

**PART 15
ENVIRONMENT AND SAFETY**

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15.1 POLLUTION CONTROL AND CLEAN AIR & WATER.

(a) **POLICY:** BPA shall not contract with violators of the Clean Air & Water Act.

(b) **PROCEDURE:** The CO shall not contract with suppliers listed on EPA's list of violators of the Clean Air and Water Act requirements.

15.1.1 Clause Usage Prescriptions.

PROCEDURE: The CO shall include clause 15-1, Clean Air and Water, in solicitations and contracts for supplies and construction expected to exceed \$100,000, except for commercial supplies and/or services, including construction.

15.2 SAFETY, HEALTH & PROPERTY PROTECTION.

POLICY: The contractor is responsible for safety, health and property protection. With regard to safety, BPA has adopted a safety policy requiring additional measures for working safely on and around transmission lines, substations, rights-of-way and other projects that may place workers in close proximity to energized transmission facilities and other potentially hazardous conditions.

BPA safety policy and procedures are found in the Subpart and in BPA's Accident Prevention Manual. The CO shall include a safety and health clause in solicitations and contracts for construction over \$50,000 or when otherwise deemed advisable, regardless of the contract dollar amount.

15.2.1 Clause Usage Prescriptions.

PROCEDURE:

(a) The CO shall include Clause 15-2 Safety and Health – Non-Electrical Contractor(s) in all solicitations and contracts for non-electrical services or construction, deleting any text after paragraph (b) that clearly does not apply to the project, or inserting additional considerations if needed. The clause section entitled "Site Specific Safety Plan" must be included if there are recognized or significant job hazards. The CO shall insert project specific safety provisions for Overhead Line Construction, Fiber Optic Construction, and Substation Construction, as provided by the BPA Safety Office.

(b) The CO shall include a clause similar to 15-3, Property Protection, in solicitations and contracts for construction valued in excess of \$50,000 or when otherwise deemed advisable. The CO may delete those portions which clearly do not apply to the project, and insert additional requirements if conditions warrant. Unless an environmental plan is already included in the Statement of Work, Alternate 1 shall be added if the work is known to involve the use of hazardous materials or will create hazardous wastes. The CO shall identify known activities involving the use, handling or transportation of such materials in the text of the clause.

(c) The CO shall include a clause similar to 15-5, Protection of Existing Vegetation, Structures and Improvements, in solicitations and contracts for construction, or dismantling, demolition or removal of improvements contracts if the contract amount is expected to be greater than \$50,000 or when otherwise deemed advisable.

15.3 HAZARDOUS MATERIALS AND SAFETY DATA.

(a) ***POLICY:*** The contractor is responsible for assuring that hazardous materials safety data requirements are met in accordance with current laws and regulations as established by Federal, state and local authorities.

(b) ***INFORMATION:*** BPA shall require contractors and their subcontractors to submit hazardous materials data. Federal Standard No. 313C (Materials Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Agencies) includes criteria for identification of hazardous materials. The standard also prescribes DOL Form OSHA-174 for use with BPA contracts.

15.3.1 Clause Usage Prescriptions.

PROCEDURE: The CO shall include clause 15-6, Hazardous Material Identification and Material Safety Data, in solicitations and contracts if the contract will involve exposure to hazardous materials in any manner (performance of work; use; handling; manufacturing; packaging; transportation; storage; inspection; and disposal).

15.4 SUSTAINABLE PRODUCTS AND SERVICES.

15.4.1 General

(a) **POLICY:** It is BPA policy to advance procurement activities that are consistent with BPA's implementation of Executive Order 13514. This includes the procurement of products and services which promote energy efficiency, water efficiency, environmental preference, are bio-based, non-ozone depleting, and contain recycled content, non-toxic, or less-toxic alternatives, where cost-effective and reasonably available to meet the functional requirements the program office.

(b) **PROCEDURE:** It is the responsibility of the requesting organization/requisitioner to specify purchase requirements which comply with the BPA Sustainability Plan, and to identify services and products that meet such standards where appropriate.

15.4.2 Ozone-Depleting Substances

(a) **POLICY:** It is the policy of the BPA to advance cost-effective programs to minimize the procurement of materials and substances that contribute to the depletion of stratospheric ozone. Non-Ozone Depleting Alternative Products are at <http://www.epa.gov/ozone/strathome.html>.

