - Tray - 12" width									
251		SW - Tray - 24" width									
252		SW - TRAY BARRIER - 6" Alum									
253		SW - TRAY - FITTINGS									
254		SW - Tray Cover									
255											
256	E15-5	Pipe Rack - Tray - 12" width									
257		Pipe Rack - Tray - 18" width									
258		Pipe Rack - TRAY BARRIER - 6" Alum									
259		Pipe Rack - TRAY - FITTINGS									
260		Pipe Rack - Tray Cover									
261											
262		Gypsum Conveyor Tray Cover, Grounding									
263		Limestone Conveyor Tray Cover, Grounding									
264											
265	E15-6	Chimney (CEMS) Tray - 12" width									
266		Chimney (CEMS) Tray - 18" width									
267		Chimney (CEMS) TRAY BARRIER - 6" Alum									
268		Chimney (CEMS) TRAY - FITTINGS									
269		Chimney (CEMS) - Tray Cover									
270											
271	E15-7	Switchyard - Control Tray from Switchyard to FGD (Run on Cable Bus Steel)									
272		Switchyard - Tray - 24" width									
273											
274	E16	<b>CABLE</b>									
275		Med Voltage Cables (4.16KV)									
276		CBUS-01A - 1/c # 750 kcmil (6 per phase) - 280 Ft each									
277		CBUS-01B -1/c #750 kcmil (6 per phase) - 280 Ft each									
278											
279	E16-1	<b>Med Voltage Cables (4.16KV)</b>									
280		MV Cable - 3 - 1/c # 750 kcmil + G									
281		MV Cable - 3 - 1/c #350 kcmil + G									
282		MV Cable - 3 - 1/c # 250 awg + G									
283		MV Cable - 3 - 1/c - 4/0 awg + G									
284		MV Cable - 3 - 1/c - 3/0 awg - G									
285		MV Cable - 1 - 3/c # 6 awg + G									
286		MV Cable - 1 - 3/c # 2 awg + G									
287											
288	E16-2	<b>Power (600V)</b>									
289		3 - 1/C # 750 kcmil + G									

REDACTED

	A	B	C	D	F	H	J	L	N	O	P
290		2 - 1/C #500 kcmil									
291		4 - 1/C #4/0 awg + G									
292		3 - 1/C #4/0 awg + G									
293		2 - 1/C #4/0 awg + G									
294		3 - 1/C #3/0 awg + G									
295		4 - 1/C #2/0 awg + G									
296		3 - 1/C #2/0 awg + G									
297		3 - 1/C #1/0 awg + G									
298		2 - 1/C #2 awg									
299		3 - 1/C #4 awg w/gnd									
300		3 - 1/C #6 awg									
301		2 - 1/C #6 awg									
302		1/C #10 awg									
303		3/C #6 awg w/gnd									
304		3/C #8 awg w/gnd									
305		3/C #10 awg w/gnd									
306		3/C #12 awg w/gnd									
307		1/C #4/0 Bare Gnd Cable (Included with + G above)									
308		1/C #4/0 Green Gnd Cable (Included with + G above)									
309		1/C #2 Green Gnd Cable (Included with + G above)									
310		1/C #8 Green Gnd Cable (Included with + G above)									
311											
312	E16-3	<b>CONTROL CABLES</b>									
313		2/C #14 Awg									
314		3/C #14 Awg									
315		5/C #14 Awg									
316		7/C #14 Awg									
317		9/C #14 Awg									
318		12/C #14 Awg									
319		3C #16 SHLD TRAY CABLE									
320		3C #12 TRAY CABLE									
321		19C #14 TRAY CABLE									
322		2C #16 SHLD TRAY CABLE									
323											
324	E16-4	<b>INSTRUMENTATION CABLES</b>									
325		1 - Pair Twisted #16 Awg&OS									
326		2 - Pair Twisted #16 Awg&OS									
327		8 - Pair, Twisted #16 Awg&OS									
328		4 - Pair, Twisted #16 Awg&OS									
329		25 - Pair, Twisted #16 Awg + OS									
330		1 - Triad #16 Awg TSP&OS									
331		3 - Triad #16 Awg TSP&OS									
332		1 - Pair Thermocouple EX #16 Awg									
333		Cat 5E Cable									
334		Profibus Cable									
335											
336	E16-5	<b>FIBER OPTIC CABLE</b>									
337		FGD - MULTI-Mode Fiber Optic 6-pair									
338		TT-1 - Mlti-Mode Fiber Optic , 6-pair									
339		SWP - Mlti-Mode Fiber Optic , 6-pair									
340		WWT - MULTI-Mode Fiber Optic 6-pair									
341		TW - Mlti-Mode Fiber Optic , 6-pair									
342		BF - Mlti-Mode Fiber Optic , 6-pair									
343											
344	E17	<b>CABLE TERMINATIONS</b>									
345	E17-1	Medium Voltage									
346		CABLE-TERMS 4.16KV 1/C 2/0 - 4/0 AWG, 3/0 - 750 kcmil									
347		CABLE-TERMS 4.16KV 3/C #6 - #2, +G									
348											

REDACTED

	A	B	C	D	F	H	J	L	N	O	P
349	E17-2	Low Voltage (600V)									
350		CABLE-TERMS ( PWR-600V )									
351											
352	E17-3	Instrument & Control									
353		CABLE-TERMS (CONTROL - 600V)									
354											
355		CABLE-TERMS INSTRUMENT/ 300V (1 PR #16 - 3TR#16 TSP & OS)									
356		CABLE-TERMS , INSTRUMENT/ 300V, (1 PR T/C Type EX)									
357											
358	E17-4	Fiber Optic									
359		All Areas - Multi-mode Fiber Optic Cables - 6 pair (12 fibers)									
360											
361	E18	<b>GROUNDING</b>									
362	E18-1	FGD - Bare copper 4/0 AWG									
363		FGD - Insulated Green 4/0 AWG									
364		FGD - #2 Bare Copper Ground Cable									
365		FGD - GROUNDING Compression Connections									
366		FGD - Mechanical Connections for Tray (Included with Tray for each Area)									
367											
368	E18-2	WWT - Bare copper 4/0 AWG									
369		WWT - Insulated Green 4/0 AWG									
370		WWT - Compression Connections									
371											
372		BF - Bare copper 4/0 AWG									
373		BF - Compression Connections									
374		BF - Mechanical Connections for Tray (Included with Tray for each Area)									
375											
376	E18-4	Pipe Rack - Bare copper 4/0 AWG									
377		Pipe Rack - Compression Connections									
378		Pipe Rack - Mechanical Connections for Tray (Included with Tray for each Area)									
379											
380		SW - Bare copper 4/0 AWG									
381		SW - Compression Connections									
382											
383	E19	<b>HEAT TRACING</b>									
384		Cable 3W/FT									
385		Cable 5W/FT									
386		Cable 8W/FT									
387		HEAT TRACING Cable (Self Regulating)									
388		HEAT TRACING Terminations, Controls, Etc.									
389											
390	E20	<b>LIGHTING/CONVENIENCE - * TYPICAL</b>									
391		Fluorescent Fixture 4 ft 2X 40W industrial type									
392		Comercial 120VAC/6VDC Emergency Fixture Self Contained Batt. Packs									
393		120VAC/6VDC, Emergency Fixture, elf Contained Batt. Pack (Nema 4)									
394		120VAC/6VDC Exit Light Self-Contained Batt.Pack (Nema 4)									
395		120VAC/6VDC, Emergency Fixture, elf Contained Batt.Pack ( w/Arrow L)									
396		120VAC/6VDC, Emergency Fixture, elf Contained Batt. Pack ( w/Arrow R)									
397		Photocell Unit 120V 60Hz for Outdoor Lighting									
398		Remote Control Sw 20A Cont. 120V Coil with 12 poles (Contactor)									
399		120/208V, 3ph, 4wire panel board, 225A (Included in "All 120/208 Panelboards")									
400		Ltq Panel Xfrm 480-120/208V 45 kVA									
401		Welding Receptacles									
402		Duplex Receptacle 20A 2pole 3 wire									
403		Weather Proof Duplex Receptacle with Gnd Fault									
404		Toggle Switch Single Pole 20A 120/277V									
405		Low Bay fixture, indoor, 208V, 400W HPS									
406		Industrial Metal Halide pendant mounted 100W, 120VAC (MGA10M1H43PA2NF)									

REDACTED

	A	B	C	D	F	H	J	L	N	O	P
407		Outdoor Metal Halide Fixtures pendant mount 100W, 120VAC									
408		Industrial Metal Halide wall mounted angle dome 100W 120VAC									
409		Industrial Metal Halide pendant mounted 100W 120VAC (MGH10M1H43CGGF)									
410		INDUSTRIAL HPS PENDANT MOUNTED 100W 120VAC									
411		OUTDOOR HPS FIXTURES PENDANT MOUNT 100W, 120VAC									
412		INDUSTRIAL HPS WALL MOUNTED ANGLE DOME 100W 120VAC									
413		INDUSTRIAL HPS PENDANT MOUNTED 100W, 120BVAC									
414											
415	E30	<b>MISC ELECTRICAL STRUCTURAL STEEL</b>									
416		All - Support Steel									
417											
418	E31	<b>COMMUNICATIONS AND FIRE ALARM SYSTEMS</b>									
419		CHIMNEY/FGD - Junction Boxes / Conduit / Cabling									
420		FGD - Comm. Junction Boxes / Conduit / Cabling (HMI Workstation)									
421		FGD - FP Junction Boxes / Conduit / Cabling (12c F/O - Patch Pnl)									
422		PRECIPITATOR/FGD - Comm. Junction Boxes/Speaker									
423		TT - 1 - FP Junction Boxes / Conduit / Cabling (12c F/O - Patch Pnl)									
424		SWP - Junction Boxes / Conduit / Cabling									
425		SWP - Comm. Junction Boxes/Speaker									
426		SWP - FP Junction Boxes / Conduit / Cabling (12c F/O - Patch Pnl)									
427		WWT - Junction Boxes / Conduit / Cabling									
428		WWT - Comm. Junction Boxes/Speaker									
429		WWT - FP Junction Boxes / Conduit / Cabling (12c F/O - Patch Pnl)									
430		TW - Junction Boxes / Conduit / Cabling									
431		TW -Comm. Junction Boxes/Speaker									
432		TW - FP Junction Boxes / Conduit / Cabling (12c F/O - Patch Pnl)									
433		BF - Junction Boxes / Conduit / Cabling									
434		BF - Comm. Junction Boxes/Speaker									
435		BF - FP Junction Boxes / Conduit / Cabling (12c F/O - Patch Pnl)									
436		BF - SPEAKER/AMPLIFIER									
437		BF - TELEPHONE									
438		SWD - SPEAKER/AMPLIFIER									
439		SWD - TELEPHONE									
440		TW - SPEAKER/AMPLIFIER									
441		TW - TELEPHONE									
442		SWP - FIRE ALARM PANEL									
443		SWP - FIRE ALARM DEVICES									
444		TW - FIRE ALARM PANEL									
445		TW - FIRE ALARM DEVICES									
446											
447		LIGHTNING PROTECTION									
448											
449	E50	MOBILIZATION									
450	E60	DEMOBILIZATION									
451	E70	SMALL TOOLS AND CONSUMABLES									
452	E90	PERMANENT PLANT MATERIALS (Purchased / Installed)									
453	E100	CONSTRUCTION EQUIPMENT									
454	E200	ENGINEERED EQUIPMENT SUPPLIED BY OWNER									
455											
456		Sub-Total – Technical Items									
457											
458		OCIP Insurance Credit									
459											
460		Grand Total – Technical & Commercial Items – Base Bid									

	A	B	C	D	F	H	J	L	N	O	P
461		The Craft Hours for Start Up Support Services will be conducted on a Time & Material basis and therefore are not a Lumps Sum cost item. The total number of Hours and ratio of Crafts are not Guaranteed and may be more or less Hours than originally estimated. The Start-up Assistance will be paid on properly documented Daily Time Sheets based on actual number of hours Worked. <i>**Overtime if utilized will be utilizing the Appendix VIII-3, T &amp; M Craft Labor Rate Schedule with the OCIP Credit. Overtime rates for 1.5 (time and a half) and 2 (double time).</i>									
462											
463		Letter of Credit [if required]									
464		Performance & Payment Bonds [if required]									
465		Parent Company Guarantee [if required]									
466											
467	Optional Pricing										
468	1	DELETE GROUNDING WIRE ON ALL CABLE TRAYS WHERE STACKED PER URS DETAIL									
469	2	CREDIT TO SET TRUCK WASH MANHOLE - PSNH TO PROVIDE AND INSTALL MANHOLE									
470											
471											
472											
473	END OF FORM										

< REDACTED >

Project Name: Merrimack Station, Clean Air Project

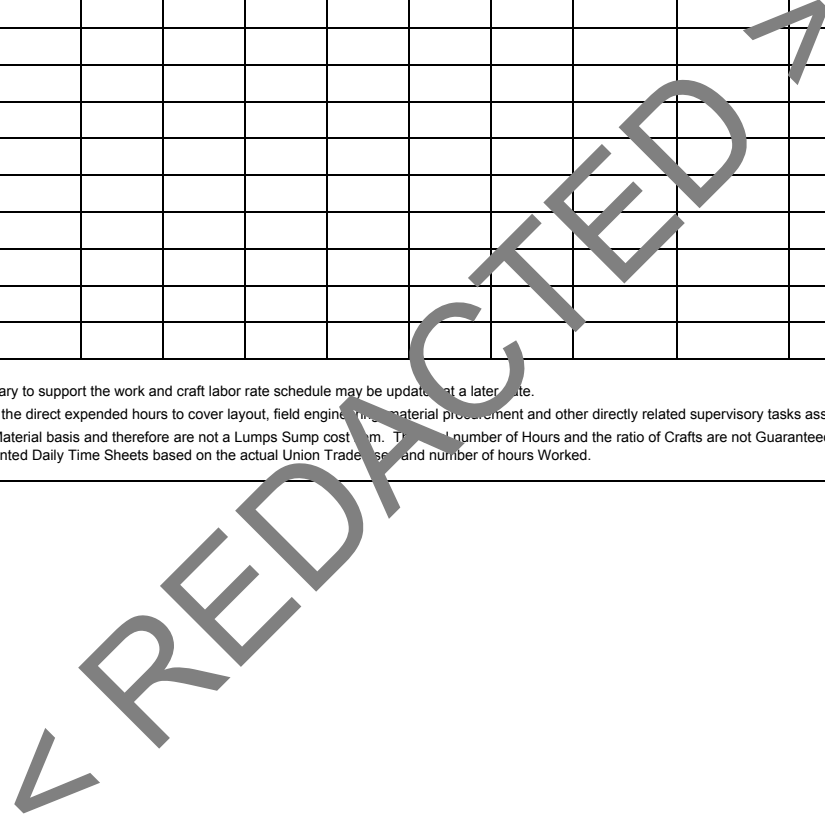
Appendix VIII-3, All Inclusive T & M Craft Labor Rate Schedule - For Changes in the Work - With Deduct Credit for the Provided O.C.I.P Insurance

Union Trade or Classification	Wage Effective Date	Wage Expiration Date	"Base" Craft Wage Rate	Craft Fringe Benefits	Company Paid Insurance SUI & FICA	Other Costs (Sm Tools * & Cons)	Credit OCIP	SUB TOTAL (1)	Overhead on	Profit on Inclusive	All-inclusive	1.5 Overtime	2.0 Overtime	Iron Worker
									Base Rate (2)	Base Rate (3)	Rate per Hour 1+2+3	Rate per Hour	Rate per Hour	Annuity Fund Add 2 X for all OT
Electrician - Journeyman														
Electrician - Foreman [+ \$0.00]														
Electrical - General Foreman														
Electrical - Superintendent														
Crew Leader														
90% Apprentice														
80% Apprentice														
70% Apprentice														
60% Apprentice														
50% Apprentice														

ESB Notes to T&M Craft Labor Rates:

1. Additional trades or classifications may be added as required or as necessary to support the work and craft labor rate schedule may be updated at a later date.
2. Supervision assigned to a change order will be charged as a percentage of the direct expended hours to cover layout, field engineering, material procurement and other directly related supervisory tasks associated with each change order.

The Craft Hours for Start Up Support Service will be conducted on a Time & Material basis and therefore are not a Lumps Sump cost item. The total number of Hours and the ratio of Crafts are not Guaranteed and may be more or less Hours than originally estimated. The Start-up Assistance will be paid on properly documented Daily Time Sheets based on the actual Union Trades and number of hours Worked.







**Project Name: Merrimack Station, Clean Air Project**

**BOP Electrical Installation**

## **EQUIPMENT RENTAL RATE SCHEDULE**

### **INFORMATION FOR COMPLETION AND APPLICATION**

1. The equipment rental rates identifies all of the Contractor owned and rented equipment that may be used by Contractor in performance of the Work and has a replacement cost greater than one thousand five hundred dollars (**\$1,500.00**).
2. The equipment rental rates are for fully maintained equipment. All rates shall include all fuel, lubricants, support equipment, repair parts, service and maintenance labor, applicable taxes, insurance, depreciation, overhead and profit, and mobilization to and from the Project Site.
3. Rates for equipment do not include the services of an operator.
4. No charges will be accepted by Contractor for equipment not listed in the foregoing schedule.
5. The above daily, weekly and monthly rates are based upon single shifts of 8 hours, 40 hours and 176 hours, respectively. Hourly charges for any one day of 8 hours will not exceed the daily rate, charges for any week of 40 hours will not exceed the weekly rate, and charges for any calendar month will not exceed the monthly rate.
6. The specified equipment rental rates shall apply whether the equipment is utilized for operations during any period during day, afternoon, and night shifts.
7. The equipment rental rates shall be in accordance with the latest editions of the Associated Equipment Distributor's ("AED") Rental Rate & Specifications Book, and the Rental Rate Blue Book for Construction Equipment Volume 1, and shall apply whether the equipment is utilized for operations during any period during day, afternoon, and night shifts.
8. When the operated use of equipment is infrequent and as determined by Program Manager need not remain at the Project Site continuously, payment shall be limited to actual hours of use. Equipment not operating but retained at the Project Site at Contractor's direction shall be paid in accordance with the latest editions of the AED Rental Rate & Specifications Book and the Rental Rate Blue Book for Construction Equipment Volume 1. Maximum allowable Rental Rate is 70% of the AED Rental Rate & Specifications Book and the Rental Rate Blue Book for Construction Equipment Volume 1.
9. Contractor shall, prior to rental of any equipment for changes in the scope of Work, submit a stated value for the equipment being rented.
10. No payment shall be made for equipment, which is not operating because it is broken down or undergoing repair, maintenance or overhaul.
11. In the event the need arises to rent any piece of equipment that is not included in the foregoing schedule from a third party, the same guidelines stated in the AED Rental Rate & Specifications Book, and the Rental Rate Blue Book for Construction Equipment Volume 1, shall apply for the determination of the rental rates of such piece of equipment.
12. The foregoing schedule shall be used for reimbursing Contractor for cost reimbursable contracts and changes and for evaluating lump sum pricing.

**Project Name: Merrimack Station Clean Air Project**

**BOP Electrical Installation**

<b>Appendix VIII-5, RATES FOR TECHNICAL SERVICE REPRESENTATIVE</b> <b>[If Any - For Changes in the Work]</b>
---

NOT APPLICABLE

Expense Category	Paragraph 1.1 Service		Paragraph 1.2 Service	
<b>Eight-Hour Weekday (5-Day work week)</b>	\$	/Hour	\$	/Hour
Ten-Hour Workday (Mon. to Thurs.)	\$	/Hour	\$	/Hour
Weekday overtime	\$	/Hour	\$	/Hour
Saturdays	\$	/Hour	\$	/Hour
Sundays or Holidays	\$	/Hour	\$	/Hour
Sundays or Holidays overtime	\$	/Hour	\$	/Hour
Travel Time	\$	/Hour	\$	/Hour
Subsistence Per Diem Rate	\$	/Day	\$	/Day
Travel Per Diem Rate	\$	/Day	\$	/Day

Notes:

1. See attached information for completion and application of this form on the next page.

**Project Name: Merrimack Station Clean Air Project**

**BOP Electrical Installation**

**RATES FOR TECHNICAL SERVICE REPRESENTATIVE**

INFORMATION FOR COMPLETION AND APPLICATION

1. Upon Program Manager's request, Contractor shall provide the following services at the Project Site:
  - 1.1. Instructor(s) at the Project Site to train Owner's personnel in the operation and maintenance of Contractor's supplied equipment, and/or
  - 1.2. Representative(s) to advise Installation Contractor in installation and startup of equipment supplied by Contractor at the Project Site.
2. Hourly rates for service identified in Paragraphs 1.1 and 1.2 are set forth in the table on Page 1.
3. Billable time for such services shall be calculated based on the actual time the personnel are on the Project Site rendering services plus normal travel time to and from the home office of such personnel. The maximum billable travel time shall not exceed six hours each way.
4. Subsistence expenses shall for meals and lodging shall either be billed at actual cost, or based on the per diem rate set forth in the table above.
5. Travel expenses include the cost of transportation of Subcontractor's representative to and from his/her home office to the Project Site and to and from the local lodgings and the Project Site. All airfare shall be Coach Class. Travel expenses shall either be billed at actual cost, or based on the following per diem rate set forth in the table on Page 1.
6. Contractor shall support each invoice for field service with:
  - 6.1. Copies of all bills of travel and living expenses (if authorized).
  - 6.2. Copies of the Contractor's daily report ("Approved" by Program Manager).
  - 6.3. Failure to attach the support required by Paragraphs 6.1 and 6.2 to Contractor's invoice will result in delay or denial of payment.
7. Contractor's representative shall observe Program Manager's starting and quitting times and working conditions at the Project Site.
8. Contractor shall ensure that all Contractors' representatives are provided with the insurance required under the terms of this Contract prior to departure to the Project Site.
9. Contractor shall not be entitled to reimbursement of any services rendered in connection with remedying a defect in the Goods and / or Services.



BOP Electrical Installation

Item	Description	Unit	Labor	Material	Total Direct Cost	Other Costs	Total Firm Unit Price
			\$	\$	\$	\$	\$
<b>Panels &amp; Transformers:</b>							
	120/208V Panel Board NEMA 1 225A	EACH					
	120/208V Panel Board NEMA 4X 225A	EACH					
	120/208V Panel Board NEMA 1 100A	EACH					
	120/208V Panel Board NEMA 4X 100A	EACH					
	120/208V Transformer NEMA 1 45KVA	EACH					
	120/208V Transformer NEMA 3R 45KVA	EACH					
	120/208V Transformer NEMA 1 30KVA	EACH					
	120/208V Transformer NEMA 3R 30KVA	EACH					
	125V DC Pannel Board NEMA 1 100A	EACH					
	Weather Seal	EACH					
	Firestop	EACH					
<b>Conduit Rigid:</b>							
	RGS Conduit 3/4"	FT					
	RGS Conduit 1"	FT					
	RGS Conduit 1 1/2"	FT					
	RGS Conduit 2"	FT					
	RGS Conduit 3"	FT					
	RGS Conduit 4"	FT					
	RGS Conduit 5"	FT					

REDACTED



BOP Electrical Installation

Item	Description	Unit	Labor	Material	Total Direct Cost	Other Costs	Total Firm Unit Price
			\$	\$	\$	\$	\$
	Flex Conduit 3/4" - 1	FT					
	Flex Conduit 1 1/2"-2"	FT					
	Flex Conduit 3	FT					
	Flex Conduit 4"- 5"	FT					
	<b>CONDUIT (PVC)</b>						
	Underground PVC SCHEDULE 40 4"	FT					
	Underground PVC SCHEDULE 40 3"	FT					
	Underground PVC SCHEDULE 40 2"	FT					
	<b>BOXES</b>						
	NEMA 4X PULL BOX, 18W X 12H X 6D	EACH					
	NEMA 4X TERM BOX W/ 2-12 PT TERM. BLOCKS 12W X 12H X 6D	EACH					
	NEMA 4X PULL BOX 24W X 24H X 12D	EACH					
	NEMA 1 PULL BOX, 18W X 12H X 6D	EACH					
	NEMA 1 TERM BOX W/ 2-12 PT TERM. BLOCKS 12W X 12H X 6D	EACH					
	NEMA 1 PULL BOX 24W X 24H X 12D	EACH					
	<b>FUSED DISCONNECT SWITCHES</b>						
	480V, 30A, NEMA 4	EACH					
	480V, 60A, NEMA 4	EACH					
	480V, 100A, NEMA 4	EACH					
	480V, 200A, NEMA 4	EACH					



BOP Electrical Installation

Item	Description	Unit	Labor	Material	Total Direct Cost	Other Costs	Total Firm Unit Price
			\$	\$	\$	\$	\$
	480V, 30A, NEMA 12						
	480V, 60A, NEMA 12						
	480V, 100A, NEMA 12						
	480V, 200A, NEMA 12						
	<b>TRAY QUANTITIES</b>						
	Tray - 6" width	FT					
	Tray - 9" width	FT					
	Tray - 12" width	FT					
	Tray - 18" width	FT					
	Tray - 24" width	FT					
	Tray - 30" width	FT					
	Tray - 36" width	FT					
	TRAY BARRIER - 6" Alum	FT					
	TRAY - FITTINGS	EACH					
	Tray Cover	FT					
	<b>Med Voltage Cables (4.16KV)</b>						
	3 - 1/c # 750 kcmil + G	FT					
	3 - 1/c #350 kcmil + G	FT					
	3 - 1/c - 3/0 awg - G	FT					
	1 - 3/c # 6 awg + G	FT					

REDACTED



BOP Electrical Installation

Item	Description	Unit	Labor	Material	Total Direct Cost	Other Costs	Total Firm Unit Price
			\$	\$	\$	\$	\$
	<b>Power (600V)</b>						
	3 - 1/C #750 kcmil + G	FT					
	2 - 1/C #500 kcmil	FT					
	4 - 1/C #4/0 awg + G	FT					
	3 - 1/C #4/0 awg + G	FT					
	2 - 1/C #4/0 awg + G	FT					
	3 - 1/C #3/0 awg + G	FT					
	4 - 1/C #2/0 awg + G	FT					
	3 - 1/C #2/0 awg + G	FT					
	3 - 1/C #1/0 awg + G	FT					
	2 - 1/C #2 awg	FT					
	3/C #4 awg w/gnd	FT					
	3 - 1/C #6 awg	FT					
	2 - 1/C #6 awg	FT					
	3/C #6 awg w/gnd	FT					
	3/C #8 awg w/gnd	FT					
	3/C #10 awg w/gnd	FT					
	3/C #12 awg w/gnd	FT					
	1/C #4/0 Bare Gnd Cable	FT					

REDACTED



BOP Electrical Installation

Item	Description	Unit	Labor	Material	Total Direct Cost	Other Costs	Total Firm Unit Price
			\$	\$	\$	\$	\$
	1/C #4/0 Green Gnd Cable	FT					
	1/C #2 Green Gnd Cable	FT					
	1/C #8 Green Gnd Cable	FT					
	<b>CONTROL CABLES:</b>						
	2/C #14 Awg	FT					
	3/C #14 Awg	FT					
	5/C #14 Awg	FT					
	7/C #14 Awg	FT					
	9/C #14 Awg	FT					
	12/C #14 Awg	FT					
	<b>INSTRUMENTATION CABLES:</b>						
	1 - Pair, Twisted #16 Awg&OS	FT					
	2 - Pair, Twisted #16 Awg&OS	FT					
	4- Pair, Twisted #16 Awg&OS	FT					
	8- Pair, Twisted #16 Awg&OS	FT					
	25 -Pair, Twisted #16 Awg + OS	FT					
	1 - Triad #16 Awg TSP&OS	FT					
	3 - Triad #16 Awg TSP&OS	FT					
	1 - Pair, Thermocouple EX #16 Awg	FT					
	Cat 5E Cable	FT					





BOP Electrical Installation

Item	Description	Unit	Labor	Material	Total Direct Cost	Other Costs	Total Firm Unit Price
			\$	\$	\$	\$	\$
	<b>TELEPHONE / DATA / CABLE / FIBER OPTIC CABLE:</b>						
	Multi-Mode Fiber Optic , 6-pair	FT					
	Cat 5E Telephone Cable (3pr)	FT					
	Profibus Cable	FT					
	<b>CABLE TERMINATIONS:</b>						
	Medium Voltage	EACH					
	CABLE-TERMS , 4.16KV ,1/C 2/0 - 4/0 AWG	EACH					
	CABLE-TERMS , 4.16KV ,3/C #6 +G	EACH					
	<b>Low Voltage (600V)</b>						
	CABLE-TERMS ,( PWR-600V )	EACH					
	<b>Instrument &amp; Control:</b>						
	CABLE-TERMS ,(CONTROL - 600V)	EACH					
	CABLE-TERMS , INSTRUMENT/ 300V, (1 PR #16 TR#16 TSP & OS)	EACH					
	CABLE-TERMS , INSTRUMENT/ 300V, (1 PR T/C Type EX)	EACH					
	<b>Telephone/Data/ Fiber Optic:</b>						
	Multi-mode Fiber Optic Cables - 6 pair (12 fibers)	EACH					
	Telephone Cable Term (2pr)	EACH					
	Profibus w/o Connectors	EACH					
	<b>GROUNDING:</b>						
	Bare copper 4/0 AWG	FT					



BOP Electrical Installation

Item	Description	Unit	Labor	Material	Total Direct Cost	Other Costs	Total Firm Unit Price
			\$	\$	\$	\$	\$
	Insulated Green 4/0 AWG	FT					
	#2 Bare Copper Ground Cable	FT					
	Compression Connections	EACH					
	Mechanical Connections for Tray	EACH					
	<b>HEAT TRACING:</b>						
	Cable 3W/FT	FT					
	Cable 5W/FT	FT					
	Cable 8W/FT	FT					
	Terminations	EACH					
	<b>LIGHTING/CONVENIENCE - * TYPICAL</b>						
	Fluorescent Fixture 4 ft 2X 40W industrial type	EACH					
	Commercial 120VAC/6VDC, Emergency Fixture, elf Contained Batt . Pack	EACH					
	120VAC/6VDC, Emergency Fixture, elf Contained Batt.Pack (Nema 4)						
	120VAC/6VDC, Exit Light Self-Contained Batt.Pack (Nema 4)	EACH					
	120VAC/6VDC, Emergency Fixture, elf Contained Batt.Pack (w/Arrow L)						
	120VAC/6VDC, Emergency Fixture, elf Contained Batt.Pack (w/Arrow R)						
	Photocell Unit 120V, 60Hz for Outdoor Lighting	EACH					
	Remote Control Sw, 20A Cont. 120V Coil with 12 poles (Contactor)	EACH					



BOP Electrical Installation

Item	Description	Unit	Labor	Material	Total Direct Cost	Other Costs	Total Firm Unit Price
			\$	\$	\$	\$	\$
	120/208V,3ph,4wire panel board, 225A	EACH					
	Ltg Panel Xfrm 480-120/208V 45 kVA	EACH					
	Welding Receptacles	EACH					
	Duplex Receptacle 20A, 2pole 3 wire	EACH					
	Weather Proof Duplex Receptacle with Gnd Fault	EACH					
	Toggle Switch Single Pole, 20A,120/277V	EACH					
	Low Bay fixture,indoor, 208V,400W HPS						
	Industrial Metal Halide pendant mounted 100W, 120VAC						
	Outdoor Metal Halide Fixtures pendant mount 100W, 120VAC						
	Industrial Metal Halide wall mounted angle dome 100W, 120VAC	EACH					
	Industrial Metal Halide pendant mounted 100W, 120VAC	EACH					
	Industrial HPS pendant mounted 100W,120VAC (MGA10M1H43PA2NF)	EACH					
	Outdoor HPS Fixtures pendant mount 100W, 120VAC						
	Industrial HPS wall mounted angle dome 100W, 120VAC	EACH					
	Industrial HPS pendant mounted 100W,120VAC (MGH10M1H43CGGF)						
	<b>MISC ELECTRICAL STRUCTURAL STEEL</b>						
	Support Steel						
	<b>COMMUNICATIONS AND FIRE ALARM SYSTEMS</b>						
	Junction Boxes / Conduit / Cabling						
	Comm. Junction Boxes / Conduit / Cabling (HMI Workstation)						
	FP Junction Boxes / Conduit / Cabling (12c F/O - Patch Pnl))						



BOP Electrical Installation

Item	Description	Unit	Labor	Material	Total Direct Cost	Other Costs	Total Firm Unit Price
			\$	\$	\$	\$	\$
	Comm. Junction Boxes/Speaker						
	Speaker/Amplifier	EACH					
	Telephone	EACH					
	Converters in J. Box Fiber Optic						
	Fire Alarm Panel	EACH					

NOTES:

Unit Prices will be used as the basis for determining the cost of work added or deleted to the scope of the contract. The unit prices are intended to be all inclusive prices which cover all work associated with the supply, construction and testing of the items listed. The following notes and definitions will better define the extent of the all inclusive nature of these unit prices as they relate to each section of the unit prices that follow.  
 Unit Prices for deducts shall be based at 90% of the add value. Unit Prices are calculated net of OCIP labor credit.

REDACTED

Project Name: Merrimack Station, Clean Air Project

BOP Electrical Installation

**BEST & FINAL**

APPENDIX VIII-7, MATERIAL AND RENTAL MARKUP RATES - For Changes in the Work		
E.S. BOULOS COMPANY REV 1. 4.15.10		
ITEM NO.	DESCRIPTION OF MARKUP CATEGORY	MARKUP FOR OVERHEAD AND PROFIT
1	Equipment and / or Materials purchased by Contractor at the direction of the Program Manager	
2	Lower Tier Subcontract cost expended at the direction of the Program Manager	
3	Equipment or other items rented at the direction of the Program Manager	
Notes:		
1	The markup rates will be will be used for adjusting the Contract Price based on the addition or deletion of the described items from Contractor's Description of Work.	
2	Markup will be evaluated on a competitive basis based on anticipated growth in contract scope outside of the Lump Sum.	

< REDACTED >



Merrimack Clean Air Project  
(CATEGORY 1 SUBCONTRACT)  
**Attachment IX REV 2 – Project Reporting and Control**  
Fn: 20091103 Appendix\_IX Rev. 2.doc

**E.S. Boulos Company accepts the Appendix IX Project Reporting and Controls as written,**

*Denis St. Pierre, Director 1/27/10*



**Project Controls Requirements  
(CATEGORY I SUBCONTRACT)  
Attachment IX REV 2 – Project Reporting & Controls  
Table of Contents**

Requirements.....Appendix IX-1 Rev. 2 11/03/09  
Contractor Daily Work Report.....Appendix IX-2 Rev. 0 10/30/08  
Daily Force Report.....Appendix IX-3 Rev. 0 10/30/08  
Contractor’s Application for Payment Form.....Appendix IX-4(A) & (B) Rev. 0  
10/30/08



**ATTACHMENT IX REV 2: PROJECT REPORTING AND CONTROL**  
**CATEGORY I SUBCONTRACT**  
**PROJECT CONTROLS REQUIREMENTS**

**I. GENERAL**

- A. This exhibit sets forth the mandatory requirements for the Contractor's Work with respect to scheduling, reporting, invoicing, meetings, changes to the Work and other project controls requirements to be fulfilled by contractor during the performance of its' Work. Nothing required herein shall limit Contractor's obligation to perform normal project controls-related functions not specified herein.

**II. WORK SCHEDULES AND RELATED UPDATES**

General

The Merrimack Clean Air Project scheduling software is currently Primavera Version 6.2. Contractors are requested to use the Primavera version 6.2 program for their schedules. This should minimize the effort to integrate each contractor's schedule into the Project Schedule maintained by the Owner. Contractors are required to develop and maintain an integrated schedule for their scope of work that addresses the pertinent engineering, procurement, fabrication, delivery, construction and startup/turnover activities. As iterative versions of the Primavera Program become available the scheduling software should be consistent with the later versions of this programs software.

Data from the Contractor's Detailed Work Schedule will be incorporated into the Project Schedule. It will also have coding consistent with the contractor's scope of work and be identifiable as that contractor's work in the schedule. The Contractor schedule will include critical interface activities to and from contractor's schedules.

- A. Detailed Work Schedule. The Preliminary Work Schedule shall be submitted within fourteen (14) calendar days of the award of the contract as set forth in the Agreement. Contractor's Detailed Work Schedule shall be submitted within thirty (30) calendar days of Contract Award. The Detailed Work Schedule shall be a time-scaled critical path method ("CPM") logic diagram schedule inclusive of all pertinent engineering, procurement, fabrication, testing, shipment, construction and startup activities included in the Description of Work for the Contract. This schedule shall, as a minimum, show an orderly array of activities in support of all milestones required for the Work as set forth in the Contract. Depending on the contractor scope, the detailed schedule should address the following:

1. Engineering. (If part of the contract scope) The Work Schedule shall be sufficiently detailed so that all documentation deliverables to be submitted by Contractor as specified in the Contract will be readily apparent. In addition, data and documentation deliverables critical to design from vendors or Owner's Representative are clearly delineated and scheduled.
2. Procurement/Shop Fabrication. (Consistent with the types of procurement as detailed by the contract scope) The Work Schedule shall include activities related to all significant procurements. As a minimum, procurement activities shall include bid



package preparation, issuance for bid, bid receipt, award, key intermediate fabrication activities and delivery or completion dates, as applicable. Major material procurements should include mill order dates (if necessary) and vendor detailing, approval and fabrication sequences of logic consistent with the major areas of work defined in the contract scope.

3. Field Fabrication/Construction/Startup. The Schedule must identify Contractor's plan of execution for the field fabrication, assembly, delivery, erection and commissioning phases of the Work including the portions of the Work to be performed by Lower Tier Subcontractor's. Consideration must be given to interfaces with Owner's and/or Owner's other contractors and milestone completion dates set forth in the Project Schedule. Additionally, critical interfaces should be identified and presented in narrative format and submitted with the Work Schedule. The Work Schedule shall be sufficiently detailed so that equipment and material deliveries, Contractor interfaces and requirements with the overall project summary plan, contract milestone completion dates, and activities as identified in the Contract are readily apparent.
  
4. Level of Acceptable Data. The Work Schedule shall comply with the following requirements:
  - a. It shall be a detailed logic diagram (Arrow or Precedence Diagram) integrating all elements of the Work including engineering, procurement, fabrication and construction as agreed upon in the Description of Work document(s).
  - b. All activities must have identifiable start and finish dates.
  - c. All activities must be discrete activities (by unit) with measurable progress of a tangible product.
  - d. The schedule must be resource loaded with number and type of resources clearly identified. The construction portion of the schedule will have craft hours and commodity quantities assigned as resources. These quantities should be consistent with the total quantities provided for the contractor's earned percent complete calculations.
  - e. Week-to-week restraints must be shown in sufficient detail. These restraints must be real and not artificially used to force activities into an arbitrary sequence.
  - f. Lag factors between activities should (start to start, finish to finish, etc.) are not acceptable and should be minimized by using logic with finish to start relationships.
  - g. Original durations greater than 30 working days are not acceptable and should be minimized using logic with finish to start relationships.
  - h. The use of fixed (or user defined constraints) imposed on the logic is not acceptable.
  - i. The logic should have only one activity without a predecessor and one activity without a successor in the data base.



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- j. All activities must be of sufficient detail to effectively manage the work. Overly long activities are unacceptable.
  - g. A computerized schedule using Primavera version 6.2 is requested. The first twelve spaces of the code field are reserved for the Owner's use. The Contractor will be required to add a code field to their schedule which designates key interface milestones with the Owners Project Schedule. Code Libraries indicating common code fields, mandatory fields, discretionary fields, and required Activity Numbering Convention to be provided to Contractor. The first two digits of the activity node number will be specific to the contractor. Contractor will work with Owner to maintain consistency and compatibility of WBS, coding, etc. Global code fields will be defined for the activities provided in the schedule.
  - h. Planned versus actual resource utilization curves must be submitted describing the overall resource utilization requirements of the Work Schedule including engineering/staff resources and craft resources.
  - i. The title block must show the Project name, Contract Number, Contractor's name and date of latest issue.
  - j. The Contractor will work with the Owner to establish and code a set of critical interface activities and the transition codes for version 6.2.
  - k. The current schedule will include all approved recovery planning applications. It should reflect the current plan to execute that contractor's remaining scope of work as reviewed with and approved by the Owner.
5. Summary Schedule. The detailed Work Schedule and resource utilization curve must roll-up to a management level one-page milestone summary schedule consistent with that contractor's Description of Work. This one page schedule can be in a bar chart format to represent the total Work status and must be supported by a detailed logic diagram in the level of detail described above. Data from this schedule will be used in the project summary schedule for all contractors.
6. Work Schedule Updates. The Work Schedule shall be updated every other week during the engineering and procurement phase and weekly upon commencement of construction. Updates will be due on Mondays with actual status through the proceeding Friday. Updates shall be submitted via hard copy and Primavera electronic files. Update timing will be coordinated to support the Owners monthly reporting close-out dates and be included in Contractor's Monthly Report. Modifications to the Work Schedule which affect completion dates must be approved in writing by the Owner. Receipt and acceptance of the detailed Work Schedule is a prerequisite to any payments to Contractor. Should the Contractor fall behind schedule, a recovery plan showing how the work will be brought back on schedule, shall be submitted within one week of the occurrence.
7. Three Week Schedule.



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- a. Contractor shall submit to Owner on a weekly basis an updated rolling three week schedule which illustrates the current week and two week look ahead schedule. The three week schedule should address all engineering, procurement and construction activities as appropriate planned for the subsequent two weeks. This schedule will be due to the owner updated for the week no later than Friday Noon of that week. The schedule should be submitted via hard copy and Primavera 6.2 electronic files. This schedule should identify all activities by area, be in the accepted bar chart format, and include personnel loading.
- b. The three week look ahead schedules will be addressed and updated for progress with the contractor once he has mobilized and work has commenced in the field. The activities contained in the three week schedule will be updated daily in the plan of the day meeting chaired by the Owner. Schedule status for all activities shown in the contractor's schedule will be progressed during these daily meetings. Contractors should come to these meetings well prepared to discuss the schedule status of the activities as well as any current issues or impacts to their work.
- c. The weekly submittal of the three-week schedule will continue until completion of the contractor's Work. This schedule will be the working tool utilized in the contractor's weekly progress/coordination meeting. The Contractor shall bring sufficient hard copies to the meeting.
- d. The three-week schedule shall be based on the Contractor's detailed current work schedule and as a minimum must include all activities and milestones identified on the Work Schedule for the Three week period.

8. Ninety-Day Schedule.

- a. Contractor shall submit to Owner on a monthly basis a ninety (90) day look-ahead of the Contractor's schedule for engineering, procurement and construction activities as appropriate for the subsequent 90-Day period. This schedule must be submitted in hard copy and Primavera electronic copy at that time. This schedule should be submitted along with the contractor's monthly report. The ninety-day schedule shall be based on the Contractor's detailed Work Schedule and as a minimum must include all activities and milestones identified in the Work Schedule for the 90-Day period.
- b. This document, along with the other contractor's 90 day schedules will be reviewed at a regularly scheduled monthly review meeting chaired by the owner to discuss progress and coordination. At this meeting, contractors will get the opportunity to see the other contractor schedules and discuss upcoming interfaces or difficulties. The monthly submittal of the ninety-day schedule will continue until completion of the contractor's Work.



**III. CASH FLOW CURVE – SEE SECTION VII.B.7 BELOW**

- A. Contractor shall submit, within ten (10) Days after Contract award, a time-scaled labor and material cash flow curve, consistent with the Work Schedule, representing all costs to be invoiced by Contractor to Owner in the course of the Work. This curve should be updated and included in the monthly report indicating baseline, actual and forecast.

**IV. INVOICE SUPPORT REQUIREMENTS**

- A. The Schedule of Values included in Form 407- 03(S) (see Appendix VIII, Attachment 2) shall form the basis for progress payments to Contractor. Such progress payments will be based on measurable milestones, quantities and activities (e.g., schedules received, drawings received, materials delivered and construction activities and quantities completed, etc.) and shall relate directly to the detailed progress report for invoicing as described below. But in no case shall any individual item be more than 5% of the total Contract Price unless the individual price cannot be further subdivided.
- B. If different from progress measurement as outlined in Section X below, Contractor shall submit its proposed method for calculating actual physical progress for each cost category identified in the Schedule of Values. Upon approval by Owner, the agreed calculation method for measuring physical progress will be used by Contractor to prepare invoices for progress payments. Unless otherwise directed by Owner, payment for approved changes shall be separately invoiced and will utilize the appropriate approved calculation method for measuring progress.
- C. Earned progress must be supported by a detailed work status breakdown based upon physical completion of each item detailed. The work status breakdown shall be in sufficient detail to objectively report progress (percent complete) on an earned-value basis. This breakdown is subject to Owner's review and approval. The work status breakdown shall be submitted five (5) working days in advance of the date for invoice submittal. Owner shall review the accuracy of the earned progress and return it to Contractor approved for use as submitted, or for revision. Any discrepancies shall be resolved to the satisfaction of Owner before invoice submittal.
- D. A copy of the approved work status breakdown is to be submitted as support for the monthly invoice showing "earned" progress against each pay item. The grand total of the earned price must then match the invoice price.
- E. The Invoice must be submitted along with the approved Application for Payment Form 407-46(S) (Blank Attached) and pertinent backup documentation. Subcontractor sign off for the earned quantities submitted is required.

**V. PROGRESS REVIEW AND COORDINATION MEETINGS**

- A. A monthly meeting will be held to review Contractor's progress, the issues identified in Contractor's monthly report, 90 day look ahead and any other relevant matters. These meetings will be held at the site.
- B. After mobilization, Contractor shall be required to attend a weekly Contractor coordination meeting with other project Contractors on the Project during which safety and schedule



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details will be discussed. As a minimum, the Contractors' site manager/superintendent and scheduler will be required to attend every such meeting and be prepared to discuss any/all issues in respect to the Contract. Attendance through telephone call in will be acceptable when pre-approved by the owner. This should be by special circumstance only.

- C. A "Plan of the Day" meeting will be conducted daily for the duration of the project. Contractor's attendance at this meeting is mandatory. The purpose of the meeting will be to review schedule progress as presented and updated in the three week look-ahead report. Daily meeting discussions will also address safety and quality concerns, operating plant conditions, road closures, and other contractor-to-contractor coordination of construction work tasks.
- D. Additional focused "Plan of the Day" meetings may be conducted daily during other critical construction or startup evolutions if deemed necessary by the Owner Construction Manager. Major accomplishments from the previous day's /night's work shift and the major milestones of the day and near term will be discussed to ensure that all Project Contractors are current on all critical daily activities, safety issues, and other topics of importance. Every Contractor shall be represented at this meeting. These meetings will be held at the Facility.
- E. As construction transitions from bulk installation to construction of systems, the following meetings may be implemented to assure proper focus on system, documentation, and turn over package completion schedules:
  - 1. Punch list meeting.
  - 2. Documentation and system turn over package meeting.



**VI. CONSTRUCTION REPORTS**

A. Daily Force and Equipment Report. Not later than 10:00 AM of each work day, Contractor shall submit to the Owner a daily force report for labor and equipment starting on the first day of mobilization to the Facility Site. This report must be submitted on forms provided by the Owner (Form 407-28(S), attached) and shall include the following information:

1. Contractor's craft type and total.
2. Contractor's administrative personnel total.
3. Major equipment being utilized.
4. Other pertinent remarks, manpower shortages, visitors, material received, etc.
5. If multiple shift operations are in effect, a separate report will be submitted for the current day and the previous day's evening shift(s).
6. Subcontractor's data must be included in this report.

B. Contractor's Daily Work Report. At the conclusion of every work shift, the Contractor shall complete a "Contractor's Daily Work Report" (Form 407-30(S) attached) identifying all work completed on that shift versus the work planned to be completed. This report must be submitted on forms provided by the Owner and deficiencies will be so noted and a recovery plan included. The report shall also include the work planned for the following shift. The report shall be submitted to, and reviewed with, the Owner before leaving the Facility Site each day.

C. Weekly Quantity/Labor-hour Report  
Contractor shall submit a weekly quantity/ labor-hour report, reporting actual quantities installed (see X.D below) and labor-hours expended according to the Contractor's Schedule of Values. This report will be supported in sufficient detail that upon Owner's review, all installed quantities can be verified. This report format will be subject to Owner's review and approval and will form the basis of Owner review and approval of the Contractor's invoice.

**VII. EARNED VALUE REPORTING**

A. For overall consistency in project earned value reporting, progress measurement for the project Contract has been divided into three phases. This reporting should be consistent with the Description of Work for the subcontract.

Engineering/Design	(when part of the scope requirement)
Procurement/Fabrication/Deliver	y (when part of the scope requirement)
Construction/Testing	

The individual subtotal weighting of each phase will be determined by the dollar values of the contract's Schedule of Values (SOV). Combined, the three phases will constitute 100% of the EPC contract.



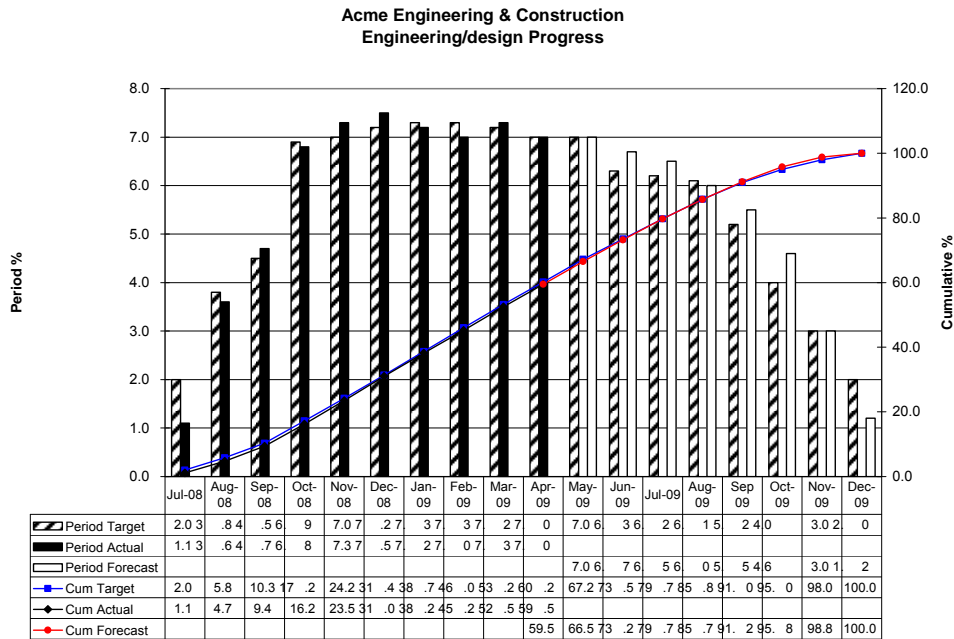
Monthly Report Example – ACME Engineering & Construction with contract value of \$5,000,000. Phases 1 and 2 are in progress, phase 3 has not started:

Phase S	OV – \$M	Period Phase Target %	Period Phase Actual %	Wtd. %	JTD Phase Target %	JTD Phase Actual %	JTD Wtd. Target %	JTD Wtd. Actual %
Engineering /design	1.150	6.0%	6.1%	23.0 %6	0.2%	59.5%	13.9%	13.7%
Procurement /Fabrication /Delivery	1.600	4.2%	3.9%	32.0 %2	5.0%	22.0%	8.0% 7	.0%
Construction /testing	2.250	0.0% 0.0	%	45.0 %0.0%	---	0.0%	0.0%	0.0%
<b>Total</b>	<b>5.00</b>			<b>100.0 %</b>	<b>---</b>	<b>---</b>	<b>21.9%</b>	<b>20.7%</b>

The chart above will be accompanied with a set of four mixed Histogram/S' Curves indicating; monthly baseline progress targets, actual progress, current forecast and the cumulative JTD actual progress and forecasted cumulative progress. There will be one curve per phase and a summary curve for total Contract progress. See example below:



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- B. Engineering/design Earned Value (when applicable to subcontract scope)  
The tool for reporting engineering progress shall be a resource loaded schedule for the engineering activities and measuring Baseline Target vs. Current. If a stand alone software is normally used for providing engineering earned value reporting over time, it will be considered in lieu of an engineering resource loaded schedule. A tracking curve similar to above is maintained and submitted. The stand alone software will need to be approved by the Owner and will become part of the contractor's project controls requirements
- C. Procurement/Fabrication/ Delivery Earned Value (when part of the scope requirement) The tool for reporting procurement progress shall be spreadsheets as shown below listing all procurements anticipated for engineered equipment and bulk materials. The relative weights are determined by estimated dollar values of the equipment or commodity divided by total. Monthly progress is earned based upon the value of milestones satisfied for each item for the reporting month. A tracking curve similar to above is maintained and submitted.





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**Typical Engineered Equipment (T=Target Date, F=Forecast Date, A=Actual Date)**

	Milestone >		Place P.O.	Receive Vendor Drawings	Release for Manufacture	Bulk Material & Equip. Rec'd in shop	Fab	Testing Final	Delivery to Site
<b>Item W</b>	<b>eight</b>		<b>5%</b>	<b>10%</b>	<b>10%</b>	<b>20%</b>	<b>40%</b>	<b>10%</b>	<b>5%</b>
Pumps	10.375	T							
		F							
		A							
Fans	6.25	T							
		F							
		A							
Valves	5.625	T							
		F							
		A							
Motors	3.50	T							
		F							
		A							
Instruments	2.75	T							
		F							
		A							
Chiller	4.75	T							
		F							
		A							
Air Comp.	5.25	T							
		F							
		A							
	<b>38.500</b>								

**Typical Bulk Materials**



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	Milestone ->		Issue RFQ	Place P.O.	Receive Vendor Specs / Drawings	Release for Manufacture or delivery	Bulk Material Fab & prepare for ship	Delivery to Site
Item Weig	ht		5%	10%	10%	10%	50%	15%
Concrete	2.50	T						
		F						
		A						
Reinforcing Steel	1.50	T						
		F						
		A						
Structural Steel	2.80	T						
		F						
		A						
Small Bore Pipe	3.20	T						
		F						
		A						
Large Bore Pipe	1.20	T						
		F						
		A						
LV Cable	2.10	T						
		F						
		A						
MV Cable	2.50	T						
		F						

D. Construction/Testing Earned Value

The tool for measuring Construction progress shall be a base-lined resource loaded schedule for the Construction activities with weekly status/progress. The resources loaded schedule shall include craft manpower and commodity quantities. Commodity tracking curves should address major quantities to be installed (ie concrete, steel, LF LB Pipe, LF Cable etc.):

Typical As Required Resources by Description of work:

- Forms
- Concrete
- Reinforcing Steel
- Structural Steel
- Siding
- Roofing
- Architectural Items
- Cable Tray
- Tanks
- Tank Welding
- Conduit
- Cable
- Lighting

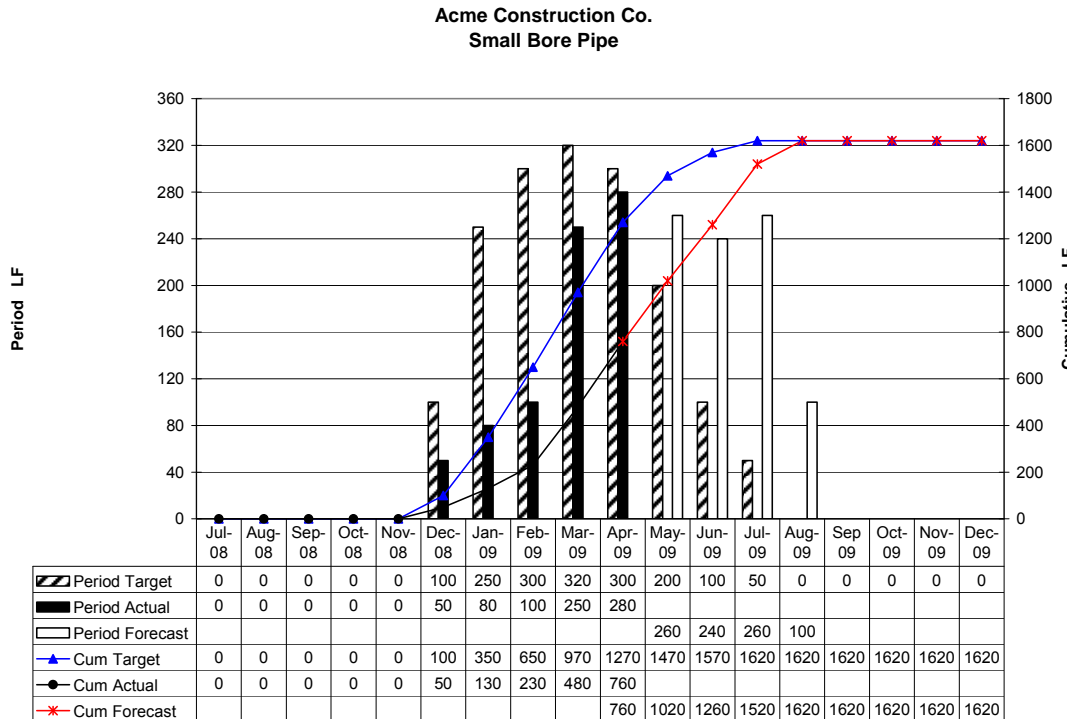


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- Terminations
- Electrical Equipment
- Mechanical Equipment
- Instruments
- Piping
- Pipe Rack Steel
- Valves
- Hangers
- HVAC
- Insulation
- Painting

The final set of commodity tracking types shall be submitted by Contractor thirty (30) calendar days after award and require approval by Owner.

Graphical Commodity charts to track planned vs . actual installation rates for equipment and bulk commodities as shown below is submitted on a weekly basis. A tabular representation showing all commodities being tracked is also required.



E. For Owner’s internal accounting purposes, Contractor shall submit progress certifications on a quarterly basis, or more frequently if requested by Owner during the term of the Contract. Such progress certifications shall be submitted to Owner no later than the fifteenth (15<sup>th</sup>) Day of the third month of each quarter, utilizing Owner’s form or similar form acceptable to Owner, which



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as a minimum shall include the Contractor Name, Subcontract Number, the Contract Price, the anticipated percentage of completion as of the end of the quarter, and signature by Contractor's authorized representative.

**XI. LOWER TIER VENDOR / CONTRACTOR DATA**

- A. Within five (5) Days of Owner's request, Contractor shall supply the Owner with the following information pertaining to all equipment to be furnished by Contractor or its Lower Tier Subcontractor: house or shop order number, name of factory contact, and complete schedule of key milestones, including completion of engineering, procurement, key subassemblies, final assembly, required shop tests.
- B. Within five (5) Days of the Owners request, contractor shall supply the Owner with un-priced copies of all major suborders and contracts with Lower Tier Subcontractors.

**Contractor Daily Work Report  
Appendix IX-2 Rev. 0 10/30/08**





## Daily Force Report Appendix IX-3 Rev. 0 10/30/08

<span style="float: right; font-size: small;">Form 407-28 S 23-Jun-08</span>									
Washington Division									
CONTRACTOR NAME:				DATE:					
CONTRACTOR NUMBER:				SHIFT:					
DAILY FORCE REPORT				WEATHER:					
Labor Classification	Gen Foreman	Foreman	Journeyman	Apprentice	NEW HIRES	(TERMINATED)	Total On PIR	ABSENT	Total Present
Boilermakers									
Brick Layer									
Carpenters									
Cement Fin									
Electricians									
Insulators									
Ironworkers									
Laborers									
Millwrights									
Operator Engineers									
Painters									
Pipefitters/Plumbers									
Roofers									
Sheet Metal Workers									
Sprinkler Fitters									
Teamsters									
Others									
<b>Total</b>									
	<b>Non-manual</b>			<b>Management</b>					
<b>Supplies &amp; Materials</b>				<b>Supervision</b>					
				<b>Engineering</b>					
				<b>Project Controls</b>					
				<b>Quality Control</b>					
				<b>Safety</b>					
				<b>Procurement</b>					
				<b>Accounting</b>					
				<b>Administrative</b>					
				<b>Total</b>					
<b>Totals</b>				<b>Total Manual/Non-manual</b>					
<b>Equipment:</b>									
<b>REMARKS:</b>									



**Contractor's Application for Payment Form  
 Appendix IX-4(A) & (B) Rev. 0 10/30/08**



**MERRIMACK CLEAN AIR PROJECT  
 CONTRACTOR'S APPLICATION FOR PAYMENT FORM**

Form 407-46(S)

Project:  
 Contractor:  
 Contract No.:  
 Payment Address:  
 General Scope:  
 Invoice Date:  
 Invoice #:

Contract Line Item No.	DESCRIPTION (In accordance with the Contract Schedule of Values)	QUANTITIES			AMOUNT		
		Original	This Period	To Date	Original	This Period	To Date
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
	Total Invoice						
	Retention						
	<b>Net Due</b>						

IT IS HEREBY CERTIFIED THAT THE ABOVE QUANTITIES AND THE CORRESPONDING VALUES REPRESENT THE ACTUAL WORK PERFORMED AND ARE ALL IN ACCORDANCE WITH THE ABOVE REFERENCED CONTRACT REQUIREMENTS:

CERTIFIED BY: \_\_\_\_\_ NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_

IT IS HEREBY CERTIFIED THAT THE ABOVE QUANTITIES  
 REPRESENT ALL WORK PERFORMED BY THE ABOVE NAMED  
 SUBCONTRACTOR TO \_\_\_\_\_ (Year)

EXTENSION AND BALANCES  
 CERTIFIED CORRECT APPROVED FOR PAYMENT

\_\_\_\_\_  
 Project Engineer/Contract Administrator

\_\_\_\_\_  
 Business Manager

\_\_\_\_\_  
 Project Manager



**APPLICATION FOR PAYMENT INSTRUCTIONS**

1. Contractor will be required to itemize each month on the Application for Payment form the percent complete, quantities and values of Work completed. All items must be in accordance with a Code of Accounts as shown on the Application for Payment and / or Change Orders as issued.
2. The Contractor is encouraged to review a draft Application for Payment with the Contract Administrator and Program Manager prior to formal submission. The review should include agreement on the monthly Milestone Payment Schedule to verify the completeness of the Engineering Deliverables, Delivery of Process Equipment, quantities of items installed during the invoice period, to assess the percentage complete and current Change Order status. This review will expedite the approval process.
3. The Application for Payment, Release and Waiver Form and all supporting documents should be submitted to :

<b>U.S. Mail - P.O. Box Mailing Address</b>	<b>Overnight Courier Mailing Address</b>
Send the <u>Original Invoice</u> to:  Public Service Company of New Hampshire P.O. Box 5017 Hartford, Ct 06102-5017 Attn.: Accounts Payable Department  Also Send <u>one (1) Copy</u> of the Invoice to:  Public Service of New Hampshire 97 River Road Bow, NH 03304 Attn: Mike Hitchko (603) 224-4081 ext: 4189  And one (1) copy of the invoice to:  URS – Washington Division 510 Carnegie Center, MS 84P6 Princeton, NJ 08540 Attn.: Steve Maximo (609) 720-2084 (Tel)	Send the <u>Original Invoice</u> to:  Overnight Courier Delivery is not available    Overnight Courier Delivery is not required    And one (1) copy of the invoice to:  URS – Washington Division Merrimack Station Clean Air Project 97 River Road Bow, NH 03304 Attn.: Bill Bullivant (603) 224-4081 ext: 4385
<b>Electronic Mail - Address</b>	
Send the <u>Electronic Copy Invoice</u> to:  URS – Washington Division Attn: Bill Bullivant <a href="mailto:Bill.Bullivant@wgint.com">Bill.Bullivant@wgint.com</a>	

4. All Certified Small Disadvantaged Business (SDB), Woman-Owned Business Enterprise (WOBE), or Veteran-Owned Business Enterprise (VOBE) shall mark their invoices accordingly.

The Application for Payment will be reviewed for final approval. Any Application for Payment, which is incomplete or not approved, will be returned to the Contractor.



## Appendix X

### FORM OF NOTICE TO PROCEED

Omitted Intentionally

## **Appendix XI: LIEN WAIVER FORMS**

**Attachment XI-1, Partial Release and Waiver, Form 407-06(MM), Rev. 0**

**Attachment XI-2, Final Release and Waiver, Form 407-07(MM), Rev. 0**

**PARTIAL RELEASE AND WAIVER**

Contract No. \_\_\_\_\_

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ )SS

**MUST BE NOTARIZED**

Whereas \_\_\_\_\_ (herein called "Contractor") who's Work will be coordinated by URS Energy and Construction (herein called "Program Manager") to furnish \_\_\_\_\_ (hereafter referred to as "Work") for the premises known as the Merrimack Station, of which Public Service of New Hampshire is the Owner (herein together with its parent, subsidiaries and affiliates called "Owner").

THEREFORE, Contractor for and in consideration of a partial payment of \$ \_\_\_\_\_ which together with prior payments constitutes a total payment to date of \$ \_\_\_\_\_ and other good and valuable considerations, does hereby waive and release any and all claims of any nature which Contractor has or may have against Owner or Program Manager relating to the Work and all labor, material, services or goods provided pursuant to or related to the Work which was performed or provided prior to \_\_\_\_\_ (date) and any and all lien(s) or claim or right of lien(s) under the Statutes of the State of New Hampshire, relating to Mechanic's or Materialmen's Liens, on the above-described premises and all improvements thereon, and on the monies or other considerations due or to become due from Contractor, on account of labor or services, material fixtures or apparatus furnished prior to \_\_\_\_\_ (date) by Contractor for the Work for the above-described premises. Further, Contractor hereby agrees to indemnify and hold harmless Owner and Program Manager against any and all costs, liabilities, damages, and expenses of whatever nature incurred as a result of any claim asserted or filed by anyone against Owner or Program Manager relating to the Work and/or the filing of any Mechanic's or Materialmen's Lien for any reason by any party who has provided labor or material for the Work, and in furtherance hereof agrees to immediately take at its sole expense whatever actions are necessary to satisfy any such claim or to remove any such lien which may be filed.

Check Appropriate Box:

- I declare under oath that Contractor has not subcontracted any part of the Work and that all material furnished under the Work has been furnished from Contractor's own stock and has been paid for in full. (If this box is checked, you do not need to execute Contractor's Affidavit on page 2 of 2.)
- Contractor has subcontracted part or all of the Work, some or all material furnished under the Work was not from Contractor's own stock, or some or all material furnished under the Work has not been paid for in full. (If this box is checked, you must execute Contractor's Affidavit on page 2 of 2, which is made a part hereof.)

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 2010.

\_\_\_\_\_ as Contractor

BY: \_\_\_\_\_ (Officer)

Its (Title): \_\_\_\_\_

**Execute Either A or B Below:**

**A. IF CORPORATION OR PARTNERSHIP**

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ )SS

I, \_\_\_\_\_, a Notary Public in and for said county in said state, hereby certify that \_\_\_\_\_ whose name on behalf of \_\_\_\_\_, a corporation (partnership), is signed to the foregoing Partial Release and Waiver, and who is known to me, acknowledged before me on this day that, being informed of the contents of the above and foregoing, (s)he, as such officer (partner) and with full authority, executed the same voluntarily for and as the act of said corporation (partnership) on the day the same bears date.

**B. IF INDIVIDUAL**

I, \_\_\_\_\_, a Notary Public in and for said county in said state, hereby certify that \_\_\_\_\_ whose name is signed to the foregoing Partial Release and Waiver, and who is known to me, acknowledged before me on this day that, being informed of the contents of the above and foregoing, (s)he, as executed the same voluntarily on the day the same bears date.

Given under my hand and official seal of office this \_\_\_\_\_ day of \_\_\_\_\_, 2010.  
\_\_\_\_\_ Notary Public



Contractor's Invoice Certification relating to Agreement dated as of **[Insert date of Agreement]**

Contractor hereby certifies the following items concerning Contractor's attached invoice:

- (i) The Project Milestone(s) stated on this invoice have been achieved.
- (ii) The quality of all Work for which payment is requested is in accordance with the terms of this Agreement.
- (iii) Contractor is entitled to payment of the amount invoiced.
- (iv) Title to all materials and Equipment invoiced has passed or will pass in accordance with the terms of this Agreement.
- (v) All of Contractor's Subcontractors have been paid in full for Work performed and supplies furnished as reflected in the immediately preceding invoice and its Subcontractors have been or will be paid in accordance with the terms of their subcontracts for the proceeds of the amount invoiced, and
- (vi) Upon receipt of the amount invoiced, the Work will be free of Subcontractors' Liens for the Work invoiced.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 2010.

\_\_\_\_\_ as Contractor

BY: \_\_\_\_\_ (Officer)

Its (Title): \_\_\_\_\_



FINAL RELEASE AND WAIVER

Contract No. \_\_\_\_\_

STATE OF \_\_\_\_\_ )
COUNTY OF \_\_\_\_\_ )SS

MUST BE NOTARIZED

Whereas \_\_\_\_\_ (herein called "Contractor") who's Work will be coordinated by URS Energy and Construction (herein called "Program Manager") to furnish \_\_\_\_\_ (hereafter referred to as "Work") for the premises known as the Merrimack Station, of which Public Service of New Hampshire is the owner (herein together with its parent, subsidiaries and affiliates called "Owner").

THEREFORE, Contractor for and in consideration of a final payment of \$ \_\_\_\_\_ which together with prior payments constitutes a total payment of \$ \_\_\_\_\_ and other good and valuable considerations, does hereby waive and release any and all claims of any nature which Contractor has or may have against Owner or Program Manager and any and all lien or claim or right of lien under the Statutes of the State of New Hampshire, relating to Mechanic's or Materialmen's Liens, on the above-described premises and all improvements thereon, and on the monies or other considerations due or to become due from Owner on account of labor or services, material fixtures or apparatus furnished at any time hereafter by Contractor for the Work for the above-described premises. Further, Contractor hereby agrees to indemnify and hold harmless Owner and Program Manager against any and all costs, liabilities, damages, and expenses of whatever nature incurred as a result of any claim asserted or filed by anyone against Owner or Program Manager relating to the Work and / or the filing of any Mechanic's or Materialmen's Lien for any reason by any party who has provided labor or material for the Work, and in furtherance hereof agrees to immediately take at its sole expense whatever actions are necessary to satisfy any such claim or to remove any such lien which may be filed.

Check Appropriate Box:

- I declare under oath that I have not subcontracted any part of the Work and that all material furnished under the Work has been furnished from my own stock and has been paid for in full. (If this box is checked, you do not need to execute Contractor's Affidavit on page 2 of 2.)
I subcontracted part or all of the Work, some or all material furnished under the Work was not from my own stock, or some or all material furnished under the Work has not been paid for in full. (If this box is checked, you must execute Contractor's Affidavit on page 2 of 2, which is made a part hereof.)

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 2010.

\_\_\_\_\_ as Contractor

BY: \_\_\_\_\_ (Officer)

Its (Title): \_\_\_\_\_

Execute Either A or B Below:

A. IF CORPORATION OR PARTNERSHIP

STATE OF \_\_\_\_\_ )
COUNTY OF \_\_\_\_\_ )SS

I, \_\_\_\_\_, a Notary Public in and for said county in said state, hereby certify that \_\_\_\_\_ whose name on behalf of \_\_\_\_\_, a Corporation (partnership), is signed to the foregoing Final Release and Waiver, and who is known to me, acknowledged before me on this day that, being informed of the contents of the above and foregoing, (s)he, as such officer (partner) and with full authority, executed the same voluntarily for and as the act of said Corporation (partnership) on the day the same bears date.

B. IF INDIVIDUAL

I, \_\_\_\_\_, a Notary Public in and for said county in said state, hereby certify that \_\_\_\_\_ whose name is signed to the foregoing Final Release and Waiver, and who is known to me, acknowledged before me on this day that, being informed of the contents of the above and foregoing, (s)he, as executed the same voluntarily on the day the same bears date.

Given under my hand and official seal of office this \_\_\_\_\_ day of \_\_\_\_\_, 2010.

\_\_\_\_\_ Notary Public

**CONTRACTOR'S AFFIDAVIT**

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ )SS

**MUST BE NOTARIZED**

The undersigned, first being duly sworn, deposes and says that (s)he is officer / partner (title) \_\_\_\_\_ of (Firm Name) \_\_\_\_\_ the Contractor referred to in the FINAL RELEASE AND WAIVER on the front hereof was employed by Owner to furnish the Work for Owner's premises and that the total amount of the Contract is \$ \_\_\_\_\_ of which (s)he has received payment of \$ \_\_\_\_\_ and that the following statement includes the names of all parties who have furnished or who have been contracted with by affiant to furnish material or labor for the Work and the amounts furnished by, contracted for, paid or due and to become due each; and that the items mentioned include all labor and material required to complete said Work according to plans and specifications:

Name and Address	Purpose	Subcontract Price	Amount Paid	Amount Now Due
<b>Total Labor and Material to Complete (If more, list on separate sheet)</b>				

All material (except as above listed) has been or will be furnished from my own stock and has been paid for in full.

The undersigned further states that there are no other contracts for said Work outstanding; that there are not any claims made or to be made by and that there is nothing due or to become due to any person for material, labor, or other work of any kind done or to be done upon or in connection with said Work other than above stated; that all releases and waivers are true, correct, and genuine and delivered unconditionally; and that there is no claim either legal or equitable to defeat the validity of said releases and waivers.

\_\_\_\_\_ (Affiant)

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 2010.

\_\_\_\_\_ Notary Public

## **Appendix XII: Change Requests and Information Requests**

Attachment XII-1, Project Change Control & Information

Attachment XII-2, Work Change Request (WCR), Form 407-25(S)

Attachment XII-3, Engineering Change Instructions, Form 366-01(S)

Attachment XII-4, Request for Information, Form 456-01(S)

Attachment XII-5, Backcharge Notification, Form 408-02(S)



## **Attachment XII-1 - Change Control and Information Requests**

### **I. REQUEST FOR INFORMATION PROGRAM – SEE APPENDIX XII-4**

A. A Request for Information (“RFI”) may be submitted by Contractor using Form 456-01(S) to obtain answers to Contractor’s questions regarding the Contract Documents, Facility Site or other matters pertaining to the Work. Contractor will identify the date by which it requires the requested information, but in no event shall such date be earlier than five (5) working days after the submission of the RFI, unless otherwise agreed in writing by Owner.