(b) **PROCEDURE:** The requesting organization/requisitioner shall identify non-ozone depleting substances/materials or refrigeration equipment and air conditioner equipment in their requirements package whenever possible.

(c) **INFORMATION:** The Clean Air Act (CAA) is the comprehensive federal law that regulates air emissions from stationary and mobile sources. For the purposes of this subpart, ozone-depleting and refrigeration substances are discussed in sections 608 and 609 of the CAA. For more information on Section 608 as it relates to refrigeration, see: http://www.epa.gov/ozone/title6/downloads/Section_608_FactSheet2010.pdf. For more information on Section 609 as it relates to motor vehicle air conditioning, see: http://www.epa.gov/ozone/title6/downloads/Section_609_FactSheet2010.pdf.

15.4.2.1 Clause Usage Prescriptions

PROCEDURE:

(a) COs shall include Clause 15-7, Ozone-Depleting Substances, in solicitations and contracts for products and services which may include the use of substances or supplies that contain, or be manufactured with, ozone-depleting substances. COs shall not include Clause 15-7 in contracts performed outside the United States or its outlying areas.

(b) COs shall include Clause 15-8, Refrigeration Equipment, in solicitations and contracts for services which may include the maintenance, repair, or disposal of any equipment or appliance which use ozone-depleting substances as a refrigerant, such as air conditioners, including motor vehicles, refrigerators, chillers, or freezers. COs shall not include Clause 15-8 in contracts performed outside the United States or its outlying areas.

15.4.3 Energy and Water Efficiency

(a) **INFORMATION:** Energy Star is a product designation issued by the U.S. Environmental Protection Agency indicating that the product uses less energy, saves money and protects the environment. FEMP is the Department of Energy's Federal Energy Management Program, which

facilitates the Federal Government's implementation of sound, cost-effective energy management and investment practices to enhance the nation's energy security and environmental stewardship. Products that are FEMP designated for energy efficiency and low standby power are in the upper 25 percent of energy efficiency in their class.

Information on Energy Star and FEMP is available at:

(1) ENERGY STAR® at <http://www.energystar.gov/products>; and

(2) FEMP at http://www1.eere.energy.gov/femp/procurement/eep_requirements.html

(b) **POLICY:** It is BPA policy to advance sustainable acquisition of supplies and services that promote energy and water efficiency, advance the use of renewable energy products, and help foster markets for emerging technologies when appropriate.

(c) **PROCEDURE:** When procuring energy-consuming products, services or construction that are listed in a product category covered under the Energy Star or the Federal Energy Management Program (FEMP), COs shall procure such products and services when cost-effective and reasonably available to meet the functional requirements of the program office.

15.4.3.1 Clause Usage Prescriptions

PROCEDURE: COs shall insert Clause 15-9, Energy Efficiency in Energy Consuming Products, in solicitations and contracts when products listed under the Energy Star or the Federal Energy Management Program may be delivered, acquired for BPA use or for performing services at a BPA facility, specified in the design of a building or work, or incorporated during its construction, renovation, or maintenance.

15.4.4 Recovered Materials and Bio-Based Products

(a) **INFORMATION:** BPA's Environment, Fish and Wildlife office promulgates BPA policy related to recovered or recycled materials. Recovered materials are waste materials and byproducts that have been recovered or diverted from solid waste, but do not include materials and byproducts generated from, and commonly reused within, an original manufacturing process. Buying recycled-content products ensures that the materials collected in recycling programs will be used again in the manufacture of new products. Utilizing their Comprehensive Procurement Guideline (CPG) program, the EPA has designated certain products that are or can be made with recovered materials. Further information is available at:

<http://www.epa.gov/osw/consERVE/tools/cpg/index.htm>. A list of CPG designated suppliers is available at: <http://www.epa.gov/osw/consERVE/tools/cpg/database.htm>.

(b) **INFORMATION:** Bio-based or bio-preferred products are commercial or industrial products (other than food or feed) that are composed in whole, or in significant part, of biological products, renewable agricultural materials (including plant, animal, and marine materials), or forestry materials as set forth in the 2002 Farm Bill, as amended. Further information is available at: <http://www.usda.gov/biopreferred>.

(c) **POLICY:** It is BPA policy to advance the acquisition of products containing recovered materials and bio-based products in service and construction contracts.

15.4.4.1 Clause Usage Prescriptions.

PROCEDURE:

(a) COs shall include Clause 15-10 Recovered Materials in solicitations and contracts for service or construction when the procurement could include products manufactured with recovered materials.

(b) COs shall include Clause 15-11 Bio-Based Products in solicitations and contracts for service or construction when the procurement could include products identified as bio-based pursuant to the USDA.

15.50 TEXT OF CLAUSES.

The following clauses are referred to in BPI Part 15:

- 15-1 Clean Air And Water
- 15-2 Safety And Health
- 15-3 Property Protection
- 15-4 Reserved
- 15-5 Protection of Existing Vegetation, Structures, and Improvements
- 15-6 Hazardous Material Identification And Material Safety Data
- 15-7 Ozone-Depleting Substances
- 15-8 Refrigeration Equipment
- 15-9 Energy Efficiency in Energy Consuming Products
- 15-10 EPA Designated Items
- 15-11 Bio-Based Product

Clause 15-1 CLEAN AIR AND WATER (Sep 98)(BPI 15.1.1)

Facilities listed on the Environmental Protection Agency List of Violating Facilities shall not be used in the performance of this contract. The contractor agrees to meet Clean Air and Water standards as identified in 42 U.S.C. 7401 et seq., Executive Order 11738, and any implementation plan described in 42 U.S.C. 1342 as well as local government with pretreatment regulations (33 U.S.C. 1317). The contractor shall comply with all requirements of the Clean Air Act (42 U.S.C. 7414) and the Clean Water Act (33 U.S.C. 1318) relating to inspection, monitoring, entry, reports and information, and all regulations and guidelines.

(End of clause)

Clause 15-2 SAFETY AND HEALTH – Non-electrical Contractor(s) (Sep 09)(BPI 15.2.1)

(a) General.

(1) The Contractor shall assure that no person employed on this contract works in surroundings or under conditions that are unsanitary, hazardous, or dangerous to their health or safety. In fulfilling these requirements, the Contractor shall comply with:

(A) Department of Labor Safety and Health Standards for Construction under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3701 et seq.).

(B) Occupational Safety and Health Act of 1970, (Public Law 91-598) and applicable rules and regulations as may have been delegated to the States.

(C) All Federal and state safety and health rules and regulations applicable to the contract work, as supplemented by BPA safety and health requirements stated below or elsewhere in the contract.

(2) If there are conflicts between any of the requirements referenced in this contract, the more stringent requirement will prevail.

(3) If the Contractor fails or refuses to promptly comply with any safety or health requirement, the Contracting Officer's Technical Representative (COTR) may notify the Contractor of any noncompliance and the Contractor shall take immediate corrective action. Such notice, whether oral or written, when served on the Contractor or any of its employees at the site of the work shall be deemed sufficient. If the Contractor fails or refuses to promptly correct the condition, the COTR may stop all or any portion of the work. When satisfactory corrective action has been taken, the contractor shall request permission to resume work from the COTR. When all work on a contract has been suspended for a Safety and Health violation, accident, or incident by the Contracting Officer (CO), the contractor shall meet with representatives of BPA's Contracting Office, and the BPA Safety Office to present a written statement outlining specific changes in work procedures that the contractor will make in order for work to safely resume. BPA must be satisfied that the contractor is capable of completing the contract in a safe manner before allowing work to resume. No time extension or additional costs, resulting from the directive to stop work shall be allowed. Failure of the COTR to provide notice of noncompliance or to stop work shall not relieve the Contractor of its responsibility for the safe performance of the work.

(4) The Contractor shall maintain an accurate record of, and shall immediately report to the COTR in the manner prescribed by the latter, all cases of death, occupational diseases, and injury arising from, or incident to, performance of work under this contract. The record and report shall include a description of the preventative measures to be taken to avoid recurrence, any restitution or settlement made, or the status thereof. The contractor shall complete and file with the COTR, BPA form 6410.15e (Contractor's Report of Personal Injury, Illness, or Property Damage Accident) within five (5) working days of such an occurrence.