B. Nothing contained in any Contractor RFI or Owner’s response thereto shall (i) be deemed to be a request for a change by Contractor, (ii) constitute Owner’s authorization to proceed with a change, or (iii) in any way relieve Contractor of its obligations to timely submit a request for a change.

C. Contractor shall establish and maintain a RFI log to facilitate identification and tracking of each RFI from origination through final disposition. The log shall also include a general description of the subject matter of each RFI and current information on the status of each RFI. This log shall be issued to the Owner in the monthly progress report by the Contractor and more frequently if requested by Owner.

### **II. WORK CHANGE CONTROL PROGRAM - SEE APPENDIX XII-2**

A. Change order control will be implemented by use of a system of Work Change Requests (WCR) and amendments to the Contract all administered in accordance with the General Conditions.

1. A WCR may be initiated by Owner for changes in scope which have a possible cost or schedule impact. If Owner initiates a WCR, it will request Contractor to provide cost and schedule information by a certain time for a specified Description of Work. If Contractor’s quotation is acceptable, Owner will authorize the change and issue an Amendment.

2. Within the time period specified in the Agreement, Contractor shall notify Owner in writing of receipt of direction or of any impact that Contractor considers to be a change.

The following information must accompany the Contractor’s submittal for Owner’s review:

a. A comprehensive narrative description of the change, including the formal directive or other applicable justification validating the change.

b. A detailed pricing breakdown complete with a material takeoff of quantities involved in the change and prices for each item. Individual prices are to be extended for each line item as applicable and totaled for a total price.

c. Any detailed description of the impacts to the work schedule, if any.

3. No WCR will include more than one directive or subject. In other words, different changes or subjects will not be consolidated into one WCR.

4. Contractor shall establish and maintain a change control log to facilitate identification and tracking of each WCR from origination through final disposition. Contractor shall establish and maintain a change control status report which will provide current information on the status of all WCR’s. This report will show each WCR in the change approval process and the resulting amendments to the Contract. This report shall be issued to the Owner in the monthly progress report by the Contractor and more frequently if appropriate.

5. Contractor shall incorporate all approved Amendments into the Work Schedules and the Schedule of Values.

**Work Change Request (WCR)**  
\_\_\_\_\_ **Project**

Contract No.: \_\_\_\_\_ Date: \_\_\_\_\_

Contractor: \_\_\_\_\_ WCR No.: \_\_\_\_\_

**A. Complete Description of Work to be performed: (include scope, drawings, specifications, and schedule if required)**

**B. Request for Quotation:**

\_\_\_\_\_ Provide a lump sum price. \_\_\_\_\_ Provide a T & M price No later than: \_\_\_\_\_

**Contractor is not to proceed with the Work until specifically authorized in writing to proceed.**

Contract Administrator: \_\_\_\_\_

**C. Authorization to proceed with work:**

\_\_\_\_\_ Proceed with the described work for a lump sum price of: \_\_\_\_\_

\_\_\_\_\_ Proceed on a T & M. Contractor shall not exceed the estimated commitment of \_\_\_\_\_

**Time and material sheets shall be submitted daily.**

**D. Cost Code (s):** \_\_\_\_\_

**E. Schedule Impact:** \_\_\_\_\_ Yes \_\_\_\_\_ No

**Approved To Proceed:**

Contract Adm.: \_\_\_\_\_ Site Mgr.: \_\_\_\_\_ Owner: \_\_\_\_\_

Date: \_\_\_\_\_ Date: \_\_\_\_\_ Date: \_\_\_\_\_

**Contractor acknowledges that the agreed compensation includes full consideration of impacts due to all existing subcontract work including other approved changes,**

**Contractor Signature:** \_\_\_\_\_

**Upon receipt and acceptance of this EWO, the Contractor is to sign and return a copy to the Contract administrator. All Terms and Conditions are to be in accordance with the Subcontract.**

## WCR Instructions

1. Contract No.: Enter the Company-designated Contract identification number of the Contract for which the WCR is being issued
2. Contractor: Enter the name of Contractor being issued the WCR
3. Contract No.: Enter the contract number of the project
4. Date: Enter the calendar date the WCR was initiated
5. WCR No.: Enter the unique consecutive number identifying this WCR
6. Complete description of Work to be performed: Provide a detailed description of Work to be performed on the WCR (include scope, drawings, specifications and schedule, using the continuation page of the WCR, if required)
7. Request for Quotation: Place a check mark in the space requiring the Contractor to "Provide a lump sum price," or to "Provide a T & M price" "no later than" (do not check more than one space)
8. Provide a T & M price no later than: Enter the calendar date by which the Contractor must return the price to the Company's Contract administrator
9. Contract Administrator: Signature of Contract administrator indicating that Work described should be sent to the assigned Contractor for a quoted price
10. Authorization to proceed with work: After receipt of the Contractor's quote, the Contract administrator checks either 11 or 12 (Do not check more than one box or fill in more than one price space. All price data detailed breakdown is to be attached to the EWO. If it is determined that extra Work is not to be done after receipt of price quote, the Contractor will be notified.)
11. Proceed with the Described of Work for a lump sum price of: Check if the lump sum price is submitted by the Contractor
12. Enter the lump sum price submitted by the Contractor in the space provided
13. Proceed on a T & M, etc.: Check if a T & M price is submitted by the Contractor
14. Enter estimated commitment, which may not be exceeded
15. Cost Code(s): All cost account codes affected by the WCR and the amount of cost each account code will be impacted are to be listed (use the Work Change Request continuation page, if required)
16. Schedule Impact: After determining possible schedule impacts, the Company's Contract administrator checks "yes" to indicate that there is a Contract / project schedule impact or "no" to indicate that there is not a schedule impact (do not check more than one space)
17. Contract Adm.: Signature indicating approval and agreement by the Contract administrator that the extra Work described is required and that the price quoted is fair and equitable
18. Site Manager: Signature indicating approval and agreement by the Site manager that the extra Work described is required and that the price quoted is fair and equitable
19. Owner: Signature indicating approval and agreement by the Owner's representative that the extra Work described is required and that the price quoted is fair and equitable
20. Contractor Signature: Signature indicating agreement by the Contractor to perform the extra Work described for the price as quoted on the WCR

## Work Change Request Continuation Page (If Necessary)

WCR No.: \_\_\_\_\_

Description of Work:

Cost/Pricing:

Cost Codes:

## **Work Change Request Continuation Page (Instructions)**

1. **WCR No.:** Enter the unique consecutive number identifying this WCR (continued from the first page of the Work Change Request from the item titled "WCR No.")
2. **Description of Work:** Enter a detailed description of work to be performed on the WCR (continued from the first page of the WCR from the item titled "Complete description of work to be performed :")
3. **Cost / Pricing:** Enter the detailed breakdown of material, labor, equipment, etc. (continued from the first page of the WCR from the item titled "Authorization to proceed with work")
4. **Cost Codes:** Cost account codes affected by the WCR (continued from the first page of the WCR from the item titled "Cost Code(s)")

**End of Document**



## Request for Information

ATTENTION \_\_\_\_\_ RFI No.: \_\_\_\_\_  
Please disposition the following problems:

PRIORITY No.: \_\_\_\_\_

(Priority: 1 = need to prevent work stoppage or schedule slip, 3 = req'd for work continuity, 5 = proj. schedule continuity, please respond appropriately).

Engineering Discipline: \_\_\_\_\_ Date Issued: \_\_\_\_\_

Contract No.: \_\_\_\_\_ Date Closed: \_\_\_\_\_

Project Name: \_\_\_\_\_ Response Needed Date: \_\_\_\_\_

Location: \_\_\_\_\_ Key Drawing/Spec: \_\_\_\_\_

PROBLEM: \_\_\_\_\_

TITLE: \_\_\_\_\_

REFERENCES: \_\_\_\_\_

LOCATION: \_\_\_\_\_

DESCRIPTION: \_\_\_\_\_

CONTRACT NO.: \_\_\_\_\_ CONTRACTOR: \_\_\_\_\_

ORIGINATOR: \_\_\_\_\_ DATE: \_\_\_\_\_

RESOLUTION: Design Change: Yes: \_\_\_\_\_ No: \_\_\_\_\_ Design Leader: \_\_\_\_\_ Date: \_\_\_\_\_

**APPROVED BY:**

## **Request for Information (Instructions)**

### **To be completed by the contractor/originator**

1. Attention: Enter the name of the Company's contract administrator assigned to your contract, or other individual who is to respond to the RFI.
2. Priority No.: Enter a priority number selected from the list on the front of this form.
3. Title: Enter a short descriptive title of the question or potential problem.
4. References: List the project documents that pertain to the RFI, including drawing numbers, specification numbers, contract sections, etc. (use an additional sheet if necessary).
5. Location: Enter the physical plant location associated with the RFI (for example: Operating Floor, Column 33-R, elevation 28'-6").
6. Description: Enter a description of the question or potential problem in sufficient detail to fully define it.
7. Contract No.: Enter the number of your company's contract with the Company, if applicable.
8. Contractor: Enter your company's name, if applicable.
9. Originator: Sign your name here.
10. Date: Enter the date you completed the RFI form.

### **To be completed by Company's chief construction engineer or other person designated to respond to the RFI**

11. RFI No.: Enter the number assigned to this RFI from the RFI Log.
12. Engineering Discipline: Enter the work discipline associated with this RFI (for example, piping, electrical, structural).
13. Date Issued: Enter the date the RFI was received from the originator.
14. Contract No.: Enter the Company's contract number for this project.
15. Project Name: Enter the name of the project.
16. Location: Enter the project location.
17. Response Needed Date: Enter the date a response must be sent to meet the requirements of the priority number provided in item 2, above, and to prevent cost/schedule impacts to the associated work.
18. Key Drawing/Spec.: Enter the drawing or specification number that has the most effect or bearing on the question or potential problem defined in the RFI.

### **To be completed by the Company's chief construction engineer**

19. Resolution: Enter the resolution in sufficient detail to fully define it.
20. Chief Construction Engineer: Sign your name here.
21. Date: Enter the date you signed your name.

### **To be completed by Company's chief construction engineer or other person designated or required to respond to the RFI**

22. Date Closed: Enter the date the Company's response was sent to the contractor.
23. Approved By: Signature of Design Engineer's project engineer or the Client representative.
24. Resolution: Design Change: Check the "Yes" or "No" box to indicate whether or not the resolution represents a design change.
25. Design Leader: If the resolution represents a design change, the design leader or individual(s) dictated by the project procedure manual may sign here.
26. Date: Enter the date the signature was entered for Item 25.
27. Cost Code: The cost analyst enters the appropriate cost code, if applicable.
28. Field Project Control Mgr.: The field project control manager signs here.
29. Date: Enter the date the field project control manager signs this form (see Item 28).
30. EWO, NCR, Backcharge No.: The chief construction engineer enters the number of the extra work order, nonconformance report, or backcharge, if applicable.
31. Apparent Cause: The chief construction engineer enters the apparent cause of the field problem, if applicable.



## CONTRACT BACKCHARGE AGREEMENT

DATE:	CONTRACT NO.:	BACKCHARGE NO.:	NCR No.:
CONTRACTOR:			
CONTRACT TITLE:			
<b>1. Description of Backcharge Work (If additional space is required, attach a separate sheet):</b>			
<b>2. Pricing Basis (Check applicable basis):</b>			
<input type="checkbox"/> Agreed lump sum price of \$ _____ Or <input type="checkbox"/> Actual Incurred costs plus mark-up in accordance with the TERMS AND CONDITIONS in section III. Below.			
<b>3. Terms and Conditions Unless otherwise provided in Part II - Commercial Terms of the Contract:</b>			
a.) Labor shall be charged at actual cost, including all applicable Taxes, Insurance, Travel and Subsistence, and other applicable Fringe Benefits plus _____%. b.) Equipment shall be charged at established rates for URS or Owner equipment or at actual rates paid for hired unities plus _____%. c.) Materials shall be charged at actual cost, plus _____%. d.) Subcontracts shall be charged at actual cost, plus _____%.			
<b>4. Contractor Authorization To Proceed:</b>			
We _____ Require and request, or understand and agree, that the Owner and / or Program Manager is able to perform, or cause to be performed, the described Work in the DESCRIPTION OF BACKCHARGE WORK section above and that we shall compensate the Owner and / or Program Manager in accordance with the rates, prices, terms and conditions set forth herein.			
BY:	TITLE:	DATE:	
<b>5. Final Backcharge Value:</b>			
Owner and / or Program Manager has performed, or caused to be performed, the work described herein and, in doing so, has incurred costs in the total amount of \$ _____ (as detailed in the supporting documentation) which shall be backcharged to the above named Contractor.			
CONTRACTOR (Signature):	TITLE:	DATE:	
Program Manager (Signature):	TITLE:	DATE:	

## Backcharge Agreement instructions

1. Date: Calendar date that the "Backcharge Agreement" is prepared
2. P.O. or Contract. No.: Purchase Order or Contract number covering the material or service that is being documented by the "Backcharge Agreement"
3. Backcharge No.: Number identifying the backcharge being covered by the "Backcharge Agreement"
4. NCR No.: Nonconformance report number reporting the nonconforming discrepancy in the materials or services being documented by the "Backcharge Agreement"
5. Contractor / Supplier Company Name: Company Name of Contractor or Supplier to whom the "Backcharge Agreement" is being issued
6. Cost Analyst: Name of the company cost analyst who will estimate and tabulate the cost associated with the "Backcharge Agreement"
7. Contract Administrator: Name of Contract Administrator, Project Procurement Manager or Buyer administrating the purchase order or Contract associated with the "Backcharge Agreement"
8. Description of Work Performed: Detailed description of Work performed which is to be covered by the "Backcharge Agreement"
9. Mark "Yes if "Backcharge Agreement" is a firm fixed price and fill in amount.
10. Mark "Yes if "Backcharge Agreement" is an estimated cost with work to be performed on a time and material basis
11. Total Labor: Total number of labor hours, required to complete the backcharge work
12. \$ / Hr: Average cost per labor hour
13. Base Labor Cost \$: Labor cost of total number of labor hours multiplied by average cost per labor hour
14. Percentage multiplier for determination of labor fringes & taxes
15. Labor Fringes & Taxes \$: Amount of labor fringes and taxes calculated by Multiplying base labor cost by the percentage multiplier
16. Total Equipment hours required to complete the backcharge Work
17. \$ / Hr: Average cost per Equipment hour
18. Equipment Rental \$: Equipment cost of total equipment hours multiplied by the average cost per equipment hour
19. Material Direct Cost \$: Total cost of direct materials used to complete the backcharge work
20. Total Direct Cost \$: Total direct cost to complete the backcharge Work, which is the base labor cost plus labor fringes & taxes, plus equipment rental plus material direct cost
21. Percentage multiplier for determination of indirect markup
22. Indirect Markup \$: Total indirect cost of backcharge (calculated by the total direct cost multiplied by the indirect percentage multiplier)
23. Total Backcharge \$: Total cost of the backcharge, which is the total direct cost plus indirect markup
24. Authorized Corporate Rep. : Signature of the authorized Corporate person for acceptance of work and costs shown on the "Backcharge Agreement"
25. Date: Calendar date authorized Corporate representative signed acceptance of the "Backcharge Agreement"
26. Contractor / Supplier Rep.: Signature of acceptance to "Backcharge Agreement" Work and cost by appropriate Contractor / Supplier representative
27. Date: Calendar date appropriate Contractor / Supplier representative signed the "Backcharge Agreement"

## **Appendix XIII**

**Omitted Intentionally**

# OCIP Enrollment Application - Insurance Premium Worksheet

Contractor's Name: E.S. Boulos Company

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Street Address 45 Bradley Drive

---

City, State, Zip Westbrook, ME 04092

---

Phone 207-464-3706 Fax 207-464-1833 Email dstpierre@esboulos.com

---

Federal ID Number (FEIN) 06-1606237 Taxpayer ID # \_\_\_\_\_ WC Bureau ID 918159215

---

Bid Package Name Merrimack Station – Clean Air Project Bid Package BOP Electrical Installation

---

Awarding Contractor: URS Energy and Construction

---

Contract Amount \_\_\_\_\_ Expected No. of Subcontractors \_\_\_\_\_

---

Contract Number 02254709 Expected Value of Subcontractors: \$ \_\_\_\_\_

---

Are Employees Leased? Yes \_\_\_ No **X** (select one) Probable Contract Dates Start 'April 2010 End Jan. 2012

---

Proposed Contract Type **GMP** \_\_\_ Lump Sum **X** Cost Plus \_\_\_ Unit Price \_\_\_ Other (describe) \_\_\_\_\_

---

Primary Contact Person Scott Marquis Phone: 207-464-3706

---

Street Address 45 Bradley Drive Fax: 207-464-1833

---

City/State/Zip Westbrook, ME 04092 Email: smarquis@esboulos.com

---

Payroll Contact Person Karen Chau Phone: 207-464-3706

---

Street Address 45 Bradley Drive Fax: 207-464-1833

---

City/State/Zip Westbrook, ME 04092 Email kchau@esboulos.com

**WORKERS COMPENSATION ESTIMATED PROJECT PAYROLLS & PREMIUMS FOR SELF-PERFORMED WORK (ON-SITE PAYROLLS ONLY).**

For Self-Insured or High Deductible Workers Compensation, please fill in APPENDIX A at the end of this package.

WC CLASS DESCRIPTION	CLASS CODE	ESTIMATED HOURS	ESTIMATED PAY RATE	WC RATE	ESTIMATED PAYROLL	MANUAL PREMIUM
Electrician Supervision	5606					
Electrician - Inside	5190					
			\$	\$ .	\$	\$

10% Credit = .10  
10% Debit/Surcharge = -.10

<p>A. EL Increased Limits Factor: _____</p> <p>B.: Experience Modification: _____</p> <p>C. WC Scheduled Credit/Debit: _____</p> <p>D. WC Premium Discount: _____</p> <p>E: State Specific Credit/Surcharge: _____ %</p> <p>F. Other Credit/Surcharge Amount: _____</p> <p>G. Terrorism Factor (rate/\$100 pay): _____</p>	<p>1. Total Manual Premium: _____</p> <p>2. EL Increased Limits Amount: (1xA) \$ _____</p> <p>3. Total Subject Premium: (1+2) \$ _____</p> <p>4. Total Modified Premium: (3xB) \$ _____</p> <p>5. WC Scheduled Credit/Debit Amount: (4xC) \$ _____</p> <p>6. Modified Premium: (4+5) \$ _____</p> <p>7. WC Premium Discount Amount (6xD) \$ _____</p> <p>8. Discounted WC Premium: (6+7) \$ _____</p> <p>9. State Specific Credit/Surcharge Amount: (8xE) \$ _____</p> <p>10. State Modified WC Premium: (8+9) \$ _____</p> <p>11. Other Credit/Surcharge Amount: (10xF) \$ _____</p> <p>12. Net WC Premium: (10+11) \$ _____</p> <p>13. Terrorism Charge Amount: (Gx Total Est. Payroll/\$100) \$ _____</p> <p>14. Total WC Charge Amount: (12+13) \$ <span style="border: 1px solid black; padding: 2px 10px;"> </span></p>
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**GENERAL LIABILITY ESTIMATED PROJECT PAYROLLS & PREMIUMS FOR SELF-PERFORMED WORK  
(ON-SITE PAYROLLS ONLY)**

Rating Basis: Per \$100 of Payroll \_\_\_\_ Per \$1,000 of Payroll XX  
 Per \$100 of Contract Value \_\_\_\_ Per \$1,000 of Contract Value \_\_\_\_  
 Other: (Describe) \_\_\_\_\_

For Self-Insured or High Deductible General Liability, please fill in APPENDIX B at the end of this package.

GL CLASS DESCRIPTION	CLASS CODE	PAYROLL, CV OR OTHER BASIS ESTIMATE	GL RATE	PREMIUM
Electrical Supervision	91580	\$	\$	\$
Electrician – Inside	92451	\$ 1	\$	\$
		\$	\$	\$

A. Excess Liability Rate:	0.94	1. Total GL Premium:	\$
		2. Umbrella/Excess Liability Premium (A x Payroll or CV)	\$
<b><u>Contract Value per \$1,000 on excess</u></b>		3. Total Liability Charge Amount: (1+2)	\$
		4. WC Charge Amount (item 14 on Page 1)	\$
		5. Total WC Charge Amount + Liability Charge Amount (3 + 4)	\$
		6. Est. Cost of Ins for Subcontracted Work: (3.5% of Subcontracted amount)	\$
		7. Grand Total Including Subcontractors: (4+5)	\$

**AGREEMENT**

Public Service of New Hampshire, as Sponsor of the Project Insurance Program, or Owner’s Representative, is granted permission by contractor to inspect the insurance and payroll records and audit methods and rates used in determining the Total Insurance Costs identified in this Form). In the event that actual audited payrolls exceed payrolls, contractor may be charged back for associated premium costs (calculated with the rates identified in this Form) and this associated premium cost shall apply to your final insurance deduction.

**WARRANTY**

As respects to Workers’ Compensation, Employer’s Liability, General Liability and Excess Liability per the coverage outlined in the Contract Documents the undersigned agrees and warrants: 1) It is Contractor’s responsibility to notify their insurance carrier, that the work performed under this contract will be insured under an Owner Controlled Insurance Program; 2) The cost of similar insurance has been identified as part of our bid and to the best of our knowledge are true; 3) Premiums for this OCIP are the responsibility of the “Owner” and Contractor agrees that any and all return of premium, dividends, discounts or other adjustments to any OICP policy(ies) is assigned, transferred and set over absolutely to the Public Service of New Hampshire. This assignment applies to the OCIP policy(ies) as now written, or as subsequently modified, rewritten or replaced.

*Denis R. St Pierre*

Director

# Appendix A:

## Self-Insured or High Deductible WC Insurance Premium Worksheet

	ITEM 1	ITEM 2	ITEM 3	ITEM 4	ITEM 5
A. WC Class Description:					
B. Class Code:					
C. Estimated Hours:					
D. Estimated Pay Rate:					
E. Estimated Payroll:	\$	\$	\$	\$	\$
F. Risk Transfer/Excess Comp Rate:					
G. Risk Transfer Charge Amount: (F÷100)	\$	\$	\$	\$	\$
H. Loss & Handling Rate: (Per \$100 Of Payroll)					
I. Loss Charge Amount: (H÷100)	\$	\$	\$	\$	\$
J. Assess Rate % Of Loss Charge:					
K. Assess Charge Amount: (Ixj)	\$	\$	\$	\$	\$
L. Total Loss Cost: (I+K)	\$	\$	\$	\$	\$
M. Total WC Charge Amount: (G+L)	\$	\$	\$	\$	\$

# Appendix B: Self-Insured or High Deductible GL Insurance Premium Worksheet

A. GL CLASS CODE	B. EXPECTED RATING BASIS	C. RISK TRANSFER RATE	D. RISK TRANSFER COST (B+C)	E. LOSS & HANDLING RATE	F. LOSS & HANDLING CHARGE (BxE)	G. TOTAL LIABILITY CHARGE: (D+F)
			\$		\$	\$
			\$		\$	\$
			\$		\$	\$
			\$		\$	\$
			\$		\$	\$
			\$		\$	\$

A. Charge for Deductible Losses: (rate/\$100 pay):(include if Deductible Credit applies)  _____	1. Total GL Premium: 2. Deductible Charge Amount: (A x Total Est Payroll) 3. Total GL Charge Amount: (1+2) 4. Umbrella/Excess Liability Premium: (Bx3) 5. Total Liability Charge Amount: (3+4) 6. Total WC + GL Charge for Self-Perf Work: 7. Est Cost of Ins for Subcontracted Work: 8 Grand Total Including Subcontractors: (8+9)	\$ _____ \$ _____ \$ _____ \$ _____ \$ _____ \$ _____ \$ _____ \$ _____
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## Appendix XIV-2

### Contractor Acknowledgement & Certification of Subcontractor Insurance

I hereby acknowledge that it is Contractor's responsibility to ensure that each of the Subcontractors engaged to provide Work in performance of this Agreement maintains the requisite insurance coverages, *except* to the extent that Contractor maintains insurance that includes requisite coverages for such Subcontractors. I certify that Contractor has obtained the required certificates of insurance from each of these Subcontractors (and Contractor will obtain such certificates from any Subcontractor that Contractor engages in the future to provide Work in performance of this Agreement). I acknowledge that it is Contractor's obligation to produce copies of such certificates of insurance upon request of Owner. Contractor has required (and will require) that each of these Subcontractors direct their respective insurers to send copies of any notices of cancellation, termination or material modification of subcontractor's insurance to Contractor and Contractor has monitored (and will continue to monitor) all such notices to help ensure that each of these Subcontractors maintains the insurance coverages that are required under the Agreement and not otherwise maintained by Contractor.

E.S. Boulos Company

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(Contractor Company or Organization Represented)

Denis R. St. Pierre, Director

---

(Print Name)

*Denis R. St. Pierre*

---

(Sign Name)

January 26, 2010

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(Date)



**Public Service of New Hampshire**

Merrimack Clean Air Project

Project Insurance Manual

Owner Controlled Insurance  
Program (OCIP)



**MARSH**

PSNH OCIP Administrator  
99 High Street  
Boston, MA 02110

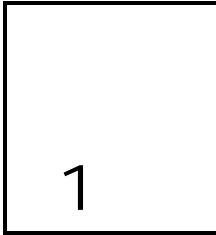
February 11, 2009

**Final**

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## ***Welcome to this Owner Controlled Insurance Program***

### Introduction

If there are any conflicts between this Manual and the insurance requirements included in the contractor's applicable agreement with Public Service Company of New Hampshire (Owner), the requirements of the applicable agreement has priority over this Manual.

Public Service Company of New Hampshire has arranged insurance for this construction project under an Owner Controlled Insurance Program (OCIP). An OCIP is a single insurance program that insures Owner, URS Washington Division (Program Manager), enrolled contractors and enrolled subcontractors of any tier, along with their eligible employees and other designated parties for work performed at the Site. Certain parties and their employees are excluded from the OCIP as identified in this manual.

This Manual is intended to provide general information as to the insurance afforded and/or required of enrolled parties, claims reporting, safety & loss control requirements, and the procedures to be followed in administering the program. All questions concerning the OCIP requirements should be referred to the OCIP administrator as indicated in Section 2, the Project Contact Directory.

The OCIP for this project provides the following coverage for enrolled parties whose employees perform actual on-site labor at the Site. This coverage includes:

- Workers' Compensation
- Employers Liability
- General Liability
- Products/Completed Operations
- Excess Liability

Owner will pay insurance premiums for the OCIP coverage described in this manual. It is recommended that you place your current insurer on notice that you are participating in an OCIP. The example endorsement attached in Section 9 of the guide that can be used in working with your insurer or agent.

**Enrolled Parties:** Contractor(s) and Subcontractor(s) of any tier who perform operations on the Site and such other persons or entities as the Owner may designate as enrolled parties, who perform direct labor at the Site or sites incidental to the Work. The Owner may elect to cover architects, engineers, and consultants if applicable. Temporary labor services and leasing companies are to be included as Subcontractor(s). Contractor(s) and Subcontractor(s) of any tier must have submitted all necessary enrollment forms and have been accepted into the OCIP as evidenced by a confirmation of enrollment letter and Proof of Insurance to receive coverage under the OCIP.

Participation in the OCIP is mandatory for ALL contractors and their subcontractors of any tier unless excluded by the Owner or as outlined below. **However, enrollment is not automatic.** Work will not be permitted at the Site until the contractor and subcontractor regardless of tier is **properly** enrolled in the OCIP. An enrolled contractor is one who has properly completed and submitted the necessary forms and other documents as described in this Project Insurance Manual.

**Excluded Parties:** Off-site fabricators, vendors, suppliers (who do not perform or subcontract installation), material dealers, guard services, blasting, truckers, (including trucking to the Project where delivery is the only scope of Work to be performed) asbestos abatement or other hazardous waste removal Contractor(s) and their respective Subcontractor(s) of any tier, and others whose sole function is to transport, pickup, deliver or carry materials, supplies, tools equipment, parts or other items to or from the Site, or who do not perform any actual on-site labor, any other entity specifically determined by the Owner to be excluded will not be covered by insurance purchased by the Owner through the OCIP.

Coverage applies only to work performed at the Site by the enrolled parties. Enrolled parties must provide their own insurance for off-site activities including but not limited to work at their permanent shops, fabrication or manufacturing of building products, materials or supplies.

The description of the OCIP coverages included in this Manual should not be interpreted as relieving the enrolled parties of any responsibility under their contracts. All enrolled parties will be required to carry certain other insurance as specified in their contracts as briefly outlined later in this Manual and may carry, at their own expense, any additional insurance they deem necessary.

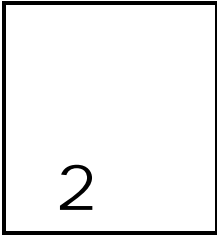
This Manual:

- Describes the general structure of the OCIP
- Identifies the responsibilities of the various parties involved in the project.
- Provides a basic description of OCIP coverage
- Describes audit and administrative procedures
- Will be updated as necessary

This Manual does not:

- Provide coverage interpretations

- Provide complete information about coverage
- Provide answers to specific claim questions



## Project Contact Directory

OCIP Administration	
<p><b>MARSH</b>                      Attn: PSNH OCIP Administrator                      99 High Street                      Boston, MA 02110</p>	
<p>OCIP Administrator                      Daily Contact</p>	<p>Alex Merida, Wrap-Up Administrator                      Via Phone # (617) 385-0434 Fax #:(617) 385-0376                      Cell: (860) 805-2720                      Email: Alexander.D.Merida@marsh.com</p>
<p>Client Administration Manager                      Supervisor</p>	<p>Richard Floyd                      Via Phone #: (617) 385 0521 Fax #: (617) 385 0376                      Email: Richard.P.Floyd@marsh.com</p>
<p>OCIP Manager                      Manager</p>	<p>Trish Kawa                      Via Phone #: (617)385 0540 Fax #: (617)385 0376                      Email: Trish.Kawa@marsh.com</p>
<p>WC Claims Contact</p>	<p>Elizabeth Clark                      Via phone #: 617-385-0567 Fax #: 617-385-0344                      Email: Elizabeth.S.Clark@marsh.com</p>
<p>GL Claims Contact</p>	<p>Giles Boucher                      Via phone #: 617-385-0446 Fax #: 617-385-0344                      Email: Giles.Boucher@marsh.com</p>
<p>Risk Control</p>	<p>Tim Bergeron                      Via Phone #: (617)385 0597 Fax #: (617)385 0376                      Email: Timothy.J.Bergeron@marsh.com</p>

<b>Owner</b>	
Public Service of New Hampshire 97 River Rd. Bow, NH 03304  Project Manager	Mike Hitchko hitchma@nu.com
<b>Insurers</b>	

Old Republic Insurance Company  WC Claims	<p><b>WORKERS COMPENSATION &amp; GENERAL LIABILITY</b></p> Gallagher Bassett Services 160 So. River Road Suite 203 Bedford, NH 03110  Phone: 603-668-4746 or 1-800-622-6800 Fax: 603-647-0212  Branch Manager: Karen Provencher e-mail: <a href="mailto:Karen_provencher@gbtpa.com">Karen_provencher@gbtpa.com</a> 603-668-4746 Ext.201  Supervisor: Kathy Stefanini e-mail: <a href="mailto:Kathy_stefanini@gbtpa.com">Kathy_stefanini@gbtpa.com</a> 508-620-6538
GL Claims	Gallagher Bassett Services P.O. Box 405 Parsippany, NJ 07054-0405  (for fedex, UPS – Maple Plaza 2 6 Campus Drive



	<p>Parsippany, NJ 07054)</p> <p>Phone: 973-644-5900 or 1-800-683-0631 Fax: 973-644-5959</p> <p>Branch Manager: Christopher Hotalen e-mail: <a href="mailto:Christopher_hotalen@gbtpa.com">Christopher_hotalen@gbtpa.com</a> 973-644-5900 ext.: 201</p> <p>Supervisor: William McComb e-mail: <a href="mailto:William_mccomb@gbtpa.com">William_mccomb@gbtpa.com</a> 973-644-5900 Ext.: 241</p>
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3

***This section provides a brief description of OCIP Coverages. You should refer to the actual policies for details concerning coverage, exclusions and limitations.***

## Insurance Provided by the Owner – OCIP Coverages

**P**articipation in this OCIP is mandatory but not automatic. The OCIP will provide the enrolled party with insurance briefly described in this section. This insurance will terminate on the date that the Project has been accepted by the Owner as complete, except for the extended completed operations coverage.

**Workers' Compensation Insurance** - Statutory Limits of the Workers' Compensation Laws of the State of New Hampshire, with Coverage B - Employer's Liability (with limits of \$1,000,000 each accident for Bodily Injury by accident, \$1,000,000 each employee for Bodily Injury by disease and \$1,000,000 policy limit Bodily Injury by disease), covering operations of the enrolled party performed on or incidental to Work at the Site. Coverage C will include All Other States, except “Monopolistic States”.

**Commercial General Liability Insurance** - (Excluding Automobile and Professional Liability) in form providing coverage not less than a Commercial General Liability insurance policy, including hazards of explosion, collapse, underground, independent Contractor(s), employees as additional insureds, completed operations for 8 years after the Project has been accepted by Owner as complete, contractual liability coverage and personal injury liability coverage for claims arising out of the Work for personal injury, bodily injury and property damage in policy or policies of insurance such that the total available limits, reinstated annually to all insureds combined will not be less than:

- \$2,000,000 per occurrence
- \$2,000,000 personal and advertising injury aggregate
- \$4,000,000 general aggregate
- \$4,000,000 completed operations aggregate - term limit on blanket basis.

Coverage will apply only to work performed at the Site. Such insurance will not include coverage for products liability for any product(s) manufactured, assembled, or otherwise worked upon away from the Site for any enrolled party or excluded party performing such off-site work.

**Umbrella/Excess Liability Insurance** in limits of at least:

- \$25,000,000 per occurrence

\$25,000,000 general aggregate

\$25,000,000 products/completed operations aggregate

Excess of those stated above, to all insureds combined unless written notice is supplied to all enrolled parties under this OCIP.

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***Primary And Non-Contributing:*** Workers' Compensation and Employers Liability insurance is primary and non-contributing with respect to any persons (other than Owner's employees) covered by such insurance. Commercial General Liability, and Umbrella/Excess insurance is primary insurance and non-contributing with any other insurance carried by the enrolled parties.

***Assignment:*** In consideration of Owner purchasing OCIP insurance as stated above, the enrolled parties will assign to Owner all return premiums, premium refunds, dividends and other monies due or to become due in connection with the insurance which Owner provides under the OCIP, all of which will inure to the benefit of the OCIP. The enrolled parties will execute such further documentation as may be required by Owner to effect this assignment.

***Waiver Of Subrogation Rights:*** Except for the amount of the deductibles as stated in the contract, the enrolled parties each on their own behalf and on behalf of anyone claiming by, through or under them, by way of subrogation, waive any and all subrogation rights that they may now or later have against each other and the parent, related and affiliated companies, the successors and assigns of each other, in connection with the performance of the Work to the extent such subrogation rights are not the result of any intentional wrongful act or omission of the party causing such loss and are covered losses under the insurance provided hereunder.

## 4

***Throughout the course of the Project, Contractors will be responsible for reporting and maintenance of certain records as outlined in this section.***

## Contractors Responsibilities

**T**he Contractor is required to cooperate with Owner and the OCIP administrator. Responsibilities of the Contractor include:

- Enrolling in the OCIP
- Including OCIP provisions in all subcontracts as appropriate
- Providing timely evidence of insurance to the OCIP administrator
- Notifying the OCIP administrator of all subcontracts awarded
- Maintaining and reporting monthly OCIP payroll records
- Cooperating with the OCIP administrator's requests for payroll and enrollment information
- Complying with insurance, claim and safety procedures
- Paying deductibles promptly as required
- Notifying the OCIP administrator immediately of any insurance cancellation or non renewal (contractor-required insurance)

## Contractor Bids - Insurance

Failure of enrolled parties to enforce the enrollment of all Subcontractor(s) of any tier does not relieve the enrolled parties of the responsibility to ensure bids are submitted net of the cost of the insurance covered by the OCIP.

The enrolled parties will need to provide of the information requested on the Enrollment Package, and agree that the OCIP administrator and/or the OCIP insurers may, but are not required to audit the Contractor(s) and/or Subcontractors payroll records to confirm the accuracy.

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The original contract sum will be based on the total estimated cost of the Work, net of insurance costs. Insurance costs are excluded from the bid and any subsequent change orders.

Upon completion of Work, or on policy expiration, the Owner's insurance insurers have the right to audit payroll records.

## Enrollment

Prior to the start of work at the Site, all contractors and subcontractors of any tier needs to complete the following forms and provide them to the OCIP administrator via express delivery or facsimile. The Enrollment Package includes the following parts:

- Insurance Enrollment Application
- Contract Details
- Contact Information
- Notice of Subcontract Award (If applicable)
- Notice of Leased Employee Award (If Applicable)

In addition to the enrollment application, the enrolled parties shall provide Owner with a Certificate of Insurance evidencing coverage outlined in Section 5. Limits for each coverage will match the contractual requirements. The OCIP administrator will provide a Certificate of Insurance evidencing OCIP coverages naming the enrolled party as an insured. Where required by law, individual workers' compensation policies will be issued to the enrolled party.

**NOTE:** All questions regarding this procedure should be directed to the PSNH OCIP administrator at Marsh as outlined in the Project Contact Directory.

The OCIP administrator must be notified of all subcontractors that will perform work at the Site. Should there be a change in such subcontractors after the initial contract award, (e.g., a subcontractor is added or changed or Work on Site is added or eliminated) the "Notice of Subcontract Award," form must be completed and sent to the OCIP administrator prior to the subcontractor starting work at the Site.

## Assignment of Return Premiums

The cost of the OCIP insurance coverages will be paid by Owner. Owner will be the sole recipient of any return OCIP premiums or dividends. All enrolled parties need to assign to Owner all adjustments, refunds, premium discounts, dividends, credits or any other monies due from the OCIP insurers. Contractors need to ensure that each enrolled Subcontractor shall execute such an assignment.

## Subcontract Award Notification

Each party is responsible for notifying the OCIP administrator of subcontract awards via Notice of Subcontract Award form signed by a company representative.

Contractors and subcontractors of any tier are not covered under the OCIP until necessary enrollment information is properly completed and submitted to the OCIP administrator.

After receiving the Notice of Subcontract Award form, the contractor will be responsible for

reporting ALL awards of subcontracts that include work on Site to the OCIP administrator, who will then contact each contractor to begin enrollment.

Each contractor is responsible for reporting their subcontractors of any tier that will be performing work on Site. The contractor must notify the OCIP administrator of subcontract awards via Notice of Subcontract Award form signed by a company representative.

**Cooperation:** The enrolled parties will:

1. Furnish to the OCIP Administrator, the OCIP insurer or its representatives all information and documentation which the OCIP may require in connection with the issuance of any policies.
2. Furnish to the OCIP Administrator, the OCIP insurer or its representatives, on-site payroll reports on the form as required and described in this Manual on a monthly basis for prior month (including months with no payroll) for OCIP payroll report.
3. Permit the OCIP Administrator, the OCIP insurer or its representatives to audit the enrolled parties books and records and provide documentation as may be required to ensure accuracy of those payroll reports.
4. The enrolled parties will provide the OCIP Administrator, the OCIP insurer or its representatives with all information necessary for the issuance of said policies and will maintain and make available to the insurance companies payroll records and appropriate NCCI class codes.
5. The enrolled parties will cooperate with Owner with regard to administration and operation of the OCIP. The enrolled parties' responsibilities will include but are not limited to: operations and insurance information; inclusion of OCIP provisions in all subcontracts that include work on Site; notification to OCIP Administrator of all such subcontracts awarded; maintenance and provision of payroll records; compliance with applicable loss control (safety) and claims reporting procedures; maintenance of an OSHA Log to be provided monthly to the OCIP Administrator.

Any fines assessed for claims that are reported late are the responsibility of the Contractor and/or Subcontractor of any tier.

## Payroll or Contract Value Reporting

**Each enrolled party must submit a monthly OCIP payroll report to the OCIP Administrator by the 15th day of the month following the end of the previous month identifying on Site work-hours and payroll.** Only the payroll of the contractor's employees who perform duties at the Site should be included on the OCIP payroll report. If your general liability insurance is rated on contract value, you will have to report your completed contract value to date. This information will be used to provide the OCIP insurer with information required to determine the Owner's premium.

**If you did not perform any work at the Site in a given month you must still submit your payroll form showing zero (0) payroll and applicable completed contract value to date (if applicable) for the month and return it to the OCIP administrator.**

The OCIP insurer is required to file experience data for each enrolled party with the appropriate rating authority. The loss experience of the contractor for work performed on the Site may affect the experience modification factor of that contractor.

To avoid paying premiums to your primary insurance insurer on payroll associated with work performed under the OCIP, payroll reported as described above should be excluded from payrolls submitted to your primary insurer. In addition, there are a number of ways to endorse or modify your primary insurance to assist in this process. The workers' compensation policy issued to you and the certificate of insurance showing you as a named insured on the general liability policy under the OCIP may be used to provide evidence of your enrollment in the OCIP to your primary insurer.

## OCIP Insurer Payroll Audits

Each enrolled party is required to maintain payroll records for the Site in accordance with the Basic Manual of Rules, Classifications, and Experience Rating Plan for Workers' Compensation and Employer's Liability Insurance. Such records allocate the payroll by Workers' Compensation classification(s) and exclude the excess or premium paid for overtime (i.e., only the straight time rate shall apply to overtime hours worked). Furthermore, such records shall limit the payroll for Executive Officers and Partners/Sole Proprietors to the limitations as stated in the state manual rules.

It is important that you properly classify payrolls, as these will be reported to the rating bureau for promulgation of future Experience Modifiers for your firm. All enrolled parties will need to make available their books, vouchers, contracts, documents, and records, of any and all kinds, to the auditors of the OCIP insurer or OCIP Representative at any reasonable time during the policy period, any extension, or during a final audit period as required by the insurance policies.

## Handling Change Orders

Change orders, field proceed orders, and/or construction change directives submitted by each enrolled party need to exclude the cost of Workers' Compensation, General Liability and Umbrella/Excess Liability insurance for Work on Site. The associated payrolls shall be documented on each and every change order.

## Notice of Work Completion – Close-out of Each Contract

The enrolled parties will need to complete a "Notice of Work Completion" form (see Section 6 – Forms) for each contract or subcontract that includes work on Site that has been completed.

Once the form has been completed it should be submitted to the OCIP administrator via fax, email or mailed.

The OCIP administrator will get verification from the Program Manager that the information submitted by the contractors is complete.

1. If all payroll reported is in line and the off Site Certificate of Insurance complies with applicable requirements and is up to date, the OCIP administrator will complete a closeout form and forward the documentation to the awarding contractor and Owner for their sign-off.
2. OCIP insurer may audit the enrolled parties at time of close out.

## Claims Reporting

Each enrolled party will need to follow the claims procedures as established by Owner's OCIP administrator. The enrolled parties will need to assist and cooperate in connection with the adjustment of all claims and demands in which Owner's insurer(s) is called on to adjust or defend. Refer to Section 7 – Claims Reporting of this Manual.

## Safety Procedures

Each contractor will establish a written safety plan (in accordance with the Project Safety Manual) and to provide, where required, a full-time Site Safety officer or designated safety representative who shall be on Site when any work is in progress.



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***Contractors and subcontractors are required to maintain coverage to protect against losses that occur away from the Site or that are otherwise not covered under the OCIP.***

## Contractor Insurance Requirements

### Insurance Required of Enrolled Contractor

The OCIP provides coverage for Work at the Site only.

Insurance for the Work performed AWAY FROM THE SITE by the enrolled parties include the following coverage as briefly described below and specified in the applicable contract:

- Workers' Compensation and Employer's Liability Insurance
- Commercial General Liability Insurance
- Commercial Automobile Liability Insurance
- Umbrella/Excess Liability Insurance
- Contractors Equipment Insurance

The enrolled parties will provide and maintain the types of insurance described below in a company or companies legally authorized to transact insurance business in the state of New Hampshire. All insurers will be rated at least A-VII in the current A.M. Best ratings or must be otherwise acceptable to Owner. The enrolled parties will maintain the specified insurance coverage until all obligations under this contract are satisfied.

The limits of liability shown for the insurance required of the enrolled parties are minimum limits only and are not intended to restrict the liability imposed on the enrolled parties for Work performed under their Contract.

**Workers' Compensation and Employer's Liability:** The enrolled parties will maintain Statutory Workers' Compensation insurance to cover obligations imposed by federal and state statutes having jurisdiction over its employees while engaged in the performance of the Work at locations other than those described as the Site. This insurance will also cover any enrolled parties' employees working AWAY FROM THE SITE and coming on the Site after the Project has been accepted by Owner as complete and Subcontractor(s) employees after Subcontractor(s) has finally performed its contract. The limits of Employers Liability are as follows:

Workers' Compensation coverage will comply with the statutory limits of the State of New Hampshire, and will provide for Employers Liability insurance with limits as follows:

\$1,000,000 bodily injury by accident for each person

\$1,000,000 bodily injury by disease for each person

\$1,000,000 bodily injury by disease—policy limit

**Commercial General Liability:** insurance for premises and operations AWAY FROM THE SITE of the enrolled parties (including products liability for any product manufactured, assembled or otherwise Worked upon away from the Site) in a form providing coverage not less than that of Commercial General Liability insurance policy ("Occurrence Form") for operations of the party required to furnish same, including hazards of elevators, independent Contractors, products and completed operations, with contractual liability and personal advertising injury liability coverage for claims arising out of the Work hereunder for personal injury, bodily injury and property damage in policy or policies of insurance such that the total available limits combined will not be less than specified in the Contractor's applicable agreement.

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Any deductibles in place will be the responsibility of the enrolled parties as respects to offsite activities.

**Commercial Automobile Liability:** covering all owned, hired, borrowed, leased, or non-owned automobiles. Such insurance will provide coverage not less than that of the Commercial Automobile Liability policy in limits not less than specified in the Contractor's applicable agreement with Owner.

Contractual Liability, if not provided in the policy form, is to be provided by endorsement.

If hazardous materials or waste are to be transported, the Commercial Automobile Liability insurance will be endorsed with the MCS-90 endorsement in accordance with the applicable legal requirements.

**Umbrella/Excess Liability:** Umbrella/Excess liability insurance, insuring against bodily injury, personal and advertising injury, and property damage, and all other coverage as specified above; (Employers' Liability, Commercial General Liability and Commercial Automobile Liability). The limits of liability shall be not less than as specified in contractor's applicable agreement.

---

Total General Liability and Automobile Liability limit requirement may be met by primary coverage or combination of primary and umbrella/excess.

Any applicable retention will be the responsibility of the Contractor as respects to off-site activities.

**Contractor's Equipment:** The enrolled parties are responsible for their construction tools and equipment, included but not limited to construction trailers and their contents, temporary

scaffolding, cranes, whether owned, leased, rented, borrowed or used at the Site; and the enrolled parties agree that the Owner will not be responsible for any loss or damage to its tools and equipment. If insured, the enrolled parties' insurance policy covering tools and equipment will include a waiver of subrogation in favor of the Owner, Program and Manager. If uninsured, the enrolled parties will hold harmless Owner and Program Manager.

---

**Additional Insureds:** Each policy required (except Worker's Compensation and Professional Liability, if selected as a required coverage) will name as additional insured Owner and Program Manager and their respective parent companies, their subsidiaries, related and affiliated companies of each and the officers, directors, agents, employees and assigns of each. General Liability coverage maintained by contractors and sub contractors shall contain Additional Insured endorsement CG 20 10 11/85 or equivalent. Products and Completed Operations coverage shall be maintained for a minimum of eight (8) years after contract expiration or Project completion, whichever occurs later.

**Waiver Of Subrogation:** The enrolled parties and their respective insurers providing the required coverage as indicated in Commercial Automobile and Commercial General Liability, Umbrella/Excess Liability or any required coverages (except Workers Compensation), will waive all rights of recovery against Owner and Owner's agents, officers, and employees.

Each enrolled party will pay all insurance premiums for such insurance, including any charges for required waivers of subrogation or the endorsement of additional insureds.

**Primary and Non-Contributing:** Insurance coverage for Work AWAY FROM THE SITE required of the enrolled parties is primary and non-contributory.

**Certificates of Insurance:** The enrolled parties and excluded parties will provide certificates of insurance to the OCIP Administrator as evidence that policies specified in this section providing the required coverage, conditions, and limits are in full force and effect. Certificates of insurance will be labeled and addressed as follows:

**Marsh  
PSNH OCIP Administrator  
99 High Street  
Boston, MA 02110**

**Notice of Cancellation:** All insurance policies and certificates of insurance will include a requirement providing for thirty (30) days prior written notice to the OCIP Administrator of any cancellation or reduction of coverage. If any such notice is given, the Owner will have the right to require that a substitute policy be obtained prior to said cancellation with appropriate evidence thereof at the discretion of the Owner. The enrolled parties and excluded parties will immediately notify the Owner and will cease operations on the occurrence of any such

cancellation or reduction and will not resume operations until the required insurance is in force and new certificates of insurance have been filed with the Owner.

## Insurance Requirements of Excluded Parties

Excluded parties as defined, performing Work will obtain and maintain, and will require each of its excluded Subcontractors to obtain and maintain, the insurance coverage described in this section. Such insurance will be primary and non-contributing with any other insurance and be in a form and from insurance companies reasonably acceptable to Owner. The insurance limits may be provided through a combination of primary and excess policies, including the umbrella form of policy. Owner reserves the right to require higher limits of liability or other insurance coverage as appropriate.

**Workers' Compensation and Employer's Liability:** The excluded parties will maintain Statutory Workers' Compensation insurance to cover obligations imposed by federal and state statutes having jurisdiction over its employees while engaged in the performance of the Work at the Site and locations AWAY FROM THE SITE. This insurance will also cover any Contractor(s) and its Subcontractor(s)' employees coming on the Site after the Project has been accepted by the Owner as complete and Subcontractor(s) employees after Subcontractor has finally performed its contract. The limits of employer's liability are as follows:

Workers' Compensation coverage will comply with the statutory limits of the State of New Hampshire, and will provide for employers liability insurance with limits those specified in the pertinent contract with Owner.

**Commercial General Liability:** insurance for premises and operations for performance of the Work at the Site and locations AWAY FROM THE SITE of the excluded party (including products liability for any product manufactured, assembled or otherwise Worked upon away from and on the Site) in a form providing coverage not less than that of Commercial General Liability insurance policy ("Occurrence Form") for operations of the party required to furnish same, including hazards of elevators, independent Contractors, products and completed operations, with contractual liability and personal and advertising injury liability coverage for claims arising out of the Work hereunder for personal injury, bodily injury and property damage in policy or policies of insurance such that the total available limits combined will not be less than those specified in the pertinent contract with Owner.

Any deductibles in place will be the responsibility of the excluded party.

**Commercial Automobile Liability:** covering all owned, hired, borrowed, leased, or non-owned automobiles. Such insurance will provide coverage not less than that of the Commercial Automobile Liability policy in limits not less than those specified in the pertinent contract with Owner.

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Contractual Liability, if not provided in the policy form, is to be provided by endorsement.

If hazardous materials or waste are to be transported, the Commercial Automobile Liability insurance will be endorsed with the MCS-90 endorsement in accordance with the applicable legal requirements.

**Umbrella/Excess Liability:** Umbrella/Excess liability insurance, insuring against bodily injury, personal injury, advertising injury and property damage, and all other coverage as specified above; (Employers' Liability, Commercial General Liability and Commercial Automobile Liability). The limits of liability will be not less than those specified in the pertinent contract with Owner.

Any applicable retention will be the responsibility of the excluded party.

***Additional Insureds:*** Each policy required (except Worker's Compensation and Professional Liability, if selected as a required coverage) will name as additional insured Owner, Program Manager and their respective parent companies, their subsidiaries, related and affiliated companies of each and the officers, directors, agents, employees and assigns of each. General Liability coverage maintained by contractors and subcontractors shall contain Additional Insured endorsement CG 20 10 11/85 or equivalent. Products and Completed Operations coverage shall be maintained for a minimum of three years after contract expiration or Project completion, whichever occurs later.

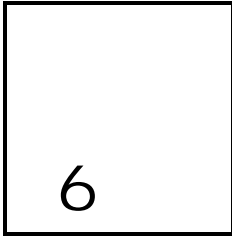
***Waiver of Subrogation:*** The Contractor and its Subcontractors and respective insurers providing the required coverage as indicated in Commercial Automobile and Commercial General Liability, Umbrella/Excess Liability or any required coverages (except Workers Compensation), will waive all rights of recovery against the Owner and the Owner's agents, officials, and employees.

Each Party will pay all insurance premiums for such insurance, including any charges for required waivers of subrogation or the endorsement of additional insureds.

***Notice of Cancellation:*** All insurance policies and certificates of insurance will include a requirement providing for thirty (30) days prior written notice to the OCIP Administrator of any cancellation or reduction of coverage. If any such notice is given, Owner will have the right to require that a substitute policy be obtained prior to said cancellation with appropriate evidence thereof at the discretion of Owner. The Contractor will immediately notify Owner and will cease operations on the occurrence of any such cancellation or reduction and will not resume operations until the required insurance is in force and new certificates of insurance have been filed with Owner.

***Certificates of Insurance:*** The Contractor and Subcontractors of all tiers will provide certificates of insurance to Owner as evidence that policies specified in this section providing the required coverage, conditions, and limits are in full force and effect. Certificates of insurance will be labeled and addressed as follows:

**Marsh  
PSNH OCIP Administrator  
99 High Street  
Boston, MA 02110**



*This section contains the forms needed for enrolling, reporting payroll, change orders and other administration of the OCIP.*

## Forms

**F**or assistance in completing these forms, please contact the OCIP administrator identified in the Project Contact Directory



# OCIP Enrollment Application - Insurance Premium Worksheet

Contractor's Name: \_\_\_\_\_  
 Street Address \_\_\_\_\_  
 City, State, Zip \_\_\_\_\_  
 Phone \_\_\_\_\_ Fax \_\_\_\_\_ Email \_\_\_\_\_  
 Federal ID Number (FEIN) \_\_\_\_\_ Taxpayer ID # \_\_\_\_\_ WC Bureau ID \_\_\_\_\_  
 Bid Package Name \_\_\_\_\_ Bid Package # \_\_\_\_\_  
 Awarding Contractor: \_\_\_\_\_  
 Contract Amount \$ \_\_\_\_\_ Expected No. of Subcontractors \_\_\_\_\_  
 Contract Number \_\_\_\_\_ Expected Value of Subcontractors: \$ \_\_\_\_\_  
 Are Employees Leased? Yes \_\_\_ No \_\_\_ (select one) Probable Contract Dates Start \_\_\_\_\_ End \_\_\_\_\_  
 Proposed Contract Type GMP \_\_\_ Lump Sum \_\_\_ Cost Plus \_\_\_ Unit Price \_\_\_ Other (describe) \_\_\_\_\_  
 Primary Contact Person \_\_\_\_\_ Phone: \_\_\_\_\_  
 Street Address \_\_\_\_\_ Fax: \_\_\_\_\_  
 City/State/Zip \_\_\_\_\_ Email: \_\_\_\_\_  
 Payroll Contact Person \_\_\_\_\_ Phone: \_\_\_\_\_  
 Street Address \_\_\_\_\_ Fax: \_\_\_\_\_  
 City/State/Zip \_\_\_\_\_ Email \_\_\_\_\_

**WORKERS COMPENSATION ESTIMATED PROJECT PAYROLLS & PREMIUMS FOR SELF-PERFORMED WORK (ON-SITE PAYROLLS ONLY).**

For Self-Insured or High Deductible Workers Compensation, please fill in APPENDIX A at the end of this package.

WC CLASS DESCRIPTION	CLASS CODE	ESTIMATED HOURS	ESTIMATED PAY RATE	WC RATE	ESTIMATED PAYROLL	MANUAL PREMIUM
			\$	\$	\$	\$
			\$	\$	\$	\$
			\$	\$	\$	\$

10% Credit = .10  
10% Debit/Surcharge = -.10

A. EL Increased Limits Factor: _____	1. Total Manual Premium: _____	\$ _____
B.: Experience Modification: _____	2. EL Increased Limits Amount: (1xA) _____	\$ _____
C. WC Scheduled Credit/Debit: _____	3. Total Subject Premium: (1+2) _____	\$ _____
D. WC Premium Discount: _____	4. Total Modified Premium: (3xB) _____	\$ _____
E: State Specific Credit/Surcharge: _____	5. WC Scheduled Credit/Debit Amount: (4xC) _____	\$ _____
F. Other Credit/Surcharge Amount: _____	6. Modified Premium: (4+5) _____	\$ _____
G. Terrorism Factor (rate/\$100 pay): _____	7. WC Premium Discount Amount (6xD) _____	\$ _____
	8. Discounted WC Premium: (6+7) _____	\$ _____
	9. State Specific Credit/Surcharge Amount: (8xE) _____	\$ _____
	10. State Modified WC Premium: (8+9) _____	\$ _____
	11. Other Credit/Surcharge Amount: (10xF) _____	\$ _____
	12. Net WC Premium: (10+11) _____	\$ _____
	13. Terrorism Charge Amount: (Gx Total Est. Payroll/\$100) _____	\$ _____
	14. Total WC Charge Amount: (12+13) _____	\$ <span style="border: 1px solid black; padding: 2px;">_____</span>

**GENERAL LIABILITY ESTIMATED PROJECT PAYROLLS & PREMIUMS FOR SELF-PERFORMED WORK  
(ON-SITE PAYROLLS ONLY)**

Rating Basis: Per \$100 of Payroll \_\_\_\_ Per \$1,000 of Payroll \_\_\_\_  
 (select one) Per \$100 of Contract Value \_\_\_\_ Per \$1,000 of Contract Value \_\_\_\_  
 Other: (Describe) \_\_\_\_\_

**For Self-Insured or High Deductible General Liability, please fill in APPENDIX B at the end of this package.**

GL CLASS DESCRIPTION	CLASS CODE	PAYROLL, CV OR OTHER BASIS ESTIMATE	GL RATE	PREMIUM
		\$	\$	\$
		\$	\$	\$
		\$	\$	\$

A. Excess Liability Rate: \_\_\_\_\_

1. Total GL Premium:	\$	_____
2. Umbrella/Excess Liability Premium (A x Payroll or CV)	\$	_____
3. Total Liability Charge Amount: (1+2)	\$	_____
4. WC Charge Amount (item 14 on Page 1)	\$	_____
5. Total WC Charge Amount + Liability Charge Amount (3 + 4)	\$	_____
6. Est. Cost of Ins for Subcontracted Work: (3.5% of Subcontracted amount)	\$	_____
7. Grand Total Including Subcontractors: (4+5)	\$	_____

**AGREEMENT**

Public Service of New Hampshire, as Owner of the Project Insurance Program, or Owner’s Representative, is granted permission by contractor to inspect the insurance and payroll records and audit methods and rates used in determining the Total Insurance Costs identified in this Form).

**WARRANTY**

As respects to Workers’ Compensation, Employer’s Liability, General Liability and Excess Liability per the coverage outlined in the Contract Documents the undersigned agrees and warrants: 1) It is Contractor’s responsibility to notify their insurance carrier, that the work performed under this contract will be insured under an Owner Controlled Insurance Program; 2) The cost of similar insurance has been identified as part of our bid and to the best of our knowledge are true; 3) Premiums for this OCIP are the responsibility of the “Owner” and Contractor agrees that any and all return of premium, dividends, discounts or other adjustments to any OICP policy(ies) is assigned, transferred and set over absolutely to the Public Service of New Hampshire. This assignment applies to the OCIP policy(ies) as now written, or as subsequently modified, rewritten or replaced.

DATE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

TITLE: \_\_\_\_\_

# NOTICE OF SUBCONTRACT AWARD

This form is to be completed every time you enter into a Subcontract. This form must be submitted each time a new Subcontract is awarded. This includes Subcontractors who are working on existing projects and are already enrolled in the OCIP program.

## RETURN COMPLETED PACKAGE TO

Company Name: **Marsh USA Inc.**

Attention: **Alex Merida**

Address: **99 High Street**  
**Boston, MA 02110**

## PROJECT IDENTIFICATION

Awarding Contractor: \_\_\_\_\_

Project Name: \_\_\_\_\_

Project Owner: \_\_\_\_\_

Bid Package Name: \_\_\_\_\_

Bid Package Number: \_\_\_\_\_

## INFORMATION ABOUT THE AWARDED SUBCONTRACTOR

Subcontractor's Legal Name: \_\_\_\_\_

Federal ID Number (FEIN): \_\_\_\_\_

Type of Work: \_\_\_\_\_

Date of Subcontract: \_\_\_\_\_

Estimated Contract Amount: \_\_\_\_\_

Probable Start Date: \_\_\_\_\_

Probable Completion Date: \_\_\_\_\_

Legal Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_

## SUBCONTRACTOR'S PRIMARY INSURANCE CONTACT

Contact's Name: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Mobile Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

## AUTHORIZATION

Authorized By: \_\_\_\_\_ Authorized Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Authorization Date: \_\_\_\_\_

# NOTICE OF LEASED EMPLOYEE AWARD

This form is to be completed every time you enter into a Leased Employee Contract. This form must be submitted each time a new contract is awarded. This includes Leasing Employers who are working on existing projects and are already enrolled in the OCIP program.

## RETURN COMPLETED PACKAGE TO

Company Name: **Marsh USA Inc.**  
Attention: **Alex Merida**  
Address: **99 High Street**  
**Boston, MA 02110**

## PROJECT IDENTIFICATION

Awarding Contractor: \_\_\_\_\_  
Project Name: \_\_\_\_\_  
Project Owner: \_\_\_\_\_  
Bid Package Name: \_\_\_\_\_  
Bid Package Number: \_\_\_\_\_

## INFORMATION ABOUT THE LEASING COMPANY

Company's Legal Name: \_\_\_\_\_  
Federal ID Number (FEIN): \_\_\_\_\_  
Type of Work: \_\_\_\_\_  
Date of Leasing Contract: \_\_\_\_\_  
Estimated Contract Amount: \_\_\_\_\_  
Probable Start Date: \_\_\_\_\_  
Probable Completion Date: \_\_\_\_\_  
Legal Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_

## LEASING COMPANY'S PRIMARY INSURANCE CONTACT

Contact's Name: \_\_\_\_\_  
Phone Number: \_\_\_\_\_ Mobile Number: \_\_\_\_\_  
Fax Number: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

## AUTHORIZATION

Authorized By: \_\_\_\_\_ Authorized Title: \_\_\_\_\_  
Signature: \_\_\_\_\_ Authorization Date: \_\_\_\_\_



## Instructions for Completing the Monthly Payroll Report Form (does not replace the weekly certified payroll requirement)

**Question #1:** Fill in the payroll period this payroll is for. [For example, if this payroll is for the work you performed in July 1, 2004 to July 31, 2004 then enter July 1, 04 and July 31, 04 in the space provided and also enter July for the **Reporting for Month of**. If the payroll is for the work you performed in March 29, 2004 to April 2 2004, then enter Mar 29, 04 and Apr 2, 04 in the space provided. Enter the month (March or April) this payroll is reporting for in the **Reporting for Month of** space.]

**Question #6:** Remember that a separate form is to be filled out for each contract you have under this project. Check either yes or no depending upon whether your work is 100% completed for this contract only. (Note: if you have more than one contract for this project you should check yes if done with this contract even if you are still working on the other contracts). If you checked yes, you do not have to complete the rest of the form. Just sign and return it. If you checked yes you'll be sent a Notice of Completion form to complete. Once you are 100% finished with your work for a contract, and have completed the Notice of Completion form, you will not have to complete the payroll form for this contract only in future months.

**Question #7:** The following descriptions will assist you in completing this section WC Class Code: This is a four digit code which can be obtained from your Workers' Compensation policy or your Agent. It is the occupational classification code used for premium rating purposes. List all the codes that apply to your work under this wrap-up.

Description: This is the word description associated with the four digit classification code above. It verbally tells you what the code is for. It can be obtained from your Workers' Compensation policy or your Agent. You should have one description for each of the codes listed.

# Emp.: Input the number of your employees that worked at this wrap-up location during this month. The number of employees should be split out for each code listed.

Regular Hours: The total number of regular (not overtime) hours worked. This should be for all employees shown under a given code.

Overtime Hours: The total number of overtime hours worked. This should be for all employees shown under a given code.

Total Hours Worked: The sum of the regular and overtime hours indicated for each code.

Regular Wages: The total regular (not overtime) wages paid to all employees under a given code. These wages should include all payroll at the straight time rate. You should include wages for vacation, holiday, and sick pay. DO NOT include wages for burden, fringe, or overtime (see below overtime wage definition).

Straight Overtime Wages: These earnings should ONLY be at the STRAIGHT TIME rate. The straight time earnings associated with the overtime should not be included in the regular wages above, they need to be separated out here. For example: If \$15 is paid at the time and a half rate, then you should only include the \$10 portion of the overtime wages in the Total Overtime Straight Wages.

**Public Service Company of New Hampshire  
Owner Controlled Insurance Program**

**NOTICE OF CONTRACT COMPLETION**

Marsh USA Inc.  
99 High Street  
Boston, MA 02110  
Attn: Alex Merida, OCIP Administrator  
Fax: (617) 385-0434

Please be advised, we have completed our work for:

Awarding Contractor: \_\_\_\_\_

OCIP Contract Number: \_\_\_\_\_

Purchase Order Number: \_\_\_\_\_

Completion Date: \_\_\_\_\_ (Last day of On-Site labor)

Site: \_\_\_\_\_

Your Company's Name: \_\_\_\_\_

By: \_\_\_\_\_ Title: \_\_\_\_\_

Final insurance audits may be made under the applicable policies. Please show who in your office (or another location if applicable) is responsible for this information:

Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_

7

***This section describes basic procedures for reporting various types of claims: workers' compensation, liability, and damage to the project.***

## Claim Reporting Procedures

**A**ll contractors and subcontractors will strictly adhere to specific guidelines for the reporting of all injuries and incidents resulting in bodily injury or property damage involving their own employees and their Subcontractor's employees.

All contractors and subcontractors are to instruct their employees to immediately report all incidents to their JOB Foreman/Supervisor. JOB Foreman/Supervisor shall immediately report all incidents to the site safety Chris Carville at (603)-224-4081 x4374 or Chris.Carville@wgint.com of URS Washington Division.

All contractors and subcontractors are to provide, upon request, any additional information regarding the incident and to cooperate fully in all incidents and claim related investigations.

Any fines assessed for claims which are reported late are the responsibility of the subcontractor.

### Workers' Compensation Claim Reporting

All contractors and subcontractors are to instruct their employees to immediately report all incidents to their JOB Foreman/Supervisor. JOB Foreman/Supervisor shall immediately report all incidents to the site safety Chris Carville at (603)-224-4081 x4374 or Chris.Carville@wgint.com of URS Washington Division.

The site safety Chris Carville will report all claims to the Insurance Company.

### General Liability Claim Reporting

Personal injury or property damage sustained by a third party constitutes a reportable event.

All contractors and subcontractors are to instruct their employees to immediately report all incidents to their JOB Foreman/Supervisor. JOB Foreman/Supervisor shall immediately report all incidents to the site safety (Chris Carville) at Program Manager (URS Washington Division) at (603)-224-4081 x4374

The site safety (Chris Carville) at Program Manager will report all claims to the Insurance Company.



The General Liability claim representative will provide periodic claim status reports to the enrolled parties and Owner.

An Owner representative will assist in the investigation of the incident. However, the enrolled parties shall remain responsible for thoroughly investigating all third party injuries or property damage claims and ensuring the claims have been promptly reported to the site safety (Chris Carville) at Program Manager at (603)-224-4081 x4374

**NOTE:** All available facts and information, including the names of witnesses, must be secured as soon as possible while such information is still available. Unless prompt action is taken in this respect, witnesses disappear, facts become obscure and the further handling of the claim may be prejudiced.



## Pollution (Environmental) Liability Claim Reporting

Environmental events causing Bodily Injury or Personal Injury to a third party and physical damage to Owner property caused by approved environmental contractors or approved transporters constitute a reportable event.

Notice must be immediately reported to site safety (Chris Carville) at the Program Manager once a contractor or subcontractor is made aware of any pollution event or an event that may give rise to a pollution event.

### **The enrolled party will:**

- Take measures necessary to preserve damaged property and to protect property from further damage.
- Immediately notify Owner and Program Manager.
- Establish accounts for recording the cost associated with the events as it affects property used in the work.

### **The On-Site Safety Officer will:**

- Establish accounts for recording the cost associated with the event as it affects Owner's property.
- Notify Giles Boucher at Marsh as soon as possible by calling the following number: (617) 385-0446
- Marsh will report the event to the insurer.

### **The Environmental Claim Representative will:**

- Investigate the cause of the event and evaluate damages.
- Assist in the recovery and return to normal operation.

## Automobile Claims

No coverage is provided for automobile accidents under the OCIP. It is the sole responsibility of each Contractor and Subcontractor to report accidents involving their automobiles to their own insurers.

HOWEVER, all accidents occurring in or around the Site must be reported to the OCIP administrator. These accidents will be investigated with regard to any liability arising out of the Project construction activities that could result in future claims (i.e., due to the conditions of the roads, etc.) Each Contractor and Subcontractor shall cooperate in the investigation of all automobile accidents.

## Other Claim Related Services

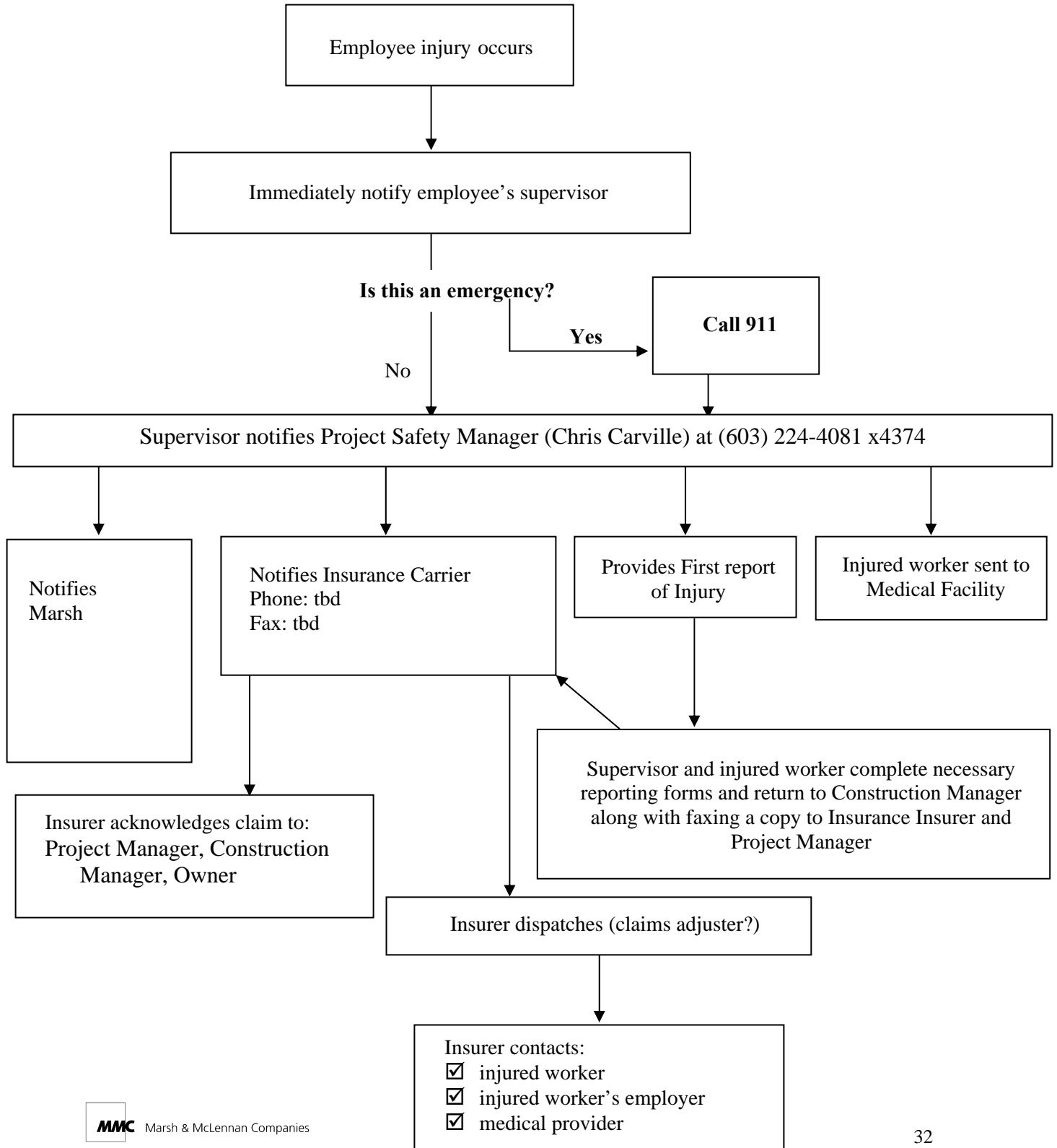
### Detailed Claim Listings

Marsh will provide detailed claim listings periodically to contractors and subcontractors. Detailed claim listings are available upon request by contacting the OCIP administrator at Marsh.

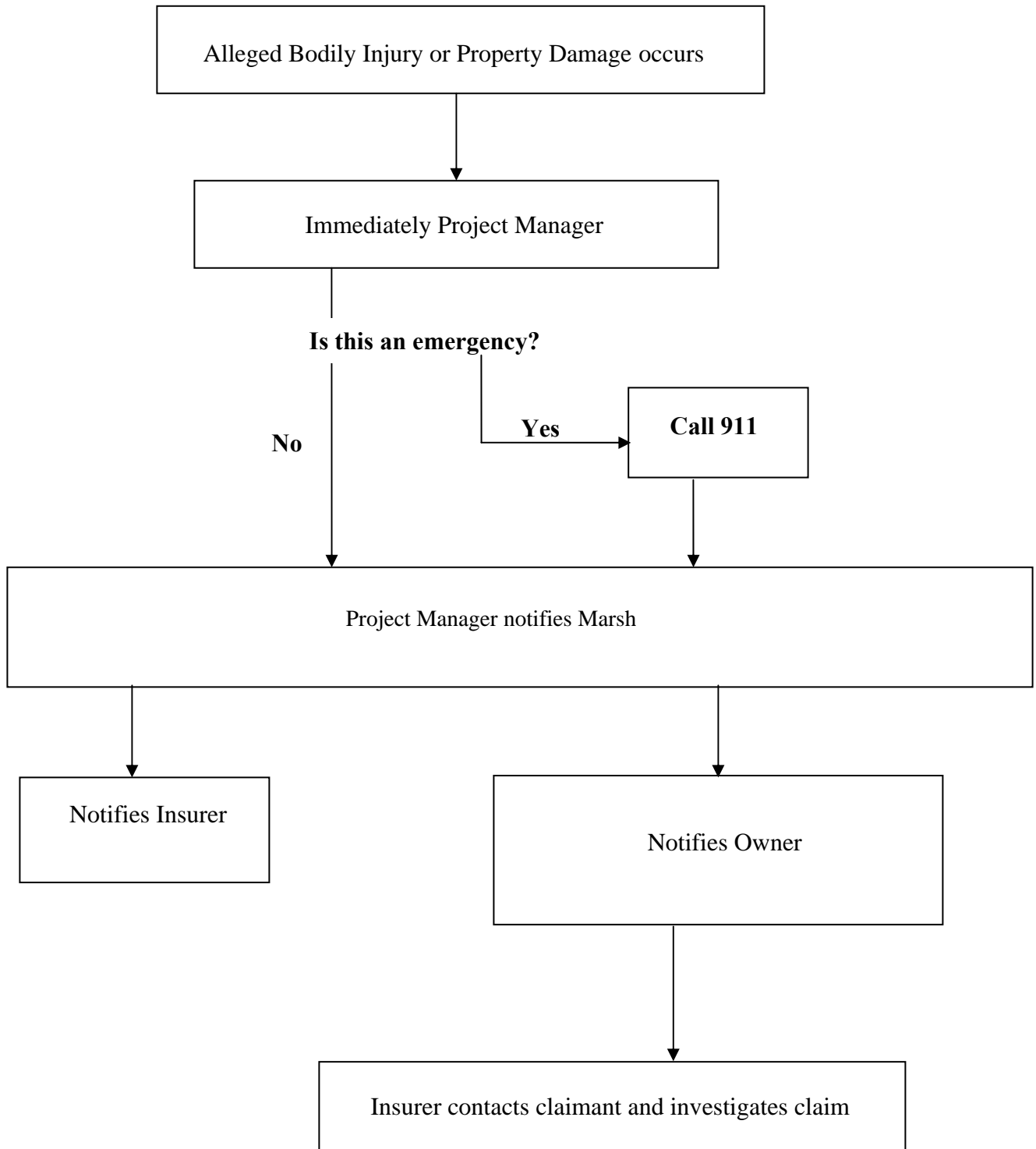
### Claim Review

Claim reviews will be conducted semi annually, or as needed. Reviews will include Owner, Project Safety Representatives, Insurer Representatives, Marsh, and contractor representative as needed.

# Workers' Compensation Claim Flow



# Third Party Claim



## Safety & Loss Prevention Program

**T**he goals and objectives under the OCIP are to emphasize that protecting people and property are of paramount importance to the success of this Project. Incidents at this Project can be controlled and prevented through safe work practices. Each contractor and subcontractors of any tier and each of its employees is responsible for safety at this Project.

Active participation by the contractor and subcontractors of any tier in all Project safety and loss prevention programs is mandatory. The contractors and subcontractors of any tier, must provide their employees with complete support and continuing involvement in all safety and loss prevention programs.

### **PROJECT SAFETY POLICY STATEMENT**

While it is the responsibility of each individual to work safely, it is ultimately the responsibility of the contractor to see that all employees are trained and comply with safety and health rules and good construction practices.

Safety should never be sacrificed for production, and it must be considered an integral part of the planning process. Our goal, and your goal as a contractor on the Project, is to prevent accidents. The contractor is charged with the responsibility for adhering to, and enforcing the safety and loss prevention program.

Each bid has included the contractor's cost to establish and maintain a safety and loss prevention plan that meets or exceeds the requirements contained in the Project Safety Manual. (A copy of the contractor's plan must be submitted for review and compliance after the contract has been awarded).

Each contractor will be solely responsible for carrying out the Safety and Loss Prevention Program. To that end, each contractor shall designate a competent on-site safety representative (if you and your subcontractors have 40+ employees on-site) to carry out this responsibility. The safety representative is responsible for directly overseeing the contractor's employees. This will ensure that the contractor's programs and actions comply with the minimum safety standards as required by federal, state and local codes, regulations and the Project Safety Manual and Loss Prevention Program.

The goal of the program is to eliminate injuries to workers and to reduce construction interruptions due to accidents by setting the minimum standards that the contractor's safety and loss prevention programs must meet.

In addition to setting minimum standards, this program promotes safety through employee safety orientations and safety incentive programs designed to promote a safe work environment.

The OCIP Team will monitor the contractor's compliance with all safety and loss prevention programs. Deviation from this program must be immediately remedied to the satisfaction of Owner.

### **DRUG FREE WORKPLACE**

This Project is a drug-free work environment. Each contractor will maintain a drug-free environment in accordance with the OCIP policy as stated in the Project Safety Manual. .

### **SAFETY PROGRAM**

The contractors will maintain a pro-active safety program and will monitor the Site to ensure all safety requirements, and program standards are met by subcontractors of all tiers.

## Sample Endorsement

**I**t is recommended that an endorsement identical to this form be prepared by your present Workers' Compensation and Employer's Liability Insurer and attached to your existing policy. The purpose of this endorsement is to exclude your Workers' Compensation and Employer's Liability insurance coverage and its premium in connection with the Public Service of New Hampshire OCIP.

## Divided Risk Endorsement

This endorsement effective (12:01 a.m. Standard Time) forms a part of Policy \_\_\_\_\_, issued to \_\_\_\_\_, by \_\_\_\_\_.

It is agreed that anything in the policy to the contrary notwithstanding, such insurance as is afforded by the policy by reason of the designation of the State of \_\_\_\_\_ in the Declarations does not apply as respects injuries (or death resulting there from) sustained by any employee (other than partners or executive officers, provided such are otherwise insured hereunder) directly connected with operations conducted for Public Service of New Hampshire

**Contract No.** \_\_\_\_\_ **(Including amendments and changes thereto), between** \_\_\_\_\_ **and** \_\_\_\_\_

It is further agreed that "remuneration," when used as a premium base for such insurance as is afforded by the policy be reason of the designation of the State of Missouri in the Declarations, shall not include the remuneration of any person excluded from coverage in accordance with the foregoing.

It is understood, however, that nothing contained in the foregoing paragraph shall be deemed to include work at the Named Insured's regularly established main or branch offices, factory, shop, warehouse or similar facility, whether or not such work is related to, incidental to, or necessary to work on the **Public Service Company of New Hampshire** project.

No insurance coverage is afforded to any Contractor until a completed Enrollment Form is acknowledged by designated OCIP Administrator through issuance of Certificate of Insurance.

**PSNH Merrimack Scrubber Project  
Builders All Risk Coverage Summary**

**Insured:**

The Project Owner and any other subsidiary companies as were, are or may be constituted or acquired and any affiliated or associated or controlled entity for which any assured had, has or may have responsibility for purchasing insurance.

**Additional Insureds:**

To the extent required by any contract or subcontract for the Insured Project, and then only as their respective interests may appear, all owners, all contractors and subcontractors of every tier, tenants of the Insured Project, and any other individual or entity specified in such contract or subcontract, are recognized as Additional Insureds.

**Period:**

The whole period of the contract for the construction of the project starting \_\_\_\_\_ and continuing until\_\_\_\_\_:

- A. the expiration date shown on the declarations page, or
  - B. the acceptance of the Insured Project by the Owner, or
  - C. the placing of the Insured Project into service for its intended purpose, or
  - D. abandonment of the Insured Project by the Insured, or
  - E. the expiration of the Named Insured's interest in the Insured Project;
- whichever first occurs

**Insuring Agreement:**

The policy, subject to the terms, conditions and exclusions contained therein, insures against all risks of direct physical loss of or damage to insured property while at the location of the Insured Project while in offsite storage or while in transit, al within the policy territory and occurring during the term of the policy.

**Policy Territory:**

The fifty states comprising the United States of America, the District of Columbia and Canada

**Property Insured:**

At the location of the Insured Project:

1. Permanent Works: All materials, supplies, equipment, machinery, and other property of a similar nature, being property of the Insured or of others for which the Insured may be contractually responsible, the value of which has been included in the estimated value of the Insured Project, all when used or to be used in or incidental to the demolition of existing structures, site preparation, fabrication or assembly, installation or erection or the construction of or alteration, renovation, rehabilitation of the Insured Project.
2. Temporary works: All scaffolding, form work, fences, shoring, hoarding, falsework and temporary buildings, all incidental to the project and the value of which has been included in the estimated value of the Insured Project.

**Coverages:**

- Debris Removal
- Decontamination Cost
- Defense Costs
- Demolition and Increased Cost of Construction
- EDP Media
- Earthquake



Errors and Omissions  
Expediting Expenses  
Fire Brigade Charges and Extinguishing Expenses  
Flood  
Hot Testing  
Land and Water Contamination or Pollutant Cleanup, Removal  
and Disposal  
LEG 2/96 Clause  
Loss Adjustment Expenses  
Property at Off-Site locations  
Property in Transit  
Valuable Papers and Records

**Conditions:**

72 Hour Clause in respect of Earthquake, Flood, Named  
Windstorm and Riot.  
Definition of Occurrence  
Sue & Labor Clause

**Valuation:**

The cost of repairing, replacing or reinstating with materials of like  
kind and quality at the time and place of loss, including  
contractor's reasonable profit and overhead not exceeding the  
percentages in the original contract; and if not so replaced, at  
Actual Cast Value.

Valuable Papers & Records: The cost to reproduce the property  
with other property of like kind and quality including the cost of  
gathering or assembling information from back up data if replaced,  
or if not replaced, at the value of blank material.

**Property  
Excluded:**

Land and land values

Contractor's tools, machinery plant and equipment including spare  
parts, and accessories, whether owned, loaned, hired or leased, and  
property of a similar nature not destined to become a permanent  
part of the Insured Project

Water, animals of any kind, standing timber and growing crops,  
trees, shrubs, plantings and landscaping  
Accounts, bills, currency, stamps, deeds, evidences of debt,  
checks, money, securities, precious metals or precious stones or  
other property of a similar nature

Vehicles or equipment licensed for highway use, rolling stock,  
aircraft or watercraft

Railroad rolling stock unless intended to be a part of the Insured  
Project, and then only if values are declared

Mines, caverns and property contained therein

Dams, dikes, gates, and flumes

Existing property at the location of the Insured Project

Property while covered by Ocean Marine Insurance or while waterborne in the course of ocean shipment or while aboard any aircraft

Prototype, developmental or used machinery and equipment but only as to damage while undergoing any form of testing, commissioning or startup

Transmission and Distribution Lines except that property within the premises of the Insured Project or within one thousand feet thereof

Property located at other than the location of the Insured Project, except that which is in transit or temporary storage

**Perils Excluded:**

This policy shall not pay for loss, damage or expense caused directly or indirectly and/or contributed to, in whole or in part, by any of the following excluded perils except as specifically allowed in 1, 2, 3, 4 (c), 5, 9 (a), 10 or 12 below:

1. Consequential loss, damage or expense of any kind or description including but not limited to loss of market or delay, liquidated damages, performance penalties, penalties for non-completion, delay in completion or non-compliance with contract conditions, whether caused by a peril insured or otherwise;
2. a. Cost of making good faulty or defective workmanship or material, unless direct physical loss or damage by an insured peril ensues and then this policy will cover for such ensuing loss or damage only (per LEG 2/96);  
b. Cost of making good fault, defect, error, deficiency or omission in design, plan or specification, unless direct physical loss or damage by an insured peril ensues and then this policy will cover for such ensuing loss or damage only (per LEG 2/96);

For the purposes of this policy and not merely this exclusion it is understood and agreed that any portion of the Insured Property or Insured Project shall not be regarded as damaged solely by virtue of the existence of any defect of material, workmanship, design, plan or specification.

3. Wear and tear, gradual deterioration, inherent vice, latent defect, corrosion, rust, dampness or dryness of the atmosphere, unless direct physical loss or damage by an insured peril ensues and then this policy will cover for such ensuing loss or damage only
4. a. Hostile or warlike action in time of peace or war, including action in hindering, combating, or defending against an actual, impending, or expected attack by (1) any government or sovereign power (de jure or de facto), or by any authority maintaining or using military, naval, air forces, or (2) military, naval, or air forces, or (3) an agent of any such government, power, authority, or forces, it being understood that any discharge, explosion, or use of any weapon of war employing atomic fission or fusion shall be conclusively presumed to be such a hostile or warlike action by such a government, power, authority, or forces;  
b. Insurrection, rebellion, revolution, civil war, usurped power or action taken by governmental authority in hindering, combating, or defending against such occurrence;  
c. Seizure or destruction of property by order of governmental authority. However, if fire is covered by this policy, the Company will pay for acts of destruction ordered by governmental authority and taken at the time of a fire to prevent its spread;
5. Nuclear reaction, nuclear radiation or radioactive contamination however such may have been caused;

nevertheless, if a fire arises directly or indirectly from nuclear reaction, nuclear radiation or radioactive contamination, any loss or damage arising directly from that fire shall (subject to the provisions of the policy) be covered, excluding however all loss or damage caused by nuclear radiation or radioactive contamination arising directly or indirectly from that fire;

6. Unexplained disappearance, shortage or other loss discovered upon taking inventory;
7. Infidelity, dishonesty or fraudulent activity of the Insured or any of the Insured's partners, officers, directors, trustees, employees or others to whom the insured property is entrusted;
8. Fines or penalties incurred or sustained by or imposed on the Insured at the order of any government agency, court or other authority arising from any cause whatsoever beyond the demolition of any damaged portion of the project no longer useful for its intended purpose;
9.
  - a. Asbestos material removal, unless the asbestos is itself damaged by fire, lightning, aircraft impact, explosion, riot, civil commotion, smoke, vehicle impact, windstorm or hail, vandalism, malicious mischief, leakage or accidental discharge from automatic fire protective systems; the company will not pay for the costs to remove the undamaged portion of any asbestos material;
  - b. Demolition or increased cost of reconstruction, repair, debris removal or loss of use necessitated by the enforcement of any law or ordinance regulating asbestos material;
  - c. Any governmental order or direction declaring that asbestos material which is present in or part of or utilized on any portion of the Insured Project can no longer be used for the purpose for which it was intended or installed and must be removed or modified;
10. Loss or damage covered under any written or implied guarantee or warranty by any manufacturer or supplier, but only to the extent of recovery from such written or implied guarantee or warranty
11. Settling, cracking, expansion, contraction or shrinkage of walls, floors, ceilings, buildings foundations, patios walkways, driveways or pavements; however, physical loss or damage which results to other insured property from any peril not otherwise excluded shall be covered;
12. Cessation of the work, whether total or partial, unless such cessation has been directly occasioned by loss or damage covered under the policy.
13. Actual, alleged, or threatened release, discharge, escape or dispersal of Contaminants or pollutants, all whether direct or indirect, proximate or remote or in whole or in part caused by, contributed to or aggravated by any physical loss or damage insured by this policy.

Nevertheless, if fire is not excluded from this policy and a fire arises directly or indirectly from the actual release, discharge, escape or dispersal of contaminants or pollutants, any loss or damage insured under this policy arising directly from that fire is insured, subject to the provisions of this policy.

This exclusion shall not apply when loss or damage is directly caused by fire, lightning, aircraft impact, explosion, riot, civil commotion, smoke vehicle impact, windstorm, hail, vandalism or malicious mischief, leakage or accidental discharge from automatic fire protection systems

14. Corrosion, decay, deterioration, erosion, evaporation, inherent vice, latent defect, leakage, loss or weight, marring or scratching, rust, shrinkage, wear and tear or any quality in property which causes it to damage or destroy itself, unless direct physical loss or damage by an insured cause of loss ensues and then this policy insures only such ensuing direct physical loss or damage;

15. Erosion of graded or planted finish or rough grades which results from normally expected or predictable precipitation and surface water runoff
16. As respects plans, blueprints, drawings, etc., electrical or magnetic injury to or errors and omissions in creating, processing or copying electronic records, however caused;
17. The company shall not be liable for any loss or damage caused by, arising out of, contributed to, or resulting from fungus, mold(s), mildew or yeast; or any spores or toxins created or produced by or emanating from such fungus, mold(s), mildew or yeast; (a) fungus includes but is not limited to, any of the plants or organisms belonging to the major group fungi, lacking chlorophyll, and including mold(s), rusts, mildews, smuts and mushrooms; (b) mold(s) includes, but is not limited to, any superficial growth produced on damp or decaying organic matter or on living organisms, and fungi that produce mold(s); (c) spores means any dormant or reproductive body produced by or arising or emanating out of any fungus, mold(s), mildew plants, or organisms or microorganisms, regardless of any other cause or event that contributes concurrently or in any sequence to such loss;
18. Rain, snow, sleet, sand, dust or ice, all whether driven by wind or not, entering the interior of any building or structure or property inside the building or structure, unless the exterior of such building or structure, first sustains physical damage to its roof, windows, or walls by a covered loss through which the rain, snow, sleet, sand, dust or ice enters.
19. Data Distortion/Corruption exclusion
20. Millennium exclusion
21. Absolute nuclear, biological, chemical terrorism exclusion

#### **GENERAL CONDITIONS**

- **Severability of Interests clause**
- **No coinsurance to apply**
- **Waiver of Subrogation clause**

If the Company pays a claim under this Policy, it will be subrogated, to the extent of such payment, to all the INSURED'S rights of recovery from other persons, organizations and entities. The INSURED will execute and deliver instruments and papers and do whatever else is necessary to secure such rights.

The Company will have no rights of subrogation against:

- A. Any person or entity, which is a NAMED INSURED or an ADDITIONAL INSURED.;
- B. Any other person or entity, which the INSURED has waived its rights of subrogation against in writing before the time of loss;
- C. Notwithstanding the foregoing, it is a condition of this Policy that the Company shall be subrogated to all the INSURED'S rights of recovery against:
  - (1) any Architect or Engineer, whether named as an INSURED or not, for any loss or damage arising out of the performance of professional services in their capacity as such and caused by any error, omission, deficiency or act of the Architect or Engineer, by any person employed by them or by any others for whose acts they are legally liable, and

(2) any Manufacturer or Supplier of machinery, equipment or other property, whether named as an INSURED or not, for the cost of making good any loss or damage which said party has agreed to make good under a written warranty.

The INSURED will act in concert with the Company and all other interest concerned in the exercise of such rights of recovery. The Insured will do nothing after a loss to prejudice such rights of subrogation.

If any amount is recovered as a result of such proceedings, the net amount recovered after deducting the costs of recovery, will accrue first to the Company in the proportion to their respective interests. Any excess of this amount will be remitted to the INSURED. If there is no recovery, the interests instituting the proceedings will bear the expense of the proceedings proportionately.

**LEG 2 / 96**

**The London Engineering Group  
Model “Consequences” Defects Wording**

“The Insurer(s) shall not be liable for:

All costs rendered necessary by defects of material workmanship, design plan, or specification, and should damage occur to any portion of the Insured Property containing any of the said defects, the cost of replacement or rectification which is hereby excluded is that cost which would have been incurred if replacement or rectification of the insured property had been put in hand immediately prior to the said damage.

For the purpose of this policy, and not merely this exclusion, it is understood and agreed that any portion of the Insured Property shall not be regarded as damaged solely by virtue of the existence of any defect of material workmanship, design plan, or specification.”



**EVIDENCE OF INSURANCE FOR OFF SITE OPERATIONS  
CERTIFICATE OF LIABILITY INSURANCE**

DATE (MM/DD/YYYY)  
1/27/2010

<b>PRODUCER (207)947-7345 FAX:</b> <b>Cross Insurance</b> 74 Gilman Road P.O. Box 1388 Bangor ME 04401 INSURED <b>E.S. Boulos Company</b> 45 Bradley Drive Westbrook ME 04104	<b>THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.</b>
<b>INSURERS AFFORDING COVERAGE</b> INSURER A: Acadia Insurance Group, LLC INSURER B: AIG, Chartis/Nat'l Union INSURER C: MEMIC & MEMIC IND Co. INSURER D: INSURER E:	<b>NAIC #</b> 66915

**COVERAGES**

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR	ADD'L LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS
	<input checked="" type="checkbox"/>	<b>GENERAL LIABILITY **</b> <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY				EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 250,000
A		CLAIMS MADE <input checked="" type="checkbox"/> OCCUR	CPA0066446	1/19/2010	1/19/2011	MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000
		GEN'L AGGREGATE LIMIT APPLIES PER:				
		<input checked="" type="checkbox"/> POLICY	<input checked="" type="checkbox"/> PROJECT	<input checked="" type="checkbox"/> LOC		
	<input checked="" type="checkbox"/>	<b>AUTOMOBILE LIABILITY **</b> <input checked="" type="checkbox"/> ANY AUTO				COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000
A		ALL OWNED AUTOS SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS <input checked="" type="checkbox"/> Hired Phy Dam <input checked="" type="checkbox"/> Non-own Phy Dam	CAA0066444	1/19/2010	1/19/2011	BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
		<b>GARAGE LIABILITY</b> ANY AUTO				AUTO ONLY - EA ACCIDENT \$ OTHER THAN EA ACC \$ AUTO ONLY: AGG \$
	<input type="checkbox"/>	<b>EXCESS / UMBRELLA LIABILITY **</b> <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE				EACH OCCURRENCE \$ 12,000,000 AGGREGATE \$ 12,000,000
B		DEDUCTIBLE \$ <input checked="" type="checkbox"/> RETENTION \$ 10000	1750124	1/19/2010	1/19/2011	
	<input type="checkbox"/>	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under SPECIAL PROVISIONS below				<input checked="" type="checkbox"/> WC STATUTORY LIMITS OTH-ER \$ E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
		OTHER Inst Floater Leased/Rented Equip	CPA0066446	1/19/2010	1/19/2011	\$2,500,000 \$500,000

**DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS**  
 Public Service Company of New Hampshire and URS - Washington division their directors, officers, agents, representatives and employees are named as additional insureds on the General Liability and Automobile Liability policies. A Waiver of Subrogation applies on all policies in favor of the Additional Insureds and any and all subcontractors of any tier. Coverage afforded the Additional Insured's will be Primary and non-contributory

<b>CERTIFICATE HOLDER</b>  Marsh USA, Inc. Mr. Alexander D. Merida 99 High St. Boston, MA 02110	<b>CANCELLATION</b>  SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL <u>30</u> DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.  AUTHORIZED REPRESENTATIVE Debbie Pelkey/DJP <i>Debra Pelkey</i>
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## **IMPORTANT**

If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

## **DISCLAIMER**

This Certificate of Insurance does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder, nor does it affirmatively or negatively amend, extend or alter the coverage afforded by the policies listed thereon.



## APPENDIX XV

### CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner Agreement No.:

Contractor Name: [ \_\_\_\_\_ ] Contract Date: \_\_\_\_\_, 201[ ]

[ \_\_\_\_\_ ] ("*Contractor*") hereby certifies to Owner Substantial Completion has been achieved pursuant to, and in full satisfaction of the terms and conditions of the Scrubber System Agreement dated [ \_\_\_\_\_ ], 201[ ] ("*Agreement*"), between Owners and Contractor. Without limiting the generality of the foregoing or the requirements of Substantial Completion, Contractor certifies to Owners that:

(a) Omitted Intentionally;

(b) all Work, except for Punch List Items for the Project, shall be substantially completed in accordance with the terms of this Agreement, and Owner shall have accepted in writing the Punch List for the Project provided by Contractor in accordance with Section 10.4;

(c) the Contractor has achieved the Performance Guarantees as described in Appendix III for the Project with the exception of the Availability Guarantee;

(d) the Project is able to perform and has demonstrated performance in accordance with its design requirements as specified in Appendix I and in accordance with Law;

(e) Omitted Intentionally;

(f) Owner has received from Contractor, all permits, licenses, and approvals required to be obtained by Contractor hereunder;

(g) Owner has received all drawings and all specifications (except as-built drawings of the Project), test data, and other technical information required hereunder for Owner to start-up, operate and maintain the Project;

(h) Owner has received results demonstrating that Contractor has successfully completed all of the Acceptance Tests;

(i) Owner has received from Contractor any waivers of liens relating to the Work for the Project (or has discharged or secured any other action in respect of any liens, as permitted under Section 7.5) which were not previously delivered by Contractor in accordance with Section 7.5 for Work performed prior to Substantial Completion;

In full reliance on the above, and subject to Section 10.2 of the Agreement, Owners hereby acknowledge that Contractor is deemed to have achieved Substantial Completion.

[CONTRACTOR]	[OWNER]
By:	By:
Name:	Name:
Title:	Title:
Date:	Date:

**APPENDIX XVI**

**CERTIFICATE OF FINAL COMPLETION**

Owner Agreement No.:

Contractor Name: [\_\_\_\_\_]

Contract Date: \_\_\_\_\_, 200[\_\_]

[\_\_\_\_\_] ("*Contractor*") hereby certifies to Owner that Final Completion has been achieved pursuant to, and in full satisfaction of the terms and conditions of the Scrubber System Agreement dated [\_\_\_\_\_] , 201[\_\_] ("*Agreement*"), between Owners and Contractor. Without limiting the generality of the foregoing or the requirements of Final Completion, Contractor certifies to Owners that the following have been achieved for the Project and the following Work has been fully completed:

- (a) Substantial Completion;
- (b) Contractor has successfully completed the Performance Tests for the Project; and
- (c) Owner has received and accepted the final "as-built" drawings and the Final Test Reports;
- (d) Owner has received from Contractor a final certificate of Contractor certifying that waivers of all Liens by Contractor and Subcontractors relating to the Work have been obtained by Contractor and delivered to Owner;
- (e) Contractor has removed all of its equipment and materials and completed removal of all waste and rubbish from around the Site;
- (f) Completion of all Punch List Items; and
- (g) Contractor has performed all other provisions and delivered all items required by this Agreement then to be performed or delivered in a manner reasonably satisfactory to Owner and in accordance with the Agreement.

In full reliance on the above, and subject to Section 10.5 of the Agreement, Owners hereby acknowledge that Contractor is deemed to have achieved Final Completion.

[CONTRACTOR]	[OWNER]
By:	By:
Name:	Name:
Title:	Title:
Date:	Date:

## **Appendix XVII**

**Omitted Intentionally**

## **Appendix XVIII**

**Omitted Intentionally**

## **Appendix XIX**

**Omitted Intentionally**

## **Appendix XX**

**Omitted Intentionally**

## **Appendix XXI**

**Omitted Intentionally**

## **Appendix XXII**

**Omitted Intentionally**



## **Appendix XXIII**

**Omitted Intentionally**

## **Appendix XXIV Contractor Work Rules and Site Rules**

Attachment XXIV-1, PSNH Generation Contractor Work Rules, Rev. 03-04-08

Attachment XXIV-2, Merrimack Station Contractor Work Rules, Rev. 04-16-07

Attachment XXIV-3, Contract Site Requirements, Rev. 0

Attachment XXIV-4, Contractor Safety and Health Requirements, Rev. 0

Attachment XXIV-5, Project Specific Safety Plan, Rev. 0, 02-10-09

Attachment XXIV-6, Crane Operator Certification, Rev. 0

Attachment XXIV-7, Construction Division of Responsibility, Rev. 0

**PSNH GENERATION  
CONTRACTOR WORK RULES**

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*These PSNH Generation Contractor Work Rules must be reviewed, understood and signed by the Contractor’s Supervisor (authorized representative) responsible for the on-site performance of the work for which they are contractually responsible. Furthermore, it is the responsibility of the Contractor’s Supervisor to ensure these rules are reviewed, understood and followed by all the Contract Supervisor’s employees or sub-contractors for which they hire in order to meet their contractual obligations for PSNH Generation.*

*These rules do not replace the obligation of the Contractor, its employees or representatives from following all applicable Local, State and Federal Regulations.*

*It will be the responsibility of each PSNH Generation Local Site Contact (liaison) to review these Work Rules on an annual basis with the Contractor Supervisor who performs work for PSNH Generation.*

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# PSNH GENERATION CONTRACTOR WORK RULES

## I. INTRODUCTION

- A. These work-rules govern the way that contractors and their staff conduct business at Generation facilities belonging to Public Service of New Hampshire system companies (PSNH). These rules are meant to convey PSNH's expectations for the safe and environmentally correct practices to be used at each station and may exceed the requirements of OSHA or other regulatory agencies. They reference PSNH policies and programs such as the fitness-for-duty program, and other rules relating to the use of facility equipment. **Contractors are responsible for supplying competent supervision and employees who are qualified and trained for the type of work that they will perform, providing all applicable training and safety instructions, and assuring that safe practices are followed. This includes verifying that the employees reporting to work are physically able to do all aspects of their jobs when they start work on the project.**
- A.1. Contractors shall have training and certification records and other such documentation for their employees that are pertinent for the work to be performed either on-site or available within twenty-four (24) hours and subject to review by Northeast Utilities (NU). **Failure to produce within such time will be considered breach of contract award and shall entitle NU, at its option, to terminate such contract without further liability on its part.**
- B. In accordance with NU's Environmental Management System (EMS) and the requirements of ISO 14001, contractors are required to ensure their employees, subcontractors, and agents are aware of:
1. The four tenets of the NU Environmental Policy (maintaining Compliance, demonstrating Leadership, ensuring Accountability, and practicing Stewardship).
  2. The scope of their job and how it impacts the environment.
- C. Contractors and their employees are expected to abide by these work-rules and discipline those who do not abide by them. **In addition, contractors must inform all of their employees of PSNH policies, practices, and rules, including these work-rules, to be followed while on PSNH properties and projects.**
- D. PSNH will assign a qualified individual who has demonstrated a sufficient level of experience and training to act as liaison for each contractor. The contractor must provide the PSNH liaison with up-to-date lists of the employees on site. Any questions or concerns regarding these work-rules should be directed to the liaison or the liaison's designee.
- E. Neither compliance with these work rules nor PSNH's approval of any actions or procedures of the contractors shall relieve the contractor of its obligation to

## **PSNH GENERATION CONTRACTOR WORK RULES**

always use due care in performing work and to take any additional precautions necessary or proper under the circumstances to prevent injury or property damage.

- F. All vehicles and personnel are subject to search by PSNH supervision and security. All persons and vehicles entering or exiting PSNH facilities must permit search and seizure of PSNH property as a condition for access permission.
- G. Planned work activities which may affect or disrupt work by PSNH personnel shall be communicated to such personnel far enough in advance to allow for coordination, accommodations, or resolution of conflicts.
- H. Contractors shall promptly inform the NU liaison of any and all inspections, visits, observations, audits, or inquiries of any kind (telephone, electronic, in-person, etc.) affecting or pertaining in any way to the contractor's work under the contract by any Federal, State or local agency, and the reasons therefore. Contractors shall keep the NU liaison updated on the status of any regulatory matters arising out of such interest, including but not limited to safety, health, and environmental citations and violations.

## PSNH GENERATION CONTRACTOR WORK RULES

### II. EMERGENCIES

- A. EMERGENCY PSNH NUMBER \_\_\_\_\_
- B. Plant operations staff handles all emergencies and coordinates all activities, such as, medical, fire, and hazardous emergencies. The phone number to contact them is \_\_\_\_\_. Plant operations staff notifies fire, police and rescue agencies when necessary.
- C. When reporting an emergency, you must clearly state what the emergency is, where you are located, and any other information to allow the appropriate response action. This includes requesting fire or ambulance equipment if needed. You must also stand by in a safe area to allow the responders to identify the area of the emergency as soon as possible and to provide them with first hand information when they arrive.
- D. Contractors must provide their employees with awareness and informational training concerning bloodborne pathogens. Training must comply with OSHA Section 29CFR 1910.1030. In the case of a biological spill, contractors must coordinate with PSNH liaison to ensure an appropriate response.
- E. Contractors should be equipped with their own first aid kits and other medical supplies, however, first aid kits are available on-site for minor injuries if necessary. Contractors are responsible for transporting employees to receive medical treatment for minor injuries, if required.
- F. Each station has a "PLAN FOR EMERGENCY EVACUATION" which is posted in a prominent location. **The contractor must assure that their personnel are familiar with this plan and the location of the exits.** Some locations have emergency evacuation warning tones which may be tested monthly and early in the outage periods following a general announcement of the test over the P.A. system.

## PSNH GENERATION CONTRACTOR WORK RULES

### III.SAFETY

#### A. General Safety Rules

**All contractors and their employees are responsible for safety. This includes following all regulatory required safety and environmental rules and regulations, (including the latest version of OSHA Sections, 29CFR §§ 1910 and 1926 in effect at the time of the work or those that may take effect during the work), PSNH rules and procedures, site specific rules, and safe work practices.** Failure to comply is just cause for expulsion from PSNH properties.

- 1. All contractors must supply qualified employees who are knowledgeable and skilled in the areas to which they are assigned.** Appropriate documentation on employees performing tasks or jobs requiring special training and medical and physical qualifications for fork truck or crane operation, rigging, welding, asbestos removal, etc., must be available at all times for review by the PSNH liaison. **Contractors must evaluate all work to determine the appropriate PPE requirements, such as respiratory protection, eye protection, hearing protection and other protective measures as needed, beyond the station's general requirements, and they must require that such protection be used.** PSNH will inform contract supervisors of **known** hazards in areas, i.e. arsenic, asbestos, vanadium pentoxide.
- 2. Contractors must conduct pre-job safety and environmental briefings ("hazard assessments") with their employees at the start of each individual work assignment, new work assignments or shift change and whenever workscope changes warrant, as required by OSHA Section 29 CFR 1910.269(c).** These discussions must discover the actual and potential hazards of the job, environmental considerations, the specific PPE requirements, NU EMS requirements, and all other precautions required to prevent injury or damage and to protect people and the environment. The PSNH liaison can help to identify hazards (boiler ash, chemicals, etc.) that exist within each station and also provide MSDS sheets for hazards.
- 3. Contractors must report all injuries, work related illnesses and near misses to the PSNH liaison as soon as possible.** Incident documentation is required on-site. PSNH requires that all injury and illness reports be promptly submitted to the PSNH liaison. PSNH also requires that all injuries, illnesses, and near misses be promptly investigated with documented investigation reports submitted to the PSNH liaison within one week, unless other arrangements with PSNH liaison have been made, but not to exceed two weeks.

## **PSNH GENERATION CONTRACTOR WORK RULES**

4. No alcoholic beverages, controlled drugs (other than prescribed drugs), or firearms are allowed on PSNH property nor shall any worker under the influence of alcohol and/or drugs be allowed on PSNH property. The sale or use of alcohol and/or drugs on PSNH property is strictly prohibited. Fighting, stealing and gambling is also prohibited and strictly enforced. Reference to the PSNH Fitness For Duty policy # 90 which states:
  - Maintaining an alcohol and drug free workplace and a workplace that is free from the effects of such substances.
  - Ensuring that employees perform their work assignments in a reliable, trustworthy manner and not impaired by mental or emotional problems, fatigue, or stress.
  - Provide reasonable measures for early detection of individuals who are not fit to perform their duties.
1. The use of personal radios, such as "walkman" style cassette or CD players, cell phones, etc., and walkie talkies are either restricted or prohibited on most PSNH properties. Permission to use equipment of this type must be obtained through your PSNH liaison.
2. Smoking is prohibited in most areas of each station. Signs are posted where a fire or explosion hazard might exist. See the PSNH liaison or the site specifics for the details of the smoking policy at this work location.

### **B. Personal Protective Equipment and Tools**

1. All contractors are required to supply their own tools, safety equipment and personal protective equipment (PPE). Tools and equipment shall have all required guards, safety features as determined by site specific requirements and applicable standards (ANSI, UL, etc.) and be in safe working condition at all times. ALL PPE shall be worn as designed. Damaged tools and equipment shall be removed from service and properly identified to prevent accidental use. PSNH will not lend tools or safety equipment to contractors except in special or unusual situations. Tools and equipment borrowed from PSNH must be approved through the PSNH liaison and the contractor must return them in good condition or replace them. Contractors must evaluate all work to determine the appropriate PPE requirements, such as respiratory protection, eye protection and other protective measures as needed, beyond the station's general requirements, and they must require that such protection be used. Contractor's PPE Hazard Assessments are subject to review by PSNH. All contractor personnel using respirators must be clean shaven (Clean shaven means that one has shaved at beginning of the day or at the end of the previous day. If a contract employee arrives to work not clean shaven and requires shaving, it will



## PSNH GENERATION CONTRACTOR WORK RULES

be done off the clock) and have satisfactory up-to-date respirator fit tests and medical clearances on file with their employer.

2. Class B hard hats and safety glasses with rigid side shields are required at all times in the work area, and while walking through the work areas while work is in progress or hazards present. PPE is usually not required in office areas or some other areas as outlined in the station specifics.
3. Hearing protection is required in designated areas in PSNH facilities and during activities that may exceed 85 dB. See the station specifics for details at your work location.
4. Foot wear and clothing appropriate for the job is required at all times. Hazard assessments of PSNH facilities have shown that safety toed work shoes or boots are required in many areas for some tasks or jobs. Safety toed work shoes or boots are required when there is a risk of foot injury. Shirts and long pants are required in all areas, and long sleeve shirts are required around hot piping or equipment. **Only** Fire Resistant disposable coveralls (worn over appropriate clothing) are permitted where welding, cutting, burning or heat/flame are in use.
5. Fire resistant clothing and other accessories are required for certain electrical work. All employees exposed to electrical sources greater than 50 volts AC or DC utilized in the generation, transmission, or distribution of electricity must wear 100% natural fiber clothing and /or Fire Resistant clothing. The necessary head, ear, face, eye, hand and foot personal protective equipment would also be in addition to the above clothing requirement.
6. GFIs are required for all work areas including extension cord use. All tools, cords and devices must be inspected prior to use. No splice, nicks, open sockets, broken bulbs or defects are allowed in cords.
7. Nail guns, Hilti Guns, and similar tools shall be used in such a manner to ensure the projected fastener cannot miss or penetrate the intended surface and strike an unintended object or person, including but not limited to directing the line of fire away from other persons, including passersby, preventing access to opposite sides of nailing surfaces (e.g. walls), and preventing access closer than 20 feet to Hilti gun use.
8. Contractor shall not move loads suspended from mobile equipment without the load being secured to prevent swinging. All chains, cables, ropes, etc. suspended from mobile equipment shall be properly fastened. Tag lines shall be used on all loads handled by lifting equipment, except when there is a danger of the equipment, load, or tag line making contact with energized parts. Swing load radius must be barricaded during moving of suspended loads.

## PSNH GENERATION CONTRACTOR WORK RULES

9. Contractor shall guard or place appropriate barricades around temporary opening in floors, hand rails, etc., to prevent inadvertent entry. Covers over excavations or floor holes shall be conspicuously marked to indicate the hazard and the danger of removal.
10. Work areas, whether indoors or outdoors, restricted to entry by authorized persons shall be clearly marked and delineated. Unless otherwise permitted, such marking shall consist of a conspicuous rope or tape barrier with appropriate CAUTION Tags (See PSNH Generation APM Section 8.4), or other appropriate signs that note the nature of the hazard and provide guidance for the reader. Detours, whether for vehicular or pedestrian traffic, shall be clearly marked along the entire route. Signs, barriers, and similar markings shall be checked and maintained throughout the period of need and shall be removed promptly when the need has ended.

### C. Hazardous Energy Control/ LOCKOUT/TAGOUT (LOTO)

1. The PSNH Generation stations use Hazardous Energy Control Procedures (LOTO - reference appropriate PSNH Safety Manual) for the implementation of practices and procedures to shut down equipment/systems, isolate it from its energy source(s), and prevent the release of potentially hazardous energy while maintenance and servicing activities are being performed. The rules in this procedure must be complied with at all times. Failure to comply with these rules could result in serious injury and violations will not be tolerated. **Only qualified NU personnel shall attach or remove tags. Manipulation of switches, controls, breakers, valves, etc. will only be performed by qualified NU personnel.** To request isolation and tagging, contact the PSNH liaison. Every worker should be aware of the requirement to sign-on/off of each assigned job through the use of a Master Tag or the appropriate tags. The contractor supervisor(s) are responsible for collecting all workers' signatures. The contractor supervisor(s) are responsible to ensure (1) that their workers sign on to a Master Tag (and place the initials of their company in the appropriate box) before they go to work and, (2) that their workers sign off the Master Tag when work is completed. In cases where the contractor(s) has left the site with Tags not signed off, the PSNH liaison shall assume authority for clearance and give permission for the equipment/system to be checked for Operational status and have the tag(s) removed. All contractor(s) who do leave the site without clearing a Tag(s), and then come back at some later date, should assume that they are no longer covered by Lockout/Tagout.
2. When the PSNH liaison is coordinating a Tag Lift for testing or repositioning equipment/system, the contractor supervisor(s) is required to (1) notify and obtain permission from all their employees before

## **PSNH GENERATION CONTRACTOR WORK RULES**

giving permission to lift Tag(s), and (2) make an attempt to contact those workers who were not available for personal contact. Individuals not contacted will be notified by the contractor supervisor(s) as soon as practical, but not later than when they resume work.

3. In addition, the contractor supervisor(s) are required to issue the following caution to all contractor employees: “When navigating about the plant, be aware that any equipment/systems that you do not have properly tagged out may start at any time”. The PSNH liaison can provide more information on the details of these safety tagging requirements and provide a copy of the current version of the tagging manual. This PSNH procedure must be complied with at all times. Failure to comply with this procedure could result in serious injury. **Violations will not be tolerated.**

### **D. Electrical Awareness**

1. Training shall be performed by the contractor as per 1910.269 to provide the level of electrical awareness to all contractors/employees to allow them to safely walk through or perform non-electrical activities outside the unqualified clearances in an area such as a power plant or substation, containing exposed energized lines or parts of equipment. This training must demonstrate proficiency in recognizing exposed energized parts and be documented in writing. All questions regarding proper electrical clearances shall be referred to the PSNH liaison as required.

### **E. Housekeeping**

1. Work and walking areas shall be free from tripping hazards like extension cords, welding leads, air & water hoses, etc. These hoses and cords shall be run either overhead or in a manner that does not result in tripping hazards. The contractor must supply cones or other warning devices to highlight the dangers in areas where tripping hazards unavoidably interfere with walkways. Contractors must assure that unused cords, hoses, cables, etc. are periodically retrieved to eliminate unnecessary hazards and housekeeping problems.
2. Walkways must be kept free of debris and materials and maintained at least three feet wide where possible. Slipping hazards such as dust, oil, or water must be promptly contained and cleaned up. Stairwells, ladders, electrical and fire protection equipment must be kept clear for easy access and use during emergencies. Do not block exits.
3. All contractor work and break areas must be kept picked up, clean and well organized by contractor employees.

## **PSNH GENERATION CONTRACTOR WORK RULES**

### **F. Welding, Cutting and Burning**

1. Oxy-fuel welding, burning and cutting in PSNH facilities must be done in a safe manner. Oxygen, Mapp gas and other combustible fuel bottle(s), whether full or "empty", must be stored vertically and secured at all times and keeping a 20 ft. separation between oxygen bottle(s) and Mapp gas or other combustible fuel bottle(s). Some fuel gasses are not allowed in certain PSNH facilities. The restrictions will be addressed in station specific instructions. Compressed gas cylinders must be transported by approved dolly or carriers, with valve protectors in place. All unused or empty cylinders must be returned to the designated storage areas as soon as possible.
2. A fire-watch is required on tasks involving welding, burning, cutting or grinding or with any other open flame or spark producing activity. The fire-watch must be properly trained and observe all areas affected, extinguish small fires and notify the control room of any and all fires. The fire-watch employee can still perform other tasks or work in the immediate area while on fire-watch. Fire-watches must be maintained for a period of 30 minutes following the completion of hot work. Precautions to avoid fires must include removing all combustibles from the work area, using protective fire retardant cloth to lay over grating, and having the fire extinguishers immediately available. The PSNH liaison may be able to provide fire extinguishers that are used only for fire-watch situations. These extinguishers must be properly stored and labeled "empty" after use. This practice will ensure that extinguishers will always be available in the normal hanging storage locations around the station. The PSNH liaison will provide details on the requirements of this section as it pertains to each contractor.
3. All necessary precautions must be taken to protect personnel and equipment from weld flashes, welding curtains and shielding over grating is required whenever welding is performed.
4. Welding, cutting, and burning may require additional permits or precautions, depending on the location of the work. See your PSNH liaison before beginning these activities to insure that all notification requirements are met and that all precautions are taken.

### **G. Scaffolding, Ladder, Climbing Stacks and Fall Protection/Restraint**

1. No scaffolding work may begin until the contract has designated a competent person to oversee the work. 100% fall protection or restraint is required at all times during erection, maintenance, use and dismantling of the scaffold whenever the fall hazard is six (6) feet or greater unless

## PSNH GENERATION CONTRACTOR WORK RULES

the competent person has available for review upon request written documentation clearly describing why using 100% fall protection or restraint is not feasible or creates greater hazards and the methods that will be implemented to achieve as close to 100% fall protection or restraint as possible. Scaffold components may not be used for fall protection or restraint anchorage unless contractor similarly has available for review written documentation by a “qualified person” as defined by OSHA 29CFR 1926.450 validating the suitability of the components for such use. The aforementioned documentation, if applicable, must be readily available for review by NU. In addition, from the time scaffold erection is begun until scaffold dismantling is complete, a competent person shall inspect the scaffolding and associated components at least once each work shift prior to their use and shall affix signs, tags, or equivalent means to conspicuously mark whether the scaffolding is or is not safe to use. Transfer of responsibility for the maintenance and inspection of the scaffolding must be coordinated and clearly noted among NU and other parties involved. Once the scaffolding has been turned over for use signs, tags or equivalent means must be used at all times to indicate whether the scaffold is safe to use or unsafe to use. Inspections to make such determinations must be made by a competent person and be completed each shift prior to its use.

2. Ladders used by contractors must be provided by contractors unless other arrangements are made through the PSNH liaison. PSNH ladders are for PSNH use only and are located throughout each station for emergency and maintenance and must not be moved or used by contractors. Ladders used by contractors must be made of wood or fiberglass and meet all applicable standards. **The use of aluminum or other metal ladders is prohibited at PSNH locations.** Use of any ladder will be in accordance with PSNH safety rules. All required safety inspections of ladders must be performed and recorded by the contractor. Any use of rolling stairs must be approved by the PSNH liaison.
3. Climbing stacks and towers requires 100% fall protection to be worn.
4. Fall protection or restraints are required when working at a height of 6’ or more. Only approved safety harnesses shall be used for fall protection when engineering controls can not be used. Approved safety belts may only be used for fall restraint in limited situations.

### H. Hazard Communications/Chemicals

1. All contractor-supplied hazardous materials and chemicals must be approved by PSNH prior to use and entry on PSNH property. **All MSDS and associated instruction sheets must be provided to the PSNH liaison far enough in advance of the time of intended use, or the materials or chemicals may not enter PSNH property.** The contractor

## PSNH GENERATION CONTRACTOR WORK RULES

must also have a copy of its "Hazard Communications" program available. **Any containers used to handle chemical, fluid, or hazardous material must be labeled.** Hazardous materials transferred from their original containers must be placed in containers approved for their use, e.g., proper construction with closed top. Minimum label requirements: product name, manufacturer or distributor, hazardous warnings.

2. The PSNH liaison can help to identify hazards (boiler ash, chemicals, etc.) that exist within each station and also provide MSDS sheets for hazards.
3. Any chemical, fluid or hazardous materials brought on PSNH properties must be properly disposed of after use. Containers must be labeled and removed with the approval of the PSNH liaison. Spent material must be disposed of in pre-labeled DOT approved barrels. The placement of such barrels requires permission of the PSNH liaison. Waste chemicals, fluids, or hazardous materials must not be mixed with other substances and drums containing waste must not be left open. **Disposal or removal of spent chemicals, fluids or hazardous materials may be the responsibility of the contractor;** therefore, see your PSNH liaison for clarification.
4. The proper disposal of batteries, aerosol cans, paint cans and light bulbs are carefully controlled through a recycling process on PSNH properties that must be coordinated through the PSNH liaison. Trash disposal procedures will be identified by the PSNH liaison.
5. Asbestos is present throughout many of the PSNH Facilities. Asbestos removal activities are frequently undertaken to reduce the quantity of asbestos containing materials within its facilities. Boiler, pipe and surfacing insulation along with other building materials should be considered to contain asbestos unless it can be identified as non-asbestos insulation. Plastic tents, glove bags, and proper demarcation surrounding the removal process protect workers in other areas of the facility. Without proper authorization and training workers may not enter asbestos work areas. The contractor should contact the PSNH liaison for help in identifying possible asbestos containing materials in its work area.
6. Lead containing materials and lead -based paints are present throughout many of the PSNH facilities. Special care and precautions shall be taken by the contractor in working with lead containing materials and/or lead based paints and the removal of the same. All potential lead containing materials must be identified. For all operations involving lead containing materials and/ or lead based paints where there is potential to exceed the action level, as stated within OSHA 29 CFR 1926.62,

## PSNH GENERATION CONTRACTOR WORK RULES

appropriate engineering and administrative controls per 1926.62 must be implemented.

7. Contractors must report all environmental incidences to the PSNH liaison as soon as possible. Incident documentation is required on-site. PSNH requires that all environmental incident reports be promptly submitted to the PSNH liaison. PSNH also requires that all environmental incidents be promptly investigated with documented investigation reports submitted to the PSNH liaison within one week, unless other arrangements with PSNH liaison have been made, but not to exceed two weeks.

### I. Confined Spaces

1. Contractor employees frequently work in areas such as boilers, precipitators, air ducts, and condensers which are considered to be confined spaces. These work areas require a pre-work evaluation as determined in the PSNH Generation Confined Space Policy. As confined spaces, they require special precautions. In some instances, energy isolation (tagging) and initial atmospheric testing for oxygen, and combustibles, a physical hazard assessment, i.e., overhead hazards, fall greater than 6', noise, may be sufficient to re-classify the space as a non-permitted confined space and allow entry. However, as conditions change or work progresses, new hazards may be introduced (or potentially introduced) which will require re-evaluation of the confined space. This re-evaluation, including any atmospheric monitoring, is the responsibility of the contractor. See your PSNH liaison for details.
2. Welding, burning, cutting, painting, and solvent or chemical use inside a confined space may require additional precautions. Fumes or dusts from boiler ash or welding and grinding activities will usually require respiratory protection. See B. Personal Protective Equipment and Tools, paragraph 1 on page 5. Prior to beginning work, the PSNH liaison and contractor will review the job, including any known or potential hazards.

### J. Electro-Magnetic Forces (EMF) and Pacemakers

1. Increasing numbers of people with a variety of heart conditions rely on implanted cardiac devices (Pacemakers and Defibrillators). The equipment used for the generation and transmission of electricity can produce electric and magnetic fields of sufficient strength to possibly interfere with the proper functioning of implanted cardiac medical devices. It is the contractors' responsibility to inform its employees of the potential created by EMF.

## PSNH GENERATION CONTRACTOR WORK RULES

### K. Trenching or Excavation

1. Trenching or excavation shall be conducted through the PSNH liaison and the proper authorities will be contacted before beginning the excavation process. Before trenching or excavation please call in:

New Hampshire "Dig Safe" 1-800-225-4977

2. Trenching and excavation requirements will be reviewed with the PSNH liaison.

### L. Diving

1. All diving activities shall be done according to 1910.401. The diving safety manual procedures shall be reviewed and coordinated by the PSNH liaison.

### M. Vehicles

1. All drivers must observe posted safety signs at all times while on PSNH property.
2. Contractor vehicles are allowed limited access to PSNH properties. Station specifics detail the conditions under which contractors may bring vehicles on site and the designated parking areas for contractor employees' vehicles.
  - **Seat Belts** - Seat belts will be worn when operating either NU or privately owned vehicles (equipped with seat belts) on site.
  - **Backing** - Avoid back whenever practical, if not practical back on arrival, vehicles will be backed into parking spaces.
  - **Lifting equipment** - When being operated, any derrick, crane, excavating machine, or other non-insulated lifting equipment shall be grounded at all times whenever its maximum reaching capabilities could bring any part of the equipment or load to within 10 feet of energized overhead conductors.
  - Contractor is required to assure that all vehicles, including those of subcontractors, used in the performance of work for PSNH are maintained in good working order, without limitation, to hydraulic systems on each vehicle. Leaks must be reported to the PSNH liaison. The driver will be required to eliminate the leak before moving the vehicle. Contractor will be required to reimburse PSNH for all costs associated with the cleanup of leaks and spills.



## **PSNH GENERATION CONTRACTOR WORK RULES**

### **N. Facilities**

1. At most PSNH sites, shower, locker and lunchroom facilities are not available to contractors. Contractors may also have to provide portable toilets for their employees and subcontractors. The PSNH liaison or the station specifics at the work location provide these details.

## PSNH GENERATION CONTRACTOR WORK RULES

### IV. ENVIRONMENTAL

- 1. Contractors must conduct pre-job safety and environmental briefings with their employees at the start of each individual work assignment, new work assignments or shift change and whenever work scope changes warrant.** These discussions must discover the actual and potential hazards of the job, environmental considerations, NU EMS requirements, and all other precautions required to prevent injury or damage and to protect people and the environment. The PSNH liaison can help to identify hazards (boiler ash, chemicals, etc.) that exist within each station and also provide MSDS sheets for hazards. See Section III.A.2.
2. Enforcement Actions – A complete list of Notices of Violations (NOVs), orders, complaints, citations or other enforcement action(s) against the contractors and other subcontractors during the last three years by any federal, state or local agency must be submitted as part of the bid package. NOVs and other enforcement/inspection results received during the term of this contract shall likewise be brought to the attention of NU following their receipt.
3. Unplanned Releases to the Environment – The Contractor is responsible for immediately reporting any and all unplanned releases to the NU liaison and/or designated representative upon discovery. Unplanned releases include, spilling, spraying, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment or any chemicals, hazardous substances, hazardous materials, oils, or petroleum products. If the release originates from the Contractor's equipment, materials, chemicals, etc., the Contractor is also responsible for contacting the appropriate regulatory agencies and for remediating the release in accordance with all applicable federal, state and local laws, ordinances, orders and directives. NU will contact the appropriate regulatory agencies for any releases from its equipment, materials, chemicals, etc., and remediation will be performed by NU or its designated licensed contractor. If the release is not caused by NU and the Contractor fails to fulfill its obligations, NU will notify the appropriate regulatory agency for the responsible contractor and will bill the Contractor for NU's costs and expenses, including investigation and remediation costs and costs incurred by NU's Contractors.
4. Permits, Licenses and Certificates – The Contractor shall comply with all permit, license, and certificate requirements and laws, regulations, ordinances, and conditions of local, state and federal agencies.
5. Chemical Use and Disposal – The Contractor is responsible for ensuring safe and proper storage, use and/or disposal of all chemicals and hazardous materials, and to take precautions necessary to prevent exposure to other persons and/or properties. Use of environmentally friendly materials is preferred. Chemicals, fluids, and other hazardous materials transferred from their original containers must be placed in containers approved for their use. Unless otherwise directed

## PSNH GENERATION CONTRACTOR WORK RULES

in writing, disposal and removal of all such chemicals and materials is the responsibility of the Contractor. *Waste materials which are considered hazardous or otherwise regulated must not be disposed of on NU property.* However, temporary storage locations and removal should be coordinated with NU.

6. Environmental Management System Requirements – Contractors, their subcontractors and agents must understand the actual and potential impacts of their jobs on the environment. Pre-job briefings conducted prior the start of work shall include a review of NU’s Environmental Policy and any environmental requirements, procedures or policies that are applicable to any component of the work to be performed. These reviews shall be documented and documentation be made available upon request.

## **PSNH GENERATION CONTRACTOR WORK RULES**

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## PSNH GENERATION CONTRACTOR WORK RULES

Instructions: **Remove and sign this sheet in the presence of your PSNH liaison.**

As an authorized representative of my company, I have reviewed the PSNH Generation Contractor Work Rules and Station Specific Addendums (if any) and agree to work in conformance with them. Any questions I had pertaining to these rules have been answered by my PSNH liaison or a PSNH company representative.

\_\_\_\_\_  
(Contract Company or Organization Represented)

\_\_\_\_\_  
(Print Name)

\_\_\_\_\_  
(Sign Name)

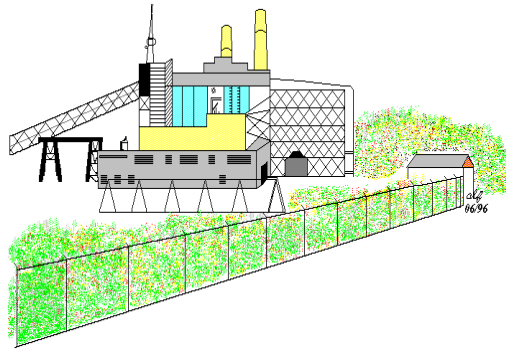
\_\_\_\_\_  
(Date)

Witness:

\_\_\_\_\_  
(PSNH assigned Liaison/Representative)

\_\_\_\_\_  
(Date)

# MERRIMACK STATION CONTRACTOR WORK RULES



Bow, 97 River Road  
New Hampshire

2007

Revised:  
PSNH Generation Contractor Work Rules  
MK Rule #17



# PSNH GENERATION CONTRACTOR WORK RULES

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## MERRIMACK STATION CONTRACTOR WORK RULES

1. All scaffolding work at Merrimack Station must be conducted under the direction of a Competent Person following all applicable OSHA Regulations.

At Merrimack Station when planking is required to support a live load it is recommended that “laminated planking (LP)” be used except as noted below. When LP is going to be used in scaffolding applications to support live loads it must **not** be used additionally for “blocking” or “cribbing” of equipment. Merrimack Station has purchased sufficient LP of various lengths for use. If Contractors use LP owned by Merrimack Station it must **not** be cut.

2. Ground fault protection is required for all work areas including all extension cord use. All tools, cords and devices should be inspected prior to use. No splices, nicks or defects are allowed in cords. Unless the receptacle being used is labeled GFI, assume it is not, in which case a GFI must be used.
3. Compressed air shall not be used to blow dust, dirt, shavings, etc. off of clothes or person. Proper air nozzles, air pressure (30 psi maximum except for sandblasting and similar activities), eye and body protection shall be used when compressed air is used to clean equipment.
4. All hoses exceeding ½” inside diameter shall have a safety check valve at the source of supply or branch line to reduce pressure in case of hose failure. Most of the air lines throughout the plant have been fitted with an inline safety check valve. Check to see that the device is in service prior to use. All Chicago fittings must be pinned prior to use.
5. Compressed gas bottles shall be sorted in posted storage areas and shall be transported with valve protectors in place. Use of compressed gas for cleaning purposes is prohibited. Proper marking and identification of content and volume (full, in-use, empty) is required. Transporting of the compressed gas cylinders shall be by approved dolly or carrier and cylinder must have valve caps installed prior to transport. Cylinders are required to be securely tied off to prevent possible tipping or falling of the cylinders. Proper purging of lines shall be performed where required. All unused or empty cylinders shall be returned to the designated storage areas as soon as practical. Any empty gas bottles used by the contractor shall be brought down off the Unit(s) to the designated empty bottle storage area on the ground, with caps on and properly chained. All bottles, full or empty, shall be chained or tied tightly at **ALL** times and must have caps on when being moved.
6. All vehicles and personnel are subject to search by PSNH supervision and security. All persons and vehicles entering or exiting PSNH facilities must permit search and seizure of PSNH property as a condition of access permission. All personnel walking through the main gate are to use the designated walking path and be cautious of vehicle traffic.

7. Breaks for lunch and coffee (if applicable) shall be consistent with PSNH breaks and should be taken at the following hours for the project:

PSNH BREAK TIMES

Day Shift Morning Break	<u>09:00 to 09:15</u>
Day Shift Lunch Break	<u>12:00 to 12:30</u>
*Day Shift Afternoon Break	<u>15:00 to 15:15</u>
Night Shift First Break	<u>19:00 to 19:15</u>
Night Shift Lunch Break	<u>00:00 to 00:30</u>
*Night Shift Second Break	<u>02:30 to 02:45</u>

\*Afternoon and second shift breaks are only authorized when working 10 hour days or more.

A catering truck will be available and arrives no earlier than 11:50 A. M. Contractor Supervisors are responsible for monitoring the breaks and work hours and shall correct any infractions of the rules.

8. Elevators are primarily for the use of passengers, but hand carried tools and wheeled carts are allowed. No materials are to be transported in the elevators between 07:00 to 07:30 or 12:30 to 13:00 hours. Under no circumstances shall the ceiling tiles be removed to accommodate large loads. Never allow the capacity of the elevators to be exceeded. Certain elevators may be designated as off limits to contractors and their employees. Smoking is not allowed in elevators. Refer to attached Elevator Protocol.
9. Certain requirements, such as daily time sheets, weekly invoicing, daily work progress sheets and a written report of work performed may exist and will be outlined by the PSNH Supervisor prior to the start of work. Daily progress reports (turnarounds) will be completed and turned into the Outage Scheduler no later than 0800 hours.
10. All personnel working for a contractor must park in the parking lot outside the main gate. Only Superintendents, job engineers/specialist and administrative personnel shall be allowed to bring their personal cars or company vehicles in to the plant area. Because of limited availability in the plant area, parking shall be restricted to the parking lot and gravel area immediately adjacent to the contractor's trailers.

Each Contractor shall submit a list of names to their PSNH Liaison of those people who should be allowed to bring their vehicles in to the plant area. These people will be issued a parking sticker which should be displayed in the lower left corner of the windshield. These stickers will be the only means of gaining admission in to the plant property. Refer to attached Security Policy.

11. A written report of all work performed shall be submitted within two (2) weeks after the completion of work to their PSNH Liaison.

12. All plant wash facilities, locker rooms, lunch rooms, machine shops, weld booths, posted areas and offices are off limits to contractor personnel. In addition, vending machines may be posted off limits in certain areas. Special needs facilities shall be requested through the Outage Manager, or their PSNH Liaison.
13. Hard hats, safety glasses and hearing protection are not required in office areas or while walking to or from the parking areas at the start and the finish of shifts and meal breaks provided that the routes taken are not through areas where hazards exist. Goggles are recommended in dusty areas and are required when side shields are not available. Contact lenses are not allowed at Merrimack Station.
14. Use of ox-Mapp or ox-propane gas is required and ox-acetylene is not allowed unless no other means exists and prior approval is obtained from the Outage Manager or their PSNH Liaison.
15. All contractor's time sheets will be turned into the Records and Inventory Department (Yellow Building) by 11:00 A. M. on Mondays. Also include invoices with backup, and breakdown of rates. All sheets must be signed by a PSNH Supervisor.
16. Air monitoring samples taken at Merrimack Station indicate that airborne concentrations of arsenic exceeded the permissible exposure limit (PEL) during certain activities. For that reason, all contractors performing work in the below areas must comply with the OSHA inorganic arsenic standard 29 CFR 1910.1018. Past Boiler Areas where air sampling for arsenic exceeded the PEL were the following:
  - MK1: Secondary superheater, reheat superheater, SCR reactor, air heater and boiler penthouse.
  - MK2: Secondary superheater, reheat superheater, economizer, SCR reactor, air heater, boiler penthouse and electrostatic precipitator.

Some requirements of 1910.1018 are:

- Respirators with high efficiency filters are required when entering the above areas.
  - Blue Tyvek disposable coveralls or equivalent are required.
  - Coveralls must be disposed of upon exiting boiler and are not to be worn elsewhere once soiled.
  - Disposal barrels will be set up on the upper elevations.
  - All personnel working in regulated areas need to wash hands and face prior to eating and shower upon leaving the premises.
17. **All contractors are required to understand and comply with the OSHA Chromium (VI) Standard 29 CFR 1910.1026. Contractors are to perform personal air monitoring for each activity where Hexavalent Chromium exposure is expected, without regard to the use of respirators. Air sampling is required for all activities involving hot work on stainless steel and sampling results are to be shared with PSNH as soon as they become available. Prior to collecting personal air samples each contractor must communicate with the PSNH Liaison to ensure the appropriate information is available such as work**

**being performed, location of work, name of employee being sampled, date/time of sampling, PPE worn at the time of sampling and the type of ventilation being used.**

18. Merrimack Station uses a remote control locomotive. When the strobe light is flashing on the locomotive it is being run remotely. Never assume there is an operator in the locomotive. All personnel working on or near the train tracks are required to fill out the "onsite railroad track work in progress log" located in the Track Hopper Control Room. This log communicates to Weaver Brothers Construction Co. the date, start time, stop time, work area, work being performed, workers name and company before starting any type of work. When coal is being off-loaded at the Station, the normal passageway to the screen houses may become blocked by the trains. If the need arises to go to the screen houses when access is blocked, cross only around the train. Do not climb over or crawl under at any time. If a situation exists so that emergency equipment or personnel must get through, only the Shift Supervisor of Operations has the authority to have the train separated. The separation of cars is considered very dangerous especially when cars are being made up. The gap between cars closes very quickly.
19. We have installed flashing red lights around the demineralizers and polishing-demineralizer on elevations 207 and 223 as a warning that the acid and caustic system has been energized. The area within these red lights is a safety goggle area. Anyone passing through or working within this area is required to wear their safety goggles. Anyone working on the acid or caustic system is required to wear goggles, face shield, acid suits, gloves and rubber boots. In addition to red lights, the area is also roped off.
20. Merrimack Station Emergency Response Plan for Anhydrous Ammonia is attached.
21. You are expected to review these rules with all of your employees and make sure that they understand them, prior to them beginning work at Merrimack Station.
22. Merrimack Station has a zero tolerance of safety rules violations policy. That means if you or your personnel are observed breaking a safety rule, you may be asked to leave the property
23. In addition to the red danger to not operate tag, we also use yellow caution tags. These tags may be attached to a piece of equipment or to yellow or red warning tape. The tags will contain a description of the hazard and instructions and will be signed and dated. If they are on yellow warning tape you must read the instructions on the tag to determine your course of action. If they are on the red warning tape, this indicates that you may not enter or pass through the barricaded area.  
  
Yellow safety tape, red safety tape and yellow tags will be in the following locations: Tool Room, Electrical Shop, Shift Supervisors Office, Working Foreman Operation's Office, Yellow Building Instrument & Control Shop, Warehouse, 1<sup>st</sup> floor Chemical Enclosure, the Waste Water Treatment Plant, and Coal Crusher House.
24. A three foot clearance must be maintained around all electrical panels, motor control centers and load centers. Nothing is to be hung from any breaker handle. Nothing is to be placed inside of or on top of the berms that surround our motor control centers. We have voltages up to 4160 volts in the plant. There is also a 4160 volt line that runs over the contractor trailer park. Contractors are not permitted to change the position of any switch or breaker, they must contact their Merrimack Station liaison in order to have this done. With the

exception lighting panels, the majority of our electrical switch gear is located on the second and third floors. If you have a question, ask your liaison.

25. Coal silos and bunkers are monitored for rising levels of Carbon Monoxide (CO) and the lower explosive limits (LEL) of methane. These alarms are set at 100 parts per million (PPM) for CO and 30% and 40% of the LEL for methane. Alarm points are located on the 8<sup>th</sup> floor elevation landing near Unit #1 and the control room. If these alarms are activated all people working in these areas are to exit and notify David Fradette at extension 172 or Brian Nault at extension 150. Air monitoring will be conducted by a qualified person to determine if upper silo area (tripper room) is safe to work in.
26. The Merrimack Station confined space inventory is attached.
27. Smoking is only permitted at Merrimack Station outdoors and away from all flammable hazards. Smokers are responsible for properly disposing of their cigarette butt and there will be **no** “smoking breaks” provided.
28. OSHA requires that approved footwear be required when working in areas where there is a danger of foot injuries due to falling or rolling objects. Contractors are required to wear ANSI Z41-1991 safety shoes with substantial heels when they work outside of administrative office areas or the control room. Attachable “toe guards” or “shoe caps” are not allowed. Safety shoes are not required when coming or going from the station or visiting the station such as a tour.
29. When the units (MK1 or MK2) are operating, walk around boiler sootblowers and not underneath as the sootblowers may operate at any time.
30. Merrimack Station uses a wash water return system when washing the boiler, air heater or electrostatic precipitator. Dirty wash water is directed to the waste water treatment facility for treatment and treated water is then returned to the washing operations for reuse. As in any water reuse system, the concentration of dissolved solids in the water will increase as the water wash proceeds and the water is cycled up. Use caution when working in or around areas conducting a water wash. As a precaution, personnel working in areas where contact with wash water is expected shall wear proper PPE such as rain gear, water proof gloves and boots as necessary.

**MERRIMACK STATION**  
**SECURITY PROCEDURES FOR CONTRACTORS**  
**ANNUAL OUTAGE**

Security procedures for personnel entering and leaving Merrimack Station have been enhanced. It is mandatory for each contractor, contractor representative and contractor employee to have complete understanding and full compliance of these procedures in an effort to maintain a secure site as well as minimize delays and/or inconvenience.

1. Contractors will provide Merrimack Station (your assigned liaison) with a list of employees who will be arriving on sight. It would be very helpful if this list could be provided in advance of employee's arrival in order to allow security to prepare a Temporary pass for the employee. The list must include the employees name, employer and liaison to whom his employer reports.
2. When the employee arrives at the gate he or she will need to provide a photo ID to the security guard. If the security guard has prepared the temporary pass he will allow the employee to enter. If the pass has not been prepared the guard will contact the employer and ask them to validate his employment prior to issuing a pass. **Failure to present proper photo identification will result in denied access to the site.**
3. From this point on the employee will be required to scan in and out of the security gate each time they enter or exit Merrimack Station, including any breaks, lunches, or any trips to their vehicle.
4. Management representatives from all contracting companies will have their employees assemble in their designated area before allowing any employee to initially begin work at the site in order to:
  - a. Conduct employee orientation per contracting company requirements.
  - b. Review and ensure employees have a full and complete understanding of applicable PSNH Generating Station Contractor Work Rules and local site specific requirements before issuing the Temporary Pass.
  - c. Issue the Temporary Pass to each employee and ensure the employee initials and dates it indicating they understand the PSNH Generation Contractor Work Rules and site specific requirements
5. Each employee must scan their Temporary Pass at the security card scanner located at the main gate walking entrance/exit each time they pass through the gate. In Addition:
  - a. Employee(s) may be required to present photo ID at any time while on the site.

- b. A lost or misplaced pass must be reported to security as soon as possible, also a new pass will only be reissued with the employer's approval and at their expense.
- c. If a Temporary Pass is reissued all changes will be registered at the security station.
- d. If an employee does not have his/hers pass and the contractor staging area is in the confines of the gate a management representative of the employee must escort the employee to the staging area and request a new pass.
- e. Employee(s) may be required to submit to a search of their bags, lunch boxes etc. when entering or exiting the facility.

6. In order to control the number of vehicles allowed on the property, we will be issuing passes that allow approved drivers on site with their vehicles. These driver passes will be controlled by Stan Drewniak X184. When a pass is issued the operator of the vehicle will be required to scan in at the main gate card reading scanner. Drivers will be assigned an area in which they may park. Each vehicle will also be issued an ID card which is to be put on the vehicles dashboard so the vehicle can be identified by PSNH Management. This ID is for the car issued only and may not be passed on to another vehicle. With the large number of contractors and limited parking it will be necessary to limit site access to supervisors only.

7. When an employee is laid off, for any reason, their temporary pass must be turned in along with their vehicle ID card if they were issued one.

Your Cooperation is greatly appreciated.

**MERRIMACK STATION**  
**ANNUAL OUTAGE**  
**ELEVATOR POLICY**

Due to the time constraints of the outage and the majority of the outage work being performed on upper elevations the following policies need to be adhered to. The elevator will be manned by a person who will be responsible for operating and managing all operations. He will insure that moving people will be the first priority, with equipment and materials secondary.

1. To insure that plant operators have access to operate the running unit. The elevator on the running unit will not be used to support the outage. It will not be used unless permission is given by the contractor's liaison. **Work with your PSNH liaison if special arrangements need to be made.**
2. All PSNH employees and outside contractors are encouraged to use the stairs for short trips such as one or two elevations. The elevator operator will try to police this, everyone's cooperation is needed.
3. Ten minutes prior to start times, breaks and lunch the elevator is to be used only to transport people, no equipment or materials.
4. All attempts should be made to transport equipment and materials to the job site by other means then the elevator if at all possible. There will be a crane on sight for portions of the outage and maybe able to assist in transporting equipment and material to upper elevations.
5. The plant realizes that it may be necessary to use the elevator to transport equipment and materials. You should discuss this with your PSNH liaison; arrangements can be made to move materials during breaks, lunches and sometimes prior to and after the day shift working hours when the elevator usage is at a minimum.
6. If at all possible it would be appreciated if we could pre-stage the job sites with materials and equipment prior to the outage. If you are going to store material on the unit please discuss this with your liaison, he will assist in locating an area that will not interfere with the plant operation.

Your cooperation will be needed and greatly appreciated in helping Merrimack Station improve our elevator efficiency.

“Let's have a SAFE and productive outage....”



**Merrimack Station Integrated Contingency Plan - Contractor Work Rules**

Merrimack Station employs an Integrated Contingency Plan that describes the actions to be taken for all emergencies occurring on site. The on duty Shift Supervisor (SS) is the emergency coordinator. Incident response priorities are always:

- a) protect worker safety and health,
- b) protect public health;
- c) protect property; and
- d) protect the environment.