(5) In case of an injury, the Contractor shall have 30 days to make full restitution or settlement. If the Contractor fails to make full restitution or settlement within 30 days, BPA may:

(A) Make, or cause to be made, the required remedial action or cash settlement to the person or persons who have been injured, and

(B) Charge to the Contractor's account an equitable amount, not to exceed \$2,500, for any injury claim. More than one such payment, and charge, can be assessed if more than one injury has occurred.

(6) The Contractor bears sole responsibility for ensuring that all personnel engaged in work related to the contract possess the necessary knowledge and skills to perform their work safely and to otherwise function in compliance with the foregoing criteria. (See also the Material and Workmanship clause)

(7) The Contractor shall hold BPA harmless from any and all suits, actions, and claims for injuries to or death of persons arising from any act or omission of the Contractor, its subcontractors, or any employee of the Contractor or subcontractors, in any way related to the work or operations under this contract.

(8) The Contractor shall indemnify and hold harmless the property owners or parties lawfully in possession against all claims or liabilities asserted by third parties, including all governmental agencies, resulting directly or indirectly from the Contractor's wrongful or negligent acts or omissions.

(9) Nothing stated herein shall be construed to be a limitation on the Contractor's liability. The rights and remedies of BPA provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

(b) Personal Protective Equipment. The Contractor shall furnish non-conductive hard hats and all other required safety and personal protective equipment, except that which has been specified to be furnished by BPA. All persons on all construction projects shall wear non-conductive hard hats meeting the requirements of OSHA/ANSI. Contract employees shall not wear yellow non-conductive hard hats. (A yellow hat signifies a qualified BPA electrical worker.) Only a BPA approved safety watcher may wear orange non-conductive hard hats.

(c) Energized Facilities.

(1) Whenever a worker enters energized substation yards or communication equipment sites, or whenever work is otherwise in proximity to BPA's normally-energized transmission facilities, the Contractor shall provide for the safety of the workers and shall at all times take necessary precautions to protect BPA's facilities from accidental contact that could cause an outage, or damage the facility. At no time will any contractor employee or equipment come closer to energized lines or equipment than the Minimum Approach Distances (MAD) in Table 2.

(2) The Contractor shall, as directed by the COTR or BPA's Qualified Electrical Employee, erect, maintain, and remove such safety fences as are required to prevent accidental contact between BPA's normally energized facilities and the Contractor's equipment or workers. BPA will normally furnish the safety fences required in its energized substation yards or communication equipment sites. The safety fences shall not be removed without consent of the COTR or BPA's Qualified Electrical Employee. Safety fences furnished by BPA remain the property of BPA. If 'Safety Fence' is not specified separately in the Schedule of Prices as a specially priced item, its cost shall be considered included in the contract price(s) for the other item(s) listed in the Schedule. If separately priced, the estimated units (linear meters) of safety fence and the price for same are set forth in the Schedule of Prices. The "Variation in Quantity" clause, whether or not included herein, is inapplicable to this safety fence requirement. The Contractor will be compensated at the same unit price for the actual lineal meters of safety fence installed.

(3) Contractor employees shall not cross red and white or yellow and black ropes. These are used by BPA to designate electrical hazards.

(4) Contractors using station service to power portable electric tools in energized yards must use grounding boxes (BPA "eartha-kits") to minimize step and touch hazards. Station service may not be used for temporary power off the ground mat. As an alternative, contractors may use generators for portable power.

(5) Conductive Devices

(A) Portable metal ladders are not permitted in energized substations.

(B) Conductive objects such as metal tapes, surveyor chains, fish tapes, and center line may be used in energized yards only when specifically approved by the BPA Safety Watcher and restrained by adequate methods, to prevent electrical contact in the event of slippage or breakage at any point.

(6) All contractor employees entering BPA substations must obtain Contractor Electrical Worker or Contractor Non-Electrical Worker permits (as applicable), or be escorted by a qualified BPA employee at all times.

(d) Flammable Liquids.