**All Emergency**

<b>Date/Time Completed</b>	<b>Discovery Any Station Employee or Contractor</b>
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**1. CALL CONTROL ROOM ON ANY STATION PHONE 140 OR 142:**

- Identify yourself and state the nature, location, and severity of the incident. Stay on the telephone until the control operator (CO) hangs up.
- The CO will notify the Shift Supervisor (SS) immediately.
- The SS will take command of the incident response, will follow the Incident Command System (ICS) and initiate appropriate action.
- If the SS cannot be reached, the Working Foreman Operator will assume initial control of the incident.

**2. ENSURE SAFETY OF INDIVIDUALS AND AREA**

- Hold a Safety Tailboard.
- Secure the area as promptly as possible and evacuate personnel if necessary in the event of a threat of fire, explosion, or hazardous or noxious emissions.
- Mark incident area with RED barricade tape and tag as soon as possible.
- Only trained employees may respond to an incident. Never act beyond your training or comfort level.

**Evacuation**

An alarm system is used to notify all personnel on site of an emergency requiring evacuation. The alarm is sounded from the control room over the PA system and is audible in the following locations: main plant, warehouses, waste water treatment and coal handling areas. All personnel are instructed to proceed to their designated reporting location (see below) when the alarm is activated and to listen to the Public Address (PA) system for possible follow up announcements by the SS. Emergency escape procedures and route assignments have been posted in each work area and near the elevators on the first 3 floors in the plant.

## *Merrimack Station Integrated Contingency Plan*

Wind socks are located in the North and South yards to provide quick visual indication of wind direction and strength. Care should be taken to avoid traveling downwind of a fire or ammonia release.

The gate guard will restrict access to the site during an emergency. Evacuating personnel shall keep the entrance road clear to allow access by outside emergency response vehicles.

Contract Supervisors are required to have a list of all personnel on site on any given day. During an evacuation, all personnel are responsible for reporting to their immediate supervisor so that an accurate head can be made. Supervisors must, personally or through a designee, account for each assigned employee by name. Supervisors will check off the names of all personnel accounted for report all those not accounted for as missing to their Northeast Utilities/PSNH Liaison. All personnel shall remain at the assembly location until they are dismissed or given the all clear to return to work by their supervisor or foreman.

The SS will announce the "ALL CLEAR" over the PA system to cancel the evacuation when safe to do so.

### **Evacuation Routes**

Evacuation routes are posted near each elevator on the first 3 floors in the main plant. Stairs are located at the north and south sides and between units 1 & 2 on the inside of the main plant. Each stairway provides a primary and alternate evacuation route to the ground floor depending on the location of the incident. Elevators are also provided at the north and south sides of the building. From the ground floor, proceed to the north or south end of the plant towards the overhead door to exit the building. Exits are also located on the east (river) side of the building. Avoid exits on the west side of the building as they open into the fenced in station high yard.

Stairs are also available in the administration building that lead to the ground floor entry at the north side of the building. Alternate exits into the plant are located on the south side of the administration building.

Hazardous waste is stored in a shed and CONEX located in the south yard adjacent to warehouse A. These are not habitable buildings. Evacuate from the hazardous waste storage areas to the west towards the warehouse parking lot.

### **Designated Assembly Locations for Station Evacuation**

#### **Outside Contract Personnel:**

##### **Overhaul**

Outside contract personnel will report to the Contractor Parking Lot located to the south of the guard shack and adjacent to the waste water treatment plant for a head count and will remain there until their supervisor or foreman dismisses them.

##### **Non-overhaul**

Outside contract personnel will report to the paved parking area North of the main building for a head count and will remain there until their supervisor or foreman dismisses them.

**SPILLS AND RELEASES**

***Report all spills of hazardous materials or unauthorized discharges occurring on the Merrimack Station site. This includes any spill of a chemical, fuel, oils, etc. to the ground, air or water.***

***In the event of a spill, take all necessary safety precautions, stop the release if it is safe to do so, contain spilled material to prevent release to the environment. Prevent access to the immediate area. Contact 140 or 142 to report the release. Speedy dry and soda ash is available for spill containment and neutralizing acids.***

**MERRIMACK RIVER**

***No discharges are allowed to the Merrimack River. No discharges are allowed to yard storm water drains without prior approval. When working near the river bank, keep vehicles, chemicals, fuels, etc. on the west side of the railroad tracks.***

***No work is allowed on river banking on in the river without a Wetlands Permit issued by the NH DES.***

**CHEMICAL AWARENESS**

Merrimack Station stores bulk chemicals such as acid, caustic, bleach, ammonia, and others. Chemical and fuel storage tanks are labeled. Care should be taken when walking or working near chemicals. Walk around and not through storage tank areas whenever possible. Do not enter areas identified by a flashing red light indicating that chemicals are in use. Safety showers and eye wash stations are located near chemical handling areas around the station.

**ANHYDROUS AMMONIA**

Anhydrous ammonia is used on site and stored as a liquid under pressure. Anhydrous ammonia is a pungent and toxic gas that is listed as an extremely hazardous substance. At low concentrations, ammonia gas is irritating to the eyes, skin, and mucous membranes of the nose, throat and lungs. At higher concentrations, ammonia is corrosive to human tissue and possibly life threatening. In heavy concentrations it can displace air and, like many gasses, cause suffocation. Ammonia's strong odor makes it impossible for persons to voluntarily remain in contact with concentrations which are hazardous or injurious to health. Ammonia causes olfactory fatigue or adaptation, making its presence difficult to detect when exposure is prolonged. The table below indicates typical human physiological responses to various concentrations of ammonia in air.

First perceptible odor	5 ppm to 35 ppm
OSHA PEL	50 ppm
NIOSH IDLH <sup>1</sup>	300 ppm
Immediate throat irritation	Equal to or greater than 400 ppm
Eye irritation	Equal to or greater than 700 ppm
Coughing	Equal to or greater than 1700 ppm
Life threatening for short exposure (0.5 hour)	2500-6500 ppm
Rapidly fatal for short exposure (0.5 hour)	5000-10,000 ppm

**MKEP001 Merrimack Station Environmental Procedure – Waste Collection Summary – Confirm current version**

WASTE <sup>1</sup>	COLLECTION LOCATION	CONTACT
METAL WASTE (recycled)	<ul style="list-style-type: none"> <li>labeled container south yard near MK2 crane bay</li> <li>container at warehouse loading bay</li> </ul>	Stan Drewniak
TRASH <ul style="list-style-type: none"> <li>industrial waste</li> <li>no drips or leaks</li> <li>spill clean up material in sealed plastic bags</li> </ul>	<ul style="list-style-type: none"> <li>labeled container &amp; collection area south yard near the MK2 condensate storage tank,</li> <li>container at the warehouse loading bay</li> <li>container outside of machine shop</li> </ul>	Stan Drewniak
PAPER (recycled) <ul style="list-style-type: none"> <li>no cardboard</li> <li>no plastic or binders</li> </ul>	<ul style="list-style-type: none"> <li>blue tubs in office areas</li> <li>cardboard box 2<sup>nd</sup> floor near MK1 elevator</li> </ul>	<ul style="list-style-type: none"> <li>Art Auclair</li> <li>John Beaney</li> </ul>
FLYASH & SLAG - MK Landfill <ul style="list-style-type: none"> <li>limited amounts of construction debris after approval</li> <li>blast grit shall be tested for toxics before disposal</li> </ul>	<ul style="list-style-type: none"> <li>container south yard beneath the SCR hoppers</li> <li>container near the MK1 SCR ammonia tanks</li> </ul>	<ul style="list-style-type: none"> <li>Stan Drewniak</li> <li>bring samples of blast grit to Art Auclair for analysis prior to disposal; date container &amp; label “pending analysis”</li> </ul>
USED OIL FOR RECYCLE <ul style="list-style-type: none"> <li>motor oil &amp; grease</li> <li>no solvents or PCBs</li> </ul>	Used oil for recycle tank near warehouse A	<ul style="list-style-type: none"> <li>John Beaney</li> <li>check in with stock handler</li> </ul>
HAZARDOUS WASTE <sup>2</sup> <ul style="list-style-type: none"> <li>listed solvents, flammables (includes pressurized aerosol cans), toxics, corrosives pH &lt;2.5; &gt;12</li> <li>unknown materials</li> </ul>	Haz Waste shed near warehouse A	<ul style="list-style-type: none"> <li>John Beaney</li> <li>check in with stock handler</li> <li>unknown materials, Art Auclair or Ken Kroh</li> </ul>
UNIVERSAL WASTE <sup>2</sup> (recycled) <ul style="list-style-type: none"> <li>LAMPS, incandescent, fluorescent, high intensity discharge</li> <li>BATTERIES, rechargeable such as nickel cadmium, nickel metal hydride, lithium, lead acid (NOT ALKALINE)</li> </ul>	<ul style="list-style-type: none"> <li>tool room</li> <li>Haz Waste shed near warehouse A</li> <li>tape battery contacts</li> <li>separate bulbs</li> </ul>	<ul style="list-style-type: none"> <li>John Beaney</li> <li>check in with tool room attendant</li> <li>check in with stock handler</li> </ul>
UNIVERSAL WASTE <sup>2</sup> <ul style="list-style-type: none"> <li>MERCURY CONTAINING DEVICES,</li> <li>ANTIFREEZE,</li> <li>PESTICIDES</li> </ul>	Haz Waste storage shed near warehouse A	<ul style="list-style-type: none"> <li>John Beaney</li> <li>check in with stock handler</li> </ul>
ASBESTOS & ASBESTOS CONTAINING MATERIAL	Asbestos storage shed near propane tank at warehouse A	Stan Drewniak
OIL & CHEMICAL SPILL CLEAN UP DEBRIS	dry & bagged	<ul style="list-style-type: none"> <li>Dave Fradette</li> <li>Ken Kroh</li> </ul>
BIO-HAZARD WASTE	<ul style="list-style-type: none"> <li>orange plastic bag</li> <li>Haz Waste storage area near warehouse A</li> </ul>	<ul style="list-style-type: none"> <li>MK trained personnel</li> <li>Ambulance (ask first)</li> <li>NU Nurse</li> </ul>
ALUMINUM CANS (recycled)	<ul style="list-style-type: none"> <li>containers in lunch rooms</li> </ul>	<ul style="list-style-type: none"> <li>Stan Drewniak</li> </ul>

- Waste – any material new or used when it is determined that it will be discarded or disposed of.
- Hazardous waste must be properly labeled and dated when it becomes waste.
- No materials including scrap metal shall be removed from Merrimack Station without prior authorization or approval.
- Only waste generated at Merrimack Station shall be disposed of by the station. No waste shall be brought in to Merrimack Station for disposal without prior approval.
- Contractors who generate hazardous waste at Merrimack Station shall discuss it with their station liaison before generating the waste.

Confined Space Inventory  
Merrimack Station  
2/20/01

Unit I	Unit II
Original Hopper(s)	4160 Vac underground vault
Boiler: all combustion and gas passages	Boiler: all combustion and gas passages
Boiler: penthouse	Boiler: flash tank
Boiler: Force Draft Fan Ducts(s)	Boiler: Force Draft Fan Ducts(s)
Boiler: Force Draft Fan(s)	Boiler: Force Draft Fan(s)
Boiler: drum	Boiler: penthouse
Boiler: slag tank(s)	Boiler: slag tank
Circulating water inlet tunnel	Circulating water inlet tunnel/slag sump pit
Circulating water outlet tunnel	Circulating water outlet tunnel
Original Precipitator hopper (s)	Coal Bunker E
	Coal Bunker F
	Coal Bunker G
Condensate storage tank	Condensate storage tank
Condenser water box inlet	Condenser water box inlet
Condenser water box outlet	Condenser water box outlet
Circulating water pump pit,	Cooling water sump
Deaerator heater and storage tank	Deaerator heater and storage tank
	Deaerator storage tank
	Dusco storage tank
Fly ash hopper rooms ( when hoppers are being dumped)	Fly ash hopper rooms ( when hoppers are being dumped)
Fly Ash Tank	Fly Ash Tank (s)
Generator	Generator
Hot well	Hot well
	Polisher: mixed bed A
	Polisher: mixed bed B
	Polisher: mixed bed C
	Polisher: regenerator anion
	Polisher: regenerator cation
	Polisher: regenerator storage
Precipitator penthouse (s)	Precipitator penthouse (s)
Supplemental precipitator hopper (s)	Supplemental precipitator hopper (s)
Turbine Low Pressure	Turbine Low Pressure
Turbine oil main reservoir	Turbine oil main reservoir
Auxiliary Boiler	
Unit I	Unit II
Boiler	Deaerator tank

Common Systems

Unit I	Unit II
Coal Silo 1A	Decarbonator
Coal Silo 1B	Demineralizer
Coal Silo 1C	Demin 3
Coal Silo 2A	Hypochlorite storage tank
Coal Silo 2B	Sodium Hydroxide tank
Coal Silo 2C	Sulfuric Acid Tank

Coal Handling

Unit I	Unit II
B Tunnel primary crusher	Car dumper hopper
E Tunnel reclaim hopper	Coal transfer chute(s)
Crusher House crusher(s)	

Domestic Water

Unit I	Unit II
Charcoal filter #2	Well water tank (lower)
Well #1	Well water tank (upper)
Well #2	

Flue Gas/Waster Water Treatment

Unit I	Unit II
Anhydrous Ammonia Storage (5)	Aqueous Ammonia Storage
Leachate Tank 1	Limestone storage tank
Leachate Tank 2	Neutralizer basin
Leachate Tank 3	Neutralizer inlet
Oil Separator	Oil Separator sump
Oil Skimmer vault	Oil Sump
Settling basin 1	Sodium Hydroxide Tank
Settling basin 2	Sulfuric acid storage tank
Settling basin 3	Walhco ammonia tank ( out of service)

Support

Unit I	Unit II
Floor Drain Sump(s)	
Gasoline Storage Tank	Diesel Fuel Containment (A warehouse)
# 2 Fuel oil Containment	Diesel Fuel Containment (Yard Service)
Septic Tank (South)	Diesel Fuel tank (A warehouse)
Septic Tank (North)	Diesel Fuel tank (Yard Service)
Gasoline Storage Tank Containment	HVAC ducts
Jet Fuel Tank #1	Septic Tank 1
Jet Fuel Tank #2	Septic Tank 2
Jet Fuel Tank #3	Waste oil (for recycle) Containment
Jet Fuel Tank #4	Waste oil (for recycle) tank
Septic Tank (Yard Service)	

**Welcome to Merrimack Station. We hope your stay here is safe and that everyone goes home in the same condition as when you arrived**

**CONTRACTOR PRE-OUTAGE GUIDELINE**  
**(See PSNH Generation Contractor work rules)**

YES N/A

- |                          |                          |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Employees must be qualified and trained for their assignment. Documentation, certification and qualifications must be available for review.   |
| <input type="checkbox"/> | <input type="checkbox"/> | Supervisor(s) and employees must abide by these rules.  |
| <input type="checkbox"/> | <input type="checkbox"/> | A qualified PSNH liaison will be assigned for each contractor. They must be provided with up-to-date list of employees on site. They are your resource for information/identifying, i.e. security/parking requirements, site specific physical/electrical/chemical/hazards, emergency procedures.   |
| <input type="checkbox"/> | <input type="checkbox"/> | Contractor will conduct Hazard Assessments and Tailboard discussions before each shift or change in workscope, i.e. appropriate PPE, Confined Space, fall protection, scope of work, and other work that could affect their work.   |
| <input type="checkbox"/> | <input type="checkbox"/> | Contractors will report work related injuries and near misses and/or environmental issues to their PSNH liaison daily.  |
| <input type="checkbox"/> | <input type="checkbox"/> | Electrical awareness training will be provided/verified by contractor.  |
| <input type="checkbox"/> | <input type="checkbox"/> | No alcoholic beverages, controlled drugs or fire arms are allowed nor shall any employee be under the influence of alcohol and/or controlled drugs. Fighting, stealing, and gambling are prohibited.  |
| <input type="checkbox"/> | <input type="checkbox"/> | All employees must be informed of emergency reporting procedures, #'s to call, emergency announcements (announced fire drills) and emergency evacuation procedures.   |
| <input type="checkbox"/> | <input type="checkbox"/> | LOTO - PSNH utilizes Do not operate (RED) Tags and/or Blue Tags for Hazardous energy control. Only qualified NU personnel may attach or remove Red or Blue Tags. After the "Safe to Work on", each worker must sign on (LOCK) to either the correct Tag(s) or Master Tag(s) before starting work. You will be notified if your LOCK will be temporally removed. If not on site, employees will be contacted or notified upon return for next shift. |
| <input type="checkbox"/> | <input type="checkbox"/> | GFI's required in all work areas.   |
| <input type="checkbox"/> | <input type="checkbox"/> | All PPE identified during Hazard Assessment will be used properly.  |
| <input type="checkbox"/> | <input type="checkbox"/> | Hearing protection required > 85 dBA i.e. arc gouging, grinding.  |
| <input type="checkbox"/> | <input type="checkbox"/> | Hard hats, safety shoes and safety glasses with rigid side shields/goggles required while work is in progress or hazards present.   |
| <input type="checkbox"/> | <input type="checkbox"/> | Shirts with long sleeves are required in areas of hot pipes and equipment.  |
| <input type="checkbox"/> | <input type="checkbox"/> | Appropriate clothing is worn under disposable coveralls.  |
| <input type="checkbox"/> | <input type="checkbox"/> | FR garments and/or 100% natural fiber clothing worn where appropriate.  |
| <input type="checkbox"/> | <input type="checkbox"/> | Respirator use requires that there be no facial hair in sealing surface.  |
| <input type="checkbox"/> | <input type="checkbox"/> | MSDSs approved prior to bringing materials on site.   |
| <input type="checkbox"/> | <input type="checkbox"/> | NU MSDS information may be requested from your liaison.   |
| <input type="checkbox"/> | <input type="checkbox"/> | All Containers of hazardous chemicals must be properly labeled.   |
| <input type="checkbox"/> | <input type="checkbox"/> | Unused/waste chemicals will be moved to designated storage area(s).   |
| <input type="checkbox"/> | <input type="checkbox"/> | Recyclable material will be moved to designated area(s).  |
| <input type="checkbox"/> | <input type="checkbox"/> | Periodic Air monitoring has indicated that airborne concentration of Asbestos/Arsenic/Lead/Welding fumes may exceed the PEL.  |
| <input type="checkbox"/> | <input type="checkbox"/> | Work and Break areas will be maintained in a safe orderly condition.  |



- Cords and hoses hung overhead whenever practical.
- Maintain unobstructed access to escape routes, fire and electrical equipment.
- Unless authorized by liaison fuel use will be MAPP, compressed gas cylinders must be secured when moved, stored or used.
- Hot work permit/welding curtains/ventilation/slag barrier used where appropriate, i.e. fire ext. immediately available, remove combustibles before starting, fire watch for 30 minutes after completion of welding,
- Tools/equipment maintained in proper working order, including guards, safety interlocks and safety pins.
- Ladders must be used properly. Ladders may be constructed of wood or fiber glass. PSNH ladders are for PSNH use only.
- Floor opening, open sided surfaces will be guarded, covered, barricaded to prevent falls.
- Be familiar with Flashing lights that are used as warning devices in chemical processing areas and/or Yellow Tags are used as informational devices, they may be used with Yellow Caution or Red Danger Tape.
- Scaffold Red/Green/Inspection Tags are being properly utilized, fall protection required during erection/dismantling.
- Others working around, above or below must be protected or warned i.e. hazards from slag, flash, welding fumes.
- Equipment used for material handling must be inspected before use and rigging must follow accepted practices.
- Smoking is restricted to designated areas, see liaison.
- Seat belts are used when NU or private vehicles are operated on NU property.
- Electrical and magnetic fields may interfere with the operation of implanted Pacemakers and Defibrillators.
- Locomotives move equipment around the site. The one used for moving cars during the unloading of coal is remote controlled (flashing strobe light).
- Vehicles are parked in designated areas.

**Completed by:** \_\_\_\_\_ **DATE** \_\_\_\_\_

Instructions: **Remove and sign this sheet in the presence of your PSNH liaison.**

As an authorized representative of my company, I have reviewed the PSNH Generation Contractor Work Rules including the Merrimack Station Specific Rules and Policies and agree to work in conformance with them. Furthermore, I agree to review these rules with all of my employees prior to them beginning work at Merrimack Station. Any questions I had pertaining to these rules have been answered by my NU liaison or an NU Company Representative.

\_\_\_\_\_  
(Contract Company or Organization Represented)

\_\_\_\_\_  
(Print Name)

\_\_\_\_\_  
(Sign Name)

\_\_\_\_\_  
(Date)

Witness:

\_\_\_\_\_  
(PSNH assigned Liaison/Representative)

\_\_\_\_\_  
(Date)

Contractor Break Times:

Day Shift Morning Break    \_\_\_\_ to \_\_\_\_    Night Shift First Break    \_\_\_\_ to \_\_\_\_

Day Shift Lunch Break    \_\_\_\_ to \_\_\_\_    Night Shift Lunch Break    \_\_\_\_ to \_\_\_\_

Day Shift Afternoon Break    \_\_\_\_ to \_\_\_\_    Night Shift Second Break    \_\_\_\_ to \_\_\_\_

## **APPENDIX XXIV ATTACHMENT XXIV-3** **CONTRACT SITE REQUIREMENTS**

### I. INTRODUCTION

This specification is to acquaint the CONTRACTOR, and its lower tier CONTRACTOR'S with the basic Rules and Regulations for CONTRACTOR'S working for the PROGRAM MANAGER at the plant site. The CONTRACTOR and its employees and others connected with the Work are required to conform to these rules whenever on plant property.

The CONTRACTOR shall be responsible for communicating and enforcing these Rules and Regulations to its employees. However, the PROGRAM MANAGER reserves the right to eject from the property at any time, any person or persons it may deem necessary to maintain the security of the plant.

Any person committing offenses such as bringing firearms, intoxicating beverages or drugs on the jobsite, being under the influence of intoxicants or drugs, gambling, fighting or committing horseplay, theft or malicious destruction of property, or other offenses listed in the Safety & Health Guidelines and Standards will be immediately removed and barred from the jobsite.

### II. GENERAL

#### A. Pre-construction Conference

A pre-construction conference will be scheduled and conducted at the jobsite prior to mobilization and the start of any Work, unless determined by PROGRAM MANAGER to be unnecessary.

#### B. Working Hours

All Work shall be done during the regular work week of eight (8) hours per day, Monday through Friday, unless authorized by PROGRAM MANAGER. Starting time will be set by PROGRAM MANAGER. PROGRAM MANAGER reserves the right to adjust work hours to take advantage of daylight.

#### C. Use of Plant Facilities

Except as specified otherwise, CONTRACTOR shall not use or have access to any PROGRAM MANAGER or OWNER facility, property, plant, and equipment, except with the specific written approval of an authorized representative of PROGRAM MANAGER.

#### D. Coordination of Work

CONTRACTOR shall coordinate the Work with PROGRAM MANAGER or others so as to maintain the construction schedule established for the entire project. The CONTRACTOR shall cooperate in the exchange of scheduling and related information with other contractors, plant operators, and municipal and other governmental agencies.

CONTRACTOR'S attention is called to the fact that PROGRAM MANAGER has overall responsibility for the project and shall therefore, participate in all such discussions.

CONTRACTOR shall take care in the execution of this work to avoid interference with PROGRAM MANAGER'S, other contractors, and OWNER'S activities and operation of equipment which may be in service while Work is being done by the CONTRACTOR. CONTRACTOR shall perform his work and follow the directions of PROGRAM MANAGER, so that normal plant operating conditions will not be interrupted.

If CONTRACTOR must interrupt existing plant utilities to complete the Work, such interruption shall be done at a time designated by PROGRAM MANAGER. If PROGRAM MANAGER designates that the interruption take place on overtime, PROGRAM MANAGER will bear only the premium portion of the labor costs associated with such authorized overtime.

E. Admittance to Site

CONTRACTOR shall submit to PROGRAM MANAGER, and keep current, a roster of all personnel expected at the jobsite. Gate passes for employees will consist of project I.D. cards issued by PROGRAM MANAGER after CONTRACTOR completes the appropriate request form. All employees and visitors will be required to have an I.D. card at all times when on-site. CONTRACTOR will inform PROGRAM MANAGER within twenty-four (24) hours of termination of any employee.

CONTRACTOR shall provide distinctive colors or markings on their employees' hard hats subject to PROGRAM MANAGER'S approval.

Periodically, PROGRAM MANAGER may invalidate all outstanding I.D.'s and reissue new I.D.'s to current employees.

All site visits must be authorized by PROGRAM MANAGER'S Site Manager or designee. To avoid delays in site access, seventy-two (72) hours prior notice is preferred and twenty-four (24) hours prior notice is required.

All of the CONTRACTOR'S visitors shall conform to the established check-in procedures and shall not leave the guardhouse holding area until the CONTRACTOR provides an escort, with hardhat and safety glasses for each visitor.

No cameras will be allowed on the jobsite without prior written approval of PROGRAM MANAGER.

Vehicle gate passes will be issued on a limited basis to control jobsite congestion. Vehicles will be subject to search on entry and exit of the jobsite premises.

PROGRAM MANAGER will provide a fenced site with site security, however CONTRACTOR shall be responsible for care, custody and control of all items brought on site, including any losses or damage thereto.

All materials, tools and equipment to be removed from the plant shall be authorized by PROGRAM MANAGER on gate passes.

Personal tool boxes or lunch boxes of CONTRACTOR'S employees and all vehicles entering or leaving the jobsite will be subject to search by security forces. Security may choose to employ the use of magnetic detectors or x-ray equipment as the situation may dictate. All CONTRACTOR'S employees must be made aware of these requirements during indoctrination and agree, in writing, to them as a condition of employment.

III. TEMPORARY FACILITIES

A. Lunch Rooms and Change Rooms

If change rooms and lunch rooms are required, they shall be furnished by CONTRACTOR (including all temporary services).

B. Telephone Service

PROGRAM MANAGER shall furnish temporary telephone hookup to a point located on the site-installed telephone junction box or post furnished by PROGRAM MANAGER. CONTRACTOR shall provide phone hookup from these sources to its construction trailer(s).

C. Temporary Heat

CONTRACTOR shall provide and maintain all temporary heat and temporary enclosures as required to ensure continuous, efficient, and uninterrupted execution of the Work.

D. Water

PROGRAM MANAGER will furnish a source of non-potable water for construction needs. A source of potable water shall also be furnished by PROGRAM MANAGER at a designated location in limited amounts. Conveyance from the source shall be by CONTRACTOR. CONTRACTOR shall furnish water containers, coolers, and other drinking water facilities which may be required to maintain potable water quality.

E. Sanitary Facilities

Portable toilets for CONTRACTOR'S use shall be furnished and maintained by CONTRACTOR.

F. Compressed Air

CONTRACTOR shall be responsible for furnishing all compressed air required for the operation of CONTRACTOR'S equipment.

G. Electric Power Facilities

1. CONTRACTOR shall perform all temporary construction electrical work necessary to accomplish the work.
2. Electric power required for operation of CONTRACTOR'S tools, shops, lighting, etc., will be furnished free of charge from a 480-volt/120-volt, 3 wire, 60 hertz power distribution center as designated and provided by PROGRAM MANAGER. Electric space heaters are not permitted. CONTRACTOR is responsible for all additional transformation and distribution equipment required for his construction activities.
3. All extensions from PROGRAM MANAGER'S center(s) of distribution shall be furnished, installed and maintained by CONTRACTOR. CONTRACTOR shall also furnish and install all necessary fused switching equipment required for his extensions.
4. CONTRACTOR'S construction power installation shall be subject to PROGRAM MANAGER'S approval and shall comply with all safety regulations. Unauthorized or unsafe installations shall be removed, upon PROGRAM MANAGER'S direction, at the CONTRACTOR'S expense.
5. CONTRACTOR shall furnish all temporary lighting facilities required for his work. He shall replace and maintain his fixtures, wiring and light bulbs.

H. Working and Storage Space

Adequate, graded and drained areas at the plant site will be provided by PROGRAM MANAGER for CONTRACTOR'S work and storage of materials. CONTRACTOR shall provide fencing and enclosures as required. CONTRACTOR shall maintain the roadways and drainage within the designated area.

A specific storage area on the project site will be assigned to CONTRACTOR. Additional space, if desired by CONTRACTOR, shall be furnished by CONTRACTOR, at its expense, off the project site. CONTRACTOR shall confine its equipment and the storage of materials to the area designated by PROGRAM MANAGER, and shall not at any time encumber the premises with materials or equipment which are not required to complete the Work.

I. Temporary Buildings and Storage Enclosures

Any temporary buildings required by CONTRACTOR, including associated electrical work, shall be furnished, erected and maintained by CONTRACTOR, shall be approved in advance by PROGRAM MANAGER and be removed by CONTRACTOR at the termination of their usefulness or termination of the Work. Location will be determined by PROGRAM MANAGER.

J. Cranes and Rigging Equipment

CONTRACTOR will provide its own lifting equipment such as cranes, trucks, chainfalls, motor-operated hoists, slings, cables, spreader bars, etc., to perform the Work. All lifting equipment shall comply with the appropriate ANSI Standards for capacity, inspection, maintenance and general service.

#### K. Fuel Storage

Storage and dispensing of liquid fuels shall comply with all applicable NFPA, OSHA and other regulations.

Location of such facilities shall be subject to PROGRAM MANAGER'S approval and shall be within the area assigned to CONTRACTOR.

Installation of containment dikes and maintenance of the entire area shall be CONTRACTOR'S responsibility.

#### IV. VEHICLE OPERATION

Operation of motor vehicles, where permitted within the plant, shall be in accordance with general safe driving practice and shall not exceed ten miles per hour (10 MPH). Vehicular accidents or damage to property shall be immediately reported to PROGRAM MANAGER.

All CONTRACTOR'S vehicles entering the plant shall be identified as required by the PROGRAM MANAGER. Personal vehicles will not be allowed inside of plant.

Parking facilities for CONTRACTOR'S employees are restricted to those areas specifically designated by PROGRAM MANAGER for CONTRACTOR'S use.

Access will be granted, at the discretion of PROGRAM MANAGER to vehicles directly associated with and necessary to the Work. All other CONTRACTOR vehicles must remain parked in the designated area only.

CONTRACTOR shall use only established streets or, in their absence, may, at CONTRACTOR'S expense, and with PROGRAM MANAGER'S prior written consent, construct temporary roadways. Vehicles shall not be loaded beyond capacity prescribed by any national, state or local law, regulation or ordinance.

When it is necessary to cross curbs or sidewalks that will not be removed, protection against damage shall be provided by CONTRACTOR and any damaged roads, curbs, sidewalks, or signs, etc., shall be repaired at CONTRACTOR'S expense.

#### V. FIRE PROTECTION

CONTRACTOR shall furnish and maintain a suitable quantity and type of portable fire extinguishers. CONTRACTOR shall be responsible for handling of the equipment and maintaining fire protection for the work, and as otherwise directed by PROGRAM MANAGER.

#### VI. WASTE MATERIALS MANAGEMENT

Except as specifically defined herein following as "by others", it shall be CONTRACTOR'S responsibility to implement waste disposal programs that comply with all current Federal, State and jobsite regulations and statutes for the control and disposal of wastes. These requirements include but are not limited to:

1. Resource Conservation and Recovery Act 1976 (RCRA)
2. Toxic Substance Control Act, 1976 (TSCA)
3. Hazard Communication Rule

Additionally, CONTRACTOR shall be responsible for the collection, packaging/containerization and off-site disposal of all garbage such as organic matter and food wastes.

The only wastes to be disposed of "by others" are the solid wastes consisting of non-salvageable construction materials. These wastes shall be placed by CONTRACTOR into PROGRAM MANAGER supplied, centrally located, trash dumpsters which will be maintained and emptied by others.

The trash dumpster solid waste disposal units are for non-hazardous materials only. CONTRACTOR is responsible for disposal of any hazardous materials. CONTRACTOR is not to dump or dispose of fuel, oils, chemicals, or hazardous materials on the plant site or in plant sewers.

CONTRACTOR shall be responsible for cleanup of waste and debris within its work area(s). CONTRACTOR shall at all times keep the project site free from accumulations of waste materials or rubbish caused by its performance of the Work and shall maintain its working and storage areas in a reasonably clean and non-hazardous condition. Upon the completion of the Work, CONTRACTOR shall remove its waste materials, rubbish, tools, equipment, temporary buildings or structures and its surplus materials, and shall leave the work area clean and in a condition acceptable to PROGRAM MANAGER.

CONTRACTOR'S equipment must be well maintained so that it does not leak oils, hydraulic fluids, petroleum fuels, greases or chemicals. If leaks or spills of these materials occur, CONTRACTOR'S employees are responsible for both promptly notifying PROGRAM MANAGER of the problem and for cleaning up the spilled material in a manner consistent with governmental agencies' requirements and acceptable to OWNER. The disposal of the resulting waste materials, off the plant site, is also CONTRACTOR'S responsibility. Equipment with continuous or repeated leaks, or employees who willfully mishandle petroleum products or chemicals will be removed and banned from the plant site.

If, at any time, the project site has accumulated waste materials and rubbish,, or is hazardous due to poor housekeeping on the part of the CONTRACTOR, and if upon notice to correct such conditions, CONTRACTOR fails to so do forthwith, such failure shall be deemed a breach of CONTRACTOR'S obligations hereunder and in addition to any other remedies which PROGRAM MANAGER may have, PROGRAM MANAGER may proceed to clean up the project site and backcharge the CONTRACTOR for the costs involved.

## VII. PROTECTION OF EQUIPMENT, FACILITIES, AND PERSONNEL REQUIREMENTS

CONTRACTOR is and shall be responsible for protecting all personnel, existing equipment, structures and facilities in the vicinity of this work, from injury or damage during the WORK. The following are particularly called to the CONTRACTOR'S attention.

- A. All existing facilities on the premises shall remain in service during the course of the work, unless otherwise specifically directed or authorized by the PROGRAM MANAGER.
- B. Scheduling of and work hours for the CONTRACTOR'S disruptive operations such as sandblasting, spray painting and radiographing shall be subject to the PROGRAM MANAGER'S approval. In some instances, this work will have to be accomplished outside of normal jobsite work hours.
- C. CONTRACTOR shall take all due precautions to avoid damages to, or interruptions in the operation of all such facilities. Work methods which might jar existing structures or otherwise set up vibrations injurious to such structures or to existing equipment, WILL NOT BE PERMITTED. Any damages, interruptions, etc., which do occur as a result of CONTRACTOR'S acts of commission or omission shall be remedied at CONTRACTOR'S expense, including all premium time, if any, required to remedy such damages and interruptions in the shortest possible time and to complete satisfaction of PROGRAM MANAGER.
- D. CONTRACTOR shall perform the Work so as not to close or obstruct any portion of any railroad, highway, road or other property (on-site or off-site) until permits therefor have been obtained. If any of the above are required to be kept open and shall be damaged or rendered unsafe by CONTRACTOR, CONTRACTOR shall, at its expense, make such repairs and provide such temporary guards, bridges, lights and other signals as are necessary for public safety and acceptable to the governmental or other authorities having jurisdiction thereof. Unless otherwise specifically provided in the subcontract, the CONTRACTOR shall not do any work that would affect any pipeline, telephone, telegraphic or electric transmission line, irrigation ditch or other structure, nor enter upon any lands or rights-of-way until notified that PROGRAM MANAGER has obtained proper authority therefor. CONTRACTOR shall give due notice to PROGRAM MANAGER of his intentions prior to beginning any such work.

- E. CONTRACTOR shall preserve and protect all cultivated and planted areas and vegetation such as trees, plants, shrubs and grass on or adjacent to the Job Site which, as determined by PROGRAM MANAGER, do not unreasonably interfere with the performance of the Work. CONTRACTOR will be responsible for damage to any such areas and vegetation and for unauthorized cutting of trees and vegetation, including, without limitation, damage arising from the performance of the Work through operation of equipment or stockpiling of Materials and Equipment. All costs in connection with any repairs or restoration necessary or required by reason of any such damage or unauthorized cutting shall be borne by CONTRACTOR.
- F. CONTRACTOR shall make no welds for attaching temporary work to existing structures without prior approval of PROGRAM MANAGER. After installation is complete, the temporary welds shall be properly removed by CONTRACTOR and the surfaces of the existing structures, left smooth and clean, and repainted in accordance with the requirements of PROGRAM MANAGER.
- G. Connections to existing equipment shall be made only by prior arrangement with PROGRAM MANAGER and shall be made only after the existing equipment is removed from service, per plant clearance procedures.
- H. CONTRACTOR is responsible to maintain its own security and that of its lower-tier contractors and employee owned items of equipment and tools. If CONTRACTOR'S tools and equipment are not already marked, it is suggested that a distinctive mark be applied to each item to facilitate identification. The marking used may be registered with PROGRAM MANAGER'S designated representative, however PROGRAM MANAGER accepts no liability for loss of tools or equipment and the registry of identification markings with PROGRAM MANAGER is for the convenience of CONTRACTOR. CONTRACTOR shall maintain a daily log of equipment items on-site and weekly will furnish PROGRAM MANAGER with a compilation of the daily records.
- I. CONTRACTOR shall furnish, construct, maintain and dismantle all ladders, scaffolding, barricades, signs, netting, temporary piping, etc., necessary to perform the Work.

#### VIII. SITE RULES

CONTRACTOR shall as a minimum, comply with the following:

- A. Hardhats and eye protection are required at all times in all construction and operating areas.
- B. Hearing protection is required for construction in all areas of operating units.
- C. Proper respiratory protection shall be provided appropriate for whatever environment is encountered.
- D. Loose clothing shall not be worn near rotating machinery.
- E. All openings in floors, gratings, walls and roadways shall be covered, guarded or barricaded according to OSHA Regulations. Temporary cones, tape, etc., barricades cannot be used to guard floor openings of even minor size. Rigid hand-rail-type barricades with a mid rail and toe-board must be used for temporary openings. These barricades should be rigid and capable of supporting a 200 lb. load in any direction.
- F. All chemicals and hazardous materials and their use shall be approved by PROGRAM MANAGER before they are brought on site.
- G. Equipment or switches tagged with a red "Danger Tag" or "Hold Off Card" are not to be operated. The OWNER Protective Tag and Card Procedures shall be complied with.
- H. Tools and electrical equipment are to be in safe condition. Non-double insulated tools and equipment are to be properly grounded.
- I. An assured grounding program or ground fault interrupters shall be employed in all electrical connections.
- J. Welding cables, hoses, electrical cords, etc., are to be run so as not to create a hazard.



- K. No cutting or welding is to be done on upper elevations unless a means is employed to keep sparks and slag from falling on people and equipment below.
- L. All gas cylinders shall be stored and transported in an upright position and shall be chained or otherwise secured against tipping over. The cap shall be on all gas cylinders in storage.
- M. No OWNER equipment (tuggers, hand trucks, etc.) shall be used without permission from PROGRAM MANAGER.
- N. Walkways are to be kept clear at all times. Debris in the work area shall be picked up at the end of shifts and a general cleanup and disposal made weekly, or sooner if necessary.
- O. "No Smoking" signs are to be observed.
- P. Fall protection shall be provided and utilized as required.
- Q. Working and equipment clearances to energized electrical conductors shall be observed.
- R. When working in confined spaces, ventilation requirements shall be observed.
- S. All signs shall be subject to the approval of PROGRAM MANAGER including wording, size and location. Unauthorized signs, posters or placards of any kind will be moved by CONTRACTOR and destroyed or otherwise disposed of at PROGRAM MANAGER'S direction.
- T. CONTRACTOR shall remove, as directed, all graffiti from its structures, materials and equipment. CONTRACTOR shall be responsible for removal of graffiti applied by its employees to plant equipment and materials and shall be liable for any rework necessary to bring the affected surface to its original condition.
- U. CONTRACTOR is not allowed to take any type of photographs or make any movie or video reproductions on the jobsite without the written permission of PROGRAM MANAGER.

IX. QUALITY ASSURANCE (Q.A.)

A. Q.A. Program

Within Three (3) weeks after notice to proceed, CONTRACTOR shall submit for PROGRAM MANAGER'S review and acceptance, and thereafter keep in effect at all times, a Q.A. Program which clearly establishes the authority, responsibilities, and quality requirements for all design, procurement, fabrication and erection activities to assure that the requirements of all applicable codes and standards are met. This program shall outline all inspection and testing requirements for all phases of the project and all equipment involved, including non-code items (structural steel, non-code piping, linings, etc.). Persons performing quality functions shall have sufficient and well defined responsibilities and authority to enforce quality requirements.

B. Responsibility for Suppliers and Lower-Tier Subcontractors

CONTRACTOR shall be responsible for assuring that all applicable quality and Q.A. requirements imposed by PROGRAM MANAGER'S specifications and the applicable codes and standards are included in CONTRACTOR'S purchase documents. CONTRACTOR shall also provide PROGRAM MANAGER with a list of all suppliers and items to be supplied as well as fabrication, inspection and testing schedules outlining inspection and testing to be performed.

PROGRAM MANAGER shall have access to CONTRACTOR'S supplier's facilities for inspection and testing purposes. CONTRACTOR shall also submit its plan for inspection and testing of purchased items.

CONTRACTOR'S suppliers or lower-tier subcontractors' quality programs shall be subject to review and approval by PROGRAM MANAGER.

#### C. Procedures

Within One (1) week after PROGRAM MANAGER'S acceptance of the Q.A. Program, CONTRACTOR shall submit for review and acceptance, Quality Control procedures containing those welding, erection, testing, inspection, cleaning, etc., procedures necessary for the accomplishment of the Work and to assure its proper quality. Procedures shall be in accordance with CONTRACTOR'S approved Q.A. program.

Procedures shall be qualified, as necessary, to Code or Standard requirements. These procedures shall detail what equipment is to be used, limiting conditions, acceptance criteria, techniques, etc., that will be used.

#### D. Inspection Point Program

An inspection point program shall be established by CONTRACTOR and shall include mandatory hold points and notification points for purchased items, fabrications, assemblies, and pertinent erection and inspection operations which will be of concern to PROGRAM MANAGER relative to Quality Control. CONTRACTOR'S recommended customer inspection point program shall be submitted to PROGRAM MANAGER within two months after notice to proceed. Inspection points shall be established by the PROGRAM MANAGER based upon PROGRAM MANAGER'S AND OWNER'S interests, and CONTRACTOR shall notify PROGRAM MANAGER five working days prior to the commencement of an inspection point activity. Work shall not proceed beyond established inspection points without PROGRAM MANAGER inspection or waiver.

#### E. Access Rights

PROGRAM MANAGER shall have ACCESS to CONTRACTOR'S supplier and/or sub-supplier facilities for surveillance/inspection/test/audit (includes, as a minimum, engineering and design, procurement, fabrication, and testing and inspection phases as appropriate).

#### F. Non-conformances

CONTRACTOR shall notify PROGRAM MANAGER of all NONCONFORMANCES and DEVIATIONS to be incorporated into the completed material and equipment within two working days, to be followed up in writing within five days of the respective deviation. Deviation is defined as a departure from the technical requirements included in the procurement documents. Affected equipment shall not be shipped until such requests have been reviewed and approved by the PROGRAM MANAGER.

#### G. Documentation

All documentation (except radiographs) shall be clear, legible and of suitable quality for microfilming and/or storage for the life of the plant. Documentation shall include, but not be limited to, material certifications, code data sheets, shooting sketches, inspection test reports, nondestructive test records, etc.

All radiographs, with appropriate reports, shall be available to PROGRAM MANAGER or PROGRAM MANAGER'S agent for review within twenty-four (24) hours after shooting. All radiographs, except those required by law to be in CONTRACTOR'S possession, shall become the property of the PROGRAM MANAGER after acceptance. All radiographs, not properly identified will be rejected.

#### X. SAFETY

CONTRACTOR shall submit for review and acceptance, a copy of his safety procedures, which will be used in execution of the work. The safety procedures should meet or exceed those outlined in PROGRAM MANAGER'S Safety and Health Guidelines and Standards, included as a Subcontract attachment.

#### XI. MATERIAL CONTROL

##### A. CONTRACTOR Furnished Material

1. CONTRACTOR shall be responsible for receipt, rigging, unloading to storage, loading and movement to work area, care, custody, and control of all CONTRACTOR furnished material. PROGRAM MANAGER will designate a storage area for CONTRACTOR'S material. Furnishing and maintaining all warehousing and associated equipment, materials and labor are the responsibility of CONTRACTOR.
2. CONTRACTOR shall promptly unload from railroad cars or trucks all materials and equipment delivered to the project site during the course of the Work.
3. CONTRACTOR shall maintain such records as necessary to establish a clear record of materials received, the laydown area in which specific materials received are stored, and the release of specific materials for incorporation in the Work. Proper care and custody shall be provided to assure requisite protection and maintenance of materials.
4. CONTRACTOR shall provide PROGRAM MANAGER a detailed list of all materials and equipment to be received at the jobsite. Such list shall be furnished at least thirty (30) days in advance of any shipment, utilizing the Materials Manifest made a part of the Documentation Requirements of the subcontract, or similar PROGRAM MANAGER approved format.
5. CONTRACTOR shall notify PROGRAM MANAGER at least twenty-four (24) hours prior to arrival of any incoming shipment. Shipments are to be accepted only between the hours of 8:00 A.M. and 3:30 P.M. local time, Monday through Friday unless prior approval has been obtained from PROGRAM MANAGER.
6. CONTRACTOR shall furnish PROGRAM MANAGER with a copy of each packing list, Material Receiving Report, freight claim, and OS&D Report within five working days after receipt at the site.

**B. PROGRAM MANAGER Furnished Material**

1. PROGRAM MANAGER may purchase items of material that will be incorporated into CONTRACTOR'S Scope of Work. Returnable vendor supplied items, not incorporated into CONTRACTOR'S Scope of Work, will be returned to PROGRAM MANAGER in first class condition.
2. CONTRACTOR is responsible for receiving any and all PROGRAM MANAGER-furnished material incorporated in CONTRACTOR'S Scope of Work. Promptly after CONTRACTOR commences on-site Work, it shall check out and remove all PROGRAM MANAGER furnished materials and equipment in PROGRAM MANAGER'S storage areas at that time. CONTRACTOR is responsible for providing all equipment, labor and rigging for unloading such PROGRAM MANAGER furnished material in an area, designated by PROGRAM MANAGER, for storage. CONTRACTOR is responsible for all dunnage or other materials required to support materials while in storage or staging area and temporary buildings for covered storage. Material will be stored and protected in accordance with Manufacturer's recommendations.
3. CONTRACTOR will provide Receiving Checkers and make a detailed check of the material against the packing list and/or develop a substitute packing list, if required. CONTRACTOR will ensure all material listed has been shipped and is in accordance with the description noted on the packing list. PROGRAM MANAGER will provide additional purchase data and assist in the receiving, if required, to ensure proper receipt of the material.
4. PROGRAM MANAGER and CONTRACTOR will inspect the material for general content, damages and shipping conditions prior to unloading. CONTRACTOR will assume care, custody and control of this material when received at the construction site after documented receipt as outlined below.
5. PROGRAM MANAGER will make out a Material Receiving Report from the CONTRACTOR verified bill of material and/or vendor's packing list and include all CONTRACTOR notations. A copy of the Material Receiving Report will be transmitted to the CONTRACTOR for its files.
6. The CONTRACTOR is responsible for identifying all damages, overages, and shortages. CONTRACTOR shall report the damages, overages, and/or shortages to PROGRAM MANAGER within five (5) working days after receipt of the material. Failure to do so could incur additional costs to CONTRACTOR. CONTRACTOR will not

attempt any repairs to damaged material without the approval of PROGRAM MANAGER unless additional damage would be created by waiting for such approval.

7. PROGRAM MANAGER will be responsible for processing all Over, Short, and Damage claims.
8. CONTRACTOR is responsible for providing the equipment, labor, rigging, loading, and transporting to the work area all material to be incorporated into CONTRACTOR'S Scope of Work.
9. CONTRACTOR shall be responsible for all demurrage charges incurred due to delays in unloading PROGRAM MANAGER-furnished materials, providing CONTRACTOR has been given twenty-four (24) hours notice to arrange for unloading services.
10. CONTRACTOR shall maintain such records as necessary and approved by PROGRAM MANAGER, to demonstrate that PROGRAM MANAGER furnished materials have been received at the Work site and shall make these records available to PROGRAM MANAGER on request. CONTRACTOR shall be responsible for all loss or damage after CONTRACTOR receipt and for keeping all materials in good condition and/or according to manufacturer's recommendations until final acceptance of the Work by PROGRAM MANAGER on request, showing the time, date and name of individual performing specified preventative maintenance such as rotation of motors, checks of purges, lubrication, etc., for each piece of equipment.

## XII. DRUG AND ILLEGAL SUBSTANCE CONTROL

CONTRACTOR shall implement and maintain a drug and illegal substance control program on the jobsite for its employees. Employees who violate the program will be immediately removed and barred from the jobsite.

**APPENDIX XXIV ATTACHMENT XXIV-4  
CONTRACTOR SAFETY AND HEALTH REQUIREMENTS**

**I. GENERAL**

- A. Contractor will perform its Work in a safe manner in, compliance with all environmental safety and health requirements of the Contract Documents and Applicable Laws. Contractor has the sole and complete obligation to provide a safe and healthful working environment for its and its Lower Tier Subcontractors' employees and for others persons at the Facility Site who may be exposed to Contractor's Work.
- B. Contractor is responsible for the development, implementation, administration and enforcement of its individual Project-specific safety and health program, regardless of any safety or first aid personnel the Program Manager may have assigned as oversight to the Project or Facility Site. Contractor shall ensure that these safety and health requirements are passed on to its Lower Tier Subcontractors.
- C. Contractor is responsible for complying with all applicable safety requirements of Program Manager and Owner, as specified herein and in the other Contract Documents.
- D. Contractor is responsible for assuring that its supervisors of the Work are trained in safety procedures and that designated "Competent Persons" meet all training and experience requirements necessary to comply with Occupational Safety and Health Administration ("OSHA") and all regulations.
- E. Contractor is required to maintain a substance abuse prevention program that meets all Applicable Laws and Program Manager's and/or Owner's substance abuse prevention programs. Contractor employees must successfully complete a substance abuse prevention test prior to initial admission to the Facility Site, and periodically thereafter for continued admission to the Facility Site.

**II. SAFETY AND HEALTH PROGRAM**

- A. A copy of Program Manager's safety program manual is available upon request on CD-ROM. Contractor may adapt any part of that program that is appropriate to its organization and scope of Work.
- B. Contractor is required to have a written safety and health program compliant with OSHA and the Contract requirements. This program must be submitted to Program Manager for review and approval prior to commencement of Work.
- C. Use of any portion of Program Manager's program and/or approval of Contractor's safety and health program does not relieve Contractor from its responsibility for the safety of its or its Lower Tier Contractors' employees, public safety, and/or compliance with all applicable safety requirements.
- D. Contractor's safety and health program must as a minimum include and address implementation of the following matters, to the extent such matters are applicable to the scope of Work:
  - 1. Description of planned Work including task hazard breakdown where appropriate.
  - 2. Responsibilities and lines of authority for the planned Work.
  - 3. Method for identifying job hazards and control methods.
  - 4. Personal protective equipment ("PPE") required for the planned Work (Note if respiratory protection is required, a OSHA compliant "Respiratory Protection Program" must be included).
  - 5. Employee orientation and required job training.
  - 6. Safety and health inspections.
  - 7. Safety and health goals and expectations.

8. Disciplinary policy for violation of safety rules.
  9. Fire prevention and protection including contingency planning.
  10. Rules of conduct and/or standard operating procedures as required for the Work.
  11. Security and Facility Site control measures.
  12. Sanitation and medical support services on the Facility Site.
  13. Owner-specified safety requirements.
  14. Accident reporting, root cause investigation and corrective actions.
  15. Record keeping.
  16. Hazard Communication training.
  17. Substance abuse testing and prevention.
- E. If the planned Work includes activities such as lead coating removal, asbestos removal or handling, confined space entry, work on energized systems, critical lifts, blasting or diving operations, then specific health and safety plans for each of these activities will be required. The requirements for such plans will be either specified in the Contract Documents, specific Owner requirements or by reference to specific OSHA or other regulatory agency requirements. For programs involving hazardous waste removal, treatment, handling or related construction activities, a specific plan meeting the requirements of 29 CFR 1910.120/29 CFR 1926.65 will be required. For most other activities, OSHA Safety and Health Standards (29 CFR 1926/1910) will be used as the regulatory document in addition to any specific requirements of Applicable Laws.
- F. Contractor will develop a job hazard analysis (“JHA”) that identifies all hazards before commencing each phase or activity at the Facility Site. The JHA will also describe the planned Work and assign responsibility for hazard prevention and control of identified hazards, and state corrective actions to prevent injury. OSHA guidance on hazard analysis may be found in “Safety and Health Management System eCAT” under “Worksite Analysis” on OSHA’s website at:
- [http://www.osha-slc.gov/SLTC/safetyhealth\\_ecat/comp2.htm](http://www.osha-slc.gov/SLTC/safetyhealth_ecat/comp2.htm).
- G. Prior to commencement of any Work on the Facility Site, Contractor shall submit a copy of its safety and health program, and Contractor and Program Manager shall meet to review and discuss Contractor’s safety and health program and its enforcement. This meeting will also be utilized to discuss the Project safety and health requirements. Any changes to the program resulting from the meeting shall be incorporated by Contractor.
- H. A revised copy of Contractor’s safety and health program must be provided to Program Manager during the pre-construction conference that will be held prior to Contractor commencing any activities on the Facility Site. A copy of the Contractor Safety and Health Program must be available on/at the Facility Site for employee, Program Manager and/or Owner access and review. Changes/modifications to the program must be approved by Program Manager and documented in the Contractor’s files available at the Facility Site.

### **III. SAFETY REPRESENTATIVES**

- A. Contractor shall designate a qualified safety representative that has the authority and support of his/her management to conduct and coordinate Contractor’s and its Lower Tier Subcontractors’ safety and health program and/or policies. The duties and responsibilities of the safety representative shall be specified in the Contractor’s Project-specific safety and health program. Such safety representative shall be granted “stop-work” authority, along with the responsibility and organizational freedom necessary to implement and enforce Contractor’s safety and health program.
- B. The level of education and expected qualifications of safety representatives shall be as follows:

1. If the Work at the Facility Site will last longer than six (6) months or if Contractor and its Lower Tier Contractors will collectively have 25 or more employees on the Facility Site, Contractor shall have at least one (1) full-time, safety and health supervisor at the Facility Site (the "Safety and Health Supervisor"). Safety and Health Supervisors shall meet at least one of the following criteria:
  - a. A four (4) year undergraduate degree in a safety-based curriculum plus at least two (2) years of relevant construction experience.
  - b. "Certified Safety Professional" as recognized by the Board of Certified Safety Professionals with at least two (2) years of relevant construction experience.
  - c. Construction Health and Safety Technician with as recognized by the Board of Certified Safety Professionals with at least three (3) years of relevant construction experience.
  - d. Safety supervisor who has completed the OSHA 500 Basic Instructor Course in Occupational Safety and Health Standards for the Construction Industry and has performed full-time safety responsibilities for at least five (5) years in the relevant construction industry.
2. If the Work at the Facility Site will not last longer than six (6) months and if Contractor and its Lower Tier Subcontractors will collectively have less than less than 25 employees on the Facility Site, one (1) part-time safety representative will be required on the Facility Site (the "Safety Representative") and such Safety Representative's other assigned duties must not interfere with the administration and enforcement of the Contractor's safety and health program. This Safety Representative must, at a minimum, have knowledge of all safety and health rules and regulations specific to the hazards of the Work to be performed, and will have completed the basic "10 hour Introduction to OSHA" course.
- C. Prior to commencement of Work, Contractor shall provide Program Manager with the name and qualifications of their Safety and Health Supervisor or Safety Representative, as applicable, for approval by Program Manager. Once approved, the Safety and Health Supervisor or Safety Representative, as applicable, will not be changed without the prior written approval of Program Manager. The Safety and Health Supervisor or Safety Representative, as applicable, must be present on the Facility Site whenever Work is being performed by Contractor and is responsible for administering and enforcing the Contractor's safety and health program. The Safety Representative may have other assigned duties subject to approval of the Program Manager.

#### **IV. FIRST AID AND EMERGENCY MEDICAL CARE**

- A. Contractor is responsible for providing first aid trained personnel and emergency medical care for its and its Lower Tier Subcontractors' employees and agents, notwithstanding any first aid personnel that Program Manager may have assigned to the Project or Facility Site.
- B. Contractor's and its Lower Tier Subcontractors' employees, at Contractor's sole risk, may use the first aid facilities and personnel provided at the Facility Site for the Project by Program Manager or Owner, provided that (1) Contractor acknowledges that such facilities and personnel render first aid treatment on a "Good Samaritan" basis and (2) Contractor executes the Release and Indemnification Agreement included in Attachment 2 prior to obtaining first aid services from such facilities and personnel.
- C. Program Manager does not and will not assume any responsibility for the transportation of Contractor and its Lower Tier Subcontractors' employees for medical treatment or other purposes unless otherwise agreed elsewhere in the Contract, but only after Contractor executes the Release and Indemnification Agreement included in Attachment 2.

#### **V. TRANSPORTATION AND ENVIRONMENTAL COMPLIANCE**

- A. If activities of the Contractor involve transportation, handling, remediation or shipping of Hazardous Materials, or if the Work requires specific environmental controls required by Applicable Laws to prevent spills and/or releases of Hazardous Materials, Contractor shall provide a designated person during all such activities to provide necessary compliance support. In the event of a transportation incident or environmental release, the designated person will

(1) provide necessary coordination of response activities for Contractor, and (2) provide necessary notification of insurance carriers and regulatory/governmental authorities, in accordance with the General Conditions.

## **VI. SAFETY MEETINGS**

- A. Contractor's Safety and Health Supervisor or Safety Representative, as applicable, will attend a weekly meeting with Program Manager's safety representative. The purpose of this meeting will be to discuss safety related matters such as any safety concerns, recent incidents, corrective actions, accident prevention, new procedures and policies.
- B. Contractor will conduct regularly scheduled safety meetings with its and its Lower Tier Subcontractors' employees and/or supervision as necessary to ensure that safety is adequately addressed in its Work planning and execution. Contractor will provide written notice of the time, place, and subject of these meetings and provide Program Manager the opportunity to attend and observe. Program Manager reserves the right to require changes necessary to comply with any applicable safety rules and regulations.

## **VII. MINIMUM DRESS REQUIREMENTS**

- A. The following minimum dress requirements have been established as a guideline for Contractor's and its Lower Tier Subcontractors' employees. It is the responsibility of Contractor to ensure that all such employees conform to these or other guidelines established by Program Manager:
  - 1. All employees are required to wear construction-type shoes or boots. No sneakers, canvas shoes, sandals, shoes with open toes or heels, or shoes with narrow high heels are permitted to be worn on the Facility Site. Job specific requirements for safety toe or metatarsal foot protection (other than as specified/required by OSHA) will be specified in Contract Documents.
  - 2. Tank tops, net shirts, cut-off shirts, sleeveless shirts, and so forth, are not permitted to be worn. As a minimum, employees are required to wear a shirt or top that is comparable to a T-shirt. As a minimum, shirts must have a neck collar and a sleeve that covers the ball of the shoulder in the same manner as a T-shirt.
  - 3. Pants must be full length. Cut-offs, shorts, and other such apparel are not permitted.
  - 4. Clothing must be in good repair and not hang loose to the point where it may be caught in moving machinery, or snag onto dangerous objects.
- B. Employees who perform welding or cutting, operate rotating machinery, or are exposed to chemicals, fire or other such hazards, must contain their hair to a point where there is no danger of their hair catching fire, dipping into toxic chemicals, acids, or being caught in rotating machinery.

## **VIII. PERSONAL PROTECTIVE EQUIPMENT**

- A. Contractor will provide all required personal protective equipment for its and its Lower Tier Subcontractors' employees and all required safety equipment and supplies as needed. Contractor is required to ensure that all such employees are wearing appropriate personal protective equipment as specified in applicable OSHA regulatory standards. In accordance with OSHA standards, all such employees shall be required to wear personal protective equipment during working hours and on the Facility Site, including non-metallic ANSI Z89.1-1997 approved hard hat and ANSI Z 1987.1-1989 approved protective eye wear with peripheral protection. Employees performing electrical work, welding, cutting, grinding or similar operations must utilize protective head and eye protection in conjunction with other required protective equipment while performing such operations.
- B. Employees working in designated "Hearing Protection Required" areas or when noise is identified as a potential job hazard in the pre-task JHA, must be provided with adequate hearing protection including either approved earplugs, canal caps or ear muffs as required to meet the applicable OSHA, MSHA or USACOE requirements.
- C. Written documentation identifying task specific PPE is required under OSHA regulation 29 CFR 1910.132(d) and/or 29 CFR 1926 Subpart E. Contractor is responsible for compliance as required for the task preparation and



distribution of the required documentation. In addition, the JHA for each task must specify required PPE for the task as part of the task specific planning process.

## **IX. INSPECTIONS**

- A. Contractor is responsible for conducting and documenting daily and weekly inspections of its Work on the Facility Site for unsafe conditions and work practices.
- B. Contractor shall prohibit the use of unsafe machinery, tools, appliances, materials, or equipment and shall conduct pre-job and as-required inspections on all machinery, tools, materials, or equipment in accordance with manufacturer's recommendations and Applicable Laws. All heavy equipment shall have a documented daily safety inspection prior to being used in the Work on the Facility Site. All machinery, tools, appliances, materials and equipment shall be used in accordance with applicable manufacturer specifications. Modifications or alternative uses of such machinery, tools, appliances, materials and equipment must be approved in writing by the manufacturer prior to planned use.
- C. Contractor will immediately notify Program Manager of any and all OSHA inspections relative to Contractor or its Lower Tier Subcontractors and shall afford Program Manager the opportunity to attend and observe the inspections. Contractor will provide Program Manager a copy of all citations received and all Contractor or Lower Tier Subcontractor responses issued as a result of such inspections within one (1) working day of receipt or issuance.
- D. Program Manager will perform periodic safety inspections of Contractor's or its Lower Tier Subcontractors' operations on the Facility Site. Contractor's Safety and Health Supervisor or Safety Representative, as applicable, will accompany Program Manager's safety supervisor during these inspections and take prompt action to correct all identified deficiencies. Contractor's management will participate in a scheduled safety walk-through with Program Manager's management. Any such inspections and resulting identification of deficiencies by Program Manager does not relieve Contractor or its Lower Tier Subcontractors from their responsibility to comply with all applicable safety regulations and rules and Applicable Laws.

## **X. EMPLOYEE ORIENTATION AND TRAINING**

- A. Contractor shall instruct each of its or its Lower Tier Subcontractors' employees required to handle or use flammable liquids, gases, toxic materials, poisons, radiological materials, and other harmful substances in the safe handling and use of such materials and substances. Employees shall be made aware of the potential hazards, the necessary personal hygiene, and the personal protective measures provided. In addition employees must receive training on appropriate spill control measures as part of site-specific emergency training conducted by Contractor.
- B. Contractor shall permit only qualified employees, by licensing, training or experience, to operate equipment or machinery, and should verify the employee's ability to operate such equipment through visual observations for appropriate time periods.
- C. All new employees, upon successfully passing the pre-employment drug screen and on their initial entrance onto the Facility Site, will be required to attend a Facility Site orientation meeting presented by Program Manager and/or Owner. The cost of the employees' time in attending such meeting is the sole responsibility of Contractor. This orientation program will include:
  - 1. Project and Facility Site rules.
  - 2. Emergency and first aid procedures.
  - 3. Work rules and procedures.
  - 4. Security procedures.
  - 5. Fire prevention and protection procedures and requirements.
  - 6. Use of PPE, and other subjects related to the employee's responsibilities and duties.

- D. Contractor will provide safety training for its and its Lower Tier Subcontractors' employees at Contractor's sole expense, and such training will be documented and copies of such documentation provided to Program Manager upon request. Safety training will include, but not be limited to:
1. Orientation to the safety policies and rules stipulated by the Contractor prior to each employee's initial Work assignment on the Facility Site.
  2. Orientation of supervisors to the safety policies, rules, and their responsibility to enforce it.
  3. Weekly "Toolbox Talks" on an appropriate safety subject for all employees.
  4. Hazardous materials training.
  5. Personal protective equipment training.
  6. Personal safe work practices
  7. Safety training for those employees affected on special matters, including but not limited to, confined space entry, respiratory protection, hot work permits, fire watch, trenching/excavation, fall protection, scaffolding, etc.
  8. Employee's rights and obligations under Contractor and Program Manager and/or Owner safety policies.
- E. Contractor shall adequately educate, train and equip all employees performing any work with Hazardous Materials. Contractor shall implement approved programs such that at all times its and its Lower Tier Contractors' employees and activities shall be in compliance with OSHA Hazard Communication Standard, 29 CFR 1910.1200 and 29 CFR 1926.59, insofar as such regulations are applicable to the Work. Program Manager has the right to use, duplicate, and disclose the data maintained by Contractor pursuant to the foregoing regulations.
- F. Contractor's and its Lower Tier Subcontractors' employees shall be provided with an employee safety handbook, or equivalent Project safety guidance.
- G. Employees of Contractor and Lower Tier Subcontractors are required to participate in regular safety meetings conducted by qualified representatives of the Contractor. These meetings should be held according to a planned schedule and also whenever significant changes to the Work scope are anticipated. The Safety and Health Supervisor or Safety Representative, as applicable, should lead the meetings and employees should be encouraged to identify safety problems and to provide corrective actions. All meetings will be documented with identification of date/time of meeting, employees attending, topics discussed, action items for follow through, and signature of meeting leader. A copy of the documentation for each meeting is to be provided to Program Manager upon request.
- H. Unsafe acts by employees or repeated unsafe conditions are considered serious and will not be tolerated. Contractor will uniformly enforce a policy that states the disciplinary action to be applied when employees violate safety rules. This policy will be consistent with the Project and/or Program Manager's safety enforcement policy.

## **XI. SAFETY VIOLATIONS**

- A. Contractor is responsible for promptly correcting all violations of its safety and health program, potential hazards and other such safety related problems within its area of responsibility. In the event an apparent violation is observed by Program Manager, Contractor will be notified and Contractor shall respond accordingly. Program Manager's issuance of such notice shall in no way relieve Contractor of its obligations and duties under this exhibit of the other Contract Documents.
- B. If Program Manager notifies Contractor of any non-compliance with the provisions of the Contractor's safety and health program, Program Manager's and/or Owner's safety and health program, or Applicable Laws, Contractor shall take prompt action and exert its best efforts to correct the unsafe or unhealthy condition(s) or act(s). Satisfactory compliance shall be made within a reasonable time. If Contractor refuses to correct unsafe or

unhealthy conditions or acts, Program Manager may, without prejudice to any of its other legal or contractual rights, initiate actions it deems appropriate including one or more of the following steps:

1. Direct Contractor to cease all affected operations.
  2. Correct the non-compliance and backcharge Contractor for cost incurred by Program Manager in accordance with the General Conditions.
- C. In the event Contractor fails to comply with Applicable Laws and/or fails to correct identified hazards, Program Manager may, without prejudice to any of its other legal or contractual rights, issue an order stopping all or any part of the Work; thereafter, a start order for resumption of Work may be issued at the discretion of Program Manager. Contractor will have no entitlement to claim an extension of time or additional compensation or Damages by reason of, or in connection with, such stoppage of the Work.

## **XII. REPORTS AND SUBMITTALS**

- A. Contractor shall immediately provide Program Manager with an oral report of all (1) injuries recordable on Contractor's or its Lower Tier Subcontractor's OSHA 300 Log, (2) accidents resulting in property damage, (3) fatal or serious occupational injuries or illnesses (requiring hospitalization) and (4) environmental incidents. Within two (2) working days after the occurrence of the injury, illness, accident or incident, Contractor shall provide Program Manager with a written report documenting the root cause(s) of such injury, illness, accident or incident, and the action(s) taken, or planned to be taken, by Contractor and/or its Lower Tier Subcontractors to prevent recurrence.
- B. A copy of each Employer's First Report of Injury or Illness submitted by or on behalf of any of Contractor's or its Lower Tier Subcontractors' employees must be provided to Program Manager within two (2) working days of the submission of any such report. Contractor shall submit a monthly summary (in the form of Attachment 1) of occupational injuries and illnesses, including labor-hours lost, to Program Manager by the fifth (5<sup>th</sup>) day of the subsequent month. Should an injury result in lost time, Contractor will notify Program Manager in writing if Contractor or a Lower Tier Subcontractor, as applicable, desires not to provide continued employment, on a modified basis, for an employee that sustained an on-the-job partially disabling injury. This notification must be provided a minimum of twenty four (24) hours prior to the discontinuance of employment. This reporting is in addition to any reporting responsibilities that Contractor or a Lower Tier Subcontractor, as applicable, may have to OSHA or any other agency under Applicable Laws. Program Manager reserves the right to perform an independent investigation at no additional cost to Program Manager.
- C. All JHAs, work permits, training records, inspection reports, and daily safety reports must be available for review by Program Manager and Owner. Contractor will maintain records of all first aid cases, work-related injuries/illnesses and property damage according to OSHA requirements and the representative insurance carrier requirements. These records shall be available for review by the Owner or Program Manager as required.
- D. Contractor shall furnish other reports and submittals as identified in other sections of this document and the other Contract Documents.

## **XIII. DRUG SCREENING/TESTING**

- A. It is the Program Managers' policy to maintain a work environment that is safe and healthful for employees, clients and the general public, and which provides efficient and stable work conditions. The Program Managers' policy hereby prohibits the unauthorized manufacture, dispensing, distribution, possession or use of alcoholic beverages or drugs, including, but not limited to; narcotics, hallucinogenic, depressants, stimulants, marijuana, or other controlled substances by an employee of the Contractor or its Lower Tier Subcontractors' while on company business or on company property. Company property includes all premises where Program Manager is conducting business.
- B. Any other use, possession, or sale of alcohol or drugs, including, but not limited to, narcotics, hallucinogenic, depressants, stimulants, marijuana, or other controlled substances by an employee that may adversely affect the employee's job performance, or conditions of the work place, or that may reflect unfavorably upon public confidence in the manner in which the company carries out its responsibilities is also prohibited. Use of a

prescription drug issued in another person's name is deemed a violation of this policy. Use of a prescription drug in excess of the prescribed dosage is deemed a violation of this policy. It is a condition of employment and all employees are required to comply with this policy.

- C. All employees of the Contractor and its Lower Tier Subcontractors' must pass a pre-employment drug screen test. All drug screens will be forwarded to a Department of Health and Human Services (DHHS) certified laboratory selected by the Program Manager or their authorized collection agent. All samples will be screened for the following drugs and use approved cut off levels as indicated. Written results will be reported to the Program Manager. DHHS cut off levels apply to the following:

**Cocaine, Opiates, Marijuana, Phencyclidine, Amphetamines**

When circumstances do not permit new hires to wait for drug screen results prior to starting work, the Program Manager provisional access acknowledgement form shall be completed during the testing process.

- D. Job candidates who test positive for any of the above drugs or alcohol, above the allowable cut-off levels will be denied employment for a period of one year from the failed test date.
- E. At the Program Managers discretion, drug testing may be administered under the following circumstances:
- 1.) As a requirement for pre-employment screening.
  - 2.) When an employee exhibits aberrant behavior or shows signs of possible impairment while on the job.
  - 3.) Subsequent to an accident or occurrence that results in an injury, near miss, property damage or when it appears that the employee might reasonably have avoided the accident or occurrence.
  - 4.) Random monthly testing of up to 5% of the work force.

**Attachment No. 1**

**Contractors Monthly Safety Report:**

Contractor \_\_\_\_\_ Subcontract No. \_\_\_\_\_

This Month          Year to date          Job to Date

No. Exposure Hours:

No. First Aid Cases:

No. OSHA Recordables:

No. Restricted Cases:

No. Lost Time Injuries:

Significant Injury / Incident / Near Miss Summary:


Root Cause and Corrective Action Summary:


Proactive Safety Initiatives for Month:


Contractors Safety Representative:


Date:

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**Attachment No. 2**

**URS  
FIRST AID SERVICES**

**AGREEMENT OF INDEMNIFICATION**

**WHEREAS**, URS, (the "Program Manager") or Public Service of New Hampshire (the "Owner") will furnish employees or a third party to perform first aid and related services (both being referred to as the "First Aid Provider") to Program Manager's and / or Owner's employees on the site of the project located on the Owner's premises located in Bow New Hampshire (the "Project Site") and such project being referred to as Clean Air Project (the "Project");

**WHEREAS**, the "Contractor") has been contracted to perform certain Work or furnish certain services in connection with the Project upon the Project Site under this Contract (the "Contract"); and

**WHEREAS**, Contractor desires that the Program Manager and / or Owner provide, or cause to be provided, first aid services and transportation for medical purposes (collectively the "First Aid Services") to Contractor's and its Lower Tier Subcontractors' (as such term is defined in the Contract) employees while on the Project Site.

**NOW THEREFORE**, in consideration of the foregoing premises and the rendering of First Aid Services to said employees of Contractor and its Lower Tier Subcontractors from time to time, Contractor agrees as follows:

1. Contractor acknowledges that (1) it is solely responsible for providing First Aid Services for its and its Lower Tier Subcontractors' employees and that neither the Program Manager, Owner nor the First Aid Provider assume any such responsibility, and (2) any First Aid Services performed by the First Aid Provider are performed merely as an accommodation to Contractor and on a Good Samaritan basis.
2. Contractor assumes full and complete responsibility for all liabilities to its and its Lower Tier Subcontractors' employees arising out of or attributable in any way to the performance of First Aid Services by the First Aid Provider.
3. Contractor undertakes and agrees, to the extent permitted by law, to indemnify, defend, hold harmless and release Program Manager, Owner, First Aid Provider, and their respective directors, officers, employees, parents and subsidiaries of any tier, representatives, agents, successors and assigns, and any and all representatives, agents, directors, officers, employees of any of the foregoing, against and from any and all losses, costs, damages, injuries, liabilities, claims, demands, penalties, interest and causes of action, including without limitation administrative and legal costs, reasonable attorney's fees whatsoever, in law or in equity, with respect to or in connection with the performance of the aforementioned First Aid Services by First Aid Provider, whether or not such injury, damage or death is caused by or alleged to have been caused by negligence of Program Manager, Owner and / or First Aid Provider. The obligations undertaken by Contractor pursuant to this paragraph shall not be limited in any way by any limitation on the amount or types of damages set forth in the Contract, or by any compensation or benefit payable by or for Contractor or its Lower Tier Subcontractors under the applicable worker's compensation act, disability acts or other employee benefit acts.

IN WITNESS WHEREOF, the "Contractor" agrees to be bound by the terms of this First Aid Services Agreement Indemnification instrument, as evidenced by "Contractors" duly executed signature located on the Contract Agreement Document with the same effective date as denoted there on.

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*Public Service of New Hampshire*

*Clean Air Project  
Merrimack Station*

**PROJECT SPECIFIC SAFETY  
PLAN**

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Washington Division


# Project Specific Safety Plan

Merrimack Station Units 1 & 2  
Clean Air Project

## SCOPE OF WORK REVISION PAGE

Project Name:	Merrimack Clean Air Project	Discipline:	Safety
Client:	Public Service of New Hampshire	Project Number:	29384

### Revision Signatures

C. Carville	7/13/09		7/13/09
Prepared by C. Carville	Date	Approved by D. Pennline	Issue Date
M. Kelly	7/13/09		
Checked by M. Kelly	Date	Approved by	Date

Status	Rev. No.	Date	Prepared By	Pages	Description of Changes
Prelim	0		AS	104	For Client Review
Prelim	A	06/23/08	MSK	108	Partial Incorporation of Client Comments, Added Event Investigation Language & Added Excavation Permit
IHR	B	08/21/08	MSK	103	Incorporation of Client Comments; Incorporation of Ammonia Risk Analysis Comments
Final	0	2/10/09	MSK	All	Incorporated Client Comments
Final	1	7/13/09	CC	All	Incorporated Client Comments; Finalize Lockout/Tagout Procedure



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# **Merrimack Station Project Specific Safety Plan**

## **1.0 Overview**

This plan was developed to ensure that all employees are cognizant of and work within the requirements set forth in the Public Service of New Hampshire (PSNH) and URS Site Specific safety policies and procedures and all applicable federal, state, and local standards. It must be recognized and understood that this is a plan, which can evolve as site conditions warrant.

Specific procedures and policies found in Public Service of New Hampshire and URS Environmental Safety and Health (ES&H) Policies and Procedures shall be the implementing forces behind this plan. Site Contractors are encouraged to sign and adhere to these policies and procedures or may choose to use their own Company's, provided they meet or exceed the requirements necessary to successfully implement this plan. Contractor safety policies shall be reviewed by the URS Project Site ES&H Manager prior to approval. If two or more standards conflict, the most stringent shall take precedence. The URS Project Site ES&H Manager and the PSNH Safety Group shall be consulted in the event a standard or safety procedure is not clearly understood. Failure to work within the parameters of this plan or any promulgated standard shall be basis for disciplinary action up to and including removal from the project.

Public Service of New Hampshire and URS are committed to protecting the environment and safety and health of employees. These are elements of our corporate culture and the business practices of all-operating divisions and subsidiaries reflect this commitment. This plan applies to all Merrimack Station Clean Air Project site activities including all Site Contractors, who through contract language have committed to the same high safety standards.

## **2.0 Environmental Safety & Health (ES&H) Policy**

In all of its operations, URS is guided by an established ES&H policy. This policy is based on the necessity to eliminate personal injuries, occupational illnesses and damage to equipment and property, as well as to protect the general public and environment whenever and wherever the public comes into contact with, or is affected by the Company's work. This will be implemented through management leadership, employee involvement, worksite analysis, hazard prevention and control, and safety and health training.

URS management, PSNH management, field supervision and our Site Contractors are charged with the responsibility for planning safety into each work task and for preventing the occurrence of incidents and/or controlling actions/conditions that could lead to occupational injuries or illnesses. While the ultimate success of a safety and health program depends upon the full cooperation of each individual employee, it is management's responsibility to see that safety and health rules and practices are established and enforced and to ensure that effective training programs are employed to the best advantage. Specific, written procedures will be the key tools for implementing this program. There will be a job specific Job Hazard Analysis (JHA) prepared by line management (Superintendent, General Foreman, etc.) for each major work evolution. Prior to their use in the field, JHA's shall be reviewed by the Contractor's safety department for content.

## **Merrimack Station Project Specific Safety Plan**

ES&H should never be sacrificed for production. It must be utilized as an integral part of quality control, cost reduction, and job efficiency. Every supervisor, foreman or everyone with leadership responsibilities will be held accountable for the safety performance demonstrated by the employees under his/her supervision.

URS and PSNH have achieved outstanding records of accomplishments in the safety field and are proud of their achievements in accident prevention. However, even though we believe our program to be most effective, we also recognize that as long as any possibility exists for even one person to suffer injury or illness, we must continue to stress safety and health and strive for continuous improvement.

Our goal is the elimination of accidents from our operations.

No endeavor is worthy if it causes human suffering through disabling injury or loss of life.

An excellent safety and health record reflects the superior quality of management and work force. It also promotes business and thereby contributes to the continuing growth and success of the Company. Poor accident experience increases cost and results in profit loss.

Management at every level is charged with the task of translating this policy into positive and productive actions.

Our policy is to accomplish work in the safest, healthiest manner possible, consistent with good work practices. Our ES&H Principles are as follows:

- a. All occupational injuries and illnesses and environmental incidents can be prevented.
- b. Each employee is responsible and accountable for their behavior and compliance with company procedures as a condition of employment.
- c. Each employee has the right and duty to question the adequacy of environmental, health, and safety provisions.
- d. The line organization is responsible and accountable for preventing injuries, illnesses, and incidents.
- e. Management shall provide the necessary resources and training to meet our ES&H objectives.
- f. We shall proactively identify workplace deficiencies and take prompt corrective action.
- g. We shall employ site contractors and suppliers who are committed to ES&H excellence and will hold them to the same standards as ourselves.
- h. We shall investigate accidents and incidents, then share and institutionalize the Lessons Learned. Reporting of accidents and incidents shall be in accordance with Section 23 of this manual.

Our goal of "zero accidents" is good business, and demonstrates our shared concern for one another. Off-the-job safety is as important as on-the-job safety.

# Merrimack Station Project Specific Safety Plan

## 3.0 Document Organization

This plan is organized into sections, which describe the area of concern, e.g., hazard communication. For acronyms and abbreviations used in this plan, see Exhibit A. For definitions used in this plan, see Exhibit B. Sample forms are located as Exhibit C.

## 4.0 Organization and Management Responsibilities

The URS Director of ES&H exercises administrative control of the overall company-wide safety and industrial hygiene program, as well as radiological control policies, standards and procedures, oversees statistical safety reports, and enacts adherence to federal, state, and local regulations pertaining to safety. This position reports to the URS Washington Division President.

### 4.1 Merrimack Station Clean Air Project ES&H Organization

#### Project ES&H Manager

The Merrimack Station Clean Air Project ES&H Manager reports to the URS Project Construction Manager and serves in an advisory capacity for project safety and accident prevention programs. The Project ES&H Manager is generally responsible for employee and public safety, industrial hygiene, occupational health, fire prevention and protection and equipment and property protection, as it applies to the URS construction management work. The Project ES&H Manager's specific reporting responsibilities are as follows:

Reporting and record keeping are critical. Documentation of accidents, inspections, industrial hygiene monitoring results, hazardous waste management activities, training and enforcement actions must be accurate and complete. Prompt reporting and recording of accidents, spills, releases, and other safety or environmental related activities is required due to one or more of the following reasons:

- a. To comply with federal or other regulatory agency requirements.
- b. To protect project management and the Company against litigation.
- c. To provide Group and project management with the data necessary to monitor, analyze, and measure safety performance and accident experience and in order to detect and control problems at an early stage.

#### **Reporting Requirements**

Immediately report to the URS and PSNH Project Management and URS Director of ES&H or his representative and the PSNH Safety Group the following:

- a. Fatality or serious injury/illness requiring the off-site transportation of an employee or other third party. Insure compliance with the OSHA reporting requirements on a fatality or multiple hospitalizations.
- b. Project incident/accident occurrences and near misses.

## **Merrimack Station Project Specific Safety Plan**

- c. State or federal safety and environmental inspections.
- d. Major equipment or property losses due to fire, theft, or other causes.
- e. Release or spill of hazardous materials or hazardous waste.
- f. Lack of management support or problems, which cannot or are not being resolved at the project level.

The Project ES&H Manager responsibilities include:

- a. Inspect work sites frequently to ensure all regulatory, PSNH and URS environmental, safety and health requirements are being met.
- b. Immediately inform URS Construction Manager of safety compliance deficiencies to aid in quick resolution.
- c. Establish contact with Site Contractor and client representatives with the objective of maintaining a regular inspection procedure, and coordinate accident prevention measures and safety compliance.
- d. Conduct safety indoctrination with all new hire employees, including Site Contractors.
- e. Perform daily inspections of all construction activities, including Site Contractors.
- f. Apply accepted policies, practices and standards to promote URS's ES&H program and administer assigned functions to aid in this overall responsibility.
- g. Provide the PSNH management with a report of injuries, accidents and near misses on a weekly basis.
- h. Administer and coordinate medical and first aid services and programs.
- i. Apply accepted safety and health standards, codes and regulations to the work underway, as it applies to the project.
- j. Conduct required industrial hygiene monitoring oversight in order to eliminate or control hazards, which could contribute to; or result in, an occupational injury or illness, or cause property damage.
- k. Investigate all personal injury, property damage, and near miss incidents, and maintain a record and submit reports as required by PSNH and URS Safety Offices.
- l. Plan and use promotional material to further safety and health education among craft and supervisory personnel.
- m. Act as a liaison with insurance and regulatory agencies.
- n. Hold weekly Site Contractor supervisor safety meetings.
- o. Oversee the site medical provider and its facility.



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### **4.2 Management Role and Responsibility toward ES&H**

#### **PSNH Site Manager**

The PSNH Site Manager has the ultimate responsibility and accountability for executing and implementing the safety and health program on the project. It must be recognized that strong support and active participation by both the PSNH Site Manager and URS Project Construction Manager is an essential element in any successful ES&H Program.

#### **URS Project Construction Manager**

The URS Project Construction Manager is directly responsible for the construction safety and health programs. As noted above, the URS Project Construction Manager's strong support and active participation are essential elements to the success of these programs.

#### **All Other Merrimack Station Clean Air Project Managers, Superintendents, Foremen, and Other Supervisors**

All other Project managers, superintendents, general foremen, foremen and supervisory staff shall orient new employees to their respective work areas and duties, and be responsible for the work methods and safety procedures and practices of employees under their supervision. They shall conduct safety meetings as required by project specifications and shall conduct frequent safety inspections of their respective work areas to ensure compliance with URS policy, PSNH requirements and appropriate regulatory codes and standards. They shall be held accountable for the actions of their subordinates' safety performance.

#### **Project Site Management and ES&H Personnel**

URS Project Site Management and ES&H personnel shall include Site Contractor personnel and work areas as part of their inspection scope and document inspection. They shall accompany Site Contractor supervision on inspections when possible and note and document deficiencies. It is required that deficiencies noted on those inspections will be followed up to ensure the assigned corrective action is completed in a timely manner.

A joint work area inspection by the URS construction management and Site Contractor supervisory personnel, and the site safety personnel shall be conducted at least once weekly and documented.

#### **Hazardous Condition Notification**

Employees shall notify the supervisor immediately when conditions or practices cause or have the potential to cause personal injury or illness, environmental damage, or property damage.

## Merrimack Station Project Specific Safety Plan

### 4.3 Site Contractor Responsibilities

All Merrimack Station Clean Air Project Site Contractors will adopt and abide by the Merrimack Station Clean Air Project Site Specific Safety Plan. Each Site Contractor employee will attend a safety orientation in accordance with the plan requirements.

#### 4.3.1 Site Contractor Enforcement

Site Contractors shall monitor and inspect their respective work areas for compliance. Each contractor is responsible for reviewing and complying with the requirements of the PSNH Generation Contractor Work Rules. Deficiencies shall be identified and corrected quickly. Serious deficiencies shall be corrected immediately. A Site Contractor's failure to react in a timely manner to serious deficiencies will result in corrective actions being taken up to removal from the Project and back charged accordingly. Minor items shall be assigned to a responsible person with a follow up inspection conducted to ensure correction. This inspection shall be documented, and the inspection team will be made up of the URS construction management staff and the Site Contractor's superintendent/designee and PSNH Safety Representatives when appropriate. The URS Contract Administrator shall be involved in this process.

### 5.0 Drug Testing Policy and Procedure

#### 5.1 Purpose

In order to provide a safe environment and productive work force, promote the health and welfare of its employees and their families, protect the Company's public image as well as its physical assets, and preserve a good relationship with its customers, a Substance Abuse Testing and Assistance policy is in place for all contractors, subcontractors and vendors and their employees who require unescorted access to the Merrimack Station Clean Air Project site. Administration of this program and policy is the responsibility of the contracted vendor, and URS ES&H Manager.

- a. This policy prohibits the use, possession, manufacture, concealment, transportation, promotion or sale of the following items or substances on Company premises:
  - Illegal drugs, prohibited drugs and drug related paraphernalia.
  - Controlled substances such as medications when usage is abused.
  - Alcoholic beverages.

Company premises refers to all property, offices, facilities, land, buildings, structures, fixtures, installations, vessels, automobiles, trucks and all other vehicles and equipment-whether owned, leased or used.

## **Merrimack Station Project Specific Safety Plan**

- b. Subcontractor shall not assign (or reassign) any employee to the Merrimack Station Clean Air Project unless such employee has taken and passed the Site Specific Substance Abuse test requirements.
- c. Employees who violate this policy will be subject to disciplinary action up to and including termination.
- d. The Company reserves the right to establish drug and/or alcohol search and screening procedures consistent with applicable local, state and federal laws.
- e. The URS Environmental, Safety and Health Manager shall be responsible for the development, implementation and administration of the substance abuse prevention program.

### **Positive Test Protocol**

- a. Any employee who tests positive for a substance prohibited by the program will be suspended for thirty (30) normal working days without pay. During this thirty day period the employee must contact their appropriate Employee Assistance Program (EAP) to initiate a counseling and treatment process.
- b. In addition to the thirty (30) working day suspension, an employee will be permitted to return to work ONLY when the following are provided:
  - a. Evidence of participation in EAP approved drug and/or alcohol treatment or counseling program.
  - b. Evidence of satisfactory passing of a return-to-work substance abuse screen test.
  - c. Employee agreement to periodic and random drug screen testing for one (1) year commencing on return to work date.
- c. Any subsequent (second) offense, such as a second confirmed positive test, a refusal to provide a specimen, or any other violation of the program will result in immediate termination.

### **Acknowledgment and Consent**

I understand the requirements of this Substance Abuse Prevention Program Policy and agree to comply with all of its requirements including searches, urine drug screening or alcohol testing as necessary. I acknowledge that the use of these drugs, alcohol and other items is in violation of this policy and that I am subject to disciplinary action. I understand that compliance with this policy is a condition of employment, continued employment or to be allowed to remain on company property.

Employee Name (Printed) \_\_\_\_\_

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### 6.0 New Hire Orientation

It is of utmost importance that all employees, including PSNH employees not directly assigned to the project, but may have reason to access the construction site receive a thorough indoctrination upon reporting to the job site for work. Clean Air Project employees will receive additional URS orientation. They must have a clear understanding of the safety requirements they will be required to follow. Subjects such as hazard communication, personal protective equipment, injury reporting and proper use of safety equipment and emergency evacuation are just a few. The training will be developed as a standard program that encompasses the requirements of this plan. The following is an outline of the new hire orientation training:

The Project ES&H Manager or responsible superintendent shall provide a verbal orientation concerning the safety requirements appropriate to the project. The orientation must be documented and include, but not limited to:

- a. Requirements of the Merrimack Clean Air Project Specific Safety Plan
  - 1) PSNH Generation Work Rules
  - 2) Merrimack Station Work Rules
  - 3) PSNH Process Safety Management Procedure (PSM)
- b. Site Safety Policy including right to stop unsafe work
- c. Evacuation Alarms and Procedures
- d. Emergency Procedures
- e. Lockout/Tagout Procedures
- f. Excavation Procedures
- g. Procedures for Confined Space, Trenching, Heights, etc.
- h. Personal Protective Equipment
- i. First aid/ES&H trailer location
- j. Off limits areas
- k. Tool room
- l. Main office
- m. Parking
- n. Danger areas
- o. Break Trailers
- p. Hazards Unique to the site, including owner chemical storage areas
- q. Public Service of New Hampshire Operation
- r. Railroad tracks
- s. Site Security
- t. Fire/explosion
- u. Chemical
- v. Electro-Magnetic Forces (EMF) and Pacemakers
- w. Environmental Management System Requirements
- x. Identify Craft Specific Hazards — advise the new employee what he/she will be working on initially and precautions to be taken on initial work assignment. Employee should be briefed on the process involving Job Hazard Analysis (JHA),

## **Merrimack Station Project Specific Safety Plan**

which describes the process of identifying hazards and establishing a plan for a control/prevention of those hazards before commencing each major phase or activity at the site.

- y. Advise time and place that toolbox safety meetings are held – the employee’s Site Contractor will provide information.
- z. Substance abuse – the employee’s Site Contractor will provide information.
- aa. Payday and distribution – information will be provided by the employee’s on-site Site Contractor.
- bb. Medical facility
- cc. Superintendent's name – information will be provided by the employee’s on-site Site Contractor.
- dd. URS Project ES&H Supervisor's name
- ee. Site Contractor’s Project Safety Supervisor’s name – information will be provided by the employee’s on-site Site Contractor.
- ff. Advise Current Job-to-Date ES&H Record and safety goals
- gg. Elaborate on URS Return to Work/Restricted Work Policy
- hh. Elaborate on Reporting:
  - 1) All injuries
  - 2) Near Misses
  - 3) Unsafe Conditions
  - 4) Unsafe Acts

During the employee orientation process, employees will be questioned to ensure that the orientation messages have been conveyed. In addition, the employee will be welcomed to the project. Use of videotapes may be incorporated into the orientation; however, such use must be with care and always followed up with questioning to ensure conveyance of the message. Those personnel receiving the orientation will be encouraged to ask questions.

### **6.1 Medical History**

Each employee is requested to fill out the URS medical history sheet. It is a confidential document to be kept under lock and key and accessible only to the medical contractor and for use and reference during treatment of illness or injury to the employee. The medical history is a very useful tool, especially if a person is unconscious and cannot tell medical personnel of existing illnesses, drug allergies or even if they are allergic to a bee sting. This must be clearly explained to each employee. (Medical History Form located in Exhibit C).

### **6.2 Medical and First Aid Reporting**

All injuries, regardless of how minor, must be reported immediately by the employees and if necessary, treated in the site medical trailer. Minor injuries, if not treated immediately, can become more serious later.

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Failure to report an injury immediately could result in loss of benefits and would cause delay in treatment if you leave the job site without reporting an injury that was sustained

All prescriptions and medications shall be listed on the employee's medical history. If prescription medication is brought on site, it must be kept in the original container. If the employee takes insulin or other injections, the employee may use the first aid facility to administer it. Needles will be disposed of properly in a sharps container and the area will be maintained in a sanitary condition.

### 6.3 Personal Protective Equipment

**The following minimum personal protective equipment (PPE) will be required while on the job site; ANSI Z89.1 approved hard hat, ANSI Z87.1 approved safety glasses with side shields, ANSI Z41 approved safety toed shoes, high visibility vest, long pants and shirts with a 3" sleeve minimum.** Certain items, such as goggles, face shields, safety harnesses, hearing protection, respirators, etc. are needed only in specific situations. High visibility tee shirts or outerwear may be substituted for high visibility vests and orange welders jackets should be used for hot work. The Site Contractor employees are to be thoroughly instructed on the use, maintenance and inspection of all their equipment. The responsible Site Contractor shall give this instruction with oversight being provided by the URS Project ES&H Manager/designee as part of the new hire orientation. All training provided shall be documented and kept on file in the responsible Site Contractor's office and the URS Project ES&H office. Additional safety related training will be the responsibility of the Site contractor, and if necessary, supported by the on-site URS project safety personnel.

Minimum PPE will be worn at all times when on the construction site. PPE may only be removed when in the office or break trailers.

All visitors entering within the boundaries of the work area shall be required to meet minimum personal protective equipment requirements.

#### Minimum Personal Protective Equipment

Mandatory PPE is as follows:

- a. Hard-hat worn with the suspension in the forward position. Hard hats will be clearly marked with employer and employee name. (must meet Z89.1 requirements)
- b. Safety glasses with side shields (must meet Z87. 1 Requirements)
- c. Safety toed, sturdy leather shoes or boots (must meet Z41, C/75, I/75, minimum requirements).
- d. Long pants
- e. Shirts that cover the shoulders and sleeves that extend to at least 3 in. below the shoulders (T- shirt length)
- f. High visibility vest, shirt or jacket must be worn when construction is active.
- g. Hearing protection and/or respirators in designated areas.

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NOTE: CONTACT LENSES ARE NOT APPROVED FOR USE AT PSNH MERRIMACK STATION.

### Footwear Policy

Safety toed shoes or boots shall be of sturdy leather uppers with a substantial heel and sole to resist cuts and punctures. No athletic type shoes will be allowed on the job site. This includes safety-toed tennis shoes. Also, prohibited footwear includes sandals, open toed shoes, nylon or canvas shoe, rubber boots, except as needed to protect against environmental or chemical elements, loafers, street shoes, thongs or other shoes or boots of soft imitation leather that can easily be cut, torn, or punctured. Footwear for the Merrimack Station construction management and Site Contractor office personnel not required to enter the construction areas shall be as specified by the Project Construction Manager. For activities posing the potential of crushing or impact injuries, URS project ES&H staff shall evaluate and require additional protection against these types of injuries. (i.e., metatarsal guards). This requirement shall be clearly stated on the Site Contractor's Job Hazard Analysis.

### Special Situation Personal Protective Equipment

#### *Fall Arrest Systems*

Fall protection shall be worn by all personnel when working near an unprotected area at or above six feet from the next working stable platform or ground. Where fall protection is required, each employee shall wear a Class III full body harness with attached lanyard. The lanyard must be equipped with an energy shock-absorbing device and positive locking snap hooks. Employees shall be instructed in the proper way of choosing anchor tie off points and the proper way of tie off. Lanyards are not to be hooked back into itself unless so designed and specified by the manufacturer. An anchor strap with double "D" rings may be necessary in areas where no suitable anchorage exists. Equipment used for rigging such as slings and choker cables shall not be used for personal fall protection.

#### *Goggles*

Goggles must be worn whenever additional protection (i.e. grinding) against dust, flying particles or chemical liquids is required. They may be worn over safety glasses, or alone, depending on the situation. A face shield will also be required with goggles when flying particles or chemical splash hazards exist.

#### *Face Shield*

Face shields and safety eyewear are required whenever there is potential for injury to the face from flying particles or hazardous chemical liquids. Face shields are required when grinding (hand or bench), chipping, jack hammering, etc. is being conducted. Face shields are considered secondary protection and shall only be worn over primary eye protection (safety glasses with side shields or goggles).

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### *Cutting Goggles/Welding Hoods*

Additional eyewear is required whenever conducting welding and/or gas cutting operations. Slag from torch cutting and flash from arc welding can be injurious to the eyes and face. PPE of the proper tint/shade must be worn. Regular sunglasses are not acceptable. If not sure of the proper tint/shade, the Site Contractor employees can consult URS ES&H for advice.

### *Gloves*

Gloves of the proper type shall be worn whenever there is hand injury potential. This includes, but is not limited to, most manual material handling tasks.

### *Metatarsal Guards*

Employees using jackhammers or other equipment that pose the possibility of foot injury must wear metatarsal guards over their work shoes or boots.

### *Reflective Vests*

Retro-reflective DOT vests shall be worn by employees engaged in traffic control or subject to vehicle traffic while conducting their normal work duties. This shall include spotter personnel who are guiding equipment. All spotter/flagmen/signal men shall wear reflective vests.

### *Hearing Protection*

Employees working in or near loud machinery or other noisy operations must, at minimum, wear earplugs. Some high noise areas may require additional protection such as earmuffs. If in doubt, assistance may be obtained from the URS ES&H Department. The project safety department will specify the appropriate level of hearing protection required for tasks with significant noise exposures.

### *Respiratory Protection*

Certain work tasks require additional protection against dust, fumes and other inhalation hazards. In such cases, it is necessary to install additional ventilation to remove these hazards. When this is not sufficient, then additional respiratory protection is required. Each employee must be properly trained in the use, selection and maintenance of his/her equipment as well as fit tested on the respirator to be used and medically qualified. Medical qualifications shall be determined by a licensed health care professional. All employees wearing respirators shall be clean-shaven. No facial hair shall come in between the face and sealing area of the mask. Employees, who are required to use negative pressure air purifying respirators, will receive additional training, prior to use. The URS Project ES&H Manager shall be consulted on all occasions where respiratory equipment is required. Voluntary use of single use respirators does not require medical qualification or fit testing, but will be provided with the appropriate appendices from 29 CFR 1910.134. Dust masks, such as the MSA 9920 and MSA 8610 are considered as single use, maintenance free types. Also, all



## **Merrimack Station Project Specific Safety Plan**

employees wearing these types of respirators shall be clean-shaven. No facial hair shall come in between the face and sealing area of the mask. )

### **6.4 Permit Procedures**

Some jobs (e.g. hot work, confined space entry, etc.) will require additional permits to insure, that all hazards to employees are identified and eliminated or controlled. These permit procedures are to be covered in the initial employee orientation and will be further discussed in detail by the Site Contractor responsible performing the permit work.

### **6.5 Scaffold Safety/Tagging**

Section 11, Scaffold Safety of this safety plan sets forth the requirements for the safe use of scaffolding and the tagging process. All Site Contractor employees required to access or work on scaffold systems must be trained in the PSNH scaffold safety/tagging procedures. Training documentation shall be retained by the Site Contractors and made available to URS Project ES&H upon request.

### **6.6 Lockout/Tagout**

Section 19.0 sets forth the requirements of the Clean Air Project Lockout/Tagout Program. All employees will receive awareness training on the LO/TO program during initial site orientation to ensure that they are aware of its requirements. Each Site Contractor responsible for working on equipment and systems will provide additional employee training on the implementation of the LO/TO procedure. Employees required to implement LO/TO will receive additional training on the entire LO/TO program.

### **6.7 Elevated Personnel Lifts**

Personnel intending to use aerial type lifts or Scissors lifts must first be trained in their proper operation. Each Site Contractor using elevated personnel lifts will be required to provide this training to their lift operators. The URS Project ES&H personnel will advise the Site Contractors on this requirement. Employees using aerial lifts or telescopic boom lifts must wear a full body harness and be properly tied off while the lift is in use.

### **6.8 Excavations and Trenches**

All employees shall be made aware of the hazards of working in trenches and excavations and the control measures required to do so. Warning personnel or hard barricades must be employed to warn approaching personnel from falling into open excavations.

### **6.9 Barricading**

Instructions in the proper selection and use of the following barricades shall be given:

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- a. Red "Danger-Do Not Enter" Barrier Tape
- b. Yellow "Caution " Barrier Tape
- c. Magenta and Yellow (For X-ray Testing of Welds, etc.)
- d. Hard/Rigid Barricades
- e. Permanent Flagging

Note: Barricade tape shall not be used as a substitute for hand railing. Barricading of excavations shall be done in accordance with 29 CFR 1926.651. All temporary barricades such as tape and rope shall be posted (every 20 feet or less) with a PSNH Yellow Caution Tag stating the hazard, responsible contractor and a contact name and how the contact can be reached.

Contractors shall guard or place appropriate hard barricades around temporary openings in floors, handrails, etc. to prevent inadvertent entry. Covers over excavations or floor holes shall be secured and conspicuously marked to indicate the hazard and the danger of removal.

### **6.10 Other Topics to Be Covered**

The following topics are described in other sections of the Merrimack Station Clean Air Project Specific Safety Plan and are provided here in outline form. The topics that will be covered during new hire orientation training include the following:

- a. Site emergency plan and procedures
- b. Fall protection policies shall be thoroughly reviewed with employees - Fire prevention/protection
- c. Confined space entry
- d. Hazard Communications
- e. Housekeeping
- f. Job rules/discipline
- g. Compressed gas/welding/cutting
- h. ES&H related warning signs shall be used in accordance with standards set forth in 29 CFR 1926

NOTE: It should be understood that this section covers general orientation only. Specific training and qualification shall be performed and documented by individual Site Contractors. The URS Project ES&H personnel will provide consultation and advise the Site Contractors on this requirement.

### **6.11 Records**

Training documentation shall be maintained on file within the individual site contractors construction management office and made available upon request.

## Merrimack Station Project Specific Safety Plan

### 7.0 Hazard Communication

This section will be communicated to all personnel that are assigned to the Merrimack Station Clean Air Project. Each employee will receive this information initially at new hire orientation and as needed, if revisions, modifications or additions to the program occur. This program encompasses the entire workplace, regardless of number of employees. It is designed to establish clear goals and objectives and to ensure that each employee is aware of the hazards existing and the measures required for eliminating or controlling them. This program shall be reviewed annually to ensure that any change in Company operations and Occupational ES&H and Health Act (OSHA) hazard communication (HAZCOM) standards are addressed and included.

All contractor-supplied hazardous materials and chemicals must be approved by PSNH prior to use and entry on PSNH property. Each contractor shall provide a program for proper labeling of containers, describe other needed forms of warning labels, detail the use and purpose of material warning labels, and detail the use and purpose of MSDSs. Storage tanks shall be labeled with the NFPA diamond as required by NFPA 704 requirements. Each employee shall be trained in the use of MSDSs and shall be informed where the MSDSs are kept. They shall also be advised that it is their right to ask to review the MSDSs anytime they intend to use a hazardous chemical or product. A current copy of all MSDSs shall be maintained in each contractors office along with the chemical inventory and be available for review by the URS ES&H Manager. MSDS sheets shall be attached to JHAs if applicable.

#### 7.1 Employee Information

Each Site Contractor shall inform their employees of the hazards of their work through Job Hazard Analysis reviews. Immediate supervisors shall oversee this requirement with regard to their employees. Each Site Contractor may use the URS project ES&H department for consultation and assistance in developing a pre-job hazard analysis.

Each Site Contractor shall detail the method intended for use to inform employees of the methods to be implemented to eliminate or control hazards. The Site Contractor's immediate supervisor should oversee this requirement.

#### 7.2 Training

URS Project ES&H manager and staff may provide consultation and advice to the Site Contractors to allow them to provide their employees with the information and documented training on hazardous chemicals in their work area. This will be provided at the time of their initial assignment, annually and whenever a new chemical is introduced into the work area that could present a potential hazard. This information should be covered in applicable Pre Job briefs to ensure employee understanding and compliance.

## Merrimack Station Project Specific Safety Plan

This training should consist of the following:

- a. A review of the MSDS and the substances known hazards.
- b. A review of the substances handling, storage and first aid guidelines.
- c. Methods that may be used to detect the presence of hazardous chemicals or materials in the work place. This will include any monitoring conducted by URS, visual releases, odors, etc. Material ES&H Data Sheets will be used to augment this requirement wherever possible.

### 7.3 Labeling Requirements

Each Site Contractor will be responsible to maintain and provide a product labeling kit to any employee requesting it. Employees shall ensure that adequate labels are on incoming containers. Containers containing hazardous materials or products will be properly disposed of and the labels defaced after use. Empty chemical containers are not to be used as trash containers or any other purpose. They shall be disposed of in accordance with the manufacturer's recommendations. No unlabeled chemical containers may be used in conjunction with any duties or operations.

CONTAINER means, any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or anything that contains a hazardous chemical or product. IMMEDIATE USE means that the chemical or product will be under the control of and used by the person who transfers it from a labeled container and only within the shift in which it is transferred.

#### Label Information for a Single Chemical

For a single chemical, each Site Contractor will provide the appropriate NFPA hazard rating and chemical compatibility charts to label containers. The MSDS will be consulted first to determine labeling requirements. The label, as a minimum, will contain:

- a. Information concerning the PPE required to use or handle the chemical
- b. The DOT hazard class (i.e., whether the chemical is flammable, toxic, corrosive, water reactive, or is an oxidizer)
- c. The chemical name as listed on the MSDS
- d. The normal operational use of the chemical or product name and address and emergency phone number of the manufacturer or other responsible party such as CHEMTREC

#### Label Information for Chemical Mixtures

For mixtures of chemicals, each Site Contractor will provide the appropriate hazard rating and chemical data to label containers. The MSDS of the chemicals used to create the mixture will be consulted first to determine labeling requirements. Labels shall be the same as specified for single chemicals.

## Merrimack Station Project Specific Safety Plan

### Mixtures That Have Not Been Tested

If the mixture has not been tested in its entirety to determine whether the mixture is a health hazard, the mixture shall be assumed to present the same health hazards as do the components which comprise one percent or greater by weight or volume of the mixture. Scientifically valid data such as provided on the MSDS to evaluate the physical hazard potential of the mixture shall be used.

### 7.4 Chemical Inventory

The chemical inventory list shall consist of the name of the product, manufacturer's address and emergency phone numbers for contact regarding information about the products. Each Site Contractor will be required to provide an accurate accounting of amounts on site and location of the chemicals. Each Site Contractor shall maintain an up to date chemical inventory list of their chemicals and provide a copy to URS upon request.

### 7.5 Material Safety Data Sheets

Each Site Contractor upon request will provide URS project safety department with copies of MSDSs that are received with incoming shipments of chemical containers or products. MSDSs will be readily available and accessible to employees during each work shift. Each site contractor shall obtain MSDSs for all applicable material and forward copies to the URS project construction ES&H Manager. If an MSDS is not received for a particular material, it will be the responsibility of each site contractor to immediately have the MSDS faxed to the job site. No hazardous chemical/material will be used if the MSDS is not available on site. Each Site Contractor will provide a MSDS and have all chemicals approved for use by PSNH prior to bringing chemicals on site.

Employees shall be familiar with the various sections of the MSDS as follows:

Section I	Product Identification
Section II	Hazardous Ingredients
Section III	Physical/Chemical Characteristics
Section IV	Fire and Explosion Hazard Data
Section V	Reactivity Data
Section VI	Health Hazards Data
Section VII	Precautions for Safe Handling and Use
Section VIII	Control Measures/Protection Information
Section IX	Additional Information

## Merrimack Station Project Specific Safety Plan

### 7.6 Facility Chemical Hazards

In addition each employee on site needs to be aware of the following chemical hazards on site and precautions that must be taken when working in these areas:

#### **Asbestos**

Asbestos is present throughout many of the PSNH Facilities. Boiler, pipe, and surfacing insulation along with other building materials should be considered to contain asbestos unless it can be identified as non-asbestos insulation. Plastic tents, glove bags, and proper demarcation surrounding the removal process protect workers in other areas of the facility. Without proper authorization and training workers may not enter asbestos work areas. The contractor should contact the PSNH liaison for help in identifying possible asbestos containing materials in their work area.

#### **Arsenic**

- Air monitoring samples taken at Merrimack Station indicate that airborne concentrations of arsenic may exceeded the permissible exposure limit (PEL) during certain activities. For that reason, all contractors performing work in the below areas must comply with the OSHA inorganic arsenic standard 29 CFR 1910.1018.

Some requirements of 1910.1018 are:

- Respirators with high efficiency filters are required when entering the above areas.
- Blue Tyvek disposable coveralls or equivalent are required.
- Coveralls must be disposed of upon exiting boiler and are not to be worn elsewhere once soiled.
- Disposal barrels will be set up on the upper elevations.
- All personnel working in regulated areas need to wash hands and face prior to eating and shower upon leaving the premises.

#### **Lead containing materials and lead-based paint**

Lead containing materials and lead-based paints are present throughout many of the PSNH facilities. Special care and precautions shall be taken by the contractor in working with lead containing materials and/or lead based paints and the removal of the same. Appropriate engineering and administrative controls per OSHA 29 CFR 1926.62 must be implemented for all potential lead containing materials and/or lead based paints where there is potential to exceed the action level, as stated within the 1926.62.

#### **Anhydrous Ammonia**

Anhydrous ammonia is used on site and stored as a liquid under pressure. Anhydrous ammonia is a pungent and toxic gas that is listed as an extremely hazardous substance. At low concentrations, ammonia gas is irritating to the eyes, skin, and mucous membranes of the nose, throat and lungs. At higher concentrations, ammonia is corrosive to human tissue and possibly life threatening. In heavy concentrations it can displace air and, like many gasses, cause suffocation. Ammonia's strong odor makes it impossible for persons to voluntarily remain in contact with concentrations which are

## **Merrimack Station Project Specific Safety Plan**

hazardous or injurious to health. Ammonia causes olfactory fatigue or adaptation, making its presence difficult to detect when exposure is prolonged. Contractor personnel are not allowed to enter the ammonia storage area or buildings unless authorized by PSNH Shift Supervisor. Roads around the Ammonia Storage Area will be blocked to traffic when ammonia is being offloaded. Structures adjacent to the Ammonia Storage Area must have plastic mesh netting installed at exterior work areas to prevent tools or materials from falling and damaging the tanks and associated piping.

### **Acid and Caustic lines**

Flashing red lights are installed inside the existing facility, around the demineralizers and polishing-demineralizer on elevations 207 and 223, as a warning that the acid and caustic system has been energized. The area within these red lights is a safety goggle area. Anyone passing through or working within this area is required to wear their safety goggles. Anyone working on the acid or caustic system is required to wear goggles, face shield, acid suits, gloves and rubber boots. In addition to red lights, the area is also roped off. Contractor personnel are not allowed to enter into acid and caustic areas unless authorized by PSNH.

### **Carbon monoxide and methane in coal storage areas**

Coal silos and bunkers are monitored for rising levels of Carbon Monoxide (CO) and the lower explosive limits (LEL) of methane. These alarms are set at 100 parts per million (PPM) for CO and 30% and 40% of the LEL for methane. Alarm points are located inside the existing facility on the 8<sup>th</sup> floor elevation landing near Unit #1 and the control room. If these alarms are activated all people working in these areas are to exit and notify David Fradette at extension 172 or Brian Nault at extension 150. Air monitoring will be conducted by a qualified person to determine if upper silo area (tripper room) is safe to work in. Contractor personnel are not allowed to enter into silos and bunkers unless authorized by PSNH.

## **8.0 Job Hazard Analysis (JHA)**

No Site Contractor employee will be allowed to perform tasks that they are not fully trained and qualified to perform. Non-routine tasks will be evaluated prior to accomplishment of work and the related hazards assessed to develop protective measures. This assessment shall be thoroughly discussed with the personnel intending to conduct the work and all protective measures will be explained, implemented and monitored for compliance during the work.

### **8.1 Requirements**

A JHA addressing the safety and health hazard risks and subsequent hazard assessment shall be prepared for the individual project work tasks and operations. The JHA shall be prepared by the Site Contractor's job supervisor and reviewed by the URS project ES&H department.

Input from workers is very helpful and shall be used in preparing the JHA. The URS project ES&H department may prepare JHA's for work activities beyond the normal scope. i.e. HAZWOPER. The JHA shall also be included as a part of the Site Contractor's project work plan or work package. A JHA of the specific work tasks or operations is required for all specific work tasks conducted at the project prior to work start up.

## Merrimack Station Project Specific Safety Plan

### 8.2 Specific Items for JHA Inclusion

The Site Contractors project job supervisors and/or safety personnel shall prepare a JHA in the following sequence:

Break individual jobs or tasks down into a series of successive steps or activities. Include required or anticipated tools and equipment for each step or activity on the JHA. Identify potential hazards within each step or activity and the measures required to eliminate or control the hazards.

Ensure the following hazard categories will always be considered for inclusion in the JHA. This list is not all-inclusive and some situations may warrant consideration as determined by Site Contractor management and/or the responsible supervisor:

- a. Elevated work 6 feet or more
- b. Lockout/Tagout Requirements
- c. Pressurized equipment and systems.
- d. Excavations over 4 feet deep.
- e. Chemical exposure
- f. Exposures to ionizing and non-ionizing radiation.
- g. Oxygen deficiency.
- h. Electrical hazards.
- i. Heavy crane lifts, lifts over process equipment, process lines or electrical lines.
- j. Fire and explosion potential.
- k. Temperature extremes.
- l. Excessive noise
- m. Biological hazards
- n. Confined space entry
- o. Hot work
- p. Flying projectiles
- q. Manual lifting of heavy objects
- r. Performance of work in the vicinity of the Ammonia Storage and Delivery Systems

Each Site Contractor personnel may solicit input from the URS project safety department for hazard evaluation. This input should include safety and industrial hygiene. After known, suspected, or potential hazards have been identified, develop solutions to eliminate or control or reduce those hazards. Develop engineering, administrative, PPE and other controls to address significant hazards discovered for key job steps and list them in the JHA.

Each Site Contractor will review the JHA frequently and update (revise) as necessary. This is to include stoppage of work, if necessary, to revise a JHA due to changes in the work activity or process that it addresses.



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### **8.3 Responsibilities**

#### URS Project Construction Manager

The URS Project Construction Manager shall be responsible for the overall safety and health compliance at the project site and shall ensure that adequate time and resources are available for implementation of JHA specified safety behavior/ hazard elimination/accident prevention program.

#### URS Project ES&H Personnel

The URS Project ES&H personnel and cognizant supervisors shall be responsible for oversight and reviews of the Site Contractors work involving preparing, implementing, monitoring and revising the JHAs. Each Site Contractor will obtain input of workers knowledgeable of the work task at hand.

#### All Site Contractor Personnel

All Site Contractor personnel intending to perform the work task addressed in the JHA shall receive thorough instructions and shall review with their supervisor all applicable information contained in the JHA. This shall be documented by signatures of all attendees.

### **8.4 Pre-Job Hazard Analysis**

Table 1 contains a pre-job hazard analysis of work to be conducted. It identifies the hazards, concerns, and environmental issues associated with the various tasks that will be carried out during the project and the associated control measures required to protect employees. They are extracted from the applicable sections of this plan, other codes and standards, and are provided to employees at new hire orientation. Although the table is not all-inclusive, it does give the new employee a good understanding of the job safety requirements for general construction activities.

Each Site Contractor can use these tables for reference purposes and then expand on these requirements to develop a more comprehensive JHA for specific job activities.

## Merrimack Station Project Specific Safety Plan

Table 1. Pre-Hazard Analysis

Hazards/Concerns	Control Measures
Personal injury potential caused by the general nature of construction activities.	Hard hats, safety glasses with side shields, proper foot wear and clothing, ear plugs or muffs
Injury due to contact with chemical and products used on the job. (i.e. cleaners, solvents, thinners, welding rods)	Face shields, goggles, rubber gloves and rain suits. Portable eye wash stations. Proper ventilation and respirators. Proper hygiene measures shall be taught to safeguard against ingestion of toxic substances. Check MSDS sheets for precautions.
Work near anhydrous ammonia storage	Contractor personnel are not allowed to enter the ammonia storage area unless authorized by PSNH. Roads around the Ammonia Storage Area will be blocked to traffic when ammonia is being offloaded. Structures adjacent to the Ammonia Storage Area must have plastic mesh netting installed at exterior work areas to prevent tools or materials from falling and damaging the tanks. Spotters will be required when moving loads around the Ammonia Storage Area. Area is monitored and alarms will sound when levels reach 35 ppm ammonia signaling employees in the area to evacuate up wind.
Injury potential from falls from elevation	Class III full body harness for all work over six (6) feet and over. Other options noted in Section 12. Use of JLG type Arial lifts, scissors lifts, temporary/permanent handrails, safety cables. Completed scaffolding, safety nets.
Dangers and hazards of open excavations and working within them	Ladders or ramps for safe and easy access and egress, proper shoring or sloping to prevent cave ins, daily inspection by competent persons, fixed barricades around all sides, dewatering as needed, spoil pile and debris at least three (3) feet back from edge.
Electrical shock or injury due to damaged electrical cords or tools.	Ground fault circuit interrupter program in place, initial inspection of tools and cords, daily inspection by user prior to use. Assured ground program in place. Use only three-pronged heavy usage rated cords.
Injury due to contact with concrete, swinging concrete buckets, using pumpcrete systems. Form work removal, Exposed Rebar ends.	Wear proper rubber boots and gloves when the possibility of gross exposure to wet concrete exists, face shields when pouring or pumping concrete. And when dumping concrete buckets. All pumpcrete systems should be secured against accidental separations. Nails must be removed from formwork or bent over. All exposed rebar ends must be capped or covered for employee protection.

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Hazards/Concerns	Control Measures
Welding, cutting burning and use of compressed gas cylinders (i.e., flash burn, fire, valve damage, etc.)	Wear cutting goggles or welding hoods gloves, leathers and fire resistant disposable coveralls. Use Welding shields to protect adjacent personnel from flash. Remove all combustibles from work area. Contain sparks and slag. Post fire watches. Secure compressed gas bottles in upright position. Cap all valves when not in use. Protect hoses from falling slag. Maintain proper storage and limit number of bottles staged in the work area. Mark empty cylinders with MT and remove from the work and staging area.
Injury due to falling objects from overhead	Place proper barricades between work levels. Use Toeboards, lanyards for tools, safety nets and secure equipment not already protected from falling. Place signs below at accesses to warn of people working overhead.
Potential injury due to flying particles or debris from grinding, chipping, wire brushing, etc.	All bench grinder guards must be in place and adjusted (Tongue guard ¼ inch, Work rest 1/8 inch) Guards shall be on hand held grinders. Face shields/goggles shall be used. Set shields around area to protect adjacent and passing workers.
Pneumatic tools and injury due to accidental disconnect or tool malfunction.	All airlines must be checked for damage, Proper pinning of all couplings is required. All tools must be checked to ensure locking pins and collars are in place. All bits and attachments should be checked for cracks or damage. Use anti-whip restraints on large diameter hoses.
Use, handling, cutting and installation of insulation material including manmade mineral fibers.	Check MSDS for proper precautions for handling. Knives and other sharp tools must be kept in a sheath or other protective carrier. Respirators (full and half face) may be required. Disposable coveralls per MSDS and additional eye protection as required.
Housekeeping, trip hazards, fire potential, puncture wounds, etc.	All work areas must be kept clear of trash and debris. All hoses, leads and cords must be elevated (8 feet) Remove nails from boards. Do not allow combustible materials to collect. Assure that sufficient number of trashcans is available and emptied regularly. Oil soaked rags disposed of properly.
Flammable Liquid use, storage, fire prevention and protection	Use of Flammable Liquid Storage Cabinets and safety cans. Grounding and bonding of containers during transfer. Adequate postings to keep flame away and no smoking and isolation of activity.
Hydrostatic testing of equipment	Written plan outlining personnel involved, activity steps, safety precautions and emergency actions.
Equipment refueling.	No refueling with equipment running. Bonding and grounding during transfer. Adequate postings to keep flame and fire away. Prohibit smoking during operation.

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Hazards/Concerns	Control Measures
Cranes, hydraulic cranes and overhead lift operations	Use only qualified operators and trained signalperson. Use only trained and qualified rigging personnel. Barricade exposed swing radius and load travel areas. Rigging inspections prior to use. Tag lines to control loads Crane inspections current. Use mats and cribbing to ensure solid base. Secure loads and use spotter/ground walker to move loads and equipment around work site. No workers under live loads; no riding live loads. No lifts will be allowed directly over the Ammonia Storage Tanks. Soil compaction tests may be required to ensure a stable lifting foundation.
Protection from potential energy sources.	Identify all potential energy sources and isolate using Lockout/Tagout program. Walk down systems and isolate areas during initial start up and testing phase. Close coordination between construction and startup groups must be maintained. System and component identification tags showing status and system PSNH ownership.
Inclement Weather such as lightning, high winds, extreme heat and cold	Minimize elevated work during high winds. Lower or secure crane booms during high winds as recommended by the crane manufacturer. A list shall be established and updated as cranes are brought on site. Establish plan to detect and react to Thunder Storms with lightning in the vicinity. Train workers in proper precautions to take during extreme heat and cold periods or locations.
Confined Space entry Hazards.	Identify and evaluate potential confined spaces. Procure air monitors and ventilation equipment. Procure rescue services if not available on site. Train all workers.
Waste generated	Work with PSNH liaison to determine proper disposal of waste generated and identify any hazardous or universal waste generated.
Release of water	Do not pump any accumulated water to any location without first getting permission from the PSNH liaison and checking to ensure that proper controls are in place to minimize erosion and contamination.

NOTE: This JHA will be continuously updated to include additional job hazards as they are identified. Any such additional items will be conveyed to all employees by means of safety training meetings as they are identified. This Merrimack Station Clean Air project JHA is meant for use as a guide for Site Contractor management, supervisory and craft personnel to develop job specific hazard analysis. (Job Hazard Analysis Form is located in Exhibit C).

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### **9.0 Safety Meetings**

Each Site Contractor is required to hold at least one ES&H meeting weekly. These meetings will receive top priority and will be monitored by the URS construction management staff. The three types of safety meetings are discussed below in further detail in Sections 9.1, 9.2 and 9.3. Supervisor and Contractor Safety Training meetings will be documented with attendance sign-in sheets.

#### **9.1 Supervisors Safety Meeting**

To help insure an effective Merrimack Station Clean Air Project safety program, the URS Project construction management shall conduct a safety meeting at least weekly for all URS and PSNH Project construction management, URS and PSNH ES&H managers, Site Contractor supervisory personnel, field supervisors, foremen, and union representative(s). It may be appropriate to combine this meeting with other scheduling or planning meetings. Meetings will be documented with minutes issued and include attendance sign-in sheets. These meetings will be presented in order to do the following:

- a. Promulgate and review safety and health policies and procedures
- b. Review the upcoming work operations. Pre-plan safe work methods and procedures into the work and ensure required safety equipment and supplies are identified and obtained
- c. Discuss findings of safety inspections and observations, safe working behaviors, any near misses, incidents, or injuries occurring since the last meeting, pointing out causes and established corrective measures to prevent recurrence
- d. Review the project safety performance to date, identify trends and deficiencies and make recommendations for improvement
- e. Discuss occupational health and safety hazards on the project and steps used to eliminate or control them
- f. Develop and discuss ideas for improving the program
- g. Make recommendations for recognition of employees who have demonstrated exemplary safety attitude and performance

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### **9.2 Contractor Safety Training Meeting**

Each Site Contractor is required to hold a safety-training meeting, which will be held at least once per week. Each Site Contractor's supervision is to hold this meeting with his/her crew and shall present subject matter provided by the URS project ES&H department. Supervision is encouraged to cover additional subject matter that pertains to their specific work, safe work behavior and safety inspection results. The subject matter shall be typed, reproduced and distributed to each foreman. The subject matter shall be pertinent to the work being performed. The meeting shall provide the opportunity for employees to ask questions make suggestions, and to voice safety concerns. The Site Contractor's supervisor shall implement any necessary corrective actions on safety issues raised or make the supervisor aware of the issue. In general, the actual meeting duration will be 10 to 15 minutes in length. Items of discussion shall be restricted to safety and occupational health. Each Site Contractor's supervisor, who conducts a meeting, shall list all employees attending the meeting and have the employee sign the list. This sign off list will be forwarded to the URS project construction ES&H department. The URS construction management staff supervisory personnel shall periodically monitor these safety meetings.

As noted previously in Section 9.1, the URS project construction manager and URS project ES&H manager will meet with the Site Contractor safety representatives and supervisors to discuss safety issues and performance.

### **9.3 Pre Job Briefings**

The Site Contractor's Superintendent responsible for implementation of a work activity is also responsible for ensuring that a pre-job brief (PJB) is prepared and communicated for that specific work activity. A PJB/JHA meeting shall be held for each crew prior to starting a particular work activity. In addition, a PJB/JHA meeting shall be held daily, at the beginning of each shift, and whenever there is a change in work scope of personnel, to cover any changes or concerns resulting from activities of the previous day or shift. The Superintendent ensures supporting personnel such as Safety, Engineering, Quality Assurance (QA), and/or plant interface personnel specific to the work, have been invited to the PJB meeting. A PJB meeting is for the communication and discussion of safety issues, environmental issues, emergency planning (evacuation route etc.) and concerns with affected personnel prior to performing the work. Documentation of this meeting is not required.

This meeting and discussion should follow these guidelines:

- a. Ensure affected personnel are all present and paying attention.
- b. Personnel coming in late shall be required to remain through another session or the meeting shall restart from the beginning.
- c. Make the meeting interactive. Ask questions and provide answers.
- d. Discuss the work scope and activity to be performed.
- e. Review the identified hazards associated with the task by discussion of the prepared JHA.

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### 10.0 Job Site and Tool/Equipment Inspections

URS construction staff and the Site Contractors' managers and supervisors will conduct weekly job site inspections. Immediate attention will be given to any discrepancies noted. On-the-spot corrections will be made where possible. Assignments of responsibility will be given in cases that cannot be corrected immediately.

#### 10.1 Job Site Inspections

The URS project construction management shall make frequent field inspections. The field safety inspections shall include all Site Contractor activities on the job site. Serious discrepancies will immediately be addressed through the appropriate Site Contractor responsible and corrective actions assigned. The serious discrepancies and corrective actions taken shall be documented.

#### 10.2 Tool/Equipment Inspections

Each Site Contractor will perform tool and equipment inspections and include the following:

- a. All scaffold, ladders, portable power tools, welding and burning equipment, and any other equipment shall be regularly tested and inspected to ascertain its safe condition
- b. Spot checks of equipment and tools shall be made daily by the each Site Contractor's construction superintendent(s) or designee(s)
- c. All equipment shall be inspected upon initial entry to job site and on a daily basis by the user prior to use, and as required by the manufacturer.

#### 10.3 Equipment Use

Contractors shall not move loads suspended from mobile equipment without the load being secured to prevent swinging.

### 11.0 Scaffold Safety

Scaffolding is an integral part of the construction industry. Sound judgment is imperative in the placement, selection and grade of materials utilized in erecting scaffolding. URS will ensure that the Site Contractor scaffolding procedures are developed in accordance with PSNH scaffold program.. Prior to use on each shift, a competent person as assigned by the Site Contractor will perform inspections of all scaffolds used and document the inspection on the scaffold tag.

#### 11.1 General Requirements

Specific requirements pertaining to the erection of scaffolding will be found in 29 CFR 1926.451. For the purpose of this section, a competent person is defined as, one who is knowledgeable through training or experience as set forth in the requirements of 29 CFR 1926.451. The following are general requirements pertaining to the erection and use of scaffolding:

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- a. The footing of scaffolds must be sound and rigid, capable of supporting the weight of the scaffold and its intended load
- b. Only qualified persons (see Appendix B), shall erect, dismantle, move or alter scaffolds. All scaffolds shall have top rails, intermediate rails and toe boards installed on all open sides
- c. Guardrails shall have a top rail between 38 inches and 45 inches high above the platform surface and have supports not to exceed 8 feet between vertical posts. Toe boards shall be 4 in. high
- d. Scaffolds and components shall be able to support at least four times the intended load
- e. Any components of a scaffold damaged or weakened shall be repaired or replaced immediately. All planking for platforms shall be overlapped at least 12 inches and secured from movement
- f. Straight and/or extension ladders shall be provided for safe access to all scaffolds and work platforms. The use of a scaffold system with built-in ladder is permitted. The top of each ladder shall be secured with wire or rope. Also, the ladder shall extend at least 36 inches above the work platform. Climbing on cross braces is not permitted
- g. Scaffold planks shall extend over their end supports at least 6 in, but not more than 12 inches and shall be wired down or otherwise secured from movement
- h. Legs and uprights of scaffold shall be plumb and rigidly braced to prevent swaying
- i. Overhead protection shall be provided for personnel on a scaffold exposed to overhead hazards. Overhead protection shall also be provided for employees passing by or under scaffolds that pose overhead hazards
- j. Wire or wire rope used for scaffold suspensions shall be capable of supporting six times the intended load

### **11.2 Scaffold Tagging**

The PSNH tagging system will be used to ensure all scaffolding is properly erected and inspected by each Site Contractor's competent person prior to use on a daily or shift basis. Although it is required that each scaffold be inspected by a competent person, it is the responsibility of each user to check his/her scaffold prior to each use to ensure it is safe and properly tagged. Prior to use, a trained scaffold builder must correct any discrepancies. Scaffolding must be appropriately tagged to designate status.

The following tagging system is required.

#### **Green Tag**

A green tag indicates that the scaffold is complete and safe to use with no additional precautions.



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### Red Tag

A red tag indicates an unsafe scaffold or inspection required and is not to be used . The only person who may enter a red-tagged scaffold is a trained scaffold builder while completing or doing repairs on the scaffold. Scaffolds shall be red tagged at the end of each shift when the scaffold is not being used on the next shift. If the scaffold is to be used during the nest shift it will be inspected and tagged appropriately.

### No Tag

If a scaffold has no tag, it is not to be used until inspected and properly tagged. If a scaffold is found to be deficient or unsafe and is tagged green, it should be immediately red tagged and the Site Contractor notified.

### 11.3 Training

All persons using or engaged in erecting/dismantling of scaffolding or persons intending to use scaffolding must be trained in the requirements and the recognition of hazards with regard to the safe use of scaffolding. This training is to be conducted upon initial entry to the job site. Any employee who displays apparent lack of knowledge with regard to scaffold hazards and use shall be immediately retrained. This training shall be conducted by the appropriate Site Contractor with oversight and consultation provided by the URS project ES&H staff and shall conform to the requirements set forth in 29 CFR 1926.451.

### 12.0 Fall Protection

Each Site Contractor shall identify and evaluate all areas of the work site that pose a fall potential of six feet or more to the next surface below. Appropriate measures shall be established to protect employees in all cases. Any employee exposed to a fall of six feet or more is required to have a fall prevention or protection system in place. In addition, all affected employees shall be made aware of each area where hazards exist and shall be thoroughly trained in using the protective measures. This section sets forth general requirements for use of fall protection devices. It is not all-inclusive. Other specific fall protection requirements are contained in OSHA 29 CFR 1926.501 and shall be implemented as required on the project. Climbing stacks and towers requires 100% fall protection to be worn.

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### **12.1 Training**

Fall protection training will be provided to all employees who will be exposed to fall hazards in the work area. The employee's Site Contractor will conduct training with an overview provided by the URS project ES&H staff at new hire orientation. The program will include the following:

- a. Full description of fall hazards in the work site
- b. Procedures for using fall prevention and protection systems.
- c. Fall protection equipment limitations
- d. The elements of total fall distance
- e. Prevention control and fall arrest systems
- f. Inspection and proper storage of fall protection equipment
- g. Equipment strengths and limitations.
- h. Equipment donning and doffing

### **12.2 Fall Hazard Evaluation**

Once an activity evaluation has been accomplished, procedures will be developed, documented and utilized for the elimination or control of potential fall hazards. Site Contractor competent persons will design fall prevention plans. During access and egress from elevated work/walk locations, safety will also be considered.

The following guidelines will be used when planning work at elevated heights:

- a. Involve the Site Contractor's and URS site safety personnel early in the task planning, so that they can recommend appropriate fall protection measures and equipment
- b. Involve qualified engineers when load rating of anchorage points must be determined. Training will be provided as needed.
- c. Involve contractor site engineering when anchor points must be installed.
- d. Require Site Contractors to submit and adhere to a fall protection policy that is equal to or more stringent than the URS policy.
- e. Consider the use of safety nets when evaluating fall protection

### **12.3 Fall Protection System**

When fall hazards of six feet or more cannot be eliminated through other means, a fall arrest or fall protection system will be utilized to mitigate the fall hazard. Proper training on the system is essential and will be conducted prior to use. The type of fall arrest/protection system selected will be dependant upon the task at hand and could include personal fall arrest (PFA) systems, retractable lifelines, positioning systems, safety nets, safety monitor and warning lines. All fall arrest hardware shall meet OSHA, ANSI Z359.1 and A10.14 requirements. Before using such equipment, the Site Contractor's supervisor and user must address the following issues:

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- a. Has the user been trained to recognize fall hazards and to use the fall arrest system properly? Are all components of the system compatible according to the manufacturer's instructions? Have appropriate anchorage points and attachment techniques been identified?
- b. Has the free fall distance been considered so the worker will not strike a lower surface or object before the fall is arrested?
- c. Have swing fall hazards been eliminated?
- d. Have safe methods for retrieving fallen workers been planned?
- e. Has the full body harness and all its components been inspected?
- f. Is any of the equipment subject to welding damage, abrasion, chemical corrosion or sand blasting operations that may weaken them and render them ineffective? This includes lanyards, connectors and lifelines.

### **12.4 Inspection and Maintenance**

To ensure that fall protection systems are ready and able to perform their required tasks, each Site Contractor will implement a program of inspection and maintenance. The following, as a minimum, will comprise the basic requirements of the inspection and maintenance program:

- a. Equipment manufacturer's instructions will be incorporated into the inspection and preventive maintenance procedures
- b. All fall protection equipment will be inspected prior to each use, and a documented inspection in accordance with the manufacturer's guidelines
- c. The user will inspect his/her equipment prior to each use and check the inspection date
- d. All fall protection equipment subjected to a fall or impact load, will be removed from service immediately and inspected by a qualified person (i.e., manufacturer)
- e. All equipment will be checked for mold, damage, wear, mildew, or disintegration. Hardware shall be free of cracks, sharp edges and burns. Ensure that no straps are cut, broken, torn or scraped
- f. Special instructions such as radiation, electrical conductivity, and chemical effects shall be considered. Equipment that is damaged or in need of maintenance will be tagged as unsuitable, and will not be stored in the same area as serviceable equipment
- g. The user and supervisor will inspect anchors and mountings before each use.

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### 13.0 Confined Spaces

This section addresses the issues of evaluating and identifying potential confined spaces, evaluating the associated potential hazards, communicating information concerning these hazards, and establishing appropriate procedures, and protective measures for employees.

#### 13.1 Confined Space Designation

After facility evaluation, spaces that meet the following criteria will be designated as a confined space:

- a. It is large enough and so configured that an employee can bodily enter and perform work
- b. Has limited or restricted means for entry or exit (i.e., tanks, vessels, silos, storage bins, hoppers, vaults and pits)
- c. Is not designated for continuous human occupancy

When new areas become designated confined spaces, PSNH will be notified so that their confined space inventory list may be updated.

Permit required

- a. Contains or has a potential to contain a hazardous atmosphere
- b. Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to a smaller cross section

#### 13.2 Written Procedures

The Site Contractor shall provide a written entry procedure for each confined space to be entered. The procedure shall be provided to the URS Project ES&H Manager or designee for review and comments. It shall include the minimum requirements listed below and shall be controlled on the entry permit:

- a. Hazard Identification - Identify and evaluate all atmospheric and physical hazards (i.e., structural defects, slipping or tripping hazards, fall hazards, temperature extremes, mixers, agitators, fans, loose soil, carbon monoxide, oxygen enriched or deficient atmospheres, etc.)
- b. Hazards that may be created during confined space work are vapors from cleaning fluids, welding fumes, heat treating fumes, coatings vapors, radiation, excessive dust, mist, depletion of oxygen
- c. MSDS for the hazardous materials used in the confined space
- d. Hazard control measures used to isolate the confined space and to eliminate or control hazards before and during entry shall include:

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- 1) Acceptable entry conditions including air quality testing, emergency rescue plan and personnel qualified for confined space rescue
- 2) Means of communication between entrant and safety watch
- 3) Means of communication between safety watch and emergency rescue personnel
- 4) Personal protective equipment required for safe entry
- 5) Proper ventilation for removal of welding fumes or chemical vapors

### **13.3 Level I Confined Space (Permitted)**

A Level I confined space contains or has the potential to contain a physical or atmospheric hazard that may expose personnel to a risk of death or serious physical injury resulting in the inability to self-rescue. Examples of Level I confined spaces include the following:

- a. Any space with the potential for oxygen content below 19.5% or above 23.5%
- b. Any space with the potential for an atmosphere to exceed 10% of the Lower Explosive Limit (LEL)
- c. A confined space that contains an atmospheric concentration above the permissible exposure limit of a material that could cause an acute illness or inability to self-rescue
- d. Other hazards which cannot be eliminated
- e. All confined spaces are considered to be Level I unless evaluated and determined to be Level II by the safety inspector

### **13.4 Level I Entry Requirements**

Level 1-entry requirements are as follows:

- a. Comply with the written entry procedure. Isolate the confined space
- b. Test for atmospheric hazards prior to entry and as needed during the entry. Evaluate the confined space for physical hazards
- c. Comply with the requirements on the entry permit
- d. Provide and use a retrieval system to perform non-entry rescue of entrants from confined space. The retrieval system shall include retrieval line, harness, and lifting device. Retrieval devices shall be determined to be in good working condition prior to entry
- e. The Attendant shall maintain an accountability log of Entrants
- f. Ensure that communications between Entrants and Attendant are in good working order. Devices shall be checked prior to entry to ensure proper communications between Attendant and rescue personnel is established
- g. Rescue from confined spaces must be addressed in the permit process and in the site emergency plans. Rescue personnel shall be trained and familiar with all rescue equipment.

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### **13.5 Level II Confined Space Entry (Non-Permitted)**

Level II confined spaces cannot contain physical or atmospheric hazards that may expose personnel to the risk of death, incapacitation, impairment, or inability to self-rescue due to injury or acute illness. Examples of Level II confined spaces are any heater, tower, tank, boiler, regenerator, ditch, pit or trench more than 4 feet deep that has the following characteristics:

- a. The oxygen content is above 19.5% and below 23.5% and;
- b. The LEL is below 10%
- c. The confined space contains an atmospheric concentration below the permissible exposure level (PEL) of a material that could cause an acute illness or impair the ability to self rescue
- d. Other hazards have been eliminated or controlled by barriers

### **13.6 Responsibilities**

#### **Authorized Entry Personnel (Entrants) Responsibilities**

The authorized Site Contractor entry personnel responsibilities are as follows:

- a. Know the specific hazards that may be present and the behavioral effects of exposure. Determine the permit is valid and posted at the entry site
- b. Properly use the safeguards and protective equipment specified
- c. Maintain communication with the Attendant and evacuate if conditions change or if directed to do so
- d. Notify the Attendant at the time of entry and exit. Sign in and out when an accountability log is required

#### **Attendants Responsibilities**

The Site Contractor safety watch responsibilities are as follows:

- a. Know the specific hazards and the behavior effects of exposure
- b. Be stationed at the entrance of the confined space and maintain continuous contact with all entrants
- c. The safety watch shall never enter the confined space, not even during rescue operations
- d. When a personnel accountability log is required, verify that personnel entering and exiting have signed the log
- e. Be observant for changing conditions and evacuate entry personnel if hazardous conditions arise. Notify the safety inspector immediately
- f. Summon emergency personnel if the situation arises. Prohibit entry by unauthorized personnel

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- g. Ensure that all requirements are met and all safeguards are in place
- h. Ensure that all personnel have cleared the confined space and verify the log at the end of the shift. If someone has not signed out, notify the supervisor immediately. Secure the entrance to the confined space and remove the entry permit
- i. Be identified as the Attendant by wearing a unique colored vest

### **Entry Supervisor Responsibilities**

The Site Contractor safety inspector responsibilities are as follows:

- a. Review the confined space permit for completeness and accuracy
- b. Know specific hazards present in the confined space and the effects of exposure. Verify the confined space is isolated
- c. Conduct air testing to ensure proper oxygen levels. Check for flammable and toxic gases. Post the necessary safeguards and ensure they are in place
- d. Sign the permit to authorize entry and place at the entry point when all requirements have been met

The URS Project ES&H department will assist and advise Site Contractors in establishing and determining the proper confined space entry procedure to meet the requirements of the Merrimack Station Clean Air Project Specific Safety Plan.

### **13.7 Training**

The Site Contractor employees shall receive training that will be documented and retained on file at the job site. All personnel that may be involved in confined space entry shall be trained in the following: Overview of OSHA confined space standard 29 CFR 1910.146

- a. Written entry requirements
- b. Differences between Level I and Level II confined spaces
- c. Permit procedures
- d. Isolation requirements
- e. Tagging/Permit System
- f. Responsibilities of the Entry Supervisor, Authorized Entrants, Attendant and rescue personnel.

### **13.8 Program Evaluations**

URS Project ES&H department will evaluate the confined space program at least annually.

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### 14.0 Welding/Cutting/Compressed Gas Cylinders

Welding, cutting and brazing operations expose workers to a variety of hazards, including burns, fires, eye damage, possible lung irritation, electric shock, slips and falls. This section addresses the issues of evaluating and identifying the specific hazards where hot work is performed, communicating the information concerning these hazards and establishing appropriate protective measures for employees. **Use of ox-Mapp or ox-propane gas is required. Ox-acetylene is not allowed unless no other means exists and prior approval is obtained from the Construction Manager or their PSNH Liaison.**

#### 14.1 Compressed Gas Cylinders

For compressed gas cylinders, the following apply:

- a. Bring only enough gas cylinders into the work area needed to accomplish the work
- b. Gas cylinders should be removed immediately to an approved storage area when they are empty, the work is complete, or will not be used for more than 24 hours
- c. All gas cylinders must be secured from tipping by use of a cylinder cart, or by securing to a suitable structure using chain, #9 wire or equivalent. **Rope is not acceptable.** Do not secure to instrument tubing, or other small piping. Do not secure to welding machine units, or other types of electrical equipment.
- d. Oxygen cylinders must be stored separately from fuel gas cylinders such as Mapp, propane, or acetylene. They must be separated by at least 20 feet or a fire barrier of at least 1 hour rating, extending at least one foot above the top of the valve
- e. Oxygen cylinders and all attachments must be kept free of oil and grease. Employees with greasy or oily hands must not handle these components
- f. Stored cylinders should be kept capped, out of direct sunlight and away from heat sources
- g. When moving cylinders by crane or derrick to a suitable cradle, platform or other device DO NOT use a chain, sling or choker through the cap of the cylinder. Valve caps must be securely in place when moving cylinders
- h. Do not drop or permit cylinders to be struck together violently, even when empty
- i. Cylinders must be secured in an upright position *when* transported in a vehicle
- j. Cylinders must be kept sufficient distance from work to prevent contact with sparks, slag and flames 20 ft. minimum
- k. When not in use, regulators must be removed and protective caps placed over cylinder valves
- l. Do not attempt to fill or mix gases in gas cylinders
- m. Turn off valves and bleed hoses when leaving for lunch or other extended periods of time
- n. Gas cylinders are not to be taken into confined spaces. If work requires the use of torches in a confined space, they are to be taken into the area for the use time required and promptly removed. A combustible gas meter is to be kept in the confined space



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during this time to detect leaks. Do not leave hoses in the confined spaces unattended such as during breaks or at end of shift

- o. The employer shall instruct employees on the proper use of gas cylinders and fuel gases. Gas hoses are not to be stored in closed cabinets or toolboxes.

### 14.2 Gas Welding and Cutting

For gas welding and cutting the following Merrimack Station site rules will apply to all Site Contractors:

- a. Fire Resistant disposable coveralls (worn over appropriate clothing) is required where welding, cutting, burning or heat/flame are in use.
- b. Torches shall be lighted by friction devices only
- c. Acetylene cylinder valves shall be opened slowly, not more than 1 1/2 turns. The valve wrench supplied with the cylinder is the only acceptable tool for this use. It should be left in position on the stem so that the valve can be shut off quickly in case of an emergency
- d. Prior to connecting the regulator, the valve should be opened slightly to clean out dust and dirt and then closed
- e. Pressure reducing regulators are required on all gas cylinders. They must be free of damage and inspected prior to each use
- f. Cutting goggles are required whenever cutting
- g. Proper steps must be taken with regard to fire prevention and protection
- h. Only use hoses designated and approved for use on oxyacetylene torch to gas outlets. Metal clad or armored hose is not recommended
- i. Unusually long lengths of hose should be avoided. Hose must be hung up or strung away from traffic areas to avoid damage and tripping hazards
- j. All fuel gas equipment shall be equipped with back flow prevention devices to prevent back flash
- k. Plastic ties or rope should be used to hang/support hoses, not wire

### 14.3 ARC Welding

For arc welding, the following Merrimack Station site rules will apply to all Site Contractors:

- a. Fire Resistant disposable coveralls (worn over appropriate clothing) is required where welding, cutting, burning or heat/flame are in use.
- b. All welding machines must be grounded.
- c. All equipment must be inspected for damage before each use. Damaged equipment must be removed from service or properly repaired.
- d. Hard hats, welding hoods and eye protection with the proper tint/shade glass must be used. Hands, arms and torso must be protected by use of proper leather equipment such as sleeves and gauntlet gloves.

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- e. Welding leads must be strung overhead at least 7 feet or out of traffic areas if hanging up is not feasible.
- f. Welding screens must be erected around all welding operations where passing employees may be subject to arc flash. This is to include elevated work adjacent to other employees that may be affected by welding flash.
- g. Eye and face protection is required when using a portable grinder, i.e. safety goggles with face shield.
- h. Guards must be in place at all times while in use. If a guard must be removed, the URS Project ES&H department and Site Contractor safety supervisors must be consulted to evaluate the need and advise on alternate protective measures to be taken.
- i. Steps must be taken to protect employees below when overhead welding is conducted. This can be in the form of barricading below or spark containment.

### **14.4 Fire Watch Personnel**

A fire watch may be required in cases that pose the risk of fire or injury to adjacent personnel or by the Job Hazard Analysis. Site Contractor fire watch personnel must be trained in the proper use of fire extinguishers. Fire watch duties consist of the following:

- a. Ensuring that all combustible or flammable material is removed from the area. Warning other approaching workers of overhead work or falling slag.
- b. Observing for fire during and for 30 minutes after work has stopped, and extinguishing them if they occur, this includes over breaks or other non-anticipated work stoppages.
- c. Keeping the welder informed of changing conditions.

### **14.5 Hot Work Permits**

A system of hot work permitting may be put in place to ensure that all required precautions are identified and fire protection or suppression measures are in place. Depending upon the nature and length of the hot work activity, permits may be issued in the form of task- specific or work zone as determined by circumstances at the time of work to be conducted. In general, work zone permits will be typically issued in those areas with localized and repetitive hot work activities in which the surrounding conditions, fire protection systems and combustible loading remain stable. This will be at the discretion of the URS project ES&H manager.

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### 15.0 General Housekeeping

Special attention shall be given to keeping the inside of the structures and surrounding grounds clean and free from trash and debris. Each Site Contractor shall employ sufficient and special personnel to thoroughly clean its work areas continuously each working day and shall cooperate with the other subcontractors to keep the entire construction site clean. This shall include sweeping the floors, collecting and disposing of trash, and all other functions required to keep the erection site clean. Materials and supplies shall be stored in locations which will not block access ways, and shall be arranged to permit easy cleaning of the area. In areas where equipment might drip oil or cause other damage to the floor surface, a protective cover of heavy gauge, flame resistant, oil proof sheeting shall be provided between the equipment and the floor surface so that no oil or grease contacts the concrete. This requirement is applicable to both finished and unfinished floors.

All hoses, cables, extension cords, and similar materials shall be located, arranged, and grouped so that they will not block any access way and will permit easy cleaning and maintenance. At the close of each workweek, and at the close of each day preceding a holiday, to the extent practical, all such items, including specifically named items, which have not been used during the work week, shall be removed from the construction area and stored in Contractor's warehouses or other storage areas.

All trash, debris, and waste materials shall be collected and deposited in designated waste collection areas.

Each Site Contractor shall, at its expense, provide satisfactory personnel to the joint Project cleanup crew in the numbers indicated below. The workers allocated to the cleanup crew shall report to the place designated by URS. For determining the number of workers to be furnished for the cleanup crew, the total manual labor force shall be based upon each site Contractor's and its Subcontractor's manual craftsmen payroll as reported daily and averaged weekly:

<b>Contractor's Total</b> <b><u>Craft Manual Labor Force</u></b>	<b>Number of</b> <b><u>Workers to be Furnished</u></b>
<b>1-30</b>	<b>1</b>
<b>30-50</b>	<b>2</b>
<b>50-100</b>	<b>3</b>
<b>For each additional 50 or</b> <b>fraction thereof</b>	<b>1 additional</b>

Promptly upon the completion of the construction work, all scrap, trash, waste materials, and debris resulting from the work under this Contract shall be deposited in proper waste containers. All Contractor facilities, materials, and construction works shall be removed from the Jobsite. Contractor shall thoroughly clean the work area, removing all accumulations of dust, scraps, waste, oil, grease, weld spatter, insulation, paint, and other foreign substances. Surfaces damaged by deposits of insulation, concrete, paint, weld metal, or other adhering materials shall be restored by the Contractor.

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At the end of construction work, all holes, ruts, settlements, and depressions resulting from the work shall be filled and graded to match elevations of adjacent surfaces, and all areas disturbed by construction shall be restored to their original condition to the maximum extent practicable and as acceptable to Company.

In the event of a Site Contractor's failure to comply with any of the above requirements, the cleanup work may be accomplished by Company at the Site Contractor's expense.

### **16.0 Fire Prevention and Protection**

A large variety of construction material, such as wood, cardboard, paper and flammable gas will be present on site. It is important that the Site Contractors' supervisors and workers are aware of the potential danger of these materials and be familiar with ways to prevent, suppress and report any fires that occur. Report all fires to control room at extension 4140 or 4142. Frequent fire protection inspections and surveys are a vital part of construction safety because of the changing nature of the construction activities. Flammable and combustible materials must be removed from work areas as quickly as possible.

#### **16.1 General Requirements**

The following are general requirements for fire prevention and protection. The local fire department will respond to fires occurring on the job site. The Site Contractor are responsible for adhering to the following:

- a. Fire-fighting equipment shall be readily available, maintained, conspicuously located, and periodically inspected.
- b. Employees will only attempt to extinguish a fire within their capabilities.
- c. Workers shall be trained in the proper use of fire fighting equipment and know the location of the equipment.
- d. Site work areas shall be accessible to fire fighting equipment by way of access roads of not less than 20 feet of unobstructed width.
- e. Emergency telephone numbers are to be posted in all areas

The Merrimack Station procedure for reporting fires on the jobsite is contained in the Emergency Response Section 30. The content will be discussed during initial site orientation and during periodic safety procedure reviews during the course of the project.

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### 16.2 Portable Fire Extinguisher

The Merrimack Station Site Contractor requirements for portable fire extinguishers are as follows:

- a. Fire extinguishers shall have monthly visual inspections.
- b. Monthly visual inspection tags shall be on each extinguisher.
- c. Annual maintenance and hydrostatic testing shall be performed as required.
- d. Records of all inspections and testing are required and will be provided to the URS project safety department when required.

### 16.3 Fire Prevention

The requirements for fire prevention are as follows:

- a. Unless specified for a particular application, untreated canvas, paper, plastic and other flammable flexible materials shall not be used on the jobsite for any purpose. If such materials are on equipment or materials that arrive at the jobsite, they shall be removed and be replaced with an acceptable covering before storing or moving into the construction area.
- b. Likewise, corrugated paper and fiberboard cartons will not be permitted in the construction area for the storage or handling of materials. If such cartons do arrive in the construction area, they shall be immediately unpacked and removed from the jobsite. Acceptable flexible materials for covering shall be waterproof and flame resistant.
- c. Formwork, scaffolding, planking and similar materials which are combustible but which are essential to execution of the Work shall be treated for fire resistance or otherwise protected against combustion resulting from welding sparks, cutting flames, and similar fire sources.
- d. Temporary heating facilities shall not be left unattended.
- e. There shall be no smoking/no tobacco use on the project, except in specified areas and times as designated by URS management.

### 16.4 Open Yard Storage

The requirements for the Site Contractors open yard storage areas are as follows:

- a. Combustible material stored in open yards shall be stable and stored in piles, no higher than 20 feet. Open yards shall be free of unnecessary combustible material such as paper, cardboard, weeds, grass and rubbish.
- b. In an open yard that has combustible material storage, portable extinguishers with a 2A-rating or greater shall be conspicuously located so that the distance of travel to unit is no further than 100 feet.
- c. Yard storage of combustible material or equipment to be installed should be no closer than 3 feet from a structure.

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### 16.5 Indoor Storage

The requirements for the Site Contractors indoor storage are as follows:

- a. Material stored indoors shall not block exits, walkways, control centers or fire protection equipment.
- b. A barrier shall segregate incompatible materials. The barrier must have a fire rating of at least one hour.
- c. Materials shall be piled so that the spread of fire is minimized.

### 16.6 Storage of Flammable Liquids

The Site Contractors storage of flammable liquids shall be in accordance with 29 CFR 1926.152. Flammable storage areas must be located on a impervious surface or placed in a secondary containment in accordance with PSNH environmental requirements.

## 17.0 Steel Erection

Structural steel erection is one of the most difficult and hazardous jobs in construction. OSHA Standards 29 CFR 1926.750, 751, 752 set forth specific requirements with regard to structural steel erection. These standards must be strictly adhered to during Merrimack Station Clean Air Project construction. The evolvement of the JLG and Scissor lifts have enabled steel workers to conduct these tasks in a much safer manner and are recommended for use whenever practical. Listed below are a few of the more common requirements of the standards. This is not an all-inclusive list.

### 17.1 Flooring Requirements

Flooring requirements are as follows:

- a. Temporary flooring shall be maintained within two stories or 30 feet, whichever is less. Below and directly under that portion of each tier of beams on which any work is being prepared. Safety nets or other fall protection systems shall be used at all times when there is a possibility of a fall greater than 6 feet.
- b. A 1/2-inch diameter wire rope or the equivalent shall be installed 42 in. high around the periphery of metal decked or planked temporary floors. Mid rail cable must also be installed prior to relaxing fall protection requirements. Toe boards should also be in place to protect people below
- c. **NO WORK OPERATION is exempt from the six (6) foot fall protection requirement; these include bolt-up, connecting, decking operations, etc.**

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### 17.2 Structural Steel Assembly

The following applies to the Site Contractors structural steel assembly:

- a. When solid-web structural members are placed in their final position, they shall not be released from the load line until they are secured with two bolts or 10 percent of the bolts, whichever is greater, drawn wrench tight at each member connection.
- b. Tag lines shall be used on all loads.

### 17.3 Bolting, Riveting, Fitting Up

The following applies to bolting, riveting, and fitting up:

- a. Containers that are secured so they will not be accidentally displaced shall be provided for storing and carrying rivets, bolts and drift pins.
- b. Pneumatic tools shall be disconnected and pressure released prior to doing repairs or adjustments. Sections of air hoses shall be pinned/wired to prevent accidental disconnect.
- c. When bolts or drift pins are being knocked out, a means shall be provided to keep them from falling. Impact wrenches shall be equipped with a locking device to retain the socket.
- d. A means shall be provided to keep knocked off or backed out rivet heads from falling.
- e. A safety wire shall be attached to the snap and handle of pneumatic riveting hammer at all times.

## 18.0 Respiratory Protection

The use of respiratory protection equipment is necessary for the safety and health of the Site Contractors' employees working in atmospheres where harmful or toxic dusts, fogs, fumes, mists, gases, smokes, or vapors exist or in an oxygen deficient atmosphere. Any atmosphere containing less than 19.5% oxygen is considered to be oxygen deficient for the purposes of this section.

The Merrimack Station Clean Air Project Site Contractors, with support and consultation being provided by the URS project ES&H department, are responsible for implementation of an effective Respiratory Protection Program, which includes the responsibilities listed below.

- a. Identify personnel potentially requiring use of respiratory protection.
- b. Provide respiratory protection training for all workers that will wear respirators and ensure that all Respirator Selection Worksheet (Attachment VII) forms are complete.

A hazard analysis of the workplace must be performed before selecting respirators. The analysis must consider inhalation hazards under routine and foreseeable emergency conditions. Other factors to consider when choosing respirators include skin and eye exposure, the effects of heat or cold, use

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of protective clothing, employee conditioning, and workload. Respiratory hazards that must be identified include:

- a. Oxygen Deficiency
- b. Air Contaminants
- c. Particulates
- d. Toxic Gases

### **18.1 Evaluating Exposures**

There are several options on how to evaluate exposures:

- a. One option is to rely on personal monitoring data of employees. Representative exposure data provided by industry or laboratory studies is acceptable as long as it applies to similar tasks and conditions at the work site
- b. The professional judgment provided by the Site Contractors safety supervisors and/or as recommended by a qualified industrial hygienist or outside safety professional may also be employed for the task
- c. If the exposure cannot be identified or estimated, then the atmosphere is considered immediately dangerous to life or health (IDLH). Atmospheres with levels of oxygen below 19.5% are also defined as IDLH.
- d. The Site Contractors' trained and qualified technical personnel shall perform assessment of the degree of respiratory hazard through sampling and testing of the work environment. Problems requiring special respiratory protection should be discussed with the URS project safety department.
- e. Each Site Contractor shall establish procedures to control respiratory hazards through engineering or administrative controls, product material substitution, respiratory protective devices, or a combination of these methods
- f. URS project safety department will perform annual evaluations of the effectiveness of the project's respiratory protection program. These evaluations shall be documented and made available for review.
- g. Each Site Contractor shall:
  - 1) Select and provide adequate respiratory protective devices for use on the project. This selection shall be based upon the specific type of air contaminant(s), the concentration of the contaminants(s) or oxygen deficiency in the work environment.
  - 2) Establish a change schedule for air-purifying respirators based upon objective information or data that will ensure that cartridges are changed before the end of their useful life. OSHA has mandated that reliance on warning properties is no longer valid.
  - 3) Consult with their Project Medical Consultant (PMC) to conduct evaluations of respiratory protection medical forms. The PMC, where required, shall determine the physiological and psychological status that is relevant to wearing different types of respirators. The PMC shall review all



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questionnaires and test results and verify in writing that workers are physically and psychologically able to perform work while using respiratory protective devices. These determinations shall be made using guidelines established by the PMC.

### **18.2 Requirements**

#### **General**

Each Site Contractors worker's exposure to contaminated air should be controlled, where practicable, by engineering or administrative controls or by substitution of process materials with less toxic substances. Only where engineering controls are not possible or are not completely effective, or while engineering controls are being instituted, should appropriate respirators be used.

All Site Contractor personnel required to wear respirators will be properly trained, fit tested and given medical clearance at initial job assignment and annually, thereafter, in accordance with the requirements set forth in Section 18.2 of this procedure.

Training will be conducted for each type of positive or negative pressure air purifying respirator used.

Fit testing will be conducted for each type, manufacturer, model, and size of respirator used.

Facial hair that may interfere with a proper respirator face piece to face seal or exhalation valves shall be removed before a respirator is allowed to be worn.

Eyeglass temples will interfere with the proper sealing of a full-face respirator. Personnel who wear eyeglasses and are required to don full-face respirators will be fitted with respirators modified with special eyeglass kits. Alternatively, personnel may wear corrective contact lenses, when approved to do so by the examining physician or PLHCP.

#### **Medical Surveillance**

All Site Contractor personnel, who may be required to wear a respirator, shall answer all questions and sign the Respiratory Protection Medical Form (OSHA's Appendix C to 29 CFR 1910.134). A "yes" answer to any questions 1 through 8 in Part A, Section 2 will require further evaluation by a physician or other licensed health care professional (PLHCP) and receipt of a signed release statement from that PLHCP authorizing the worker's use of an air purifying and/or supplied air respirator. The Site Contractor's safety supervisor will review the form with each worker prior to completing it to ensure all questions are completely understood. Once the worker has completed the questionnaire, the following tests may be administered at the direction of the examining physician or PLHCP.

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- a. Pulmonary function testing (PFT). If necessary, a PFT should be performed using standard NIOSH protocols and include forced expiratory volume in one (1) second (FEV1), forced vital capacity (FVC), and calculation of the FEV1-to-FVC ratio, with interpretation and comparison to normal predicted values corrected for age, height, race, and sex. A permanent record of flow curves shall be placed in the worker's medical records. At a minimum, the tests shall be conducted by a NIOSH certified technician and the results interpreted by the examining PLHCP
- b. Blood pressure
- c. Electrocardiogram (EKG). A standard, 12-lead resting EKG may be performed at the discretion of the examining physician or PLHCP. A "stress test" (graded exercise) may be considered particularly where heat stress or other extreme physiological stress may occur
- d. Chest X-ray. Posterior/anterior and lateral chest x-ray, or as specified by the examining physician or PLHCP
- e. Records generated in support of any of the above shall be retained in accordance with 29 CFR 1910.1020
- f. Any other test that the examining (Physician or other licensed Health Care Professional) PLHCP deems appropriate toward determining the employee's capability of wearing a respirator

After a review of the results, the examining PLHCP will issue a completed and signed Physician' Release Statement, indicating that the employee can or cannot wear respiratory protection. This statement shall be provided to the Site Contractor's safety supervisor and maintained in the employee's personal file.

### Training

Site Contractor employees, who have the responsibility for overseeing the work activities of one or more employees that must wear respirators, should be given adequate training to ensure the respirators are properly used. Adequate supervisor training should include, but not necessarily be limited to the following:

- a. The nature and extent of respirator hazards to which persons under their supervision may be exposed
- b. The principles and criteria of selecting respirators
- c. The issuance and inspection of respirators
- d. The maintenance and storage of respirators
- e. The location rules concerning respirator use

### *Training of Person(s) Issuing Respirators*

All Site Contractor personnel assigned the task of issuing respirators to persons who must wear respirators for protection against harmful atmospheres should be given adequate training to ensure

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that the correct respirator is issued for each application. This training should include, but not necessarily be limited to, the following:

- a. Establishment of a working knowledge of the specific types of respirators to be issued, their limitations, and the importance of issuing only the respirators for which each user is specifically approved
- b. Familiarization with the respirator maintenance and repair program in order to be able to identify any respirator that is improperly cleaned or needs repair
- c. Familiarization with the procedures for respirator issue. Only persons trained to ensure that proper respirators are issued shall be permitted to issue respirators to persons needing them

### *Respirator Users*

Each Site Contractor shall ensure that respirator users are qualified and trained prior to being assigned to work areas requiring respirators. The training shall include a requirement that the employee demonstrate knowledge of at least the following points:

- a. Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protection offered by the respirator
- b. The limitations and capabilities of the respirator
- c. Actions to take during emergency situations involving respirator malfunction
- d. How to inspect, put on, remove, use and perform a user seal check
- e. The procedures for maintenance and storage of the respirator
- f. How to recognize medical signs and symptoms that may limit or prevent the effective use of the respirator
- g. What OSHA generally requires the employer to do under its respiratory protection program
- h. Fit testing not required for voluntary respirator use. (CFR 1910.134 appendix D)

### *Training Frequency (Annually)*

All Site Contractor employees required to use respirators shall be trained initially prior to wearing a respirator. All Site Contractor supervisors, respirator issuers, and respirator users shall be trained annually. Retraining shall occur more frequently if an employee shows they do not know or understand how to properly use and care for their respirator.

### *Fit Testing*

#### *Qualitative/Quantitative Fit Testing*

Qualitative and quantitative fit testing performed by the Site Contractors must be performed in negative pressure mode for all tight fitting respirators, whether the respirator is positive or negative pressure demand. (Note: Irritant smoke with appropriate precautions is the test media of choice.)

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- a. Each person will have a qualitative or quantitative fit test when first required to wear a respirator, every 12 months when respirators will be worn thereafter, or as hazards or respiratory needs change
- b. Each person will have a qualitative or quantitative fit test for each specific make(s) and model(s) of respirator(s) for which the worker may wear
- c. Under no circumstances shall a worker be allowed to use any respirator if the results of the qualitative fit test indicate that the worker is unable to obtain a satisfactory seal

### 19.0 Lockout/Tagout

#### Clean Air Project Lockout/Tagout Program

July 13, 2009 Rev. 6

##### **PURPOSE**

The purpose of this procedure is to outline and describe methods for isolating energy sources to ensure protection from energized systems for all Merrimack Station and Clean Air Project (CAP) employees.

##### **PROGRAM SCOPE**

Hazardous energy control through a Lockout/Tagout (LOTO) program will be implemented throughout CAP construction activities including temporary power installation and usage, power tie-in's and connections to existing systems, testing/commissioning of new equipment installation and final start up of new equipment. During these activities there will be a requirement for two LOTO programs (URS LOTO and PSNH LOTO) to be functional and available for implementation.

All work requiring energy isolation of Merrimack Station Points of Demarcation (PODs) for personnel protection will be performed in accordance with the PSNH LOTO program referenced in this program as Appendix A. Danger Do Not Operate Tag placement, conforming to both the PSNH and URS LOTO Programs, will be implemented at the plant approved Point of Demarcation (POD) which separates the two LOTO Programs.

All construction phase work that utilizes temporary electrical power from designated URS distribution centers, requiring energy isolation for personnel protection, will be performed in accordance with the URS LOTO program referenced in this program as Appendix B. If fed from a Merrimack Station-owned source, then this isolation device will be downstream of a POD.

##### **WORK SCOPE**

The CAP has four major island contracts and principle contractors for each: FGD Absorber, FGD Waste Water Treatment Facility, Material Handling, and Chimney. There are also four phases of work where PSNH

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and URS LOTO programs may both be implemented. Phase 1 will be tie-in's followed by start up, commissioning and turnover.

During the construction phase of work, prior to testing or start up activities, the URS LOTO program will be implemented for control of electrical and mechanical energy sources on the construction side of the POD. Any energy isolation requirements at the POD will be coordinated through, and isolated by, CAP/PSNH designated employees following the PSNH LOTO program. The URS LOTO program will also be used at the POD and will utilize a tagging system similar to the PSNH tagging system.

### **DEFINITIONS**

#### Authorized Employee

Any qualified employee, who is knowledgeable about the work process and, in URS's case, is authorized by URS management to conduct LOTO operations in fulfillment of work activities.

#### Capable of Being Locked Out

An energy isolating device is capable of being locked out if it has a hasp or other means of attachment to which, or through which, a Lock or Tag can be affixed.

#### Competent Person

An individual who by reason of education, training, and experience can identify existing and potential hazards that are or may be dangerous to employees and has authorization to take prompt corrective measures to eliminate their cause. URS Site Management shall assign a Competent Person to oversee the installation and removal of each system requiring LOTO.

#### Energized

Connected to an energy source or containing residual or stored energy.

#### Energy Isolating Device

A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following: a manually operated electrical circuit breaker; a disconnect switch; a fuse; a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors, and, in addition, no pole can be operated independently; a line valve; a block; and any similar device used to block or isolate energy. Push buttons, selector switches and other control circuit type devices are not energy isolating devices.

#### Energy Source

Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

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### Lockout

The installation of a controlled Lock is to prevent an undesired change in position or energized state of equipment.

### Lockout Device

A prominent Locking device such as, a Lock and a means of attachment, which can be securely fastened to an energy isolating device in accordance with URS LOTO procedure, to indicate that the energy isolating device may not be operated until all Lockout Devices are removed.

### PSNH Master Tag [MT] [if used]

Extension of a Danger Do Not Operate (Red) Tag(s). It functions as a personal Lockout device when signed on/off by an AE, and clearly identifies each AE protected. Signing an MT is equivalent to signing the individual Tag(s) associated with an isolation design.

- A. The MT will be maintained in a secure location, accessible to PIA(s) and PAE(s).
- B. The Location List shall be kept with MT until the MT is cleared.
- C. The MT will be cleared before additions or deletions are made in the isolation design.
- D. An isolation design may have more than one MT.

### Point of Demarcation [POD] (See Appendix C for Point of Demarcation List)

An Isolation Device that is designated to be the separation point between the PSNH LOTO program and the URS LOTO program. The device will be operated ONLY by PSNH Merrimack Station Shift Supervisor (or his designee), also known as the Person in Authority (PIA). A list of all current PODs will be maintained in the Shift Supervisor's Office. The Shift Supervisor who adds or deletes a POD from the list will initial and date the addition/deletion, and will also require the URS PCM to initial and date the change.

### Qualified Employees (URS)

Those personnel determined by contractor management to be knowledgeable and competent to perform LOTO. To be qualified, workers shall successfully complete training to URS and/or their own Companies LOTO procedures. All URS Competent Persons and Authorized Employees involved in LOTO shall meet the criteria for a Qualified Employee.

### Servicing and/or Maintenance

Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning or un-

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jamming of machines or equipment and making adjustments or tool changes, where the employee may be exposed to the unexpected energizing or startup of the equipment or release of hazardous energy.

### Tags Plus

Additional measures incorporated into an isolation, to demonstrate that it is equivalent to a Lockout procedure. Tags Plus requires a physical action or measure, not a behavior, culture, or administrative procedure, to prevent accidental or inadvertent re-energization of equipment/system. These measures are intended to keep a worker safe if a person makes a single mistake. Examples of Tags Plus include, two tagged valves in a series, one tagged valve with a tie wrap connecting the valve handle to the yoke, grounding an electrical circuit, a racked out breaker, inaccessible location, removal of a valve handle on a tagged valve, tie wrap through place where lock would be applied.

### Tagout

The placement of a Tagout (Danger Do Not Operate Tag) device on an energy isolating device, in accordance with URS and PSNH established LOTO procedures, to indicate that the energy isolating device may not be operated until the Tagout device is removed.

### Tagout Device

A prominent warning device such as, a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device may not be operated until the Tagout device is removed.

### Task Supervisor

A Competent Person who shall be knowledgeable and authorized by Contractor Manager to conduct LOTO operations and is responsible for field implementation of this procedure and identifying and assigning competent persons to perform LOTO procedures on systems.

## **RESPONSIBILITIES**

### Person in Authority (PIA)

The PIA (Merrimack Station Shift Supervisor or his Designated Working Foreman Operations) is responsible for arranging for deactivation of equipment, properly isolating, attaching tags as indicated on Location List, and conducting testing to ensure that the equipment is effectively isolated for servicing and maintenance.

### Primary Authorized Employee (PAE)

PAE shall have knowledge of the overall job scope, understand the isolation and determine Safe-to-Work under their LOTO control; have control of the work conditions which may affect work group(s) safety, and

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coordinates changes in work scope with other affected AE's or PAE's and the PIA to assure isolation is maintained.

### Authorized Employee (AE)

AE(s) possess the necessary knowledge and experience within the proper job classification for duties assigned and have completed required LOTO training. AE's must ensure tag(s) are correct, on the right equipment, and the isolation points are in the designated position (where possible-exterior observation only) before signing on to the tag(s). AE's must receive the Safe-to-Work authorization from the PAE before starting work.

### URS Project Construction Manager (PCM)

The PCM is responsible for field implementation of the URS LOTO procedure and for identifying and assigning Competent Persons and Authorized Employees to perform work in accordance with the URS LOTO program. The PCM, along with the CAP/PSNH designated employees and ultimately the PIA, are responsible for identifying areas where the PSNH LOTO program will be implemented. The PCM shall thoroughly communicate the LOTO needs to the Merrimack Shift Supervisor or his designee for proper isolation.

### URS Safety Manager (SM)

The SM is responsible for continuous monitoring of the URS LOTO procedure and PSNH LOTO procedure where applicable by performing inspections of affected work areas and interfacing with competent and authorized personnel.

### Competent Person (URS)

The Competent Person is responsible for field inspection, oversight and procedural compliance of the URS LOTO program.

### Authorized Employee

The Authorized Employee is responsible along with the Competent Person for ensuring work is performed safely and in compliance with URS and applicable PSNH procedural requirements.

### Contractor Supervision

All contractor supervisors shall be knowledgeable on the PSNH and URS LOTO programs and be responsible for initiation and implementation of the LOTO program specific to work activities.

### Contractor Employees

All contract employees, when applicable, shall be trained on the URS program.



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### **LOTO APPLICATIONS**

As described above, Point of Demarcation (POD) will be identified and include steps for LOTO and the placement of Danger Do Not Operate Tags by PSNH and URS. When the need to isolate a POD is required the PSNH Tag will be placed first to signify that PSNH is the only party who may operate the device and then the URS Tag is placed to cover the down-stream protection. A URS employee and the CAP/PSNH designated employee will sign onto the PSNH red tag. URS will be responsible to ensure those requiring isolation for work on the construction side (down-stream) of the POD have a means to sign on to the URS Tag or other suitable documentation to ensure they are protected while performing work under the isolation. In all instances the URS and PSNH Tags will be hung on the same POD device. Once the work requiring isolation is complete, URS will communicate to the PIA that the work is complete. The URS red tag will be signed off and removed from the POD device before the PSNH red tag is signed off and removed. **NOTE:** Contractors will need to wear Fire Retardant clothing and be escorted to enter the FGD Construction Substation by a CAP/PSNH designated employee to access the Construction Substation Switchboard.

URS will develop a laminated (or similar) communication to be placed in pre-arranged locations to communicate steps required if the POD will need to be isolated. In all cases PSNH will operate the POD.

URS LOTO Policy will meet PSNH LOTO Policy at a minimum and include Tags-Plus.

URS will not hang locks at a POD, they will use tags with PSNH. For the FGD Construction Laydown Area a PSNH lock may be used, along with tags, until such a time when the POD is secured via a fence or similar structure.

URS may use locks for LOTO except at PODs.

### **LOCKOUT DEVICE APPLICATION**

Lockout devices shall only be affixed to the energy-isolating device by a URS Authorized Employee.

Lockout devices, where used, shall be affixed in a manner that will hold the energy isolating devices in a "safe" or "off" position.

### **TAGOUT DEVICE APPLICATION**

Tags, used under the URS LOTO program, shall only be affixed to the POD energy-isolating device by a URS Authorized Employee. Tags, used under the PSNH LOTO program, shall only be affixed by Merrimack Station Operations Personnel.

Tags, where used, shall be affixed in such a manner as will clearly indicate that the operation or movement of energy isolating devices from the "safe" or "off" position is prohibited.

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Where a tag cannot be affixed directly to the energy isolating device, the tag shall be located as close as safely possible to the device, in a position that will be immediately obvious to anyone attempting to operate the device.

### **20.0 Rigging**

Only Site Contractor qualified personnel shall use rigging equipment. Each Site Contractor will conduct rigging operations within the requirements of 29 CFR 1926, 550 and 753.

#### **20.1 Inspection and Use**

General inspection and use guidelines for each Site Contractor are as follows:

- a. Rigging equipment shall be inspected by a qualified person, as specified by the manufacturer, prior to use on each shift and as necessary during use to ensure that it is safe. In addition ANSI inspection guidelines shall also be followed
- b. Defective rigging shall be removed from service and destroyed immediately to prevent accidental re- issue and use
- c. The use and maintenance of rigging equipment shall be in accordance with recommendations of the rigging manufacturer. When rigging equipment is not in use, it shall be removed from the immediate work area and properly stored to maintain it in good condition
- d. Hoist ropes shall not be wrapped around the load
- e. Running lines located within 6 feet 6 in. of the ground or working level shall be guarded.
- f. All eye splices shall be made in an approved manner.
- g. All load hooks shall be equipped with assemblies (mouse) of a type that can be closed and locked, eliminating the hook throat opening.
- h. All rigging hardware (i.e., hooks, shackles, rings, etc.) displaying excessive wear or damage shall be immediately taken out of service and destroyed or repaired. All loads require the use of tag lines.
- i. A tagging system or other means shall be implemented to ensure rigging equipment is not subjected to loads exceeding their rated capacity.

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### 20.2 Wire Rope

Wire rope guidelines are as follows:

- a. Wire rope found to be damaged and removed from service shall be cut up to prevent accidental use.
- b. Wire rope clips shall be installed with the u-bolt on the dead end of the wire. Nuts shall be tightened after initial use. Remember, "Never saddle a dead horse".
- c. Protruding ends of strands in splices on slings and bridles shall be covered or blunted. Eye splices in wire rope shall have a minimum of five full tucks
- d. Eyes on wire rope bridles, slings, or bull wires shall not be formed by wire rope clips or knots

### 20.3 Chain

Chain guidelines are as follows:

- a. Only alloyed chain shall be used for rigging
- b. Chain shall be inspected weekly and before each use for damage or wear in links

**Warning: Job made hooks and makeshift fasteners shall not be used.**

### 20.4 Fiber Rope (Natural and Synthetic)

Fiber rope guidelines are as follows:

- a. Slings shall be inspected prior to each use and as needed during the work shift
- b. Protection shall be provided between the sling and sharp unyielding surfaces of the load to be lifted (softeners)

## 21.0 Excavations

Excavation means any manmade cut, cavity, trench, or depression in an earth surface.

The Site Contractor general requirements for excavations are as follows:

- a. Prepare and submit for signatures an "Excavation, Trenching and Ground Penetration Permit."
- b. Trenching or excavation shall be conducted through the PSNH liaison and the proper authorities will be contacted before beginning the excavation process. Prior to breaking ground for trenching or excavation call **New Hampshire "Dig Safe" 1-800-225-4977**. Prior to the start of excavating, a meeting will be held to determine the location of existing underground obstructions and to determine the most expedient and safest method of excavating. URS and PSNH representatives and the Site Contractor's designated on site competent person shall attend and participate in this meeting. An excavation pre-job meeting

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will be held and all applicable parties must attend and sign the pre-job. Where there is a possibility of existing underground utilities, the area to be excavated shall be electronically scanned. The intended edges of the excavation will be identified with orange paint prior to commencing the dig.

- c. The location of underground utilities will be identified with spray paint as follows:
  - 1) Gas/Oil/Steam - Yellow
  - 2) Electric - Red
  - 3) Blue-Waterline
  - 4) Green-Sewer/Waste line
- d. Surface and subsurface obstructions that could create a hazard shall be removed if possible and shored, braced, propped, or slung if removal is not possible
- e. Safe means of access and egress from trenches shall be provided so there is no more than twenty five (25) feet of lateral travel to safe egress
- f. Surface traffic shall be diverted and the excavation shall be protected by means of a barricade, handrail, or other suitable means
- g. It is reasonable to expect dangerously stagnate or accumulated toxic air in any excavation. If adequate means of ventilation is not available or a hazardous atmosphere could be expected to exist, the excavation shall be considered a confined space and the confined space/closed vessel entry program shall be activated. By definition any excavation over 4 ft in depth is a confined space. If no hazards exist, nor the potential of hazards, the excavation will be classified as a Level II non-permit confined space.
- h. Additional hazard consideration shall be acidulous water, residual PCB, and other substances during excavations. These hazards and control measures shall be part of the pre-excavation permit process.
- i. All soils on the Merrimack Clean Air Project site are to be treated as Type 'C' soils for the duration of the project.

### **21.1 Competent Person**

Each Site Contractor performing excavation work shall designate a competent person. The competent person must have had training in, be knowledgeable about soil analysis, the use of protective systems and the requirements of OSHA 29 CFR 1926 Subpart P. They must be capable of identifying existing and predictable hazards in excavation work and have the authority to take prompt measures to abate these hazards. The Site Contractor's competent person must be able to do both visual and manual soil testing. It will be the competent person's responsibility to oversee all excavations on the project site. The competent person will make daily inspections looking for changing conditions and determine on a daily or more frequent basis if conditions are suitable for safe work in the excavation. The Site Contractor's supervisor and the competent person shall ensure that a properly executed excavation permit is in place prior to excavating starts. Daily pre-entry inspections by the Site Contractor's competent person shall be performed and documented. A professional engineer registered in the State of New Hampshire shall design shoring for an excavation of greater than 20-feet in depth. A licensed engineer shall do soil classification. All soils

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on the Merrimack Clean Air Project site are to be treated as Type 'C' soils for the duration of the project.

### 21.2 Shoring/Sloping

All excavations greater than five feet but less than twenty (20) feet in depth shall be shored using OSHA (29 CFR 1926 Subpart P), acceptable shoring or will be laid back (stepped or sloped) at an angle of repose determined as follows: one and one half horizontal to one vertical (34 degrees horizontal). If this option is used no other parameters are required except a daily inspection by the designated competent person. Maximum allowable angle of repose may be determined by classifying the soil as type "C", type "B", type "A" or stable rock. Table 2 applies for these classifications. The competent person shall indicate soil classification designation on the excavation permit. All soils on the Merrimack Clean Air Project site are to be treated as Type 'C' soils for the duration of the project.

**Table 2. Excavations Twenty (20) Feet Or Less**

Classification	Horizontal or vertical	HOR Angle
Stable Rock	Vertical	90°
Type A	¾ to 1	53°
Type B	1 to 1	45°
Type C	1 ½ to 1	33°
Exception: A type "A" short term (open 24 hours or less) excavation of twelve (12) feet or less may have one half to one angle of repose.		

Trench boxes may be used provided they have sufficient strength to withstand all external forces to which they may be subjected.

### 22.0 Site Medical Services

Prior to commencing work on the project, URS shall assure that adequate medical facilities and staff have been set up and placed in service.

#### 22.1 URS Project ES&H Manager Responsibilities

The URS project ES&H Manager is responsible for reviewing project requirements included in this document, 29 CFR 1926 along with project scope to ensure that sufficient staff and medical services are set up and made available for proper care of injured employees. The project shall not commence until these requirements are fulfilled. In addition, the URS project ES&H Manager will do the following:

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- a. Periodically monitor the activities of the medical facility to ensure compliance with all standards and requirements of the project
- b. Periodically review the first aid treatment, log and other required documentation to assure accuracy and completeness
- c. Develop and implement a light duty/restricted duty program. The work program should provide the injured employee work that will accommodate a speedy return to full work status. Light duty/restricted duty work must not put the employee in jeopardy of further injury and must be such that the employee can provide a useful service to the project.

### **22.2 First Aid Log**

A record of all injuries/illnesses treated by first aid responders shall be entered into the logbook. As a minimum, the following information will be entered:

- a. Date and time of injury
- b. Date and time of treatment
- c. Name of injured employee
- d. Person giving treatment
- e. Nature of injury
- f. Type of treatment
- g. Initial/follow-up treatment
- h. Work restrictions and associated duration
- i. Plant location where injury occurred
- j. Activity which resulted in the injury
- k. Name of Foreman/Supervisor

### **22.3 Workers Compensation Insurance Administration**

The URS ES&H Dept. and management will act as an interface between the Site Contractors, PSNH, and the Owner Controlled Insurance Program administrators.

### **23.0 Accident Investigation/Reporting**

Accident investigation is a fact-finding procedure. The facts are used to evaluate accident causes, develop corrective and control measures and to assure their implementation to prevent recurrence of the accident. Each injury, incident and near miss will be thoroughly reviewed with this goal in mind. Minor injuries also need to be investigated by the respective foreman and/or supervisor and corrective actions taken. More serious accidents or near miss require an in-depth assessment. All investigations and reports will be documented and forwarded to URS and PSNH management. The guidelines for accident investigation on the project are as follows:

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### **23.1 Accident Investigation Team**

The accident investigation team shall be made up of the Site Contractor's supervisor(s), URS's project ES&H manager or designee, the involved employee, the employee's supervisor, witnesses and other knowledgeable personnel as identified. Depending on the severity of the accident, the Site Contractor, URS project construction management and other management personnel will assist in the investigation. All project notification and reporting requirements will be followed.

### **23.2 Accident and Incident Reporting**

The employee must report all accidents, injuries, near misses and hazards or potential hazards that could result in injury or property damage immediately to their supervisor. The supervisor shall advise all affected employees and remove them immediately from the effects of the hazard. The supervisor shall then do the following:

- a. Notify personnel deemed responsible for correcting the situation
- b. Secure the area by barricading or posting sentries to keep personnel from entering the affected area
- c. Ensure the proper steps are completed and the hazard is eliminated or proper control measures are put into place prior to removing barricades and allowing workers to return to the area. Each employee must be thoroughly briefed on the existing hazard and applicable control measures if it applies
- d. Notify and request assistance, if necessary, from the URS project construction management staff

### **23.3 Accident, Incident and Near Miss Investigations**

The focus of accident investigations is to prevent future accidents and injuries and to increase the effectiveness of the Merrimack Station Clean Air Project Site Specific ES&H Program. As a guideline, for each occurrence a meeting to discuss initial findings is to be held the same day or the morning following the incident. During the investigation, communication with all parties involved will be maintained and informational meetings held as deemed necessary. A formal written report of the investigation findings should be issued no later than seven (7) days after the incident.

#### **Immediate Action**

The following are the immediate actions to be taken:

- a. Assure injured employee(s) received immediate and adequate medical care
- b. Secure the scene to preserve evidence
- c. Identify all witnesses as soon as possible
- d. Identify any hazard that may still exist and eliminate or control them to prevent any further injury (interim measures)

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- e. Assemble the investigation team as soon as possible. If the injured or involved employee(s) will be available reasonably soon, set a time when they will be available. If it is apparent that person will not be available then the investigation team should assemble immediately
- f. The area must be roped off or otherwise secured until released by the URS Project Construction Manager, Project ES&H Manager or designee
- g. The investigation team shall assign corrective action to a responsible person, along with a required completion date. A follow-up meeting will be held at a predetermined time with the responsible person, Site Contractor Superintendent and URS construction management attending to discuss the corrective action progress.

To ensure that thorough Event Investigations are conducted, proper documentation is created and corrective actions are developed and implemented, the below steps will be followed.

Upon an offsite medical visit, near miss, property damage or other significant safety event occurrence, the affected Subcontractor will:

1. Immediately notify their respective Merrimack Clean Air Oversight Construction Manager and Merrimack Clean Air Safety Department of the event.
2. Have their Foreman and/or General Foreman begin an investigation of the event with the necessary employees participating.
3. Request Merrimack Clean Air Safety personnel, if needed, to assist the Subcontractor personnel with initial discovery efforts.
4. Within 24 hours, meet with Merrimack Clean Air Construction Management and Safety Department, and provide a preliminary report of the investigation findings. This report will contain a timeline of the event, causes of the event, corrective actions items, and follow-up actions that are necessary. During the review of the Subcontractors investigation report, and if it is determined further investigation information is needed, the Subcontractor will be requested to provide the information in their final report.
5. Complete the corrective actions and track them to closure.
6. Assist Merrimack Clean Air Safety with assembling a Merrimack Clean Air Event Narrative using the Subcontractor's final report for information.
7. Review the Merrimack Clean Air Event Narrative for acceptable information and actions. The Merrimack Clean Air Site Construction Manager or their designee will approve the report by signing the report.
8. Upon completion of the Merrimack Clean Air Event Narrative review, be given a signed copy. The Event Narrative will then be stored in the Merrimack Clean Air Safety Database and distributed to appropriate Merrimack Clean Air personnel.



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### **23.4 Required Documentation**

Each contractor shall submit a monthly safety report by the 10<sup>th</sup> day of the month for the preceding month stating the following information: Number of OSHA recordables including information on any lost work days, restricted work days, or job transfer associated with the case; information on safety incentive programs in place including any safety milestone celebrations; any visit or inspection by a Federal, State or local agency.

The following documentation will be completed by the Site Contractor and submitted as required by the PSNH, URS, and Federal and State agencies:

- a. Employee first report of injury
- b. OSHA 300 log
- c. First aid activity log
- d. Applicable Incident Report
- e. Witness statements
- f. Photographs should be taken when possible
- g. Instances of fatalities, serious injury or major property damage must be reported as soon as feasibly possible to the PSNH and URS Corporate ES&H Managers. Corporate reporting guidelines will be followed.

### **23.5 Accident Trending**

The URS Project ES&H Manager shall review and evaluate all accidents, incidents, injuries and near misses and on a regular basis identify any trends that may be present and implement measures to correct them.

### **23.6 Managers and Supervisors Training**

All site managers and supervisors shall receive instructions on methods and procedures for conducting investigations and the important role they play with regard to assuring the safety and health of all employees on the project.

## **24.0 Crane Safety**

Site Contractor safe operation of cranes and other lifting equipment is imperative on the Merrimack Station Clean Air Project. All operations involving heavy lifting equipment will be done in accordance with 29 CFR 1926.551-556 and URS Safety Procedure 28.7, Cranes & Derricks. The elements of these standards are set forth in the URS Corporate ES&H Manual. This section highlights some of the more important Site Contractor requirements with regard to training, certification of equipment, periodic inspection and maintenance. The Site Contractor heavy equipment supervisor will be responsible for the compliance with all project, state and federal standards regarding cranes. The following applies to crane safety:

- a. Each Site Contractor shall have a written procedure for the safe operation of cranes

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- b. All Site Contractor employees intending to operate cranes must be properly trained and physically fit. Written documentation of training, experience and physicals are required
- c. Each operator shall conduct a daily documented inspection of the assigned crane and equipment prior to use
- d. A thorough annual inspection of the hoisting machinery shall be conducted by a competent person or by private government agency recognized by the Department of Labor. The Site Contractors will retain a record of the annual inspection on site. Each Site Contractors must provide copies of this documentation to the URS project ES&H department prior to the use of the crane on site.
- e. The Site Contractor's qualified personnel using hand signals prescribed by the applicable American National Standards Institute (ANSI) standard shall give all signals. An illustration of the signals shall be posted at the job site.
- f. The swing radius of cranes that pose a hazard will be barricaded to prevent an employee from being struck or crushed by the counter weight.
- g. No lifts will be allowed directly over the Ammonia Storage Tanks. Some lifts in the immediate area of the tanks will require approved lift plans.
- h. Soil compaction tests and/or crane mats may be required to ensure a stable lifting foundation.

### **24.1 Clearance Requirements for Electrical Lines**

Unless electrical lines are de-energized and grounded, the following clearance requirements for operating equipment will apply:

- a. 50 kV or below --10 feet
- b. Over 50 KV - 10 feet plus 0.4 inches for each KV over 50 KV.

#### **IN- TRANSIT CLEARANCE FROM POWER LINES**

The in transit clearance distance for cranes with no load and with boom or mast in cradle position are as follows:

- a. Less than 50 kV --4 feet
- b. 50kv up to 345 kV --10 feet

NOTE: A Site Contractor observer must be designated to walk with and observe equipment clearances of power lines and must warn the operator if it appears a sufficient clearance will not be maintained.

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### 25.0 Vehicle Use

All drivers must observe posted safety signs at all times. Roads around the Ammonia Storage Area will be blocked to traffic when ammonia is being offloaded. Seat belts will be worn when operating any equipment on site that is equipped with seat belts. Avoid backing vehicles when practical, except on arrival when vehicles will be backed into parking spaces. Maintain all vehicles in good working order. Leaks must be reported to the PSNH liaison. Contractor will be required to reimburse PSNH for all costs associated with the cleanup of leaks and spills.

#### 25.1 Equipment without Backup Alarm

Construction equipment and vehicles with impeded visibility to the rear must be equipped with back-up alarms. To ensure against collision with personnel and equipment, a spotter shall guide vehicles or equipment not equipped with a backup alarm.

### 26.0 Electrical Safety

#### 26.1 General Requirements

- a. All temporary and permanent electrical work, installation and wire capacities shall conform to the National Electrical Code, OSHA 1926.405 and other applicable federal, state, and local codes. Buried High Voltage Power Feeders for temporary power shall be accurately recorded as to location and depth. High Voltage warning ribbon shall be laid in the trench approximately 18 inches above the cable. Red dyed concrete is a suitable substitute. High Voltage Temporary Power Transformers shall be protected from unauthorized access
- b. Only qualified electricians familiar with code requirements shall be allowed to perform electrical work.
- c. Work on energized circuits shall require at a minimum a thorough JHA to be reviewed by the Electrical Superintendent and ES&H Manager to ensure compliance with OSHA and NEC requirements. Additionally a Flash Hazard Analysis in accordance with NFPA 70E shall be conducted to determine flash protection boundaries and required PPE based on expected fault energy.
- d. No employee shall be permitted to work close enough to an unprotected electrical power circuit so that he or she may contact the same in the course of his or her work unless the employee is protected against electrical shock by use of proper PPE, de-energizing the circuit and grounding it or guarding it by effective insulation or other means
- e. Construction electrical equipment or machinery shall be de-energized and rendered inoperative by locking out and tagging out supply switches prior to performing work on such equipment or machinery unless power must be applied for the purpose of adjustment or electrical troubleshooting. If lockout devices are not feasible, the Lockout/Tagout system shall be used at all points where the equipment may be energized. A qualified electrician should assist other crafts to Lockout or Tagout electrical machinery or equipment if those workers do not understand the Lockout/Tagout procedure

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- f. Controls of equipment or circuits to be worked shall be locked out, tagged out and deactivated
- g. Equipment or circuits that are de-energized shall be locked out, tagged out where locks are not feasible, at all points where such equipment or circuits can be energized
- h. Locks and tags shall be placed and marked to identify the equipment or circuit being worked on
- i. Extension cords used with portable electrical tools and appliances shall be of the three-wire type. Cord shall be designated heavy usage or rough service by code. Cords with the ground probe removed or rendered ineffective shall be removed from service
- j. Electrical cords and trailing cables shall be covered, elevated or otherwise protected from damage, which could create a hazard to employees or other persons in the area
- k. All 120-volt, single-phase, 15- and 20-ampere receptacle outlets on construction sites which are not a part of the permanent wiring of the building or structure and which are in use by employees shall have approved ground-fault circuit interrupters for personnel protection. Receptacles on a two-wire, single-phase portable or vehicle-mounted generator rated not more than 5kW, where the circuit conductors of the generator are insulated from the generator frame and all other grounded surfaces, need to be protected with ground-fault circuit interrupters

**Note: The exclusive use of ground fault circuit interrupters on all cord and plug tools and equipment, regardless of the power source is required.**

- l. All temporary electric wiring shall be installed so that the wiring cannot be damaged when materials are moved as construction progresses. In addition Temporary Power 480 volt feeders such as to distribution panels shall be protected from damage by workers stepping on it
- m. Suitable barriers or other means shall be provided to ensure that the workspace for electrical equipment will not be used as a passageway during periods when energized parts of electrical equipment are exposed
- n. Each temporary disconnect box shall be legibly marked to indicate its location and arranged so the purpose is evident

### 26.2 Lighting and Illumination

- a. Where the use of artificial light is required, the Site Contractor shall maintain lighting while workers are entering or leaving the area
- b. Areas requiring the continuous use of artificial light shall be inspected regularly and defective lamps replaced
- c. Temporary lights shall be equipped with guards to prevent accidental contact with the bulb. Guards are not required when the construction of the reflector is such that the bulb is deeply recessed
- d. Approved explosion proof electrical lighting shall be the only means used for artificial illumination in areas where flammable liquids, vapors, fumes, dust or gases are present and are creating a potential explosion hazard

## **Merrimack Station Project Specific Safety Plan**

- e. In addition to providing the required illumination intensities, consideration should be given to the selection and placement of lights, which will provide minimum glare, eliminate harsh shadows and provide adequate illumination to work efficiently and safely (a minimum of 5 foot candles of light must be provided for construction activities).
- f. Exposed empty light sockets and broken bulbs shall not be permitted
- g. Adequate light shall be provided throughout the building and in all work areas throughout the project, particularly passageways and stairways, and wherever necessary to avoid a hazard due to lack of light. Low voltage (12V) lighting shall be used in moist and/or other hazardous locations such as drums, tanks, and vessels. However, 120-volt lights may be used if protected by a ground-fault circuit interrupter

### **26.3 Temporary Installation and Maintenance**

- a. Clearances for open conductors shall conform to the requirements in the National Electrical Code
- b. Entrances to rooms and other guarded locations containing exposed energized components shall be marked with conspicuous warning signs forbidding unqualified person to enter
- c. See Crane ES&H Section for required clearances of equipment such as cranes, derricks, and shovels operating around overhead power lines
- d. Overhead transmission and distribution power lines shall be installed on poles and/or towers, which provide required clearances over work areas and structures
- e. High voltage power lines should have at least 25 feet of clearance above roadways, tracks, and work areas. For voltages over 750 volts and for specific hazardous situations, refer to the National Electrical Code and local requirements
- f. Warning signs should be posted where overhead power lines pass over the roadways
- g. Each disconnecting means for motors and appliances, and each service feeder or branch circuit at the point where it originates, should be legibly marked to indicate its purpose. On circuits exceeding 600 volts, "Danger - High Voltage" signs shall be posted where unauthorized persons might meet live parts

### **26.4 Battery Rooms and Charging**

- a. Battery storage and charging operations should be located in separate well ventilated rooms built or lined with substantial noncombustible materials
- b. Racks, trays, and floors should be of acid resistant construction
- c. Acid accumulations and vapors shall not be allowed to accumulate to hazardous or explosive levels
- d. Face shields, aprons and rubber gloves shall be provided for workers handling acids or batteries
- e. Facilities for quick flushing of the eyes and/or body should be located near the work area

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### **27.0 Job Safety Rules/Disciplinary Program**

A violation of Section 27.1 – Job Safety Rules, can result in serious injury and is grounds for immediate removal of access privileges from the project. The duration of access removal will be documented in writing. Reinstatement of site access privileges will be at management’s discretion. Disciplinary action for lesser violations will be at the discretion of management and proportionate with the seriousness of the infraction.

### **27.1 Job Safety Rules**

Violation of Merrimack Station Clean Air Project Construction Project Work Rules is considered to be extremely serious and a detriment to the job as well as to the safety and welfare of all employees on this site. It is the employee’s responsibility to honor and abide by these rules of conduct. Unsatisfactory conduct, including, but not limited to the following activities, will be subject to appropriate disciplinary action and cause for immediate dismissal:

- Failure to comply with the Project Safety and Health Program or any governmental safety and health regulations, laws, rules, or instructions.
- Failure to attend a safety orientation session prior to commencing work
- Entering existing Company operations areas or areas not designated as a project construction area.
- Use of Company facilities, equipment and tools for any reason without written permission from the Company
- Failure to comply with housekeeping rules and practices or engaging in conduct that tends to create a safety hazard, fire hazard or unsanitary condition.
- Non-compliance of the Company smoking policy by smoking in Company buildings or areas other than designated smoking areas.
- Committing or threatening any act of violence, engaging in fighting, brawling, horseplay, practical jokes or disorderly conduct.
- Misuse or damage of tools, equipment, facilities or property.
- Unsafe or improper operation of tools, equipment or vehicles.
- Use of personal cellular phones during working hours in the work area, other than formal coffee breaks and lunch periods and only in designated assembly areas, is strictly prohibited.

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- Behavior that interferes with or discriminates against other employees, including intimidation, coercion or harassment of any nature.
- Falsification of forms, records, time cards, reports or any work related document.
- Neglect of job duties, or failure or refusal to perform work assignments or follow supervisor's direction.
- Loitering, roaming the job site or leaving the project or assigned work area without proper authorization.
- Smoking, changing clothes, eating lunch, parking vehicles or taking breaks in areas that the Company and/or Owner have declared off limits for such purposes.
- Theft or removal of Company property from the premises without proper authorization.
- Failure to report and remain at work in a fit physical condition to safely perform assigned job tasks.
- Failure to comply with the project security rules or other project specific rules, regulations or requirements.
- Failure to report off from work, absenteeism, late starts, early quits.
- Gambling, engaging in a lottery, selling chances or merchandise or soliciting contributions of any nature during working hours or on company property.
- Placing or removing signs, posters, advertising, pictures or other notices on company property at any time.
- Picking up or leaving another employee's time card, badge or other identification.
- Possession sale and/or use of illegal drugs, designer and synthetic drugs, prohibited drugs, drug related paraphernalia, alcoholic beverages, firearms or other weapons, ammunition, explosives or incendiaries is strictly prohibited on the job site. For any violation or deviation of these rules, the Owner of Contractor has the right to remove any employee or any subcontractor, sub-subcontractor, vendor, visitor or agent. The job site includes, but is not limited to, all process units, buildings, shacks, parking lots, lay-down areas and roads.

The above rules are NOT all-inclusive and may not identify all forms of unacceptable employee conduct, which may justify discipline or termination. Project Work Rules are intended for the welfare of all personnel and everyone's cooperation is expected and appreciated.

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Merrimack Station Clean Air Project Contractor Employees Work Hours- No Merrimack Station contractor employee shall be allowed to work more than 16 hours in a 24 hour period and shall receive a minimum of 8 hours break before returning to work. Contractor employees shall not work more than 84 hours in a 7-day period and shall not work more than 13 consecutive days without a day off. Any deviations to this policy shall be approved by PSNH Site Manager or the URS Project Construction Manager.

### **27.2 Disciplinary Actions for other infractions**

Site Contractors shall implement a comprehensive disciplinary program to address punitive issues of a lesser and/or repetitive nature.

### **27.3 Dismissal**

The PSNH management, URS project construction management, and Site Contractors reserve the right to take disciplinary action up to and including dismissal if deemed appropriate.

### **27.4 Retention of Records**

Project ES&H violation notices and termination slips become a permanent part of employee's files and may be subject to review by URS construction management when considering the employee for rehire on the Merrimack Station Clean Air Project.

## **28.0 Falling Objects Protection**

Whenever employees are potentially exposed to falling objects from overhead work activities, the following requirements in addition to wearing normal PPE such as hard hats and safety shoes shall be followed:

Where scaffolding work is in progress, erect toeboards, screens, or guardrail systems to prevent objects from falling from higher levels or;

Erect a ground level canopy structure, debris net or equivalent structure and keep potential objects far enough from the edge of the higher level so that those objects will not go over the edge if accidentally displaced or;

Establish a control zone by erecting a barricade at ground level where objects could fall, prohibit employees from entering the barricaded area, and keep objects that may fall far enough away from the edge of a higher level so that those objects would not go over the edge if they were accidentally displaced.

Use tool lanyards or tethers to secure hand tools from falling off of elevated surfaces.



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### 29.0 Site Rail Line

Merrimack Station uses a remote control locomotive. When the strobe light is flashing on the locomotive it is being run remotely. Never assume there is an operator in the locomotive. All personnel working on or near the train tracks are required to fill out the “onsite railroad track work in progress log” located in the Track Hopper Control Room. This log communicates to Weaver Brothers Construction Co. the date, start time, stop time, work area, work being performed, workers name and company before starting any type of work. When coal is being off-loaded at the Station, the normal passageway to the area east of the tracks may become blocked by the trains. If the need arises to go across the tracks when access is blocked, cross only around the train. Do not climb over or crawl under at any time. If a situation exists so that emergency equipment or personnel must get through, only the Shift Supervisor of Operations has the authority to have the train separated. The separation of cars is considered very dangerous especially when cars are being made up. The gap between cars closes very quickly.

### 30.0 Site Emergencies

#### 30.1 Definition of Emergency/Crisis

An emergency or crisis can be defined as anything that can endanger the life of an employee or visitor, fall under close government or media scrutiny, significantly interfere with normal business operations, jeopardize the Company's positive image, or threaten the Company's financial or legal condition.

Some examples include:

- a. Major accident;
- b. Employee death or serious injury through accident, structure or plant process failure;
- c. Act of God; i.e., tornado, flood;
- d. Explosion or fire;
- e. Improper acts by an employee; i.e., major theft, site violence, etc.;
- f. Condition that endangers the life of our employees or the public; i.e., gas leak;
- g. Violation of a code, law, environmental act, or regulation;
- h. Bomb threats;
- i. Other situations that constitute a crisis.

In any emergency or crisis situation, time is a critical element. The better prepared the Emergency Response/Crisis Management team is for a crisis, the more time will be available to properly manage the event.

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### **30.2 Emergency Response/Crisis Management Team**

To assist PSNH in resolving emergency events at the Merrimack Station Clean Air Project, URS will form an Emergency Response/Crisis Management Team. Once formed the names and contact telephone numbers shall be entered into the “Crisis Management Team” form of Exhibit C and posted in conspicuous locations for employee reference and emergency event notification purposes. Ensure the following site-specific elements of the Emergency Management program are addressed:

- a. Appoint a Crisis Management Team Leader with overall authority to manage emergency events.
- b. Define clear roles and responsibilities among each Crisis Management Team member.
- c. Determine primary and alternate emergency evacuation routes, as well as assembly and accountability locations. Maps depicting routes and assembly areas shall be posted.
- d. Determine a reliable means and responsible personnel for employee accountability at assembly areas.
- e. Understand various alarm systems and how each will be differentiated by sound (e.g. site warning vs. site evacuation).
- f. Determine location of primary and alternate Command and Control Centers to assemble Crisis Management Team members.
- g. Obtain local emergency contact telephone numbers for Police, Fire and Ambulance.
- h. Obtain location and quickest route for hospital transport of employees with serious injuries.
- i. Determine offsite URS and PSNH reporting requirements and obtain names and contact telephone numbers.
- j. Determine location of site windsock.
- k. Determine locations of severe weather shelters.
- l. Develop a required inventory of emergency supplies.

### **30.3 Immediate Site Actions**

The Project Crisis Management Team during any emergency event shall take the following actions:

- a. If the situation is life threatening or threatens the safety of our employees or the public, take immediate action to neutralize the threat. Call the PSNH Control Room at 4140 or 4142 to notify Shift Supervisor of any site emergency and if necessary, to summon public emergency assistance; e.g., ambulance, fire department or police. Site personnel shall then meet the response vehicles at the front gate and direct them to the appropriate location.
- b. Take whatever steps seem appropriate in the immediate crisis situation to protect the safety of the employees and the public.

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Following the neutralization of immediate threats, the URS Crisis Management Team Leader will:

- a. Inform URS and PSNH Project Management
- b. Conduct offsite reporting requirements to URS Corporate Offices.
- c. Conduct investigation and reporting as noted under Section 23 if the event was due to an accident

### **30.4 Emergency Evacuation and Accountability**

This section outlines the Emergency Evacuation and accountability process to be used in case of an emergency. This procedure will apply to all URS, Site Contractor personnel and site visitors at the Merrimack Station Clean Air Project site.

#### **Emergency Procedure**

Upon hearing the emergency evacuation alarm all work will stop. Personnel will observe the nearest windsock (windsocks are located in the North and South Yards) to provide quick visual indication of wind direction and strength. Care should be taken to avoid traveling downwind of a fire or ammonia release. All equipment will be shut down and put in a safe configuration. Personnel will then proceed to the primary assembly areas which are north to the PSNH office parking lot or south to the west of the Clean Air Project Construction Management trailers unless designated otherwise over the radio. Signs and postings will mark the evacuation routes.

Once in the assembly area, personnel will divide into individual groups according to their employer (URS, and Merrimack Station Clean Air Project Site Contractors). Contractor crews will report to their Foremen for a head count. Foremen will then report to their General Foremen. General Foremen will then report to their Superintendents. Responsible URS personnel and the Site Contractor Superintendents will then report to the URS ES&H Manager regarding employee accountability. The URS ES&H Manager will then report final accountability numbers to senior URS and PSNH Project Management.

Should any person(s) be noted as missing, no one is to go back and look for this person or persons. They are only to report them missing and their last known whereabouts. If it is safe to do so, the PSNH Shift Supervisor will be responsible for appointing a search team to locate any missing persons during an emergency.

Personnel will not return to work until they receive an “all clear” signal from the URS Crisis Management Team Leader received from PSNH.

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### **30.5 Severe Weather Conditions**

The weather service usually anticipates and announces severe weather well in advance. In case of sudden unanticipated storms, local authorities issue warnings or recommend a plan of action. The project ES&H Manager shall monitor the weather forecast through a National Weather Service.

If inclement weather occurs during business hours and the need arises to shelter employee's in-place, project management will determine a suitable evacuation (shelter) area, and advise employees of the situation over the radio and through their supervisors.

With the beginning of severe weather season, the Crisis Management Team Leader will review Severe Weather Preparedness with all Site Contractors. Following the review, the Team Leader will then audit the Project with representatives from all Site Contractors to evaluate the project's ability to safely withstand severe weather conditions and shall confirm that critical emergency supplies are on site if needed.

The Team Leader shall additionally confirm that all after hour's emergency telephone numbers are current for project employees in the event scheduled work activities are cancelled by severe weather.

#### **Severe Weather- (Thunder Storms, Tornado etc.)**

All contract supervision shall begin a survey of the project and prepare for the following:

- a. All heavy equipment shall be ready to move to a secure area away from existing buildings, pipe racks, tanks, etc.
- b. All construction materials shall be placed in storage trailers.
- c. All materials in the lay-down yard shall be secured with anchors and wire rope when feasible,

#### **Post-Severe Weather**

Personnel will not be allowed back to work until a post severe weather survey has been completed by the Crisis Management Team.

### **30.6 Terrorist/Bomb Threat**

Terrorist/Bomb threats pose significant problems to all. Terrorist/bomb threats shall be taken seriously and reported immediately. This section provides a "basic plan of instruction" along with appropriate guidelines to follow when there is a terrorist/bomb threat. In most instances, terrorist/bomb threats are made by telephone and anyone in the office can receive one. If this occurs, any person receiving a threat should use the following guidelines:

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### Receipt of Bomb Threat by Telephone

- a. When you receive a terrorist/bomb threat call, remain calm, and listen very carefully to what the caller is saying. **Do not, under any circumstances, interrupt the call or hang up the telephone.** Typically, the call will be very short, perhaps no longer than fifteen seconds.
- b. Maintain a Bomb Threat Checklist and use it as a guide during the conversation and immediately afterwards to aid in recalling details. Review this checklist periodically and become familiar with it.
- c. You must attempt to obtain as much information as possible, including what time the bomb is set to explode and where the bomb is located. Take note of any background noises; if the caller is male or female; if the caller has an accent; if the voice is familiar; and try to remember the exact words used by the caller. A telephone bomb threat often indicates the caller does not necessarily want people to get hurt and that is the reason for the warning.
- d. When the call is complete, do not hang up the telephone! From another telephone, notify the Crisis Management Team Leader and the ES&H Manager who will relay to Project and PSNH Management all the information obtained.
- e. If it is necessary to evacuate the project, follow the emergency evacuation procedures noted above.
- f. Employee should not leave the Evacuation Assembly Area until instructed to do so by PSNH, the URS Crisis Management Team Leader, Police, or Fire Department personnel.
- g. If you receive or witness the receiving of a bomb threat call, you must remain available to answer questions by the police department.

### Receipt of Terrorist/Bomb Threat by Written Message or Package

- a. Remain calm.
- b. Do not alert other employees, which may cause panic.
- c. Do not attempt to open or investigate the package.
- d. Immediately notify the Crisis Management Team Leader and/or ES&H Manager who shall in turn notify PSNH.
- e. Save all materials, including the envelope or container for law enforcement officials. Once the package is recognized as a suspicious package or as a bomb threat, avoid further unnecessary handling.
- f. Provide details to management and be available to answer questions from the police.

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### **30.7 Civil Disturbance**

If a civil disturbance occurs, the only actions Project Management can take against would-be intruders, rioters or demonstrators are defensive through notification of the police authorities, as civil disturbance control is the responsibility of law enforcement. If there is an arson or bomb threat, Project Management will implement appropriate emergency plans. Should anyone become aware of a pending civil disturbance or potential threat of disturbance, call the Crisis Management Team Leader or the ES&H Manager immediately.

Standard emergency procedures shall include:

- a. URS Management will alert PSNH. Control room at phone extension 4140 or 4142.
- b. Management will notify key personnel including department heads and supervisors.
- c. Department Managers and Supervisors are responsible for taking the following actions in their respective areas:
  - 1) Advise employees of the impending situation.
  - 2) Prepare to secure all sensitive and Company confidential information.
  - 3) Closing all windows, locking perimeter doors, etc.
  - 4) Ensuring employees remain away from windows and doors.
  - 5) Closing all blinds and drapes.
  - 6) Securing all flammable and other hazardous chemicals or materials.
  - 7) Closing gates and taking other protective measures as directed by the Crisis Management Team.
  - 8) Remaining calm, providing leadership to employees.
  - 9) Standing by for additional instructions.

### **30.8 Dealing with the Media**

#### **Company Spokesperson**

- a. Contact with the press, radio, or television is to be coordinated through PSNH.. No employee should serve as a company spokesperson unless directed to do so by PSNH Project Management.

#### **What to do if a reporter/TV crew meets you at the office entrance, site gate, or your home:**

- a. Give reporters the communications office phone number and they will be the source of company comment. Tell the reporters or TV crew no more than, "The company is very concerned about the incident, and it is now investigating the circumstances and will be issuing a statement when all the facts are known." Say no more. Never say "no comment".
- b. PSNH Corporate Communications will arrange, handle, and authorize any contact with the press, radio, or TV.

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- c. All responses will be from the designated spokesperson appointed by PSNH.
- d. URS Corporate Communications and the Corporate Crisis Management Team will collect all media clippings and video newscasts.

### **31.0 Environmental**

#### **31.1 Spills and Releases**

Report all spills of hazardous materials or unauthorized discharges occurring on the Merrimack Station site. This includes any spill of a chemical, fuel, oils, etc. to the ground, air or water.

In the event of a spill, take all necessary safety precautions, stop the release if it is safe to do so, contain spilled material to prevent release to the environment. Prevent access to the immediate area. Contact control room at phone extension 4140 or 4142 to report the release.

#### **31.2 Merrimack River**

No discharges are allowed to the Merrimack River. No discharges are allowed to yard storm water drains without prior approval. When working near the river bank, keep vehicles, chemicals, fuels, etc. on the west side of the railroad tracks.

No work is allowed on river on in the river without a Wetlands Permit issued by the NH DES.

#### **31.3 Chemical Use and Disposal**

The Contractor is responsible for ensuring safe and proper storage, use and/or disposal of all chemicals and hazardous materials, and to take precaution as necessary to prevent exposure to other persons and/or properties. Use of environmentally friendly materials is preferred. Chemicals, fluids, and other hazardous materials transferred from their original containers must be placed in containers approved for their use. Unless otherwise directed in writing, disposal and removal of all such chemicals and materials is the responsibility of the Contractor. Waste materials which are considered hazardous or otherwise regulated must not be disposed of on PSNH property. However, temporary storage locations and removal should be coordinated with PSNH.

#### **31.4 Permits, Licenses and Certificates**

Contractors shall comply with all permit, license, and certificate requirements and laws, regulations, ordinances, and conditions of local, state, and federal agencies.

# Merrimack Station Project Specific Safety Plan

## 32.0 References

### Washington Division of URS

- ES&H and Substance Abuse Prevention Manuals 2001
- ES&H Procedures and Guidelines
- Guidelines for ES&H Supervisors and Designated ES&H Representatives
- ES&H and Health Program Description for Hazardous Waste Operations
- Industrial Hygiene Procedures
- Environmental Policy and Guidelines
- Substance Abuse Prevention Program

### Federal Regulations, Rules & Guidelines

- ANSI A10.14 (1991), “Requirements For Safety Belts, Harnesses, Lanyards, & Lifelines For Construction and Demolition”
- ANSI Z359.1 (1992), “Safety Requirements For PFA Systems, Subsystems and Components”
- NIOSH (Industrial Hygiene) 1995 American National Standards Institute
- National Fire Prevention Association (NFPA)
- NFPA 70E (2000), “Electrical Safety Requirements For Employee Workplaces”
- National Electric Code (NEC) 1996
- Life ES&H Code (LSC) 1995
- American Council of Government Industrial Hygienists (ACGIH) 1995
- OSHA 29 CFR 1910, General Industry Standards
- OSHA 29 CFR 1926, Safety and Health Regulations For Construction



## **Merrimack Station Project Specific Safety Plan**

### **EXHIBIT A. ACRONYMS AND INITIALISMS**

ACGIH American Council of Government Industrial Hygienists

ANSI American National Standards Institute

APP Accident Prevention Plan

ASTM American Standards for Testing and Materials

CFR Code of Federal Regulations

CPR Cardiopulmonary Resuscitation

DHHS Department of Health and Human Services

DOT Department of Transportation

EAP Employee Assistance Program

EMT Emergency Medical Technician

GFCI Ground Fault Circuit Interrupter

HAZCOM Hazard Communication

JHA Job Hazard Analysis

LSC Life Safety Code

MSDS Material Safety Data Sheet

NEC National Electric Code

NFPA National Fire Prevention Association

NIOSH National Institute of Occupational Safety and Health

OSHA Occupational Safety and Health Act (or Administration)

PEL Permissible Exposure Level

PPE Personal Protective Equipment

PPM Parts Per Million

## Merrimack Station Project Specific Safety Plan

### EXHIBIT B. DEFINITIONS

**Affected employee(s)** means any person who may be at risk while working in the area where the equipment is locked out. This includes any person who may put others at risk by operating or attempting to operate the equipment.

**Anchorage** means a secure point of attachment for lifelines, lanyards, or deceleration devices.

**Article** means a manufactured item(s):

1. Which is formed to a specific shape or design during manufacture.
2. Which has end use function(s) dependent in whole or in part upon its shape or design during end use.
3. Which does not release, or otherwise result in exposure to, a hazardous chemical, under normal conditions of use.

**Assistant Secretary** means the Assistant Secretary of labor for Occupational ES&H and Health, U.S. Department of labor, or designee.

**Authorized employee** means any employee responsible for the safe operation of or working on the equipment.

**Authorized entry personnel** means personnel authorized to enter a permitted confined space by the safety watch.

**Authorized lead employee** means the person having responsibility during group Lockout to verify for the craft that all hazardous energy sources are locked out and tagged out.

**Body belt** means a strap with means both for securing it about the waist and for attaching it to positioning device or ladder climb assembly.

**Body harness** means straps which may be secured about the employee in a manner that will distribute the fall arrest forces over at least the thighs, pelvis, waist, chest, and shoulders with means for attaching it to other components of a personal fall arrest system.

**Chemical** means any element, chemical compound or mixture of elements and/or compounds.

**Chemical manufacturer** means an employer with a workplace where chemical(s) are produced for use or distribution.

## Merrimack Station Project Specific Safety Plan

**Chemical name** means the scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS) rules of nomenclature, or a name which will clearly identify the chemical for the purpose of conducting a hazard evaluation.

**Combustible liquid** means any liquid having a flashpoint at or above 100°F (37.8°C), but below 200°F (93.3°C), except any mixture having components with flashpoints of 200°F (93.3°C), or higher, the total volume of which make up 99 percent or more of the total volume of the mixture.

**Common name** means any designation or identification such as code name, code number, trade name, brand name, or generic name used to identify a chemical other than by its chemical name.

**Competent person** means a person who is capable of identifying hazardous or dangerous conditions.

**Compressed gas** means:

1. A gas or mixture of gases having, in a container, an absolute pressure exceeding 40 PSI at 70°F (21.1°C); or
2. A gas or mixture of gases having, in a container, an absolute pressure exceeding 104 PSI at 130°F (54.4°C) regardless of the pressure at 70°F (21.1 OF); or
3. A liquid having a vapor pressure exceeding 40 psi at 100°F (37.8°C) as determined by the American Society for Testing and Materials (ASTM) D-323-72.

**Connector** means a device, which is used to couple (connect) parts of the personal fall arrest system and positioning device systems together. It may be an independent component of the system, such as a carabineer, or it may be an integral component of part of the system. (Also has different meaning in Steel Erection.)

**Danger Tag** means a warning tag placed with all Lockout devices to identify the user and to warn against energizing of equipment due to in progress work. This tag must be waterproof and carry the message: "Danger-Do Not Operate."

**Deceleration** device means any mechanism with a maximum length of 3.5 feet, such as a rope grab, ripstitch lanyard, tearing or deforming lanyards, self-retracting lifelines, etc. which serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limit the energy imposed on an employee during fall arrest.

## Merrimack Station Project Specific Safety Plan

**Designated representative** means any individual or organization to which an employee gives written authorization to exercise such employee's rights under this section. A recognized or certified collective bargaining agent shall be treated automatically as a designated representative without regard to written employee authorization.

**Director** means the Director, National Institute for Occupational ES&H and Health, U.S. Department of Health and Human Services, or designee.

**Distributor** means a business, other than a chemical manufacturer or importer, which supplies hazardous chemicals to other distributors or to employers.

**Employee** means a worker who may be exposed to hazardous chemicals under normal operating conditions or in foreseeable emergencies. Workers, such as office workers or bank tellers, who encounter hazardous chemicals only in non-routine, isolated instances, are not covered.

**Employer** means a person engaged in a business where chemicals are either used, distributed, or are produced for use or distribution, including a URS or Site Contractor.

**Energy shock absorber** means a device that limits shock-load forces on the body.

**Engulfment** means the surrounding and effective capture of a person by a liquid or finely divided solid substance.

**Entry** means entering a permit required confined space. The entrant is considered to have entered when any part of the body breaks the plane of an opening into the space.

**Explosive** means a chemical that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure, or high temperature.

**Exposure or exposed** means that an employee is subjected to a hazardous chemical in the course of employment through any route of entry (i.e., inhalation, ingestion, skin contact or absorption, etc.), and includes potential (i.e., accidental or possible) exposure.

**Failure** means load refusal, breakage, or separation of component parts. Load refusal is the point where the ultimate strength is exceeded.

**Fall arrest system** means a system specifically designed to secure, suspend, or assist in retrieving a worker or from a hazardous work area. The basic components of a fall arrest system include anchorage, connector, lanyard, shock absorber, harness, and self-locking snap hook.

## Merrimack Station Project Specific Safety Plan

**Flammable** means a chemical that falls into one of the following categories:

1. Aerosol flammable means an aerosol that, when tested by the method described in 16 CFR 1500.45, yields a flame projection exceeding 18 in. at full valve opening, or a flashback (a flame extending back to the valve) at any degree of valve opening.
2. Gas flammable means: (a) .A gas that, at ambient temperature and pressure, forms a flammable mixture with air at a concentration of thirteen (13) percent by volume or less.  
  
(b) A gas that, at ambient temperature and pressure, forms a range of flammable mixture with air wider than twelve (12) percent by volume, regardless of the lower limit.
3. Liquid flammable means any liquid having a flash point below 100°F (37.8°C), except any mixture having components with flashpoints of 100°F (37.8°C) or higher, the total of which make up 99 percent or more of the total volume of the mixture.
4. Solid flammable means a solid, other than a blasting agent or explosive as defined in 190.109(a), that is liable to cause fire through friction, absorption of moisture, spontaneous chemical change, or retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious hazard. A chemical shall be considered to be a flammable solid if, when tested by the method described in 16 CFR 1500.44, it ignites and burns with a self-sustained flame at a rate greater than one- tenth of an inch per second along its major axis.

**Flashpoint** means the minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite when tested.

**Foreseeable emergency** means any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment, which could result in an uncontrolled release of a hazardous chemical into the workplace.

**Free fall** means the act of falling before a personal fall arrest system begins to apply force to arrest the fall.

**Free fall distance** means the vertical displacement of the fall arrest attachment point on the employee's body belt or body harness onset of the fall and just before the system begins to apply force to arrest the fall (maximum of 6 feet). This distance excludes deceleration distance and lifeline/lanyard elongation, but includes any deceleration device slide distance or self-retracting lifeline/lanyard extension before they operate and fall arrest forces occur.

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**Hazard warning** means any words, pictures, symbols, or combination thereof appearing on a label or other appropriate form of warning which convey the hazard(s) of the chemical(s) in the container(s).

**Hazardous chemical** means any chemical that is a physical hazard or a health hazard.

**Hazardous energy sources** means any source of potential energy such as electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or radiation, which may cause injury or damage.

**Health hazard** means a chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees. The term health hazard includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system and agents which damage the lungs, skin, eyes, or mucous membranes. Appendix A, to 29 CFR 1910.1200 provides further definitions and explanations of the scope of health hazards covered by this section, and Appendix B, 29 CFR 1910.1200 describes the criteria to be used to determine whether or not a chemical is to be considered hazardous for purposes of this standard practice instruction.

**Hole** means a gap or void 2 in. or more in its least dimension in a floor, roof, or other walking/working surface.

**Identity** means any chemical or common name, which is indicated on the MSDS for the chemical. The identity used shall permit cross-references to be made among the required list of hazardous chemicals, the label, and the MSDS.

**Immediate use** means that the hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

**Importer** means the first business with employees within the Customs Territory of the United States, which receives hazardous chemicals produced in other countries for the purpose of supplying them to distributors or employers within the United States.

**Job Hazard Analysis (JHA)** specifically addresses expected hazards of work elements required to complete a specific job. This method identifies key job steps, tools or equipment used, potential health injury hazard control practices, and personal protective equipment (PPE) for significant and unusually repetitive jobs. A JHA is required for each at-risk task.

**Label** means any written, printed, or graphic material, displayed on or affixed to containers of hazardous chemicals.

## **Merrimack Station Project Specific Safety Plan**

**Lanyard** means a flexible line of rope, wire rope, or strap, which generally has a connector at each end for connecting the body belt or body harness to a deceleration device, lifeline, or anchorage.

**Leading edge** means the edge of floor roof, or formwork for a floor or other walking/working surface, which changes location as additional floor, roof, decking or formwork sections are placed, formed, or constructed. A leading edge is considered to be an unprotected side and edge during periods when it is not actively and continuously under construction.

**Lifeline** means a component consisting of a flexible line for connection to an anchorage at one end to hang vertically or for connection to anchorages at both ends to stretch horizontally and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.

**Lockout (isolation lock)** means a locking device used as a positive means to isolate equipment from its energy source.

**Material Safety Data Sheet (MSDS)** means written or printed material concerning a hazardous chemical which is prepared in accordance with 29 CFR 1910.1200, Paragraph (g).

**Mixture** means any combinations of two (2) or more chemicals if the combination is not, in whole or in part, the result of a chemical reaction.

**Opening** means a gap or void 30 in. or more high and 18 in. or more wide, in a wall or partition, through which employees can fall to a lower level.

**Oxidizer** means a chemical other than a blasting agent or explosive as defined in 29 CFR 1910.109(a), that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gases.

**Personal fall arrest system** means a system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these. As of January 1, 1998, the use of a body belt for fall arrest is prohibited.

**Personal Lockout Lock** means this lock is issued to each employee intending to work on a system or equipment requiring Lockout/Tagout. The owner of the lock shall maintain possession of a lock key. Multiple locks are not to be keyed alike.

## Merrimack Station Project Specific Safety Plan

**Physical hazard** means a chemical for which there is scientifically valid evidence that it is a combustible fluid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive.

**Positioning device system** means a body belt or body harness system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning.

**Produce** means to manufacture, process, formulate, or repackage.

**Pyrophoric** means a chemical that will ignite spontaneously in air at a temperature of 130°F (54.4°C) or below.

**Qualified person** means with a recognized degree or professional certificate and extensive knowledge and experience in the subject field who is capable of design, analysis, evaluation, and specifications in the subject work, project, or product.

**Responsible party** means someone who can provide additional information on the hazardous chemical and appropriate emergency procedures, if necessary.

**Retractable lifeline** means a fall arrest device that allows free travel without slack rope, but locks instantly when a fall begins.

**Rope grab** means a deceleration device that travels on a lifeline and automatically, by friction, engages the lifeline and locks so as to arrest the fall of an employee. A rope grab usually employs the principle of inertial locking, cam/level locking, or both.

**ES&H inspection** means the person responsible for reviewing the confined space entry procedure, determining the entry permit level classification, acceptable entry conditions and authorizing entry. He/she shall also conduct air monitoring of the confined space prior to the entry.

**ES&H-monitoring system** means a safety system in which a component person is responsible for recognizing and warning employees of fall hazards.

**ES&H watch** means a person outside a confined space who monitors the authorized entrants.

**Self-retracting lifeline/lanyards** means a deceleration device containing a drum-wound line which can be slowly extracted from, or retracted onto, the drum under slight tension during normal employee movement, and which, after onset of a fall, automatically locks the drum and arrests the fall.



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**Snaphook** means a connector comprised of a hook-shaped member with a normally closed keeper, or similar arrangement, which may be opened to permit the hook to receive an object and, when released, automatically closes to retain the object. Locking type snaphooks are the only one authorized for use as part of a personal fall protection or positioning system

**Specific chemical identity** means the chemical name, Chemical Abstracts Service (CAS) Registry Number, or any other information that reveals the precise chemical designation of the substance.

**Toeboard** means a low protective barrier that will prevent the fall of materials and equipment to lower levels and provide protection from falls for personnel.

**Trade secret** means any confidential formula, pattern, process, device, information or compilation of information that is used in an employer's business, and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it.

**Unstable (reactive)** means a chemical which in the pure state, or as produced or transported, will vigorously polymerize, decompose, condense, or will become self-reactive under conditions of shocks, pressure or temperature.

**Use** means to package, handle, react, or transfer.

**Walking/working surface** means any surface, whether horizontal or vertical on which an employee walks or works, including, but not limited to, floors, roofs, ramps, bridges, runways, formwork and concrete reinforcing steel but not including ladders, vehicles, or trailers, on which employees must be located in order to perform their job duties.

**Warning line system** means a barrier erected on a roof to warn employees that they are approaching an unprotected roof side or edge, and which designates an area in which roofing work may take place without the use of guardrail, body belt, or safety net systems to protect employees in the area.

**Water-reactive** means a chemical that reacts with water to release a gas that is either flammable or presents a health hazard. Often when the water is heated it goes into a gaseous state allowing oxygen to be released which can help feed a fire.

## Merrimack Station Project Specific Safety Plan

### EXHIBIT C. SAMPLE FORMS

- 1.0 Hot Work Permit
- 2.0 Medical History
- 3.0 Confined Space Entry Permit (Level 1 Permit Required Space)
- 4.0 Confined Space Entry Permit (Sign In/Out Sheet)
- 5.0 Level II Confined Space (Non-Permit Required Space)
- 6.0 Job Hazard Analysis Form
- 7.0 Excavation, Trenching and Ground Penetration Permit
- 8.0 Lock/Tag Removal Authorization
- 9.0 Equipment Operator's Daily Inspection
- 10.0 Weekly Safety Meeting
- 11.0 Emergency Contact List
- 12.0 Crisis Management Team
- 13.0 Bomb Checklist
- 14.0 Substance Abuse Prevention Program

# HOT WORK PERMIT

<b>Issued to:</b>		<b>Date:</b>				
<b>Location: Permit</b>		<b>Expires:</b>				
<b>Fire Watch Required: Yes      No</b>		<b>Control No.</b>				
<b>Please check appropriate response:</b>				<b>Yes</b>	<b>No</b>	<b>N/A</b>
1. Has affected personnel been briefed on job safety and requirements?						
2. Has equipment been properly prepared for this work?						
3. Does other work or processes affect this work?						
4. Are there any cable trays potentially affected by this work?						
5. Is the work area clean and ready for work to begin?						
6. Are all combustibles removed or protected?						
7. Has fire watch been assigned if required?						
8. Is gas test required?						
9. Does the surface or filler material subject to hot work contain Lead, Cadmium, Chromium, Beryllium, Mercury or Zinc? If yes, refer to ventilation and respiratory protection requirements of 29 CFR 1926.353 and 354.						
<b>Test results:</b>		<b>Per cent LEL</b>	<b>O2</b>	<b>H2S</b>	<b>CO</b>	
<b>Remarks:</b>						
<b>Special Instructions: Yes      No</b>						
<b>Job completed? Yes      No</b>		<b>Time/Initial:</b>		<b>Time Cancelled:</b>		
<b>Endorsements as Required:</b>						
<b>Title Signature</b>					<b>Time</b>	
<b>Foreman</b>						
<b>Safety</b>						
<b>EXTENDED HOT WORK PERMIT</b>						
<b>Day Date</b>					<b>Initials</b>	
1.						
2.						
3.						
4.						
5.						
6.						

# Medical

CONFIDENTIAL When filled in

Name (Print or Type)			Age	SSN	Phone #	Date of Birth		
Last	First	M.I.						
Occupation	Marital Status Married <input type="checkbox"/> Divorced <input type="checkbox"/> Single <input type="checkbox"/> Separated <input type="checkbox"/> Widowed <input type="checkbox"/>		# of Children	Address				
Apprentice Yr			Date of Hire					
<b>MEDICAL HISTORY (TO BE FILLED IN BY EMPLOYEE)</b>								
Instructions: Please fill in the blanks below to the best of your knowledge. It will provide basic medical data so that proper assistance and medical treatment can be provided to you in case of emergency. Signature below authorizes release of information for workers compensation insurance purposes and medical necessity.								
1. Do you have any physical disabilities? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes briefly describe:								
2. List any prescription medication you are currently taking.								
3. Are you allergic to any drugs or medication? Please list.								
4. Have you had surgery in the past year or been advised to have surgery? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, briefly describe:								
5. Date of last Tetanus Shot:								
6. Have you ever had, or have you now, any of the following: (Check Yes or No, and explain any positive answers on the back.)								
Frequent headaches	Yes	No	Tuberculosis	Yes	No	High Blood Pressure	Yes	No
Dizziness or Fainting			Pleurisy/Pneumonia			Hearing Loss		
Convulsions/Epilepsy			Indigestion/Ulcers			Hives, Eczema or Skin Rash		
Paralysis Including Polio			Abdominal Pain			Serum Reaction		
Persistent Fatigue			Nausea or Vomiting			Other Allergies		
Mental Illness			Kidney Disease			Metallic Poisoning		
Nervous Breakdown			Boils			Diabetes		
Chest Pains			Backache or Spinal Disc Disorder			Tumor or Growth		
Difficulty Breathing			Joint Pains			Rupture/Hernia		
Rheumatic Fever			Foot Ailment			Head or Neck Injuries		
Heart Disease			Eye Ailment			Broken Bones		
Spitting Blood			Infectious Diseases			Alcoholism		
Drug Allergies			Seizures			Asthma		
Other								
Employee's Signature							Date:	

Use back of form for additional space.

# CONFINED SPACE ENTRY PERMIT

## (LEVEL 1 PERMIT REQUIRED SPACE)

### General Information

SPACE TO BE ENTERED: \_\_\_\_\_ PURPOSE FOR ENTRY: \_\_\_\_\_

LOCATION/DESCRIPTION: \_\_\_\_\_ Authorized Duration of Permit: Date: \_\_\_\_\_ to \_\_\_\_\_  
 Time \_\_\_\_\_ to \_\_\_\_\_

PERMIT SPACE HAZARDS (Indicate specific hazards with initials and list countermeasures taken to allow safe entry.)

\_\_\_\_\_ Oxygen deficiency (less than 19.5%)  
 \_\_\_\_\_ Oxygen enriched (greater than 23.5%)  
 \_\_\_\_\_ Flammable gases or vapors (greater than 10% LEL)  
 \_\_\_\_\_ Airborne combustible dust (meets or exceeds LEL)  
 \_\_\_\_\_ Toxic gases or vapors (Greater than PEL or TLV)  
 \_\_\_\_\_ Mechanical Hazards  
 \_\_\_\_\_ Electrical Hazards  
 \_\_\_\_\_ Chemical Hazards (Material harmful to skin, eyes, respiratory tract, etc.)  
 \_\_\_\_\_ Engulfment  
 \_\_\_\_\_ Other \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Special PPE requirements:  
 Gloves \_\_\_\_\_  
 Clothing \_\_\_\_\_  
 Respirator Type \_\_\_\_\_  
 Retrieval System (harness, anklets, wristlets) \_\_\_\_\_

Work activities: \_\_\_\_\_  
 Hazards being introduced: gases, welding fume, dusts, electrical, etc.

Countermeasures taken: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Preparation for entry (Check after steps have been taken)  
 Review tagging order for accuracy.  
 Air Sampling frequency established.  
 Ventilation (Natural – Mechanical)  
 PPE, special tools and retrieval equipment available for use.  
 Crew Briefing (hazards of the space & countermeasures taken, any symptoms, work to be performed, emergency procedures, etc.)  
 Lockout/Tagout complete  
 Rescue Team notified.  
 Communications established.  
 Air Sampling results indicate space safe for entry.

Communications: Phone: \_\_\_\_\_  
 Radio Channel \_\_\_\_\_  
 Other \_\_\_\_\_

### Air Sampling test frequency

Atmospheric Testing Results	Date/Time	Date/Time	Date/Time D	ate/Time D	ate/Time	Date/Time
Oxygen between 19.5 & 23.5%						
Flammability (LEL <10%)						
CO						
SO2						
H2S						
Other:						
Tester Initials						

Authorized Entrants:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Attendants:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Use the attached log to document entries

Authorization by Entry Supervisor: I verify review of this permit and verify that all necessary precautions have been taken to provide for safe entry into and work in this confined space.

Printed name      Signature      date/time      Printed Name      Signature      Date/time

**Post permit at the confined space. Return the permit to Safety when expired or work is complete.**



**LEVEL II CONFINED SPACE  
(NON-PERMIT REQUIRED SPACE)**

SPACE TO BE ENTERED: \_\_\_\_\_ PURPOSE FOR ENTRY: \_\_\_\_\_

LOCATION/DESCRIPTION: \_\_\_\_\_ Authorized Duration of Permit, Date: \_\_\_\_\_ to \_\_\_\_\_  
Time \_\_\_\_\_ to \_\_\_\_\_

SUPERVISOR AUTHORIZING WORK: \_\_\_\_\_  
Print Signature

An evaluation of the above space was accomplished and it has been determined that there are no hazards present. Should conditions change, entrants shall immediately exit the space and advise the entry supervisor.

Entry Supervisor: \_\_\_\_\_ Date/time of Evaluation: \_\_\_\_\_ / \_\_\_\_\_

**ENTRY AUTHORIZED ONLY AFTER THE AIR HAS BEEN TESTED**

Frequency of Atmospheric Testing: \_\_\_\_\_

Atmospheric Testing Results	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time
Oxygen between 19.5 & 23.5%						
Flammability (LEL <10%)						
CO						
SO2						
H2S						
Other:						
Tester Initials						

List authorized entrants below or attach list

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Work Complete Space Closed by: \_\_\_\_\_

# JOB HAZARD ANALYSIS FORM

HAZARD ANALYSIS		
ACTIVITY	ANALYZED BY:	REVIEWED BY/DATE
<b>Principal Steps</b>	<b>Potential Hazards</b>	<b>Recommended Controls</b>
<b>Equipment to be used</b>	<b>Inspection Requirements</b>	<b>Comments</b>





## EXCAVATION, TRENCHING AND GROUND PENETRATION PERMIT

Permit Tracking #

DATE: _____	TIME: _____	DATE EXPIRES: _____
-------------	-------------	---------------------

Contractor Name: \_\_\_\_\_ Contract Number: \_\_\_\_\_  
 JOB DESCRIPTION AND LOCATION (Be Specific): \_\_\_\_\_

### A. BEFORE TRENCHING AND EXCAVATION

Have existing drawings, & Merrimack installations, documents, etc. been reviewed to determine if existing utilities are located within the affected area: Yes <input type="checkbox"/> No <input type="checkbox"/> <b style="background-color: yellow;">Call New Hampshire "Dig Safe" 1-888-344-7233</b> Were Underground Locator Services Contacted: Yes <input type="checkbox"/> No <input type="checkbox"/>  Did the Underground Locator check for underground obstructions: Yes <input type="checkbox"/> No <input type="checkbox"/> Job/Ticket Number: _____ Name of Locator: _____  List all Existing & Merrimack Clean Air Drawings Reviewed: _____	Are Locator Service reports attached: Yes <input type="checkbox"/> No <input type="checkbox"/> Are Underground Locator markers installed: Yes <input type="checkbox"/> No <input type="checkbox"/>  Check For Previously Disturbed Ground: Yes <input type="checkbox"/> No <input type="checkbox"/>  Adequacy and Availability of All Equipment, Including Personal Protective Gear, Shoring Material, Signs, Barricades and Machinery: Yes <input type="checkbox"/> No <input type="checkbox"/>  <b style="background-color: yellow;">Require all Underground Utilities to be hand dug a minimum of 18" to verify location: Mandatory</b>  <b style="background-color: yellow;">Locator and Company Reps review locations with excavating crew daily or when conditions change. (See back of this page for sign offs) Mandatory</b>
--	---

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### B. DURING TRENCHING AND EXCAVATION

Soil Classification: Stable Rock <input type="checkbox"/> Type A <input type="checkbox"/> Type B <input type="checkbox"/> Type C <input type="checkbox"/>  Size of Excavation: Depth _____ Width _____ Length _____  Check for changing ground conditions, particularly after rain fall.  Monitor For Possible Oxygen Deficiency Or Gaseous Conditions. (Record per IH Manual Procedure 5.0 or equivalent).  Check for adequacy of shoring and/or sloping as work progresses.  Entrances and Exit Facilities: Stairway <input type="checkbox"/> Ladders <input type="checkbox"/> Ramp <input type="checkbox"/>  Review changes in vehicular and machinery operation.  Review water removal equipment and operation.	Review adequacy of portable trench boxes or trench shields.  Protective Systems Depth of A Trench Or Excavation Of 5 Feet or More. <b>Check The Applicable OSHA Appendix Below:</b> B - Sloping and Benching (1926.652 Appendix B) <b>Maximum Allowable Slopes</b> Stable Rock Vertical (90 degrees) Type A 3/4:1 (53 degrees) Type B 1:1 (45 degrees) <b style="background-color: yellow;">Type C 1-1/2:1 (34 degrees) Merrimack Site</b>  <div style="border: 2px solid black; padding: 5px; background-color: white;">                     NOTE: Sloping or Benching For Excavations Greater Than 20 Feet Deep Shall Be Designed By A State Registered Professional Engineer (RPE), Table B-1                 </div> C - Timber Shoring For Trenches  D - Aluminium Hydraulic Shoring For Trenching  RPE - Designed Protection Systems (data must be filed on job-site)
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Notify URS Construction Manager or PSNH Client Representative when any underground utility is contacted or damaged.

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_

### C. SIGNATURES AND DATES

Contractor's Competent Person: _____ Date: ____/____/____	Other Approval: _____ Date: ____/____/____	URS Construction Mgt Rep: _____ Date: ____/____/____
Contractor Superintendent: _____ Date: ____/____/____	Client Rep for exist'g M1 & M2 facilities only: _____ Date: ____/____/____	SSHC: _____ Date: ____/____/____



# EXCAVATION, TRENCHING AND GROUND PENETRATION PERMIT

Permit  
Tracking #

## TAILGATE REVIEW AND VERIFICATION SIGNATURES

A. BEFORE TRENCHING AND EXCAVATION

B. DURING TRENCHING AND EXCAVATION

### General Notes:

For items A & B above, daily tailgates are required, - and when personnel or conditions change, - the Job Task Contractor Field Supervisor, Excavator Operator, Utilities Locator must review and sign off each time. Other review criteria is found on Page 1 of this permit.

There must be a transfer of information, - for change of contractor field supervision, excavator, competent person, utilities Locator

Please note that the contractor shall never be complacent of using only one aspect of locating. Contractor must integrate all aspects, all existing and new installation drawings, locator flagging, all other reference info - i.e. photos of previous installations, and hand digging to prove locations. Further note that there is always multiple drawings to be reviewed for any one area to be located. Never stop drawing search after finding one drawing.

### C. SIGNATURES AND DATES OF ITEM "A&B" AND GENERAL NOTES ABOVE

Contractor's Competent Person:	Date:		Contractor's Competent Person:	Date:
/ /			/ /	
Contractor Superintendent:	Date:		Contractor Superintendent:	Date:
/ /			/ /	
Contractor's Excavator Operator:	Date:		Contractor's Excavator Operator:	Date:
/ /			/ /	
Utility Locator	Date:		Utility Locator	Date:
/ /			/ /	
Contractor's Competent Person:	Date:		Contractor's Competent Person:	Date:
/ /			/ /	
Contractor Superintendent:	Date:		Contractor Superintendent:	Date:
/ /			/ /	
Contractor's Excavator Operator:	Date:		Contractor's Excavator Operator:	Date:
/ /			/ /	
Utility Locator	Date:		Utility Locator	Date:
/ /			/ /	
Contractor's Competent Person:	Date:		Contractor's Competent Person:	Date:
/ /			/ /	
Contractor Superintendent:	Date:		Contractor Superintendent:	Date:
/ /			/ /	
Contractor's Excavator Operator:	Date:		Contractor's Excavator Operator:	Date:
/ /			/ /	
Utility Locator	Date:		Utility Locator	Date:
/ /			/ /	

Contractor shall immediately notify PSNH Operations (603) 224-4081 Ext 4141, and URS Construction Manager (603) 224-4081 Ext 4246, when any underground utility is contacted or damaged.

**This document shall be kept at the field work location at all times and be ready for random audit**

## LOCK/TAG REMOVAL AUTHORIZATION

Purpose: This form shall be completed when equipment must be re-energized and the employee is not available to remove his or her personal Lock or Tag. It must be filled in for each employee whose lock/tag is to be removed.

EQUIPMENT INVOLVED (Name, Number, Unit): \_\_\_\_\_

REASON FOR REMOVAL:

NAME OF EMPLOYEE WHO ORIGINALLY INSTALLED LOCK/TAG (CRAFT/UNIT):

AUTHORIZED EMPLOYEE PERFORMING LOCK/TAG REMOVAL:

Construction Manager authorizing removal

\_\_\_\_\_

print

signature

Verify that the employee whose Personal Lockout Lock/Tag remains on the equipment is not at the job site.

Make a reasonable effort to contact the employee alerting him/her that his/her Personal Lockout Lock/Tag is being removed.

Ensure that the employee is informed that his/her Personal Lockout Lock/Tag has been removed before that employee resumes work.

Follow the sequence steps to restore equipment to normal operation. Extra caution must be taken. This is not a normal situation when someone other than the employee installing the lock/tag will be removing the lock/tag.

**Lock removal by other than original worker requires approval by Construction Manager.**

Lockout/Tagout Authorization

**Purpose: This form shall be completed when equipment must be re-energized and the employee is not available to remove his or her personal Lock or Tag. It must be filled in for each employee whose lock/Tag is to be removed.**

**EQUIPMENT OPERATOR'S DAILY INSPECTION**

EQUIPMENT:

TYPE \_\_\_\_\_ NO. \_\_\_\_\_  
 SHIFT \_\_\_\_\_ DATE \_\_\_\_\_

ADJUSTMENTS OR REPAIRS  
 NEEDED \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**SAFETY INSPECTION**

OK	CHECK ONE ONLY		
		N/A	REPAIR
Service, Parking, and Emergency Brakes			
Steering Mechanism			
Tires, Wheel Nuts			
Lights, Reflectors			
Coupling Device			
Operating Controls			
Windshield Wiper			
Horn			
Back Up Alarm			
Seat Belts			
Fire Extinguisher			
Roadside Reflectors, Flares			
Mirrors			

**CRANES ONLY**

Hoist Cable			
Boom Cable			
Sheaves			
Hook			
Limit Switches, Boom Stops, Pins and Keepers			
Hydraulic Control and Cylinder Leaks			

**INSPECTION COMPLETED**

**BY:** \_\_\_\_\_



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## Crisis Management Team

Calling Priority	Position/Title	Shift		Name	Contact Numbers		
		1st	2nd		Work	Home	Mobile

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# BOMB CHECKLIST

(2 pages)

**KEEP CALLER ON THE LINE AS LONG AS POSSIBLE**

EXACT TIME AND DATE OF CALL: \_\_\_\_\_

EXACT WORDS OF CALLER: \_\_\_\_\_

Check All That Apply:

**Voice**

- Loud
- High Pitched
- Raspy
- Intoxicated
- Soft
- Deep
- Pleasant
- Other

**Language**

- Excellent
- Fair
- Foul
- Good
- Poor
- Other

**Accent**

- Local
- Foreign
- Race
- Not Local
- Region

**Speech**

- Fast
- Distinct
- Stutter
- Slurred
- Slow
- Distorted
- Nasal
- Lisp
- Other

**Manner**

- Calm
- Rational
- Coherent
- Deliberate
- Righteous
- Angry
- Irrational
- Incoherent
- Emotional
- Laughing

**Familiarity With Threatened Facility**

- Much
- Some
- None

**Background Noise**

- Factory Machines
- Bedlam
- Music
- Office Machines
- Mixed
- Street Traffic
- Trains
- Animals
- Quiet
- Voices
- Airplanes
- Party Atmosphere

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Questions to Ask the Caller

1. When is the bomb going to explode?

\_\_\_\_\_

2. Where is the bomb?

\_\_\_\_\_

3. What does it look like?

\_\_\_\_\_

4. What kind of bomb is it?

\_\_\_\_\_

5. What will cause it to explode?

\_\_\_\_\_

6. Did you place the bomb?

\_\_\_\_\_

7. Why did you place the bomb?

\_\_\_\_\_

8. Where are you calling from?

\_\_\_\_\_

9. What is your address?

\_\_\_\_\_

10. What is your name?

\_\_\_\_\_

If voice is familiar, whom did it sound like?

\_\_\_\_\_

Were there any background noises?

\_\_\_\_\_

Telephone number call received at:

\_\_\_\_\_

Person receiving call: \_\_\_\_\_

Any Additional remarks:

\_\_\_\_\_

Taken from the Los Angeles Police Department Bomb Threat Checklist



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## **Substance Abuse Prevention Program**

In order to provide a safe environment and productive work force, promote the health and welfare of its employees and their families, protect the Company's public image as well as its physical assets, and preserve a good relationship with its customers, a Substance Abuse Testing and Assistance policy is in place for all contractors, subcontractors and vendors and their employees who require unescorted access to the Merrimack Station Clean Air Project site. Administration of this program and policy is the responsibility of the contracted vendor, and URS ES&H Manager.

- a. This policy prohibits the use, possession, manufacture, concealment, transportation, promotion or sale of the following items or substances on Company premises:
  - Illegal drugs, prohibited drugs and drug related paraphernalia.
  - Controlled substances such as medications when usage is abused.
  - Alcoholic beverages.

Company premises refers to all property, offices, facilities, land, buildings, structures, fixtures, installations, vessels, automobiles, trucks and all other vehicles and equipment- whether owned, leased or used.

- b. Subcontractor shall not assign (or reassign) any employee to the Merrimack Station Clean Air Project unless such employee has taken and passed the Site Specific Substance Abuse test requirements.
- c. Employees who violate this policy will be subject to disciplinary action up to and including termination.
- d. The Company reserves the right to establish drug and/or alcohol search and screening procedures consistent with applicable local, state and federal laws.
- e. The URS Environmental, Safety and Health Manager shall be responsible for the development, implementation and administration of the substance abuse prevention program.

### **Positive Test Protocol**

- a. Any employee who tests positive for a substance prohibited by the program will be suspended for thirty (30) normal working days without pay. During this thirty day period the employee must contact their appropriate Employee Assistance Program (EAP) to initiate a counseling and treatment process.
- b. In addition to the thirty (30) working day suspension, an employee will be permitted to return to work **ONLY** when the following are provided:

- 
- 
- a. Evidence of participation in EAP approved drug and/or alcohol treatment or counseling program.
  - b. Evidence of satisfactory passing of a return-to-work substance abuse screen test.
  - c. Employee agreement to periodic and random drug screen testing for one (1) year commencing on return to work date.
- c. Any subsequent (second) offense, such as a second confirmed positive test, a refusal to provide a specimen, or any other violation of the program will result in immediate termination.

**Acknowledgment and Consent**

I understand the requirements of this Substance Abuse Prevention Program Policy and agree to comply with all of its requirements including searches, urine drug screening or alcohol testing as necessary. I acknowledge that the use of these drugs, alcohol and other items is in violation of this policy and that I am subject to disciplinary action. I understand that compliance with this policy is a condition of employment, continued employment or to be allowed to remain on company property.

Employee Name (Printed) \_\_\_\_\_

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## 33.0 Appendices

### APPENDIX A. PSNH LO/TO Program

#### SECTION 4 INDEX LOCKOUT/TAGOUT

<u>RULE</u>	<u>SUBJECT</u>
<b><u>GENERATION - TAGGING PROCEDURES 4.1- 4.6</u></b>	
4.1	General Tagout Procedures
4.2	Danger Do Not Operate (Red Tag)
4.3	Blue Safety Tag
4.4	Yellow Caution Tag
4.5	Annual Inspection (Being Developed)
4.6	Definitions
4.7 to 4.9	Reserved for future revisions
<b><u>SYSTEM OPERATIONS &amp; TAGGING PROCEDURES 4.10- 4.33</u></b>	
4.10	Authority and Jurisdiction
4.11	Transmission Systems
4.12	Distribution Systems
4.13	System Tagging Procedures
4.14	Safety Tags
4.15	Use of Red Safety Tag

- 
- 
- 4.16 Use of Blue Safety Tag
  - 4.17 Blue and Red Safety Tags on the Same Switch
  - 4.18 Orange Safety Tag
  - 4.19 White Safety Tag
  - 4.20 Manner of Placing Safety Tags
  - 4.21 Person to Tag to
  - 4.22 Transferring Clearance
  - 4.23 Tagging Procedures for Hot Line Work
  - 4.24 Issuing Hot Line Clearance
  - 4.25 Receiving Hot Line Clearance in the Field
  - 4.26 Returning Hot Line Clearance
  - 4.27 Relaying Dispatcher Hot Line Clearance
  - 4.28 SCADA Operation
  - 4.29 Distribution System
  - 4.30 Emergency Hot Line Clearance Dispatcher Controlled Circuits
  - 4.31 Switching Orders and Review of Tags
  - 4.32 Isolating Equipment
  - 4.33 Utilization Facilities Tagout/Lockout Procedure

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**GENERATION TAGGING - PROCEDURES 4.1- 4.6 OSHA 1910.269 (d)****4.1 GENERAL TAGOUT PROCEDURES**

- 4.1.1 New acronyms introduced: (See Section 4.6 “Definitions”)
- a. AE - Authorized Employee
  - b. PIA - Person in Authority
  - c. PAE - Primary Authorized Employee
  - d. PPT - Person Placing Tag
  - e. PRT - Person Removing Tag
  - f. MT - Master Tag
- 4.1.2 These Tagout procedures are designed to provide a level of protection equal to that afforded by a lockout procedure. Tagging will be conducted in accordance with approved procedures.
- a. All tagging performed for Generation employees will utilize the Generation Procedures and associated Generation “Red” Danger Do Not Operate Tag (Red Tag), Generation’s “Blue” Safety Tag (Blue Tag) and/or Generation’s “Yellow” Caution Tag (Yellow Tag).
  - b. All tagging done in the Electric System Control Center (ESCC) jurisdiction will utilize the System Operations and Tagging Procedures as outlined in APM Sections 4.10 through 4.33. All tagging of devices located within the ESCC jurisdiction will be coordinated and ultimately authorized by the staff at PSNH’s Electric System Control Center (ESCC).
  - c. Tagging associated with ESCC jurisdiction will utilize the ESCC “Red” Danger Do Not Operate Tag (ESCC Red Tag), the ESCC “Blue” Danger Do Not Operate Tag (ESCC Blue Tag) and Generation’s “Red” Danger Do Not Operate Tag (Red Tag), when appropriate. See 4.2.2.4 for the specific procedure for using Generation’s “Red” Danger Do Not Operate Tag (Red Tag) in ESCC jurisdiction.
- 4.1.3 These procedures are designed to provide an effective means of creating safe work conditions while equipment is being serviced and/or maintained. It establishes a uniform hazardous energy control program for isolating all hazardous or potentially hazardous energy sources, i.e. mechanical, electrical, chemical, etc.
- 4.1.4 A Tagout procedure is based on training and mutual trust that all employees adhere to the established procedures. Adherence to these procedures requires constant vigilance to assure that tags are properly applied and that the tags remain affixed throughout the servicing and maintenance of equipment. It also requires that no employee violates a tag by re-energizing equipment, either intentionally or inadvertently, before the tag is removed. Violating the tagout procedures could jeopardize the lives of employees. Therefore, violations are subject to disciplinary action.

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- 4.1.5 Some routine or repetitive maintenance/servicing operations **may be performed with the power on**. Therefore, these procedures shall not apply **if controls in place prevent exposure to hazards created by the unexpected energization or startup of equipment or release of energy**. i.e., uses listed in Section 4.3, certain lubrications, certain calibrations, replacing light bulbs, servicing or maintaining cord and plug connected equipment. Controls may include, control of plug, a Blue Safety Tag (See Section 4.3), control procedure, guard or other safety device.
- 4.1.6 Some maintenance/servicing operations **must be performed with the power on**. Therefore, these procedures shall not apply **if controls in place prevent exposure to hazards created by the unexpected energization or startup of equipment or release of energy**, i.e. centering belt on conveyor, certain calibrations/testing/troubleshooting (breakers, dampers, motor operators, PLC's, thermocouples, transmitters). Controls may include a Blue Safety Tag (see Section 4.3), control procedure, guard or other safety device.
- 4.1.7 While all personnel should be concerned that safe tagging procedures are followed, the Person in Authority (PIA) is responsible for determining the proper isolation design and the routine conformance with these procedures.
- 4.1.8 It is the responsibility of the PIA to make certain that equipment to be worked upon is properly designated by name and/or number. All employees shall use such designated name(s) and/or number(s) in identifying equipment.
- 4.2 DANGER - DO NOT OPERATE (RED TAG) (See Appendix 4.2)**
- 4.2.1 General Red Tag Procedures
- 4.2.1.1 The Red Tag shall be used only for protection of personnel. The Red Tag shall be used for isolating equipment in the Stations. All tagging using a Red Tag shall be performed in accordance with approved procedures. Additional measures, **Tags Plus**, will be incorporated into the isolation design to demonstrate that these procedures are equivalent to lock out. Tags Plus requires a physical action or measure, not a behavior, culture, or administrative procedure, to prevent accidental or inadvertent re-energization of equipment/system. The measures are intended to keep a worker safe if a person makes a **single** mistake (see Appendix 4.2.1.1). Examples of Tags Plus include, two tagged valves in series, one tagged valve with tie wrap connecting the valve handle to the yoke, grounding an electrical circuit, a racked out breaker, in accessible location, removal of a valve handle on a tagged valve, or tie wrap through place where lock would be applied.
- 4.2.1.2 All equipment shall be considered in-service unless safely isolated, tested and tagged.

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- 4.2.1.3 Proper tagging shall involve the tagging of all switches (*other than control switches*), valves, controllers, grounding wires, etc. needed to completely isolate the equipment/system.
- 4.2.1.4 When possible, the tag will be attached at the same location as a lockout device would be applied.
- 4.2.1.5 If any changes in the work scope or conditions occur, the affected tagging procedures shall be reviewed and modified if necessary.
- If additional Red Tags are required, the PIA will ensure that affected individuals understand the expanded isolation and are signed on to the additional Red Tag(s) before work resumes.
  - If a Master Tag (MT) (See Appendix 4.2.1.5) is being used and the design is modified, a new MT will be issued reflecting the change in isolation design, and the existing MT will be cleared.
  - A Red Tagged isolation point shall not be cut out or otherwise removed without first re-establishing an effective isolation boundary and clearing the Red Tag attached to the isolation point.
- 4.2.1.6 Revisions or corrections are permitted on the **front** of the tag to indicate a change in PIA, date and time, and Person Placing Tag (PPT) before the tag is placed on an isolation point. **NO OTHER CHANGES MAY BE MADE ON THE TAG.**
- 4.2.1.7 Tag(s), MT(s) and/or log(s) must be filled out with permanent ink and names are to be legible.
- 4.2.1.8 Before the equipment/system is to be considered “Safe to Work On”, it will be properly isolated, de-energized from all hazardous energy sources (a thorough hazardous energy assessment must be performed), tested, and tagged.
- 4.2.1.9N The PSNH Generation “Notification Form for High Voltage Electrical Testing of Main Generators, Main/Service/Running Transformers, and Associated Conductors”, shall be used when conducting high voltage electrical testing activities (as applied to unit main generators, main/service/running transformers, and associated conductors). This form (located in Generation Procedure GEN-8086) is used to document signatures of authorized personnel and employees who may be affected by the testing procedures as follows:
- Signatures required in “Testing Notification Performed” block prior to commencing high voltage electrical testing procedures, and
  - Signatures required in “Testing Completed Notification” block after testing activities cease and prior to PAE declaring “Safe to Work”.

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## 4.2.2 Isolate, Test, And Tag Procedures

- 4.2.2.1 When any piece of equipment/system is to be tagged out for maintenance work, the Planning Department, Authorized Employee (AE) or Primary Authorized Employee (PAE) shall contact the PIA to have the equipment/system secured or the system isolated and tagged. The tags shall be attached using a "tie wrap" having a breaking strength greater than 50 pounds, i.e. - stock code #0133002. The tags shall be signed, if not preprinted, and dated (with time) by the PPT, position of the device, equipment title and/or identification number, shall be entered where designated on the tag. The location list including reason for tagging, the number of tags, and the work order number will be documented in the log book or in the tagging computer.
- 4.2.2.2 All sources of hazardous stored energy shall be considered during the isolation design, and before equipment/system is considered "Safe To Work On", i.e. confined space hazard assessment, bottled up or stored energy, thermal, work environment, etc. Before starting work on any piece of equipment, its associated energy source(s) shall be tagged.
- 4.2.2.2.1 The circuit breaker shall also be racked out. If the circuit breaker is not the rack-out type, it shall be placed in the open or manual trip position, tested and tagged. The test can consist of an operational check, an electrical check (live/dead/live - mandatory for handling conductors) in the 50-600 volt range with the appropriate testing equipment to verify that the circuit is DEAD, or a visual check to verify proper isolation. Additional requirements may include FR garment over 100% natural fiber clothing, face shield, Class "O" rubber gloves and grounding mat (when applicable).
- 4.2.2.2.2 The molded case circuit breaker in the "off" position does not provide a "visible" opening and removing the breaker or the line from the breaker may create more of a hazard. Therefore, before commencing work on any line or equipment that is isolated by a molded case circuit breaker, TESTS shall be conducted, consisting of an operational check or an electrical check (live/dead/live - mandatory for handling conductors) in the 50-600 volt range with the appropriate testing equipment to verify that the circuit is DEAD. Additional requirements may include FR, over 100% natural fiber clothing, garment, face shield, Class "O" rubber gloves and grounding mat (when applicable).
- 4.2.2.2.3 All valves, controllers, etc., required to remove energy sources from the equipment must be secured, tagged and signed on to before work begins. Drains and vents shall be tagged in the proper position as necessary to provide proper isolation. When performing operational checks, the AE(s) shall observe the vents and drains to ensure the energy source(s) has been released. If no venting and draining is observed, the AE(s) shall report that observation to the



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PIA to ensure proper energy release is addressed as part of the work procedure.

4.2.2.2.4 Control switches are not to be used as isolation points. Small informational tags may be used to indicate that a Red Tag is on an associated isolation point elsewhere in the Station.

4.2.2.3 No other color Generation tag shall be attached on the same “lockout device” location as a Red Tag. A single special **exception** is permitted as described in 4.2.2.4.d below.

- a. More than one Generation Red Tag may be attached at the same location. Each Tag functions independently so that the device cannot be operated until all Tags have been safely cleared. A single Red Tag may be used for more than one job or work activity.
- b. A Generation Red Tag and an ESCC Red Tag may be attached on the same isolation point. Each tag functions independently so that the device cannot be operated until all tags have been safely cleared.

4.2.2.4 The following procedures shall be used when using Generation Red Tags in ESCC jurisdiction.

- a. Placing a Generation Red Tag in ESCC jurisdiction:
  - 1. With the appropriate notice, submit an “Application for Apparatus” to the ESCC dispatcher for the equipment (controlling authority for isolating and tagging) to be issued an ESCC Red Tag. The application for the ESCC Red Tag should clearly state to whom the clearance will be issued, and that a Generation Red Tag will be placed on the same isolation point/device.
  - 2. Once the switching order is received to isolate the device, contact the PIA to have the Generation Red Tag placed on the same isolation point/device with the ESCC Red Tag. The ESCC Red Tag and the Generation Red Tag must both be placed during the same switching sequence in which the ESCC Red Tag is applied. There should be no intentional delay between the application of the ESCC Red Tag and the Generation Red Tag.
- b. Removing a Generation Red Tag in ESCC jurisdiction:
  - 1. The ESCC Red Tag issued for the placement of the Generation Red Tag may not be cleared/removed until after the Generation Red Tag is completely cleared/removed.
    - a. Clear/remove the Generation Red Tag.
    - b. Contact the ESCC dispatcher and return the ESCC Red Tag clearance for the associated Generation Red Tag issued. Tags not associated with the Generation Red Tag may still remain on

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the device. The device cannot be operated until all parties have returned their clearances and operation of the device is ordered by the ESCC dispatcher.

c. The dispatcher will:

- i. Issue switching steps, asking if all Generation Red Tags associated with this application have been cleared.
- ii. Issue switching steps to remove ESCC Red Tag and return only the clearance associated with the Generation Red Tagged device. Additional switching steps may be ordered to return device to service.

c. The only permitted exception to the single color tag rule is that a Generation Red Tag and an ESCC Blue Tag may be attached to the same isolation device. The ESCC Blue Tag and the Generation Red Tag function independently, as Do Not Operate Tags, such that the device cannot be operated until all of the tags have been safely cleared. However, the ESCC Blue Tag does allow test potential to be applied within the ESCC Blue Tag zone. This exception is allowed as long as the Generation Red Tag provides isolation safely outside of the ESCC Blue Tag zone. To use the Generation Red Tag in this situation, follow the procedure above in 4.2.2.4.a and b.

#### 4.2.3 Verify And Sign On

4.2.3.1 No AE shall work on any equipment before it is "Safe to Work On" and until AEs have signed and dated tag(s) as noted on the location list or the correct Master Tag (s) (MT). **Your signature is your personal Lockout/Tagout Device (LOCK).**

4.2.3.2 After isolation has been completed and tags placed, the PIA or designee shall notify the individual requesting the isolation that the equipment is isolated and what test(s) has been performed or may need to be performed to effectively isolate the equipment/system as noted on the location list (See Appendix 4.2.3.2)

4.2.3.3 Before starting work on any equipment/system, it is the responsibility of each AE (if no PAE is designated) to see that the proper safety precautions are taken and that equipment/system is "Safe To Work On."

a. AE(s) (if no PAE is designated) shall ensure the isolation design is appropriate for the work they will perform, read the tag(s), ensure tag(s) is correct and is on the right equipment, verify equipment/system isolation is effective by observing that the isolation points on the location list have been properly tagged, ensure isolation points are in the correct position (where

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possible - exterior observation only), and complete the “Safe To Work On” evaluation. Then AE(s) signs and dates the tag(s) before starting work.

4.2.3.4 In some tagging situations a PAE may be designated. The PAE shall ensure the isolation design is appropriate for the work to be performed, read the Tag(s), ensure Tags are correct and are on the right equipment, verify equipment/system isolation is effective by observing that the isolation points on the Location List have been properly tagged, ensure isolation points are in the correct position (where possible - exterior observation only), and complete the “Safe To Work On” evaluation. Then, sign and date the Tag (s) before authorizing “Safe To Work On” for affected AE(s).

- a. Each affected AE, after receiving “Safe To Work On” authorization from the PAE, will sign and date the Tag (s) as identified on the Location List when no MT is used. AE(s) signing Tags must ensure Tags are correct, on the right equipment, and isolation points are in the designated position (where possible - exterior observation only). **No work may be performed before receiving the “Safe to Work On” authorization.**

4.2.3.5 When working on the same equipment/system, each Department’s AE(s)/PAE(s) shall follow the procedures described in 4.2.3.2, 4.2.3.3 and 4.2.3.4.

- a. AE(s) (when no PAE is assigned)/PAE(s) must communicate with other affected AE(s)/PAE(s) any changes in work procedures or conditions that may impact other work.
- b. To ensure “Safe To Work On” is maintained, AE(s) (when no PAE is assigned) or PAE(s) must communicate with the PIA, any changes in work procedures or conditions that may impact “Safe To Work On”.

4.2.3.6 A PAE may be issued an MT if the PIA agrees it is appropriate. Each Master Tag, shall have only one PAE. An isolation design may have more than one MT. When an MT is used, the PAE shall ensure the isolation design is appropriate for the work that will be performed, tag(s) are correct and on the right equipment, verify isolation points on the Location List are in the correct position (where possible - exterior observation only), and that the system/equipment is “Safe To Work On.” After signing and dating the Tag(s) and MT(s), the PAE shall then communicate to the affected AE(s) (1) that the system is “Safe To Work On” and (2) the correct MT(s) to sign on to.

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- a. Each affected AE, after receiving “Safe To Work On”, will sign and date the correct MT(s) after re viewing the a sso ciated Location List. **No work may be performed before receiving the “Safe To Work On”** authorization. AE(s) sig ning ta gs must ens ure tag(s ) a re correct a nd on t he right equipment, i solation poi nts are in t he correct p osition (wh ere possi ble - exterior obs ervation only). AE(s) may choose to sign all Tags in lieu of signing onto the Master Tag.
  - b. All AE(s) must receive permission from the PAE to sign on the MT. The PAE has the authority to approve/disapprove who can work (sign-on) under their MT. W hen multiple Departments are signed on an MT , the PAE is responsible for verification. Therefore, in this situation, i ndividual Department verification is not required.

4.2.3.7 When work on equipment is to be done by outside Contractors, Tags shall be placed by the PIA or their designee. Under n o circu mstances shall outside Contractors assume t he resp onsibility of attaching o r re moving Ta gs. Th e respective PSNH li aison or PAE fo r the co ntractor personnel shall date and sign th e ta g(s) a nd MT (when us ed) as p er Rule 4.2.3.6. All Contractor Workers shall sign the t ag(s) or MT with thei r name, date and initials of their company.

4.2.3.8 In the event of a change of AE(s) or PAE(s) doing the work, or a Shift ch ange, all newly assigned AE(s)/PAE(s) shall date and sign the Tag(s) or MT(s) as per Rules 4.2.3.3, 4.2.3.4, 4.2.3.5, 4.2.3.6 and 4.2.3.7.

#### 4.2.4 Equipment Inspection And Sign Off

4.2.4.1 After the work is co mpleted, e ach AE shall cle ar the e quipment fo r re turn to Operational status b y dating and signing t he Tag(s) or Master T ag in the appropriate section. Only then shall the PAE date and sign the MT, (first, when used) the n the Ta g(s) last , in t he a ppropriate s ection to i ndicate th at equipment/system is re ady to be p laced in service a nd th at the AE(s ) have cleared the MT or Tag(s) properly. The PAE sh all then n otify the PIA that the work is co mpleted and that the AE(s ) have cleared the tag (s) or MT p roperly. In the event there is no PAE, the last AE on the job after signing off the Tag(s), shall notify the PIA that the work is completed.

- a. AE(s) a re expected and/or may be requested to clear th eir Tag(s) before the wo rk is compl eted if they a re reassigne d, exp ect th e work will be completed before they return, or will be away from the facility for an extended time, i.e. vacation, training (fo r continuity pu rposes: If th e work was not completed, the last AE on the job would not sign off until another AE is signed on.) Upon their return, they must sign on to the proper Tag(s) or MT before resuming work.

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- 4.2.4.2 The PIA shall have Tag(s) removed only after receiving clearance to do so.
- a. Person Removing Tag (PRT) will ensure that the work is completed, the equipment/system is ready to be returned to service and all AE(s)/PAE(s) have properly cleared the Tag(s) and MT(s).
  - b. Tags that have not been properly cleared shall not be removed unless the AE(s) in question are contacted personally OR:
    1. In instances where employees are not available (sickness, injury, etc.) the PIA, PAE or Supervisor of department involved shall visually check equipment before removing Tag(s). This is where the importance of a general description of reason for isolation in the Tagging Computer or hand written log is valuable. Clearance of a Tag requires special responsibility in that all work is complete and that the equipment is ready for service. This procedure shall not preclude an attempt to contact an individual who is signed on a tag.
    2. The unavailable AE(s) shall be notified of the removal of their Tag(s) as soon as reasonably possible, but in no case later than when they resume work at the Facility.

4.2.4.3 If there are no accidents, Red Tag(s) and MT(s) shall be kept for two (2) weeks and then destroyed. Tag(s) and the MT(s) involving incidents or near misses resulting in injury to people or damage to equipment shall be held and turned over to the person next in authority.

#### 4.2.5 Temporary Removal For Repositioning Or Testing (Tag Lift)

- 4.2.5.1 A Red Tag may be temporarily removed (Tag Lift) during servicing or maintenance to test and/or reposition the machine or piece of equipment, if all of the following conditions are met:
- a. All efforts should be made by individuals signed on tags who have completed work to clear their tag(s) (sign off).
  - b. The Tag Lifting procedure must be coordinated between the PIA and PAE or AE(s) (when no PAE is assigned).
  - c. The PIA lifting Tag(s) must obtain permission from the PAE(s) and AE(s) signed onto the Red Tag(s) and MT(s) (if used) being temporarily lifted.
    1. The PIA lifting Red Tag(s) may accept that permission has been obtained from persons signed on to the Red Tag(s) and/or MT(s) from the PAE requesting the Tag Lift, other PAE's, or the Contractor Supervisor.

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- a. The PAE(s) responsible for a MT must notify and obtain permission from all persons signed onto the MT, before giving permission for a Tag Lift.
  - b. The PAE responsible for a Contractor(s) may, in lieu of gaining permission from each person signed on to the Red Tag(s), accept permission from the Contractor Supervisor. However, in this case the Contractor Supervisor must notify and obtain permission from their employees signed on to the MT(s) before giving permission for a Tag Lift.
2. In instances where employees are not available (sickness, injury, etc.) the PIA, PAE or supervisor of department involved shall visually check the equipment before temporarily lifting Tag(s). This is where the importance of a general description of the reason for isolation in the tagging computer or hand written log is valuable. Temporarily lifting a RED TAG requires special responsibility so that testing and/ or repositioning a piece of equipment can be done safely.
  3. This procedure shall not preclude an attempt to contact each individual who is signed on the tag(s) and MT(s). Individuals not contacted will be notified as soon as practical, but no later than when they resume work at the facility.

4.2.5.2 A record of a Tag Lift shall be documented on the Tag(s) being lifted. This documentation shall include the name of the PIA, person lifting/reattaching the same Tag, and the date and time.

- a. The PIA verifies equipment safe for test and initials all Tags being lifted in the Tag Lift section.

4.2.5.3 After it has been determined that everyone is in the clear, the PIA may direct that Tags be lifted and the functional or electrical test be performed.

4.2.5.4 The lifted Tag(s) shall remain in the possession of the PIA, or their designee, until the functional or electrical test has been completed. These tests shall be performed as soon as practical after the tags have been lifted.

- a. The PIA informs the Operator that the equipment is ready to be lined up.
- b. The Operator removes and initials with date and time all lifted tags in the Tag Lift section and lines up the equipment/system.
- c. The person requesting the Tag Lift and an Operator are present at the equipment with a radio to communicate with the Control Room (or will communicate directly in areas without a Control Room).

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- d. Request the Control Operator to start the equipment or if motor starter/control switch is located at the equipment, the Operator will run the equipment.
  - e. Control Operator pages starting the equipment, and the equipment is then started.

4.2.5.5 After a functional and/or electrical test has been completed and if additional work must be performed, the lifted Tags will be reattached and "Safe To Work On" re-established and communicated by the PAE or AE(s) (when no PAE is assigned), before allowing work to resume, or permission may be given to clear the Tag(s) if work is completed.

4.2.5.6 The duration of a Tag Lift will be as short as possible, but as long as necessary. If it is extended beyond the shift or personnel change, the PAE or AE(s) (if no PAE assigned) conducting the Tag Lift shall notify all persons reporting to work on the equipment that a Tag Lift is still in progress.

#### 4.2.6 Temporary Removal For Testing An Uncoupled Motor

4.2.6.1 This procedure requires temporary removal of the Red Tag(s) and shall be used only for rotation, vibration checking or electrical test(s) of an **uncoupled** motor.

4.2.6.2 The person requiring the motor to be tested shall inspect the equipment to assure that it is uncoupled, coupling half is secured, guards are in place and that its running will not affect the status of other associated equipment or systems.

4.2.6.3 This person shall inform and gain permission from all people signed on to the Red Tag(s) of the plan to temporarily remove the Red Tag(s) and test the uncoupled motor.

4.2.6.4 Following this, a request shall be made to the PIA, who upon receiving the request, shall assign an Operator or the PAE to verify that the motor is uncoupled and safe to test.

4.2.6.5 When the motor has been verified to be uncoupled and safe to operate, the person requesting the tests shall remain at the motor with a radio to communicate with Operations.

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- 4.2.6.6 The Operator, immediately after verifying the condition of the motor, shall:
- a. Remove the Red Tag
  - b. Rack the motor breaker in
  - c. Return to the motor
  - d. Request that the Control Operator test the uncoupled motor, or if the motor starter is not located in the Control Room, the Operator shall test the motor.
  - e. For those motors started in the Control Room, the Control Operator shall page over the intercom before testing the uncoupled motor.

4.2.6.7 After the test(s) is complete, the Operator shall:

- a. Have the Control Operator or Operator shut the motor off
- b. Open and rack out motor breaker
- c. Reattach the Red Tag

4.2.6.8 Also, the person who requested the motor to be tested shall verify reattachment of the Red Tag(s). All people signed onto the Red Tag(s) shall be notified, by the person requesting the test(s) of this motor that:

- a. The operation has been completed
- b. The Red Tag has been reattached
- c. The system has been returned to the prior isolation state
- d. "Safe To Work On" status, i.e. visual opening at breaker or a live/dead/live test on molded case circuit breaker.

### 4.3 Blue Safety Tag (See Appendix 4.3)

4.3.1 The Blue Safety Tag is an administrative control, issued at the sole discretion of the PIA to a single NU AE (outside contractors are excluded from holding a Blue Tag). The Blue Tag permits testing, calibration, and troubleshooting. It also permits specific maintenance/servicing operations, listed in Rule 4.3.2, not requiring a Red Tag after certain conditions are met (See Rule 4.1.5 and 4.1.6). No other color Tag shall be attached in the same tagout location as a Blue Tag.

- a. A Blue Tag clearance does not give assurance to others that the equipment will remain de-energized. Therefore, the person issued a Blue Tag, is responsible to:
  - 1. Ensure only one Blue Tag is issued for each control point.
  - 2. Ensure no revision(s) are made on the Blue Tag.
  - 3. Maintain control of the operation of the equipment/system by being the sole operator of the equipment/system or being the individual contacting a manned control room for operation of the equipment/system.



4. Ensure that all controls, preventing exposure to hazards created by the unexpected energization or startup of equipment or release of energy, remain effective.
5. Inform all affected workers to remain in the clear before energizing equipment.
6. Inform workers that the testing and/or specific maintenance/servicing operations have been completed and of the current status of the equipment/system.
7. Implement additional control(s), preventing accidental or inadvertent operation of the equipment/system when/if they are not physically present at the location of the Blue Tag(s) (unless the Blue Tag(s) is located in a manned Control Room).
8. Once removed, the Blue Tag(s) will be returned to the PIA.
9. If there are no accidents, the Blue Tag(s) shall be kept for two (2) weeks and then destroyed. The Blue Tag(s) involving incidents or near misses resulting in injury to people or damage to equipment shall be held and turned over to the person next in authority.

4.3.2 Station Specific Maintenance/Servicing uses, Authorized in Rule 4.1.5 and 4.1.6: this list is inclusive. Additional uses may be added only with an approved JSA and the approval of Generation Team C.

- a. Adjusting/inspecting/replacing bolted on air heater seals
- b. Repairing/replacing/welding limited access air heater seal rings (Schiller Station only)
- c. Adjusting/cleaning forced draft fan inlet vanes
- d. Clearing cyclone coal feeder downcomers
- e. Cleaning/greasing/removing/replacing traveling screens
- f. Greasing rack rake
- g. Removing/replacing/washing air heater baskets
- h. Routine coal handling system cleaning
- i. Servicing polisher strainers
- j. Clearing a plugged fly ash / bottom ash soot rotary valve
- k. Light fixture maintenance in crane bay

#### 4.4 Yellow Caution Tag (See Appendix 4.4)

4.4.1 The Yellow Tag is an informational tag attached to, i.e., a barricade, control switch, equipment, small tools, or warning tape, to inform individuals of hazards/ conditions/ precautions which should be taken to protect personnel safety, equipment or the environment.

4.4.2 The PIA normally authorizes placement of a Yellow Tag. However, it may be placed/authorized by anyone recognizing a situation which warrants informing others. The PIA shall be notified by the person authorizing the placement of a Yellow Tag. The Tag shall be signed by the Person Placing Tag.

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4.4.3 It shall be attached in such a manner that the Tag can only be removed by a deliberate attempt by an individual. "Tie wrap" and/or plastic sleeves will be used if the Yellow Tag(s) will be in place for an extended period of time or the environment could affect the integrity of the Yellow Tag.

4.4.4 When warning tape is used, a Yellow Tag shall be attached to:

- a. Yellow "Caution" Tape with a description of situation/hazard and the Statement "**Proceed with Caution**".
- b. Red "Danger" Tape with a description of the situation/hazard and the Statement "**Do Not Enter Unless Authorized**".

4.4.5 When encountering warning tape, it is an employee's responsibility to first read the information description of the hazard/situation. All instructions on the Yellow Tag shall be adhered to by all employees.

4.4.6 When no longer serving an informational purpose, Yellow Tag(s), warning tape or barricades shall be removed:

- a. by the person who attached it, or
- b. the person who authorized its placement; or
- c. at the discretion of the PIA.

4.4.7 The PIA shall be notified when a Yellow Tag has been removed.

#### 4.5 **ANNUAL INSPECTION** - (See Appendix 4.5)

LOTO procedures will be periodically (at least annually) inspected using Hazard Energy Control Inspection (Audit) Guidelines.

#### 4.6 **DEFINITION(S)**

I. **Authorized Employee (AE)** - Employees, (PSNH and Contract) possessing the necessary knowledge and experience within the proper job classification for duties assigned under these procedures and having successfully completed required training.

A. Employees performing servicing and maintenance on equipment or systems will have successfully completed AE Training (For Contractors: equivalent to PSNH Contractor Liaison reviewing Appendix 4.6 with each Contractor).

B. AE(s) are responsible to verify isolation with Location List (s) and identify and perform other steps (if any) needed to ensure equipment is "Safe To Work On" before signing tag(s) and starting work or:

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- C. When a Primary Authorized Employee (PAE) is designated, all the AE(s) must ensure tag(s) are correct, on the right equipment, and the isolation points are in the designated position (where possible - exterior observation only) before signing on to the tag(s). If signing an MT(s) it must be the correct MT(s). The AE(s) must receive the "Safe To Work On" authorization from the PAE before starting work.
- II. **Person in Authority (PIA)** - AE(s) at each location, designated by management, who have the responsibility for isolation design and the routine conformance with these procedures.
- A. The PIA is responsible for arranging for deactivation of equipment, properly isolating, attaching tags as indicated on Location List, and conducting testing to ensure that the equipment is effectively isolated for servicing and maintenance.
- B. The PIA (or designee) must communicate to the AE(s) or PAE (if designated) the results of any test(s) that have been conducted to effectively isolate equipment/system.
- C. The PIA (or designee) must communicate with the AE(s) or PAE (if designated) any test(s) procedures that were not performed to effectively isolate equipment/system.
- D. The PIA is responsible for returning equipment to service after servicing or maintenance work has been completed.
- III. **Primary Authorized Employee (PAE)** - An AE, during certain tagging situations, whose responsibility is to ensure and communicate to affected AE(s) that equipment is "Safe To Work On".
- A. PAE is not required for every tagging situation, but may be designated by management.
- B. PAE, when designated, is responsible to authorize "Safe to Work On" to affected AE(s).
- C. PAE shall have knowledge of the overall job scope under lockout/tagout control, control of the work conditions which may affect work group(s) safety, and coordinates changes in work scope with others affected or AE(s) or PAE(s) (if designated) and the PIA to assure isolation is maintained.
- D. The PAE(s) have the authority to approve/disapprove who can work (sign-on) under their MT.
- E. PAE will communicate the status of the work scope and group lock out/tagout to the new Shift PAE(s)/AE(s) (if no PAE is designated) upon Shift turnover or when personnel changes occur.

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- IV. **Person Placing Tags (PPT)** - AE designated by the PIA to perform isolation(s).
- A. PPT is responsible to place their name on Tag(s) if not pre-printed, perform isolation(s) and tag equipment/system(s) as requested, including conducting test(s) as needed to ensure effective isolation, and/or notify PIA of additional test(s) which may need to be performed to complete the isolation.
- V. **Person Removing Tags (PRT)** - AE designated by the PIA to clear tags and return equipment to service when maintenance and/or servicing is completed.
- VI. **Tags Plus** - Additional measures incorporated into an isolation design, to demonstrate that it is equivalent to Lockout procedure. Tags Plus requires a physical action or measure, not a behavior, culture, or administrative procedure, to prevent accidental or inadvertent re-energization of equipment/system. These measures are intended to keep a worker safe if a person makes a single mistake (see Appendix 4.2.1.1). Examples of Tags Plus include, two tagged valves in series, one tagged valve with tie wrap connecting the valve handle to the yoke, grounding an electrical circuit, a racked out breaker, inaccessible location, removal of a valve handle on a tagged valve, tie wrap through place where lock would be applied.
- VII. **Isolation** - A component of "Safe To Work On". The operational procedure(s), i.e. isolation design and implementation, location list, testing, and tagging implemented to prevent exposure to hazardous energy sources, i.e. thermal, bottled up or stored energy, electrical, etc.
- VIII. **"Safe To Work On"** - An authorization to go to work when all hazardous energy sources have been eliminated or controlled, or steps to do so are included in the work practices. Before servicing or maintenance is allowed by an AE(s) or PAE (when designated), they must ensure that the equipment/system has been isolated, tested, tagged, and any additional work procedures implemented to effectively control employee exposure to hazards (i.e. confined space, thermal, bottled up or stored energy, electrical, live/dead/live, work environment, etc.). The PAE (when designated) then signs the Tag(s) and communicates the "Safe To Work On" to the AE(s) or Contract Supervisor with any controls that are needed as part of the work process.
- IX. **Danger Do Not Operate (Red) Tag** (see Appendix 4.2) - An approved PSNH Generation form that can be securely fastened to an energy-isolating device. (See PSNH APM Section 4.2)
- A. When signed on the back, the Red Tag is an AE's personal isolation device (LOCK). The Red Tag indicates that the energy-isolating device and the equipment being controlled shall not be operated until the Red Tag is cleared.
- B. Work Order number is a reference number only and generally shows the first Work Order number assigned to an isolation point.
- X. **Blue Safety Tag** - (see Appendix 4.3). The Blue Safety Tag is an administrative control form that permits testing and/or specific maintenance/servicing operations not requiring a Red Tag. (See PSNH APM Section 4.3)

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- XI. **Yellow Caution Tag** - (see Appendix 4.4). The Yellow tag is an informational form used to inform individuals of hazards/conditions/precautions to be taken to protect personnel safety, equipment or the environment. (See PSNH APM Section 4.4)
- XII. **Clearance** - Permission, after specific procedures are followed, to remove a Danger Do Not Operate (Red) Tag from equipment/system that has been controlled under these Tag out procedures.
- XIII. **Master Tag (MT)** - Extension of a Danger Do Not Operate (Red) Tag(s). It functions as a personal Lockout device when signed on/off by an AE, and clearly identifies each AE protected. Signing an MT is equivalent to signing the individual Tag(s) associated with an isolation design. (See Appendix 4.2.1.5)
- A. The MT will be maintained in a secure location, accessible to PIA(s) and PAE(s).
  - B. The Location List shall be kept with MT until the MT is cleared.
  - C. The MT will be cleared before additions or deletions are made in the isolation design.
  - D. An isolation design may have more than one MT.
- XIV. **Testing** - A determination that equipment/system(s) are de-energized. This involves the use of approved, properly operating test equipment or procedures designed for an d capable of determining if any energized conditions exist.
- XV. **Energy Isolating Device** - A device that physically prevents the transmission or release of energy, including but not limited to the following: a manually operated electric circuit breaker; a disconnect switch; a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors and, in addition, no pole can be operated independently; a line valve; a block; and any similar device used to block or isolate energy.
- A. Push buttons, check valves, selector switches and other control circuit type devices are not energy isolating devices for Red Tag isolation, but may be used in conjunction with a Blue Tag.

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## **SYSTEM OPERATIONS AND TAGGING PROCEDURES 1910.269 (m)**

### **4.10 AUTHORITY AND JURISDICTION**

4.10.1 This rule outlines procedures to be followed for safety tagging at all voltages and at all locations where Company personnel are engaged in the operation or maintenance of lines and equipment, including the areas of transmission, sub-transmission, distribution and generating locations. It must be noted that at generating stations, joint tagging of equipment may exist, and this may involve safety tagging practices as noted in rules 4.1 through 4.6.

4.10.2 System Operation Authority & Jurisdiction  
(overhead/underground/sub-station)

4.10.2.1 The authority and jurisdiction over the PSNH transmission/sub-transmission system (lines and equipment operating at 34.5 KV and above) for planned, unplanned or emergency operations shall be governed by the following:

**THE SYSTEM DISPATCHER SHALL HAVE AUTHORITY AND JURISDICTION OVER ALL TRANSMISSION/SUB-TRANSMISSION LINES AND/OR EQUIPMENT FOR PLANNED, UNPLANNED OR EMERGENCY OPERATIONS UNTIL THE SYSTEM DISPATCHER HAS EXPRESSLY RELINQUISHED THIS AUTHORITY TO PROPER DIVISION OR AREA WORK CENTER PERSONNEL.**

**NO OPERATION OR SWITCHING SHALL BE DONE UNLESS IT IS IN COMPLIANCE WITH THE PRECEDING STATEMENT.**

4.10.2.2 Application to perform planned work on the transmission system should be made to the ESCC with sufficient notice to be thoroughly reviewed by the System Dispatcher. Projects involving multiple switching operations which involve coordination of various departments should have switching orders prepared sufficiently in advance to be thoroughly reviewed by all involved.

Refer to NHSOP #3, Transmission Maintenance Procedure.

4.10.2.3 For additional information, refer to the NH Switching and Tagging Reference Manual used to qualify individuals on the Certified List for switching and tagging.

4.10.2.4 The system dispatcher shall have authority and jurisdiction **over all** under-frequency relays at any voltage above 600 volts for planned and unplanned operations.

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4.10.3      Exceptions to Preceding Statement

4.10.3.1    An emergency to save life or property.

4.10.3.2    In an emergency with total loss of communication with System Dispatcher, local operation or switching by authorized personnel is permissible under the direction of appropriate local authority.

4.10.3.3    34.5 kV radial distribution lines connected to sub-transmission lines through a protective device such as a recloser, fuse, etc. designed to clear without affecting the integrity of the sub-transmission system.

4.10.4      Included with Preceding Statement

4.10.4.1    34.5 kV distribution lines that can be connected to other sub-transmission sources (loops, ties, back fed, etc.) are deemed to be under the System Dispatcher's jurisdiction.

4.10.4.2    34.5 kV lines which have generators, co-generators, small power producers (SPPs), limited electrical energy producers (LEEPs) greater than 1.0MW in capacity or any unit claimed as capacity by PSNH are deemed to be under the System Dispatcher's jurisdiction.

4.10.4.3    Work being performed beyond protective devices which affect the integrity of the sub-transmission system in order to sectionalize is deemed to be under the System Dispatcher's jurisdiction.

4.10.      5      Additional Notes

4.10.5.1    THE SYSTEM DISPATCHER SHALL BE CONTACTED if any work on lines or equipment IS THOUGHT to jeopardize the integrity of the sub-transmission line/system or there is any doubt concerning proper procedures.

4.10.5.2    Any type of work clearance on one phase of a three phase circuit must apply to all three phases. Therefore, it is not permissible to take clearance on a single phase of a three phase circuit, unless the same clearance would apply to all three phases.

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## 4.11 TRANSMISSION SYSTEMS

### 4.11.1 Definition

The transmission system includes all lines operating at 115 kV and above. The separation point between transmission and distribution equipment is the isolation device on the primary side of the transformer.

### 4.11.2 Dispatcher - Definitions

The following definitions are applicable to this rule:

#### 4.11.2.1 Dispatcher/System Dispatcher

- a. Authorized Electric System Control Center (ESCC) system dispatching personnel.

#### 4.11.2.2 Acting Dispatcher

- a. Any authorized PSNH employee to whom the System Dispatcher has expressly relinquished system operation authority to.
- b. Non PSNH employees (contractor personnel, et c.) are not authorized to be Acting Dispatchers.

#### 4.11.2.3 Authorized NU Employees for taking clearances.

Authorized employees for taking clearances, shall include NU Employees and other employees working under the sole direction and supervision of PSNH employees. The authorized NU employee shall have completed training from PSNH, received department head or process owner approval, and be included on the ESCC list of "Certified Personnel" for switching/tagging and clearance.

### 4.11.3 Contractors

Clearance for work by contractors on the PSNH transmission system must be issued to authorized NU employees only. The physical placing of tags and switching may be performed by non NU work crews only under the direction of authorized NU employees, who are certified by ESCC for both switching/tagging and taking clearances.



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4.11. 4 Intersatellite Clearance/Tagging

When it becomes necessary for NU employees to work on the interconnected system under the dispatcher's jurisdiction, which involves adjacent utilities, the system dispatcher shall act as the agent in coordinating the work requests with the system operator of the adjacent utility and in obtaining the necessary clearance requirements for the type of work requested.

Authorized personnel from adjacent intersatellite utilities shall be entitled to receive clearance and hold safety tags in their name on PSNH equipment while working on the interconnected system.

4.11.5 Review of Tags and Switching Orders

All tags removed and all completed switching orders written for work on the Transmission System shall be reviewed and initialed by Transmission supervisory staff and stored for thirty days.

4.11. 6 Customer Interface

Switches and equipment which isolate customer-owned equipment on the Transmission System shall only be operated by order of the System Dispatcher or appropriate Transmission Business Unit (TBU), or Area Work Center personnel. Appropriate tags shall be placed in the name of the Dispatcher, or acting dispatcher, when such devices are utilized to isolate a work zone on customer-owned equipment to be worked on by the customer.

**4.12 DISTRIBUTION SYSTEMS**

4.12. 1 Definition

Distribution circuits include all lines and equipment operating at 5 through 34.5 kV.

4.12. 2 Jurisdiction

4.12.2.1 Distribution circuits and equipment under local jurisdiction of the Zone/Area Work Center include 34.5 kV lines not shown on the system one line diagrams (red book) and circuits/equipment operating at 15 kV and below. The separation point between circuits/equipment under System Dispatcher authority and local AWC jurisdiction is the protection device connecting the two systems. Work on distribution circuits which transcend the boundaries of one Area Work Center or Zone must be coordinated between the Zones, Area Work Centers, and the ESCC.

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4.12.2.2 Any authorized PSNH employee (person in charge, standby person, foreman, supervisor, superintendent, etc.) who operates or orders the operation of systems operating at or below 19.9/34.5 kV that are not under System Dispatcher authority or jurisdiction is considered an Acting Dispatcher or local authority when operating at the distribution level.

4.12.2.3 Non-authorized NU employees (contractor personnel, etc.) are not authorized to receive or hold clearance in their name to operate or work on systems or equipment under local jurisdiction. Such clearances shall be under the name of authorized local NU personnel who shall be responsible for directing non-NU personnel system clearance requirements.

4.12.2.4 All tags shall be installed/removed by, or under the direction of, authorized local NU personnel only (includes tags for systems/equipment under System Dispatcher's jurisdiction).

**NOTE:** Rule 4.12.2.3 and 4.12.2.4 above are NOT APPLICABLE to single phase reclosers, sectionalizers and line fuses under location control/jurisdiction.

4.12.2.5 The ESCC System Dispatcher must be contacted prior to performing work on the Distribution System if such work may jeopardize the integrity of the transmission system or switching is required on the transmission system in order to perform distribution work. The ESCC Dispatcher must be contacted prior to working on 34.5 kV distribution lines or underground systems which can be looped to lines under Dispatcher jurisdiction, and which can be utilized as a transmission path.

4.12. 3 Authority

Authorization to perform switching and/or hold clearance on a distribution circuit must be given by the appropriate Area Work Center or authorized personnel.

4.12. 4 Switching Orders

All projects requiring more than one tag to be placed must have a written switching order listing all steps to be taken, the time completed, by whom, and the person in authority.

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4.12.5 Contractors

Non PSNH work crews, contractors, etc. may hold clearance and perform switching and tagging only on portions of distribution circuits which are beyond single phase protective devices. An authorized NU employee must hold clearance and direct switching for all work to be performed by non PSNH work crews protected by three phase devices such as station breakers, three phase reclosers, etc., and physical placing of tags and switching may be performed by non PSNH work crews only under the direction of authorized NU personnel.

4.12.6 Live Line Work

4.12.6.1 Orange Safety Tags must be installed in such a way as to clearly identify all station breakers, reclosers, cutouts, and all devices used to provide protection during live line work. It may be necessary to install additional Orange Tags on protective devices if it cannot be clearly established which device will clear for a fault. All normally open points which could reenergize the zone on which live line work is being performed, must be visually checked open. The person directly in charge of doing the actual work shall have the option of having such devices tagged prior to starting the job. **For additional information see SH-6013 Switching Procedure for non dispatcher controlled circuits.**

4.12.6.2 Work using live line methods on de-energized lines may be done with an Orange or Red Tag. Red Tags shall only be installed on equipment utilized to provide a visual opening. Appropriate live line work methods must be utilized on de-energized circuits which have not been properly tested and grounded.

4.12.6.3 Orange safety tagging of field/substation reclosers, including McGraw Edison (ME) type 3A & 4C, may be achieved by applying a single Orange Safety Tag to the device. ME controls are to be tagged at the WB lock or handle on the access door to the main controls. An additional Orange Safety Tag may be placed inside the unit, but is not required. Any field recloser of this type that is Orange Safety Tagged, with a single tag, means the entire device and its controls are protected by the tag in place and must not be operated without proper authorization. Within substations conventional tagging methods must be adhered to for all other types of control schemes.

4.12.7	<u>Review of Tags</u>	All tags placed and switching orders written will be reviewed and initiated by area work center supervisor and retained for a period of thirty days.
4	.12.8	<u>Underground</u>
		Proper tagging is required for all underground work requiring a worker safety zone of protection. Work performed on energized underground equipment must be treated as live line work and issuance of clearance, placement of tags, and writing of switching orders must be done in accordance with proper procedures. Refer to New Hampshire Satellite Operating Procedure (NHSOP) 30, Section VI, Underground System Tracking Procedures.
4.12.	9	<u>Customer Interface</u>
		Switches and equipment which isolate customer owned equipment on the Distribution System shall only be operated by order of the Acting Dispatcher as designated by the Area Work Center or authorized personnel. Appropriate tags shall be placed in the name of the Acting Dispatcher when such devices are utilized to isolate a work zone on customer owned equipment to be worked on by the customer.
4.12.10		<u>Distribution Operations - Emergency Restoration Tag (ERT)</u> <b>(See Appendix 4.12.10)</b>
	4.12.10.1	<u>Scope:</u> To provide a generic safety tag for Distribution Operations' use during emergencies and the restoration of service on <b>DE-ENERGIZED</b> lines and equipment. This safety tag shall only be used on PSNH Distribution lines and equipment and is equivalent in meaning to the existing PSNH Red Safety Tag, which requires appropriate authorization from the designated person, who ordered or placed the tag in service, prior to removing or operating the device or equipment which is tagged.
		This tag is intended for normal use during restoration of service. The line/equipment is normally in a de-energized state and would be considered a Red Tag clearance zone if appropriate visible openings have been checked and tagged, otherwise, it must be considered and worked upon as energized.

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4.12.10.2 Application: This safety tag is for non-Dispatcher Controlled Systems **ONLY**. This safety tag is designed to be used by the person in charge of the unit indicated on the safety tag. When devices or equipment being tagged are under the sole control of the person in charge of the unit indicated on the tag, then these safety tags may be applied, otherwise, conventional Lockout/Tagout rules and procedures must be followed.

When more than one safety tag is placed in service the existing requirement for tracking each location on a switching order is still in effect. No operation or switching is permissible while the safety tag is in place, and the safety tag may not be removed without the expressed consent of the person in charge of the unit indicated on the tag. The unit number is equal to the radio identification number for the purpose of this safety tag.

#### 4.13 SYSTEM TAGGING PROCEDURES

4.13. 1 Definition

The safety tagging rules and the Safety Tags hereinafter described are intended to meet the following requirements:

4.13.1.1 To protect employees working under all conditions.

4.13.1.2 To protect equipment from damage.

4.13.1.3 To direct attention to abnormal or special conditions.

4.13. 2 Application

The safety tagging rules shall apply equally to electrical and mechanical work.

4.13.2.1 No work shall be done on or near any equipment except in accordance with these rules.

4.13.2.2 Clearance to work on lines or equipment shall not be issued unless Safety Tags have been placed on the appropriate controls or switches. **The equipment shall be considered and worked upon as "energized" until tested otherwise and properly grounded.**

4.13.2.3 Each Safety Tag shall be used only for the purpose for which it is intended. Use of any Safety Tag as a sign, a card to make notes or for any other purpose than that authorized by instructions covering its use is prohibited.

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4.13.2.4 Safety Tags must be placed on appropriate equipment in all situations, except for Emergency Hot Line work on SCADA/Dispatcher controlled circuits.

#### 4.14 **SAFETY TAGS**

There are four different Safety Tags, each with a single purpose and each of a different color. These four tags will cover all of the various operating and working conditions. These Safety Tags are as follows:

- 4.14. 1 Red Safety Tag - (Black printing on red card)  
See **Appendix 4.14.1**  
To be used on switches or valves used to isolate or ground equipment which shall not be operated or have pressure applied.
- 4.14. 2 Blue Safety Tag - (Black printing on blue card)  
See **Appendix 4.14.2**  
To be used on switches or valves used to isolate equipment which may have test potential or pressure applied as necessary and the zone of clearance is issued only to one person.
- 4.14.3 Orange Safety Tag - (Black printing on orange card with black borders)  
See **Appendix 4.14.3**  
  
To be used for Hot Line purposes only. **HOT LINE IS CONSIDERED WORK ON ANY ENERGIZED CIRCUIT OR DEENERGIZED CIRCUIT WHICH IS NOT PROPERLY GROUNDED.**
- 4.14.4 White Safety Tag - (Black printing on white card)  
See **Appendix 4.14.4**  
  
To be used to indicate an abnormal condition or cancellation of normal operating procedures not covered by Red, Blue or Orange Safety Tags.

#### 4.15 **RED SAFETY TAG**

- 4.15. 1 Use Of
- 4.15.1.1 When equipment must be deenergized and isolated in order to allow persons to work safely on this equipment or to protect the equipment itself, Red Safety Tags shall be placed on all the isolating points that are open to isolate this equipment and upon any station switch closed to ground the equipment.

**Potential or pressure shall not be applied within the area surrounded by Red Safety Tags.**

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- 4.15.1.2 When the Dispatcher or Acting Dispatcher orders a Red Safety Tag placed, the tag shall not be removed until ordered by the Dispatcher or Acting Dispatcher. If a person in charge of a job orders a Red Safety Tag placed, that tag shall not be removed until that person reports clear of the work being done that required the tag.
  - 4.15.1.3 The Red Safety Tag prohibits operation of the switch, control or valve to which it is attached. **The switch, control or valve shall never, under any circumstances, be operated by any person while a tag is in place.** Any number of Red Safety Tags may be attached to a switch, control or valve at the same time. Each separate group working on the equipment must request its own Red Safety Tags. These tags shall be applied for by the supervisor responsible for each group.
  - 4.15.1.4 Electrical equipment which has been isolated and the isolating points Red Tagged shall, whenever possible, be separated from all other apparatus by a visible opening to each possible source of energy.
  - 4.15.1.5 All such openings shall be checked and Red Tagged regardless of their location or position during normal operation.
  - 4.15.1.6 If no visible opening is possible, the switch, control or valve shall be blocked open mechanically.

#### 4.16 **BLUE SAFETY TAG**

##### 4.16. 1 Use Of

- 4.16.1.1 This tag shall be used for the tagging of isolating devices to isolate equipment which is to be energized or have pressure applied for tests. Potential or pressure to be applied to the equipment may be up to several times normal.
- 4.16.1.2 The purpose of the Blue Safety Tag is to permit testing of the equipment by the person to whom the tag is issued. **The Blue Safety Tag is the only tag which authorizes such testing.** A Blue Tag Clearance does not give assurance that the equipment will remain dead. Therefore, the person in charge of work under Blue Safety Tags has special responsibilities not present when working under Red Safety Tags.

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- 4.16.1.3 If the Dispatcher or Acting Dispatcher orders a Blue Safety Tag placed, it shall remain until ordered removed by the Dispatcher or Acting Dispatcher. If a person in charge of a job orders a Blue Safety Tag placed, that tag shall not be removed until that person reports clear of the work being done that required the tag.
- 4.16.1.4 The Blue Safety Tag prohibits operation of the switch, control or valve to which it is attached. **The switch, control or valve shall never under any circumstances be operated by any person while a tag is in place.**
- 4.16.1.5 Only one Blue Safety Tag clearance may be issued on any one zone of protection at a time. No Red Safety Tag clearance may be issued on equipment which is Blue Safety Tagged and no Blue Safety Tag clearance may be issued on equipment which is Red Safety Tagged.
- 4.16.1.6 The Blue Safety Tag shall be used to permit work such as Double testing of equipment, cable testing, testing of relays and maintenance and repair involving testing. The repair and testing of URD and network systems is allowed under Blue Safety Tags.
- 4.16.1.7 If more than one crew is to work upon apparatus which is to be Blue Safety Tagged, the persons in charge shall agree in advance which one of them shall be responsible for all work. After this person has received clearance from the Dispatcher, that individual shall make sure that all persons are clear of the apparatus before any test potential or pressure is applied. Between the times when potential is applied to electrical apparatus, if work or adjusting is to be done on parts normally energized, these parts shall be grounded. If the apparatus is to be tested from a normal source of potential or pressure, the person holding the clearance must request it and the Blue Safety Tag must be ordered removed by the Dispatcher or Acting Dispatcher from the switch or valve which is to be operated to apply potential or pressure.

The most common use for the Blue Safety Tag will be during Double testing and routine breaker maintenance. **Major maintenance or construction shall not be allowed under Blue Safety Tags.**



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4.16.1.8 URD/Network Systems

When maintenance is required on cables for URD systems and isolated cables on network systems, then these isolation points may be Blue Tagged which will allow grounding and or repairs under Blue Tag Clearance. The ordering and removing of the grounds is under the control of the person holding the Blue Tag Clearance.

**4.17 BLUE AND RED SAFETY TAGS ON THE SAME SWITCH**

4.17. 1 Use of

4.17.1.1 In cases where certain equipment is to be Red Safety Tagged and one or more of the switches tagged open is also used to isolate adjacent equipment for Blue Safety Tag work, the Red Safety Tag and the Blue Safety Tags shall specify on the line "For Work On" which equipment or line is to have that particular type of clearance.

**4.18 ORANGE SAFETY TAG**

4.18. 1 Use Of

4.18.1.1 R The purpose of the Orange Safety Tag is to indicate that the device or equipment tagged has its normal operating procedures canceled due to Hot Line Work in progress, or other work having the potential to encroach unqualified distances shown in Table 3.4B. NOTE: Qualified distances shown in Table 3.4A must always be maintained when working under an Orange Safety Tag.

4.18.1.2 Anytime an Orange Safety Tag is ordered on by the Dispatcher or Acting Dispatcher, Special Orders for that device or equipment are automatically in effect. The Special Orders that are in effect are: the device or equipment Orange Tagged is **NOT** to be operated until clearance has been received from the person or persons for whom the device is tagged. This clearance is to be issued through the Dispatcher or Acting Dispatcher who ordered the tag placed.

4.18.1.3 Some of the areas for normal use of the Orange Safety Tag include reclosing relay switches and OCB or OCR control handles, permissive switches for automatic reclosing schemes, voltage sensing and motor operated airbrakes that require tagging, lifted taps, in-line disconnects and cutouts.

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#### 4.19 WHITE SAFETY TAG

##### 4.19. 1 Use Of

- 4.19.1.1 This tag shall be used to indicate an abnormal condition or cancellation of normal operating procedures. It is intended to act as a reminder to anyone planning to operate the device or equipment that an abnormal condition exists and to refer to the Special Orders written on the tag.
- 4.19.1.2 If the Dispatcher or Acting Dispatcher orders a White Safety Tag placed, it shall remain until ordered removed by the Dispatcher or Acting Dispatcher. If a person in charge of a job orders a White Safety Tag placed, that tag shall not be removed until that person reports clear of the work being done that required the tag.
- 4.19.1.3 Some common uses of the White Safety Tag are circuit breaker control handles for circuit breakers out of service for maintenance or Double testing, OCB, OCR and recloser control handles when in an abnormal state such as, sectionalizing and testing of lines and equipment, carrier relay switches or relay systems either off or operating with restrictions, AC or DC circuit breakers that are off or fused circuits which are open in equipment due to trouble or maintenance.
- 4.19.1.4 Anytime a White Safety Tag is used in the system it is mandatory to issue Special Orders with the tag. Special Orders could be "Do not operate contact Dispatcher", "Out of service per Communications and Control Department", or any other operating limitation placed on the device or equipment by the person ordering the tag to be placed.

#### 4.20 MANNER OF PLACING SAFETY TAGS

##### 4.20. 1 Transmission & Distribution

- 4.20.1.1 All Safety Tags shall be placed to clearly identify the isolating device to which it applies. When tagging single blade disconnect switches, the tag shall be attached to an insulated tagging device and this device shall be hooked into the eye of the blade on the middle phase. An insulated switch stick shall be used to place and remove the tagging device. If more than one tag is to be used on a set of disconnects, additional tagging devices may be placed on the outside blades.

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- 4.20.1.2 Devices such as gang operated switches which have provisions to be locked, shall have the tag placed on the lock. Devices to be tagged which do not have a convenient location to attach the tag (hydraulic reclosers, cutouts, etc.) shall have the tag attached to an approved tagging device and placed in such a way as to clearly identify the isolating device to which it applies. A Marshall tagging device must not be placed on bushings where they may provide a path to ground for an energized conductor.
  - 4.20.1.3 In tagging a circuit breaker racked down or out to disconnect position, a Red Safety Tag shall be placed on the elevating or engaging mechanism control. A White Safety Tag shall also be placed on the remote control switch for all breaker maintenance.
  - 4.20.1.4 Truck type breakers pulled out to disconnect position shall be tagged by placing the appropriate Safety Tag on the outside of the panel.
  - 4.20.1.5 Anytime maintenance work is being performed on a apparatus which has switchboard control, a White Safety Tag with Special Orders shall be placed on its switchboard control handle. The Special Orders shall be written up on it to operate only for the person in charge of the maintenance.

#### **4.21 PERSON TO TAG TO**

##### 4.21. 1 Transmission & Distribution

- 4.21.1.1 Work zones shall have clearance issued to and tags placed in the name of the person designated in charge of the job. Crews working on the same equipment or line, but remotely located, shall have a designated person in charge at each location and that person takes clearance and has tags placed in his or her name. Multiple crews working at the same location may have clearance and tags in only the designated person's name.

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4.21.1.2 A PSNH employee who is holding clearance for a non PSNH work crew must be authorized to do so. That person is responsible to ensure that switching orders are prepared; all equipment is properly tagged for the work being performed, the zone to be tagged is appropriate, and the necessary switching is accomplished. The physical placing of tags and switching may be performed by the non PSNH work crew only under the direction of an authorized PSNH employee. For Hot Line Work, the PSNH employee has the responsibility that should the line become deenergized, the non PSNH work crew is clear prior to reenergizing the line.

4.21.1.3 In addition to PSNH placed tags, the non PSNH work crew may install their own tags on equipment and devices. No switching may be performed on devices or equipment while any tag is in place unless the tag expressly allows such switching. Non PSNH work crew tags must be released prior to release of PSNH clearance, and removal of PSNH tags.

#### 4.22 TRANSFERRING CLEARANCE

Clearance may be transferred to another designated person in charge provided the following conditions are met:

##### 4.22. 1 Transmission & Distribution

4.22.1.1 Safety Tags must be in place when work is being performed within the clearance zone. The designated person in charge must contact the Dispatcher or Acting Dispatcher and indicate that a transfer of clearance is requested, and the transfer must comply with sections 4.22.1.2, 4.22.1.3 and 4.22.1.4.

4.22.1.2 Clearance may only be transferred by the ESCC System Dispatcher while working on the transmission system and by the Acting Dispatcher designated by the Area Work Center or authorized personnel while working on the Distribution System.

4.22.1.3 The transfer of clearance must be recorded on the switching order including the time, designated person releasing clearance, the designated person accepting clearance, and the person authorizing the transfer.

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4.22.1.4 Where a transfer of clearance is anticipated, tags may be ordered placed for a future designated person in charge without issuance of clearance for that person to perform work. At the time of transfer of clearance to that designated person, the placement of additional tags is not necessary. The removal of tags placed for a designated person releasing clearance may be done at a future time as ordered by the Dispatcher or Acting Dispatcher.

#### 4.23 TAGGING PROCEDURES FOR HOT LINE WORK

4.23. 1 Transmission System

The following rules are applicable when issuing Hot Line Clearance to crews in the field including situations involving the SCADA (Supervisory Control and Data Acquisition) systems and Dispatcher controlled circuits.

4.23.1.1 Normally open manually operated switches (airbrakes) on Dispatcher controlled circuits need not be visually checked open as part of the normal Hot Line Clearance procedure. However, there may be cases when checking would be desirable because of special conditions or locations. In such cases the person directly in charge of doing the actual work shall have the option of having such devices visually checked prior to starting the job.

4.23.1.2 Normally open SCADA controlled sources of supply shall be checked open via SCADA and inhibited prior to issuing Hot Line Clearance.

4.23.1.3 Normally open automatically (non-SCADA) controlled sources of supply shall be checked open and automatic closing schemes disabled and properly tagged prior to issuing Hot Line Clearance.

4.23. 2 Visual Checks

Visual checks and tagging of automatic reclosing on circuit breakers at remote locations operated by the SCADA system shall not be required.

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#### 4.23.3 Alarms \_\_\_\_\_

Every station that has supervisory control of reclosing relays is equipped with a control house entry alarm system. If entry is made an immediate alarm is received at the ESCC. An alarm will also be received at the ESCC whenever an unauthorized attempt is made to switch from supervisory to local control. In either of the above situations, the Dispatcher upon receiving the alarm, shall inform the line crew of the alarm and shall instruct them to stop work and remain clear of the line until further notice. The Dispatcher will then determine the cause for the alarm(s) and reissue clearance when it is proper to do so.

NOTE: Notification to get clear of a line or apparatus is necessary only when the System Dispatcher does not know the reason for the person entering the station or for switching from SUPV to LOCAL CONTROL. **Notifying Dispatcher before entering a station is therefore important.**

#### 4.23.4 System Dispatcher Requirements Prior to Issuing Hot Line Clearance:

- 4.23.4.1 Review Hot Line application or Hot Line request and determine required switching.
- 4.23.4.2 Log all orders and actions.
- 4.23.4.3 Turn off necessary reclosing relays and or automatic closing schemes locally or via SCADA and tag appropriately.
- 4.23.4.4 Check open and inhibit SCADA controlled normally open sources of supply.
- 4.23.4.5 Tag breaker control when done locally.
- 4.23.4.6 Inhibit SCADA control of reclosers and breakers.
- 4.23.4.7 Tag mimic board with magnetic sign "HOT LINE WORK".
- 4.23.4.8 Tag mimic board to reflect field tags in place and also locations where automatic reclosing has been turned off.
- 4.23.4.9 Issue Special Orders.
- 4.23.4.10 Order certain other switches to be checked in accordance with a request received from the line person directly in charge of doing the actual work, before clearance may be given for the work to begin.

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#### **4.24 ISSUING HOT LINE CLEARANCE**

4.24. 1 Required Action

4.24.1.1 Issue switching order number and Dispatcher's name.

4.24.1.2 Issue Special Orders.

4.24.1.3 Define the Hot Line Zone, i.e. between points or beyond a device.

4.24.1.4 Verify that this is satisfactory with field crews receiving the clearance.

4.24.1.5 Issue Hot Line Clearance time.

4.24.1.6 **Optional:**

Field personnel, prior to receiving Hot Line Clearance, may request all actions taken by the Dispatcher in 4.23.4 for their Hot Line Clearance issue process, otherwise the zone of protection format will be followed.

#### **4.25 RECEIVING HOT LINE CLEARANCE IN THE FIELD**

4.25. 1 Required Action

4.25.1.1 Record order number and Dispatcher's name.

4.25.1.2 Listen to the defined Hot Line Zone.

4.25.1.3 Acknowledge that this is satisfactory or not.

4.25.1.4 Record Hot Line Clearance time.

#### **4.26 RETURNING HOT LINE CLEARANCE**

4.26. 1 Required Action

4.26.1.1 Report that you are clear of the Hot Line Clearance zone.

4.26.1.2 Status update of work being performed, i.e. job completed or will need to continue tomorrow.

4.26.1.3 Record time Hot Line Clearance was returned, on the original switching order.

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## 4.27 RELAYING DISPATCHER HOT LINE CLEARANCE

- 4.27. 1      Required Action
- 4.27.1.1      When it becomes necessary for a third party to relay Hot Line Clearance for the Dispatcher the third party shall convey the exact clearance as stated and received from the Dispatcher.
  - 4.27.1.2      Switching order number and Dispatcher's name.
  - 4.27.1.3      State what the Dispatcher quoted in 4.24.
  - 4.27.1.4      Verify that this is satisfactory with the field crews.
  - 4.27.1.5      Issue Hot Line Clearance time.
  - 4.27.1.6      Report back to the Dispatcher when clearance was issued.

## 4.28 SCADA OPERATION

The following is an outline of how the SCADA operation is performed.

After receiving a request for Hot Line Clearance on a line which is remotely controlled by the SCADA system, the Dispatcher will, by supervisory control, make the automatic reclosing device inoperative (change it to the off position). This is done by selecting the point for the desired reclosing relay and turning the reclosing off. This operates an interposing relay at the remote substation after which a signal is sent back to the Dispatcher confirming that the necessary action has taken place. Additionally, the substation switchboard indicating light for the reclosing relay will change from red to green to give local indication that the reclosing relay is off.

The Dispatcher, after receiving the signal that the reclosing is off, will inhibit supervisory control of the reclosing relay(s) and the circuit breaker(s) that protect the line and for which the automatic reclosing has been made inoperative (turned off). This makes control of this device at the ESCC impossible until deliberate action has been taken to enable control. This is a safeguard against inadvertent closing of a circuit breaker if a trip should occur during Hot Line Work. Supervisory control of the reclosing relay and circuit breaker for a given line is governed by the SUPV/LOCAL transfer switch at the station. LOCAL control is not possible while the switch is in the SUPV position. These switches, along with any other equipment under Dispatcher control, shall not be operated without Dispatcher knowledge and permission.



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## 4.29 DISTRIBUTION SYSTEM

### 4.29. 1 Definition

The following rules are applicable when Hot Line Clearance is to be issued for work on the Distribution System:

- 4.29.1.1 The designated person in charge or the PSNH employee holding clearance for non PSNH work crews will be the acting Dispatcher and order all tags placed.
- 4.29.1.2 Hot Line Clearance zone must be identified and Orange Tags placed on protective devices to ensure that should a fault occur within the zone, it will not be reenergized until clearance has been received from the person to whom the device is tagged.
- 4.29.1.3 Normally open tie points from which the Hot Line work zone may become energized must be checked open. The person directly in charge of doing the actual work shall have the option of having such devices tagged prior to starting the job.
- 4.29.1.4 Automatic reclosing devices, station breakers, reclosers, etc. which may reenergize the work zone, must have reclosing deactivated and Safety Tagged. Station breaker control handles and control handles of electronic controlled reclosers shall also be tagged at all locations which are not under the Dispatcher's jurisdiction. Also see 4.12.6.3 for additional tagging options.
- 4.29.1.5 A switching order listing all tags to be placed and switching to be performed must be completed whenever more than one tag is to be placed.

## 4.30 EMERGENCY HOT LINE CLEARANCE DISPATCHER CONTROLLED CIRCUITS

### 4.30. 1 Definitions/Statements

- 4.30.1.1 **Emergency Hot Line Clearance** is only applicable to SCADA/Dispatcher controlled circuits under the Dispatcher's jurisdiction. Work performed on all non SCADA controlled circuits, energized or deenergized, requires tags placed appropriate to the type of work being performed.
- 4.30.1.2 This procedure allows for Hot Line work without normal Hot Line switching under certain conditions.

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4.30.1.3 The intent of this rule is to provide a temporary clearance zone that will afford a safe means to remedy an emergency or special condition. An emergency is when human life or property is in immediate danger, and special conditions are related to system reliability.

4.30.1.4 This is not a substitute for Red Tag Clearance procedures. **Emergency Hot Line Clearance** shall be used only when Hot Line methods and tools can be safely utilized to complete the work. **Hot Line work procedures shall be employed and required clearances maintained.** Verification of the deenergized line shall be accomplished by proper test methods prior to beginning the work.

4.30.1.5 When line OCBs or devices under the Dispatcher's jurisdiction have been intentionally opened or have tripped and will remain open, **Emergency Hot Line Clearance** may be given on these deenergized lines without any further switching. It is important that the line person in charge receives Emergency Hot Line Clearance from the Dispatcher before work begins.

The Dispatcher shall learn the name of the person in charge and assure that person that Special Orders shall be in effect at the ESCC. These Special Orders shall be that closing of the line circuit breakers or other devices will not take place until the person in charge has requested it. It shall not be necessary to issue switching order number to the person in charge.

4.30.1.6 The System Dispatcher shall take the necessary precautions at the ESCC to ensure that **Emergency Hot Line Clearance** is maintained in accordance with the Special Orders which may include turning the reclosing relay(s) off, inhibiting control of the reclosing relay(s) and circuit breaker(s) and placing the magnetic "Hot Line Work" tags in the appropriate location at the ESCC. It must be realized by everyone involved that in some cases the automatic reclosing relays will still be in service when the circuit breaker is closed.

4.30.1.7 During **Emergency Hot Line Clearance** work conditions it will not be necessary to decouple the motor mechanisms or otherwise disable the motor operators of remotely controlled switches. The Dispatcher shall tag the appropriate location for these switches at the ESCC and advise the person in charge that the motor operator is not decoupled.

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4.30.1.8 It is advisable, whenever possible, to sectionalize a line with a remotely controlled switch so that **Emergency Hot Line Clearance** work may be done on one section of line and customer service if any, may be restored on the other section. In such cases, the person in charge of the **Emergency Hot Line Clearance** work shall be made aware by the Dispatcher that this switching has or will be done and that the section of line not being worked on will be energized.

#### 4.31 **SWITCHING ORDERS AND REVIEW OF TAGS**

4.31. 1 Requirements

4.31.1.1 Switching order forms or a typewritten form of similar appearance shall be used for all switching orders. All information for the switching order and Safety Tags shall be filled out completely and accurately and must be legible.

4.31.1.2 When performing switching or taking clearance on the Transmission System, a switching order must be completed. The switching order, along with tags placed, will be reviewed and initialed by a local supervisor and retained for a 30-day period.

4.31.1.3 When performing switching or taking clearance on the Distribution System, a switching order must be completed when more than one Safety Tag is to be placed. The switching order, along with all tags placed, will be reviewed by a local supervisor and retained for a 30-day period.

#### 4.32 **ISOLATING EQUIPMENT**

4.32. 1 Methodology

4.32.1.1 The employee performing switching should be familiar with the equipment to be switched. In certain circumstances, the System Dispatcher or Acting Dispatcher may order switching to be performed on equipment with which the switch person may not be totally familiar. In such cases, the System Dispatcher or Acting Dispatcher shall be contacted to provide the appropriate support.

4.32.1.2 Motor operated switches must be decoupled, locked open, and tagged when being used for a visible open point. It shall be the operator's responsibility to ensure that all other remaining means of operation of the switch have been secured and locked where design permits.

- 4.32.1.3 Substation capacitor banks which are operated by means of a vacuum switch, must be verified deenergized by proper test methods prior to opening the fused disconnects.
- 4.32.1.4 When operating single blade disconnects within a substation, the sequence of operation to open is left, right, middle and to close is middle, right, left. The middle disconnect must always be the last opened and first closed.
- 4.32.1.5 **The procedure for Overhead Distribution Line Work** should be referred to whenever switching is to be performed involving in-line disconnects or cutouts.

**4.33 UTILIZATION FACILITIES TAGOUT/LOCKOUT PROCEDURE OSHA 1910.147**

4.33. 1 Purpose

This procedure establishes the minimum requirements for the tagging and locking of energy isolating devices at **Utilization Facilities** before maintenance of servicing is done on machines or equipment to ensure the isolation of all potentially hazardous energy sources and prevent unexpected energization/start-up of the machines or equipment or the release of stored energy that could cause injury.

4.33. 2 Scope

All employees affected by Tagout/Lockout will be trained and required to comply with the restrictions, limitations and record keeping imposed upon them during the use of these procedures.

4.33. 3 Definitions

4.33.3.1 **Utilization Facility**

A location or place of business where servicing and/or maintenance of machines or equipment is being performed, i.e. general office areas, shops, labs, warehouses, garages, construction sites and all other areas not covered under PSNH Generation and System Operations Tagging Procedures.

4.33.3.2 **Hazardous Energy Services**

Potential releases of energy sources would include electrical, mechanical, hydraulic, pneumatic, chemical or thermal.

4.33.3.3 **Affected Employees**

An employee whose job is to operate or use machines or equipment on which servicing or maintenance is done under these safety tagging procedures.

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4.33.3.4 **Authorized Employee**  
An employee who knows how to identify the type and magnitude of energy sources shall understand the hazards of the energy and be able to locate and effectively control all energy isolating devices before servicing or maintenance is done on machinery or equipment.

4 .33.4 General Requirements

4.33.4.1 Affected employees shall be notified by the employer or authorized employee before LOTO devices are applied and after they are removed.

4.33.4.2 All energy isolating devices that supply energy to the machine or equipment shall be physically located and placed or found in a position that isolates the energy source.

4.33.4.3 Loto devices and/ or tags shall be affixed to each, energy isolating device by an authorized employee.

4.33.4.4 Loto devices shall be applied in such a way as to clearly identify the isolation device and clearly indicate restrictions placed on that device. Reference Appendices 4.2 - 4.11 for approved tags.

4.33.4.5 Prior to starting work on machines or equipment that have been tagged out, an authorized employee shall verify, by an approved testing method, that isolation and de-energization have been accomplished.

4.33.4.6 When work is completed, tagging devices shall be removed from all energy isolating devices by the employee who applied the device. When this employee is not available, tagging devices can be removed in accordance with standard company procedure.

4.33.4.7 Tagging devices removed shall be completed and retained with any written switching orders for a minimum period of two weeks.

4.33.4.8 After tagging devices have been removed and before machines or equipment are re-energized, affected employees shall be notified that the Tagout devices have been removed.

- 
- 4.33.4.9 Whenever outside servicing personnel (contractors) are to be engaged in work governed by these procedures, the company and the contractor shall advise each other of their respective safety tagging procedures.
  - 4.33.4.10 Local company management shall ensure that all employees understand and comply with the outside employers (contractors) written safety tagging procedures.

ENERGY ISOLATION-LOCK OUT/TAG OUT (LO/TO)

1.0 Purpose:

This URS Energy Isolation-Lockout/Tagout Procedure establishes minimum requirements for the installation of energy-isolating (lockout-Tagout) devices. Lockout-tagout devices shall be used to ensure that the machine, equipment, or system is isolated from all potentially hazardous energy. Machinery, equipment, or systems shall be locked out, tagged (attachment 3), and tried before personnel perform any servicing or maintenance activities on the machinery, equipment, or systems. LO/TO will prevent unexpected energizing, start-up, or release of stored energy that may result in personal injury.

**NOTE: Only Public Service of New Hampshire (PSNH) personnel may operate equipment owned by PSNH. Only PSNH personnel may operate equipment at points of demarcation and upstream.**

**Prior to start of checkout and startup activities, this procedure shall be reviewed to include, if necessary, additional requirements during those activities.**

2.0 Procedure:

- 2.1 All machinery, equipment or systems shall be locked out, tagged and tried prior to performing any construction, repair, tie-in or maintenance work to prevent accidental or inadvertent operation (start-up), when such operation could result in injury to personnel. Do not attempt to operate any switch, valve, or other energy-activating device when it has been locked out/tagged out.
- 2.2 A multiple lockout device (hasp/scissors) will be used when the Lockout/Tagout procedure is used. The last hole in a multiple lockout device shall be reserved for another multiple lockout device. Each lock used for lockout must have its own lockout tag. (Attachment 3)
- 2.3 The responsible competent person that is locking out tagging out a system will enter all relative information on the Lockout/Tagout log (attachment 1).
  - 2.3.1 The responsible contractor Task Supervisor will establish, control and maintain the Lockout/Tagout log.

THESE PROCEDURES DO NOT APPLY WHEN:

- a. Work is being performed on electrical extension cords and plugs when the plugs (cords) are disconnected.

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- b. The person is performing the repair and maintenance to an electric plug, cord, or equipment (i.e. electric drill) for which exposure to unexpected energizing or start-up is controlled by the unplugging of the equipment from the energy source and the plug is under the exclusive control of the person performing the service or maintenance.
  - c. Hot-tap operations involving transmission and distribution systems for substances such as gas, steam, water or petroleum products are performed on pressurized pipelines, provided that the following have been demonstrated:
    - 1) Continuity of service is essential
    - 2) Shutdown of the system is impractical
    - 3) Procedures are written, personnel trained in, and followed
    - 4) Special equipment is used to provide effective personal protection for all personnel.

### 2.3 Inspection:

No less than once per month, URS Management shall conduct periodic inspection of the overall project to ensure that the Lockout/Tagout Procedure requirements are being complied with.

### 2.4 Machinery or Equipment Procedures:

To ensure that machinery and/or equipment is isolated from the potentially hazardous energy sources, the Task Supervisor shall plan the work for each particular machine, system and/or piece of equipment, and design the isolation.

### 2.5 When to Lockout/Tagout:

Whenever any equipment (electrical or mechanical) is shut down for maintenance, repair, modification, cleaning, and/or inspection, it shall be locked out and tagged out by every competent person, and tried (ref 2.10.f) by the initial competent person, involved with the equipment to prevent exposure to energy potential and/or mechanical hazards.

### 2.6 How to Lockout/Tagout:

- a. All locks used for this procedure are to be of a color that is readily identified for this Lockout/Tagout procedure. This color of lock shall be used for NO other purpose.
- b. All de-energization shall be performed and the first lock and tag placed by the Task Supervisor.
- c. A competent person of other crafts, as required, may place additional locks and tags.



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- d. The individual placing the lock & tag will retain the key in their possession from his or her lock placed on equipment
  - e. Locks will have a non-repeating number inscribed on them and should have only one (1) key per lock. If there are two (2) keys, the second key shall be locked away and controlled by the Task Supervisor.
  - f. Each craft and/or Subcontractor shall be responsible for locks and tags for their employees. URS will supply tags.
  - g. Each lock placed must have a lockout tag indicating the following:
    - 1) Date
    - 2) Craft or Subcontractor
    - 3) Name of the competent person installing the lock
    - 4) Name of the Task Supervisor
    - 5) Reason the lock is being installed.
  - h. Each competent person installing a lock and tag will remove the lock and tag when they finish the work or when they leave for the day.
  - i. If the work is not complete and removing the person's lock and tag has the potential to create a safety hazard, the leaving person shall leave his or her lock and tag in place.

#### 2.7 What to Lockout/Tagout:

- a. Any piece of mechanical and/or electrical equipment, piping, vessel, tank, etc. being worked on (repair, routine maintenance, etc) in order to prevent accidental injury to any personnel in the area.
- b. A typical, but not all inclusive, list of items which should be locked out in order to be worked on would include: pumps, valves, motors, tanks, conveyors, gear trains, lathes, air systems, steam systems, hydraulic systems, and any other piece of equipment which, if started up or filled, could cause injury to anyone working on the equipment or system. Types of energy to isolate include, but are not limited to, electrical, steam, gravity, hydraulic, spring, pneumatic, pressure, etc.

#### 2.8 Electrical Lockout/Tagout:

- a. To prevent the unexpected, accidental start-up of electrical equipment, the power disconnect switch must be locked out, tagged out, tested with the appropriate meter (when handling conductors) and tried to ensure that the electrical start-up cannot occur.
- b. Only trained authorized personnel may open line disconnects.
- c. The locking device used must be adequate to prevent closing line disconnects.
- d. The initial competent person performing a LO/TO must try to operate equipment before working on it. Before trying to operate the equipment he or she shall notify any workers who are associated with the equipment and remove them from the area if necessary.

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- 
- e. Each competent person must place a lock and tag on system. As each craft finishes their work on the system, the competent persons will remove their lock and tag from the scissors/hasp.
  - f. The Task Supervisor will be the last person to remove his or her tag and lock.
  - g. Check other areas where stored energy, such as springs, elevated machine members, gravity release, rotating fly wheels, hydraulic systems, air, gas, steam, water, or any energized cells may propel parts or machinery into unsuspected motion. These energies must be dissipated or restrained by bleeding down, chocking, blocking, or barricading the area where they may be activated.

## 2.9 Valve Lockout/Tagout (Energy Source Isolation):

- a. Steam Energy:
  - 1) When valves are the point of isolation from energy sources, a point to discharge pressure is required.
  - 2) Valves must be in a safe position, chained, and locked. The competent person locking the chain must verify the proper valves are being locked out and tagged. Involved personnel on the system must verify the LO/TO by checking that the valves are in the proper position.
- b. Pneumatic/Hydraulic Energy:

Some pressurized systems can store energy and must be isolated with valves, locked and drained of pressure.

## 2.10 Sequence of Lockout/Tagout Procedure:

- a. Notification:
  - 1) All personnel affected by the LO/TO must be notified. This includes craftsmen, other Subcontractor personnel, Client representatives, and anyone else in the immediate area who may be affected.
  - 2) The competent person employing LO/TO must know the proper energy isolation points and the proper way to relieve all types of stored energy.
- b. Machine or Equipment Shutdown.

An authorized and trained person shall turn off, or shut down by operating a switch, valve, or other means established for the machinery and/or equipment.

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c. Machine or Equipment Isolation:

A competent person shall operate the switch, valve or other energy-isolating device(s), so that the machinery and/or equipment are isolated from its energy source(s).

d. LO/TO Device Placement

A competent person shall LO/TO the energy isolation device with their issued lock and tag. No person shall install and/or remove another person's lock and tag. Each competent person may only remove his or her own lock and tag.

e. Stored Energy:

Following the application of the Lockout/Tagout procedure to energy-isolating devices (REF 2.8g) all potential hazardous electrically or mechanically stored or residual energy shall be relieved, disconnected, restrained, and otherwise rendered safe.

f. Final Check:

After ensuring that no personnel are exposed and as a check to ensure that energy sources have been disconnected, the initial competent person who is isolating the device will operate the start button or other operating control(s) to make certain the equipment will not operate (start).

CAUTION: Return controls to the Neutral or Off position AFTER performing this check.

g. Going Off Shift or the Completion of Work:

If the equipment is not in operating condition at the end of the competent person's work assignment, each person shall remove his or her lock and tag. If removing the leaving persons lock and tag has the potential to create a safety hazard then such person shall leave his or her lock and tag in place. The exception to this is when another competent person has the same equipment locked out and tagged out and he or she is continuing to work on it, or if the next shift is locking out and tagging out the equipment as well for the same job, and the incoming personnel replace the leaving personnel's locks and tags.

h. Restoring Machinery or Equipment to Normal Operation:

- 1) Machine or Equipment: After service, modification, or maintenance is complete and before release from lockout, the Task Supervisor shall check around the area, machine and/or equipment to ensure the components are operationally intact, i.e.

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walk the system down to ensure that nothing will hamper start-up and/or operation.

- 2) Personnel: The work area shall be checked by the Task Supervisor to ensure that all personnel have been safely positioned or removed from the area before start-up process begins.
- 3) Prior to starting up and prior to re-energizing machinery and/or equipment systems shall be walked down and, all affected personnel in the immediate area of the system shall be notified.

i. LO/TO Removal:

Only the competent person who installed a lock and tag will do that LOCK and TAG REMOVAL. Each person is personally responsible for his or her own lock, tag, and key. When the person's part of the job is completed, he or she is responsible for the coordination of the prompt removal of the lock and tag. The only exception to a person's LO/TO removal by someone other than that person is when he or she is no longer on the job-site or in the company's employment.

j. Emergency Lock and Tag Removal Procedure:

When a person has left the job-site, or is no longer employed on the project, or an emergency condition exists, the Task Supervisor and his or her Manager, along with a representative of Contractor's Project Management, shall walk the system to ensure that it is safe to remove the lock and tag.

The following procedure shall be used when a lock and tag are removed:

- 1) If the person is on the job-site, he or she shall be located and returned to the work area to remove his or her lock and tag.
- 2) If it is verified that the person has left the job-site, then he or she and the Task Supervisor responsible for that person shall be called back in to remove the lock and tag, or to begin the LO/TO removal process.
- 3) If the person cannot be located, the person's Task Supervisor shall:
  - Check the work area to verify that the job his or her employee was working on is complete and that it is safe to change the state of the isolation device(s).
  - Notify other personnel in the area that the equipment involved will be put back into operation, if necessary.
  - Secure the area to prevent entry of any personnel before starting equipment.
  - Complete the LO/TO Removal Form (attachment 2)
  - Obtain and sign for the spare key, if available. Only as a last resort will bolt cutters be used to remove a lock.

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- Locks shall not be cut off at any time unless the person's Task Supervisor, his or her manager, and the Contractor Project Site or Safety Manager approve, with URS oversight.
  - With such signed approvals the lock and tag can be removed.

k. Lockout/Tagout Violations:

The following LOCKOUT/TAGOUT violations shall be subject to established disciplinary procedures, up to and including removal from the project.

- 1) Working on equipment or system as defined previously in this procedure that have not been properly locked out and tagged out.
- 2) Putting on, or taking off, another person's lock or tag.
- 3) Using lockout locks and tags for any purpose other than Lockout and Tagout.
- 4) Inadequate isolation design or protocols in place.
- 5) Loss of control of LO/TO log.

### 3.0 Referenced Forms/Attachments

- 1) Lockout Tagout Log
- 2) Lock Removal Form
- 3) Lockout Tag

### 4.0 Records

Records generated shall remain in site files until demobilization at which time they shall be transmitted to the owner.

### 5.0 References

- a. 29 CFR 1910.147
- b. 29 CRR 1926.417
- c. URS/WD Corporate Lockout Tagout Procedure





Washington Division



# LOCK REMOVAL FORM

Whenever any LO/TO lock is removed by any method other than by " normal means with a key, under normal circumstances by the competent person assigned to the lock, " URS Management shall be notified and oversee that this form is completed and sent to the Contractor Site Project Manager and the competent person's Task Supervisor for approval:

Removal Procedure has been reviewed with the following: \_\_\_\_\_

Employee's LO/TO Removed: \_\_\_\_\_

Item(s) Locked out Tagged Out \_\_\_\_\_

Date Removed: \_\_\_\_\_ Time Removed: \_\_\_\_\_

Reason for Removing LO/TO:: \_\_\_\_\_

Employee's Name and Title with Reference to Lock and Tag Being Removed  
(List People and Phone Numbers Called, by Whom, etc): \_\_\_\_\_

Method Used to Remove Lock and Tag: \_\_\_\_\_

Method Used and by Whom to Notify Employee of Removal of His/Her Lock and Tag: \_\_\_\_\_

The employee's Task Supervisor and a competent employee of the same craft as the original employee must sign this form before the lock and tag can be removed.

CONTRACTOR SITE PROJECT MANAGER \_\_\_\_\_

TASK SUPERVISOR \_\_\_\_\_

cc: Original - Contractor Site Manager; Copies - Employee's Supervisor, Contractor Safety Professional; Employee whose lock was removed, URS Management

**DANGER!**

This energy source has  
been LOCKED OUT

Only the individual who  
signed the reverse side  
may remove this lock/tag  
Remarks: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**DANGER!**

**LOCKED  
OUT**

**DO NOT OPERATE**

**This lock/tag may  
only be removed by:**

Date \_\_\_\_\_  
Craft or Subcontractor  
\_\_\_\_\_  
Name \_\_\_\_\_  
Supervisor \_\_\_\_\_  
Reason for Lock \_\_\_\_\_

attachment 3

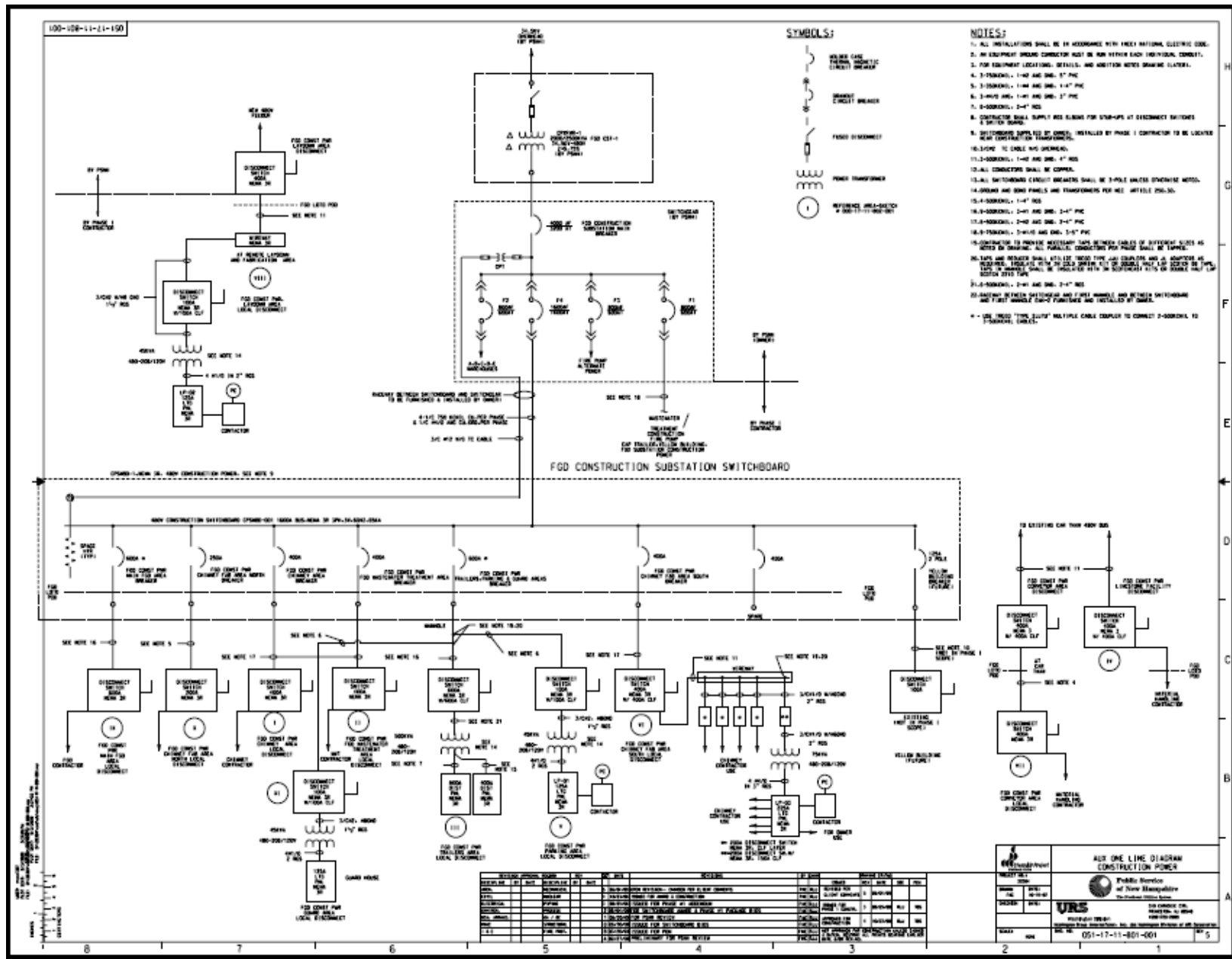


## APPENDIX C. Point of Demarcation (POD) List

### FGD Construction Power – LOTO Points of Demarcation

<u>Tagging Nomenclature</u> "Equipment" Field & "Isolating Device" Field	<u>SS Initial/Date for</u> <u>Addition/Deletion</u>	<u>URS PCM Initial/Date for</u> <u>Addition/Deletion</u>
FGD Const Pwr - Main FGD Area Breaker @ FGD Const Substation		
FGD Const Pwr - Chimney Fab Area North Breaker @ FGD Const Substation		
FGD Const Pwr - Chimney Fab Area South Breaker @ FGD Const Substation		
FGD Const Pwr - Chimney Area Breaker @ FGD Const Substation		
FGD Const Pwr- Trailers, Parking & Guard Breaker @ FGD Const Substation		
FGD Const Pwr- FGD Wastewtr Treatmnt Area Breaker @ FGD Const Substation		
FGD Const Pwr - Conveyor Area Disconnect at Track Hopper		
FGD Const Pwr - Limestone Facility Disconnect at Track Hopper		
FGD Const Pwr - Laydown Area Disconnect at FGD Laydown Area		

# APPENDIX D. AUX One-Line Diagram Construction Power



Appendix XXIV Attachment XXIV-6

Crane Operator Certification:

All crane operators employed on this Project will be required to have the National Commission for the Certification of Crane Operators (**NCCCO**) **Crane Operator Certification** or an active license in a state that has a certification program policy.

This certification program is designed to reduce risk of loss, reduce accidents and provide consistent training to crane operators.

This is a PSNH Merrimack Station Project requirement and **must** be followed without exception.

## **Appendix XXIV Attachment – 7 Construction Division of Responsibility**

### **Services Provided by the Owner:**

- 1.) Site access lighting of walkways to and from the work area and area lighting in the construction entrance and parking areas will be provided. There will also be general area lighting provided in the laydown/storage area located across River Road from Merrimack Station.
- 2.) Program Manager will maintain site roads and construction parking lots, including grading, snow removal and watering for dust control.
- 3.) Temporary portable chemical toilets will be furnished and maintained in numbers and locations to support the work force.
- 4.) An on site source of potable water will be provided along with a facility to be used by Contractors for cleaning and filling of drinking water cans.
- 5.) Construction power will be provided to strategically located distribution panels. Where Contractors will be assigned disconnects in accordance with their needs. Telephone and data services will also be located at strategic points on the work site.
- 6.) A site trash collection and disposal area will be established with dumpsters appropriately labeled for recycling or debris removal.
- 7.) Program Manager will provide site security access utilizing temporary fencing as required. Site access will be obtained with the use of cardreader badges to be issued by Program Manager. These badges are for site access and accountability in the event of an emergency and are not intended for Contractor time keeping purposes. Site security guard services will be provided for the duration of the project.
- 8.) A medical trailer with an EMT on staff, will be located on site to provide emergency first aid. All personnel reporting to work on the Merrimack Clean Air Project will be required to pass a drug screening which will be administered at site by the Owner's contracted medical vendor. This location will also be utilized for site safety orientation of personnel.
- 9.) Program Manager will provide and maintain general site barricades and site signage for traffic control and site wide information.

## **Services Provided by the Contractor:**

- 1.) Contractor will be responsible to provide lighting other than site access for his work area(s).
- 2.) An area for laydown/storage may be assigned to a contractor. With the exception of a central access road, these areas are un-improved, therefore the contractor may improve his area as necessary for his benefit. These areas will have to be restored to as received condition upon completion of the contractors use.
- 3.) Snow removal in their respective work areas will be the responsibility of the individual Contractor.
- 4.) Provision of ice, cleaning, filling and distribution of drinking water cans is the responsibility of the individual Contractor.
- 5.) Program Manager will provide a source of power to each Contractor. It is the responsibility of the Contractor to distribute this power, include any step down required, to their work area for the performance of their Work. This same requirement will apply to telephone and data lines for the Contractors use. Contractors will be responsible for obtaining and paying for their respective telephone and data services.
- 6.) Work area housekeeping, sorting of debris or recyclables, transport to the on site collection area and placement into the appropriate dumpster is the responsibility of the contractor. Each contractor will be required to maintain his work area in a clean and safe condition.
- 7.) Each Contractor is responsible for his own timekeeping and for that purpose may be allowed to install a small "brassing shack" along the walkway inside the turnstiles, or at another location with the approval of the Program Manager.
- 8.) Each Contractor will be responsible to provide appropriate safety barricades as dictated by his Work. This would include hole covers, tape or hard barricades, etc to ensure a safe work area.
- 9.) Fire extinguishers for the purpose of fire watch use are to be provided by the Contractor.

## **APPENDIX XXV Diversity**

- Attachment XXV-1, Owner Second Tier Procurement Program, Rev. 0**
- Attachment XXV-1.1 Subcontracting Plan**
- Attachment XXV-1.2 Diversity Supplier Expenditure Report**
- Attachment XXV-2, Non-Discrimination, Small, Small Disadvantage and Women Owned Small Businesses, Subcontracting Plan, Rev. 0**
- Attachment XXV-3, Business Size – Diversity Requirement Form, Rev. 0 (Document RFP Attachment 3-G)**

## APPENDIX XXV

### ATTACHMENT XXV-1

#### Owner Second Tier Procurement Program

Attached are the forms for supplying information to PSNH on your company's use of Minority and Protected Class Business Enterprises or diverse suppliers. You are not required to use this form, however, please be sure that all information requested is submitted. One-half of Project expenditures should be allocated to PSNH. Expenditures for minorities and protected classes must be submitted separately. Do not combine these expenditures.

There are two categories of expenditure reporting:

Direct expenditures are those material and service acquisitions from minorities and or protected classes directly attributable to a PSNH contract or purchase order. For example – your company provides general construction services to PSNH and you subcontract earthmoving and painting to diverse suppliers. In this instance, 100% of the painting and earthmoving expenditures should be reported to PSNH. Another example – your company provides PSNH with office supplies under a blanket purchase order and you purchase pens, pencils, and stationary from diverse suppliers. Expenditures for the volumes of these pens, pencils and stationary furnished to PSNH should be reported at 100%.

Indirect expenditures are those material and service acquisitions from diverse suppliers that cannot be identified for or apportioned to any specific customer. For example – “overhead” items such as paper, computing expenses, or office maintenance incurred by your company. Also included would be any and all materials and services purchased from diverse suppliers that are used in the direct production of your product or service. These “indirect expenditures” should be proportionately allocated and reported to PSNH as outlined in the example below:

*Diverse Vendor  $\frac{\text{Your YTD Sales to PSNH}}{\text{Total YTD Sales}} = \text{Allocation Factor}$  “indirect allocation” Total YTD Sales*

*(Total YTD diverse vendor (by category) indirect expenditures X Allocation Factor = PSNH's Diverse Vendor Allocation)*

To further illustrate: Your Company's total sales are \$50 million; total sales to PSNH are \$3 million and total diverse vendor expenditures are \$5 million:

$$\frac{\$3,000,000}{\$50,000,000} = 0.06$$

$\$5,000,000 \times 0.06 = \$300,000$  or PSNH's diverse vendor allocation

For direct and indirect expenditures, please provide the names of the diverse vendor companies, their addresses, diversity classification (minority, woman-owned, service disabled veteran or HUB Zone) and dollar amounts. Please do not combine categories.

This information should be submitted by the 15<sup>th</sup> day of January, April, July, and October to:

Cheryl Clarke  
Supplier Diversity & New Vendor Program Manager  
Northeast Utilities  
107 Selden Street  
Berlin, Connecticut 06037

or fax to (860) 665-6301

(Company Name)  
201[ ] Diverse Supplier Expenditure Report

**PSNH Second Tier Program**  
(Indirect Expenditures)

PSNH's Contract / Purchase Order Number: \_\_\_\_\_

Indirect Diverse Supplier Expenditure Allocation:

*(Minority Business Enterprises (MBE) Only)*

Factor

Sales to PSNH \$ \_\_\_\_\_

Total MBE Vendor Expenditures \$ \_\_\_\_\_

PSNH's Allocation \$ \_\_\_\_\_

Indirect Diverse Supplier Expenditure Allocation:

*(Woman-Owned Business Enterprises (WBE) Only)*

Factor

Sales to PSNH \$ \_\_\_\_\_

Total WBE Vendor Expenditures \$ \_\_\_\_\_

PSNH's Allocation \$ \_\_\_\_\_

Indirect Diverse Supplier Expenditure Allocation:

*(Service Disabled Veteran-Owned Business Enterprises (SDV) Only)*

Factor

Sales to PSNH \$ \_\_\_\_\_

Total SDV Vendor Expenditures \$ \_\_\_\_\_

PSNH's Allocation \$ \_\_\_\_\_

Indirect Diverse Supplier Expenditure Allocation:

*(HUB Zone Business Enterprises (HUB) Only)*

Factor

Sales to PSNH \$ \_\_\_\_\_

Total HUB Zone Vendor Expenditures \$ \_\_\_\_\_

PSNH's Allocation \$ \_\_\_\_\_

Note: Please refer to the expenditure allocation formula and procedures for calculating in PSNH's Second Tier Reporting Program document.

\_\_\_\_\_  
Submitted By

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date



## **Subcontracting Plan**

(Name of Contractor) fully supports the requirements of Paragraph 3.39 of the Prime Contract for Non-Discrimination and Supplier Diversity based on the following policy:

(Name of Contractor) encourages the establishment and growth of disadvantaged, minority and women-owned business enterprises.

It is (Name of Contractor)'s policy:

- To ensure nondiscrimination in the award and administration of Permanent Materials Purchase Orders.
- To create a level playing field on which disadvantaged, minority and women-owned business enterprises can compete fairly.
- To ensure that the disadvantaged, minority and women-owned business enterprises program is narrowly tailored in accordance with applicable law.
- To help remove barriers to the participation of any disadvantaged, minority and women-owned business enterprises.
- To assist in the development of firms that can compete successfully in the marketplace outside of the disadvantaged, minority and women-owned business enterprises program.

In support of this policy, (Name of Contractor) assists disadvantaged businesses through mentoring programs, technical and managerial assistance and placing business with them. Disadvantaged businesses are given the maximum practicable opportunity to compete and participate.

It is the policy of (Name of Contractor) that Small Business Concerns, including veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns, shall have the maximum practicable opportunity to compete for the procurement of goods and services.

This commitment extends to the procurement of goods and services for (i) prime contracts let by municipal, state and federal agencies, as required by the Small Business Act (Public Law 85-536, as amended), Federal Acquisition regulation, Administrative Practice and Procedure of the Department of Transportation (49 CFR Part 26), as well as, applicable state and local laws and regulations; (ii) commercial contract requirements; and, (iii) in-house procurement requirements.

(Name of Contractor) is committed to an effective supplier diversity program that demonstrates measurable improvements from year to year, is consistent with recognized industry objectives and applications, is consistent with the contractual expectations of our clients, and that maximizes procurement opportunities for small business concerns consistent with efficient contract performance.

(Name of Contractor) regularly participates in Outreach efforts across the country to ensure that small business concerns will have an equitable opportunity to compete for subcontracts.

See attached (year) Supplier Diversity Program Past Performance narrative for past commitment details. (If available)

**PSNH Second Tier Program**  
(Indirect Expenditures)  
(Name of Contractor)  
2009 Diverse Supplier Expenditure Report

PSNH's Contract/Purchase Order Number:

**Indirect Diverse Supplier Expenditure Allocation:**

*(Minority Business Enterprises (MBE) Only)*

Sales to PSNH	\$0	Factor
Total MBE Vendor Expenditures	\$0	
PSNH's Allocation	\$0	

**Indirect Diverse Supplier Expenditure Allocation:**

*(Woman-Owned Business Enterprises (WBE) Only)*

Sales to PSNH	\$0	Factor
Total WBE Vendor Expenditures	\$0	
PSNH's Allocation	\$0	

**Indirect Diverse Supplier Expenditure Allocation:**

*(Veteran-Owned Business Enterprises (VE) Only)*

Sales to PSNH	\$0	Factor
Total VE Vendor Expenditures	\$0	
PSNH's Allocation	\$0	

**Indirect Diverse Supplier Expenditure Allocation:**

*(Service Disabled Veteran-Owned Business Enterprises (SDV) Only)*

Sales to PSNH	\$0	Factor
Total SDV Vendor Expenditures	\$0	
PSNH's Allocation	\$0	

**Indirect Diverse Supplier Expenditure Allocation:**

*(HUBZone Business Enterprises (HUB) Only)*

Sales to PSNH	\$0	Factor
Total HUBZone Vendor Expenditures	\$0	
PSNH's Allocation	\$0	

Note: Please refer to the expenditure allocation formula and procedures for calculating in PSNH's Second Tier Reporting Program document.

Submitted By: (Name of person preparing report)

e-mail:

Title:

Tel.

Date:

This information should be submitted by the 15<sup>th</sup> day of January, April, July, and October to:

Cheryl Clarke  
Supplier Diversity & New Vendor Program Manager  
Northeast Utilities  
107 Selden Street

Berlin, Connecticut 06037  
or fax to (860) 665-6301

(Contractor's Name)

**Direct Spend First Quarter (1 Jan – 31 Mar) 2009**

Vendor	LB	SB	SDB MBE	WO SB WBE	HUB	VO SB	SD VO SB	Totals
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0

**Direct Spend Second Quarter (1 April – 30 June) 2009**

Vendor	LB	SB	SDB MBE	WO SB WBE	HUB	VO SB	SD VO SB	Totals
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0

**Direct Spend Third Quarter (1 July – 30 Sept) 2009**

Vendor	LB	SB	SDB MBE	WO SB WBE	HUB	VO SB	SD VO SB	Totals
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0

**Direct Spend Third Quarter (1 Oct – 31 Dec) 2009**

Vendor	LB	SB	SDB MBE	WO SB WBE	HUB	VO SB	SD VO SB	Totals
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0

## Appendix XXV

### Attachment XXV-2

#### **Non-Discrimination; Small, Small Disadvantaged and Women Owned Small Businesses; Subcontracting Plan**

##### 1. Non-Discrimination.

In connection with its performance of the Contract Documents, Contractor shall comply with the applicable Laws regarding non-discrimination and affirmative action, including the provisions of Executive Order 11246 and the regulations issued pursuant thereto (generally Part 60-1 of Title 41 of the Code of Federal Regulations), unless exempted by said regulations, particularly the provisions of the Equal Opportunity Clause (41 CFR Section 60-1.4(a)), which are incorporated herein by reference; the provisions and regulations pertaining to nondiscrimination and affirmative action in employment (41 CFR Sections 60-1.4, 1.40, 1.41 and 1.42), and the filing of Standard Form 100 (EEO-1). Contractor certifies, in accordance with the requirements of 41 CFR Section 60-1.8, that its facilities for employees are not segregated. In addition, Contractor shall comply with the provisions of the Affirmative Action Clause for Workers with Disabilities (41 CFR Section 60-741.5), and for Special Disabled Veterans and Veterans of the Vietnam Era (41 CFR Section 60-250.5), which are also incorporated herein by reference.

##### 2. Small, Small Disadvantaged and Women Owned Small Businesses.

(a) Owners are a government contractor and fully support the government's policies of ensuring that Small, Small Disadvantaged, and Women Owned Small Business have every opportunity to compete for government contracts and subcontracts. Owners have and will continue to commit to filing annual Subcontracting Plans regarding the utilization of Small, Small Disadvantaged, and Women Owned Small Businesses as contractors and subcontractors in accordance with Federal Acquisition Regulation 52.219. CONTRACTOR MAY BE REQUIRED TO SUBMIT DATA AND/OR SUBCONTRACTING PLANS REGARDING CONTRACTOR'S UTILIZATION AND INTENDED UTILIZATION OF SUCH SMALL, SMALL DISADVANTAGED, AND WOMEN OWNED SMALL BUSINESSES DURING THE TERM OF THIS AGREEMENT.

(b) Flow-down of Federal Acquisition Requirements (*FAR*) Clause 52.219-8 -- Utilization of Small Business Concerns. Utilization of Small Business Concerns (Oct 2000). It is the policy of the United States that small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUB Zone small business concerns, small disadvantaged business concerns, and women-owned small business concerns shall have the maximum practicable opportunity to participate in performing contracts let by any Federal agency, including contracts and subcontracts for subsystems, assemblies, components, and related services for major systems. It is further the policy of the United States that its prime contractors establish procedures to ensure the timely payment of amounts due pursuant to the terms of their subcontracts with small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUB Zone small business concerns, small disadvantaged business concerns, and women-owned small business

concerns. Contractor hereby agrees to carry out this policy in the awarding of subcontracts to the fullest extent consistent with efficient contract performance. Contractor further agrees to cooperate in any studies or surveys as may be conducted by the United States Small Business Administration or the awarding agency of the United States as may be necessary to determine the extent of Contractor's compliance with this Appendix XXV, Attachment 2.

(c) As used in this Agreement:

"*HUB Zone small business concern*" means a small business concern that appears on the List of Qualified HUB Zone Small Business Concerns maintained by the Small Business Administration.

"*Service-disabled veteran-owned small business concern*"

(i) Means a small business concern -

- (1) not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and
- (2) the management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(ii) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

"*Small business concern*" means a small business as defined pursuant to Section 3 of the Small Business Act and relevant regulations promulgated pursuant thereto.

"*Small disadvantaged business concern*" means a small business concern that represents, as part of its offer, that:

- (i) It has received certification as a small disadvantaged business concern consistent with 13 CFR 124, Subpart B;
- (ii) No material change in disadvantaged ownership and control has occurred since its certification;
- (iii) Where the concern is owned by one or more individuals, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); and
- (iv) It is identified, on the date of its representation, as a certified small disadvantaged business in the database maintained by the Small Business Administration (PRO-Net).

"*Veteran-owned small business concern*" means a small business concern -

- (i) not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and
- (ii) the management and daily business operations of which are controlled by one or more veterans.

"*Women-owned small business concern*" means a small business concern -

- (i) that is at least 51 percent owned by one or more women, or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and
- (ii) whose management and daily business operations are controlled by one or more women.

(d) Contractors acting in good faith may rely on written representations by Subcontractors regarding their status as a small business concern, a veteran-owned small business concern, a service-disabled veteran-owned small business concern, a HUB Zone small business concern, a small disadvantaged business concern, or a women-owned small business concern.

3. Subcontracting Plan. In compliance with Owners' obligations under FAR 52.219-9(d), Contractor shall supply Contractor's subcontracting plan to Owners within a reasonable time after the Execution Date (but in no event more than thirty (30) days after the Execution Date) and shall fully comply with such plan in performing the Work. Contractor's subcontracting plan shall include the following:

(a) Goals, expressed in terms of percentages of total planned subcontracting dollars, for the use of small business, veteran-owned small business, service-disabled veteran-owned small business, HUB Zone small business, small disadvantaged business, and women-owned small business concerns as subcontractors. Contractor shall include all subcontracts that contribute to performance hereunder, and may include a proportionate share of products and services that are normally allocated as indirect costs.

(b) A statement of:

- (i) Total dollars planned to be subcontracted for an individual contract plan; or Contractor's total projected sales, expressed in dollars, and the total value of projected subcontracts to support the sales for a commercial plan;
- (ii) Total dollars planned to be subcontracted to small business concerns;
- (iii) Total dollars planned to be subcontracted to veteran-owned small business concerns;
- (iv) Total dollars planned to be subcontracted to service-disabled veteran-owned small business;
- (v) Total dollars planned to be subcontracted to HUB Zone small business concerns;
- (vi) Total dollars planned to be subcontracted to small disadvantaged business concerns; and
- (vii) Total dollars planned to be subcontracted to women-owned small business concerns.

(c) A description of the principal types of supplies and services to be subcontracted, and an identification of the types planned for subcontracting to:

- (i) Small business concerns;
- (ii) Veteran-owned small business concerns;

- (iii) Service-disabled veteran-owned small business concerns;
- (iv) HUB Zone small business concerns;
- (v) Small disadvantaged business concerns; and
- (vi) Women-owned small business concerns.

(d) A description of the method used to develop the subcontracting goals in subparagraph (a) above.

(e) A description of the method used to identify potential sources for solicitation purposes (including existing company source lists, the Procurement Marketing and Access Network (*PRO-Net*) of the Small Business Administration (SBA), veterans service organizations, the National Minority Purchasing Council Vendor Information Service, the Research and Information Division of the Minority Business Development Agency in the Department of Commerce, or small, HUB Zone, small disadvantaged, and women-owned small business trade associations). Contractor may rely on the information contained in *PRO-Net* as an accurate representation of a concern's size and ownership characteristics for the purposes of maintaining a small, veteran-owned small, service-disabled veteran-owned small, HUB Zone small, small disadvantaged, and women-owned small business source list. Use of *PRO-Net* as its source list does not relieve Contractor of its responsibilities (including outreach, assistance, counseling, or publicizing subcontracting opportunities) in this Appendix XXV, Attachment 2.

(f) A statement as to whether or not Contractor included indirect costs in establishing subcontracting goals, and a description of the method used to determine the proportionate share of indirect costs to be incurred with:

- (i) Small business concerns;
- (ii) Veteran-owned small business concerns;
- (iii) Service-disabled veteran-owned small business concerns;
- (iv) HUB Zone small business concerns;
- (v) Small disadvantaged business concerns; and
- (vi) Women-owned small business concerns.

(g) The name of the individual employed by Contractor who will administer Contractor's subcontracting program, and a description of the duties of the individual.

(h) A description of the efforts Contractor will make to ensure that small business, veteran-owned small business, service-disabled veteran-owned small business, HUB Zone small business, small disadvantaged business, and women-owned small business concerns have an equitable opportunity to compete for subcontracts.

(i) Assurances that Contractor will include a companion clause of this Section 3 of this Appendix XXV Attachment 2 entitled "Utilization of Small Business Concerns" in all subcontracts that offer further subcontracting opportunities, and that Contractor will require all Subcontractors (except small business concerns) that receive subcontracts in excess of \$500,000 to adopt a plan similar to the plan that complies with the requirements of this Appendix XXV, Attachment 2.

(j) Assurances that Contractor will:

- (i) Cooperate in any studies or surveys as may be required;
- (ii) Submit periodic reports so that Governmental Authorities can determine the extent of compliance by Contractor with the subcontracting plan;
- (iii) Submit Standard Form (SF) 294, Subcontracting Report for Individual Contracts, and/or SF 295, Summary Subcontract Report, in accordance with the requirements of this Appendix XXV, Attachment 2. The reports shall provide information on subcontract awards to small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUB Zone small business concerns, small disadvantaged business concerns, women-owned small business concerns, and Historically Black Colleges and Universities and Minority Institutions. Reporting shall be in accordance with the instructions on the forms or as provided in agency regulations; and
- (iv) Ensure that its Subcontractors agree to submit SF 294 and 295.

(k) A description of the types of records that will be maintained concerning procedures that have been adopted to comply with the requirements and goals in the plan, including establishing source lists; and a description of Contractor's efforts to locate small business, veteran-owned small business, service-disabled veteran-owned small business, HUB Zone small business, small disadvantaged business, and women-owned small business concerns and award subcontracts to them. The records shall include at least the following (on a plant-wide or company-wide basis, unless otherwise indicated):

- (i) Source lists (including PRO-Net), guides, and other data that identify small business, veteran-owned small business, service-disabled veteran-owned small business, HUB Zone small business, small disadvantaged business, and women-owned small business concerns.
- (ii) Organizations contacted in an attempt to locate sources that are small business, veteran-owned small business, service-disabled veteran-owned small business, HUB Zone small business, small disadvantaged business, or women-owned small business concerns.
- (iii) Records on each subcontract solicitation resulting in an award of more than \$100,000, indicating:
  - (1) Whether small business concerns were solicited and if not, why not;
  - (2) Whether veteran-owned small business concerns were solicited and, if not, why not;
  - (3) Whether service-disabled veteran-owned small business concerns were solicited and, if not, why not;
  - (4) Whether HUB Zone small business concerns were solicited and, if not, why not;
  - (5) Whether small disadvantaged business concerns were solicited and if not, why not;



- (6) Whether women-owned small business concerns were solicited and if not, why not; and
- (7) If applicable, the reason award was not made to a small business concern.
- (iv) Records of any outreach efforts to contact:
  - (1) Trade associations;
  - (2) Business development organizations;
  - (3) Conferences and trade fairs to locate small, HUB Zone small, small disadvantaged, and women-owned small business sources; and
  - (4) Veterans service organizations.
- (v) Records of internal guidance and encouragement provided to buyers through:
  - (1) Workshops, seminars, training, and other means; and
  - (2) Monitoring performance to evaluate compliance with the plan's requirements.
- (vi) On a contract-by-contract basis, records to support award data submitted by Contractor to Governmental Authorities, including the name and address.

## Appendix XXVI

### Technical Document Register

**Attachment XXVI-1, Technical Document Register**

**[Also see Appendix 1, List of Technical Documents]**