(1) Flammable liquids within 21.5 meters (70 feet) of conductors energized at voltages of 345kv and higher shall not be transferred from one metal container to another unless the two have been electrically bonded together to eliminate arcing. Plastic or any other non-conducting portable containers shall not be used, except those with a capacity of one gallon or less that are UL or FM approved.

(2) Fuel storage shall not take place under or adjacent to energized lines or equipment.

(e) HAZCOM.

(1) The Contractor shall supply employees with effective information and training regarding any hazardous chemicals used at the work site.

(2) The contractor shall maintain any required Material Safety Data Sheets (MSDS) at the work location and available to employees

TABLE 1

Minimum Approach Distances (MAD) For Non-Electrical Workers and Equipment	
Nominal Voltage Phase to Phase	<u>MAD (in feet)</u> <u>(Phase to ground)</u>
Up to 345 kV	15 ft.
500 kV*	20 ft.
400 kV DC + 500 kV DC +*	20 ft.
Fiber Optics (OPGW)	10 ft.
Insulated Overhead Ground Wires	10 ft.

* Note-Lines nominally designated as 500 kV lines may be operated up to 550 kV operating voltage, which is therefore used to calculate the MAD for 500 kV nominal voltage.

(f) Site Specific Safety Plan.

(1) The Contractor shall prepare, implement, and enforce a site specific safety plan for each contract or release.

(2) Prior to the start of any on-site work for each contract or release, the Contractor shall:

(A) Provide a site specific safety plan to identify and mitigate any recognized hazards or conditions. Site and adjacent conditions shall be considered. All significant hazards shall be identified. Unusual or unique hazards or conditions specific to the contract or release, known by BPA, will be identified in the technical specification.

(B) Submit to BPA a copy of the site specific safety plan at least 10 days prior to start of on-site work. If the BPA Safety Office determines the site specific safety plan to be insufficient, they may stop the Contractor's right to start with any or all on site work.

(3) The contractor shall ensure that their subcontractors, suppliers, and support personnel follow all safety and health provisions and that all employees working on the project are knowledgeable of the provisions of the plan.

(4) The contractor shall conduct and document job briefings each morning with safety as an integral part of the briefing. Provide copies of any other safety meeting notes to the COTR. The notes will at a minimum show the date, time, topics discussed, and attendees of each meeting.

(g) Helicopter.

(1) Helicopter(s) can only be used for the following: pulling sockline, moving personnel from and to a safe ground location near the work site, moving equipment and material to the work site.

(2) When aircraft are to be used for performance of work under this contract, they must be certified under the applicable Federal Aviation Regulation (FAR) for the type of work being performed, and comply with all applicable regulations. No aircraft will be operated as a public aircraft at anytime while working on a BPA contract. All aircraft operators and pilots must be approved by BPA's Aircraft Services prior to performance of any work on BPA's power system or property.

(3) All helicopter pilots must meet the following minimum qualifications: 1) Possess a current FAA Rotocraft-Helicopter Pilot's Certificate with Commercial Privileges; 2) Possess a current FAA Class II Medical Certificate; 3) Have a minimum of 3,000 hours pilot time in helicopters with 500 hours in the make, model and series being flown on this project; 4) Have 500 hours mountain flying experience and a minimum of 100 hours pilot time in support of electrical utility activities or demonstrate proficiency to a BPA check airman for the type of mission being contracted; and 5) Must have attended a formal pilot training program, i.e., factory school, Flight Safety, etc., for the model of helicopter being contracted. If external load work is required, recent experience and FAR Part 133 qualification is required.

(4) Prior to operation of any aircraft, the Contractor must submit, to the Contracting Officer, the operator and pilot's minimum qualifications on "Aircraft Operator Questionnaire" and "Contractor Pilot History" forms. (Forms will be provided by BPA.)

(5) During the performance of helicopter work, the contractor shall submit a "Federal Aviation Interactive Reporting Systems (FAIRS) Aircraft Usage Report quarterly. (Form to be provided by BPA.)

(6) A flight plan must be filed with BPA's Dittmer Control Center each day prior to operating a helicopter at or adjacent to any BPA overhead line or substation.

(h) Ground Mat.

(1) Employees shall not "come between" cut sections of substation ground grids. Separated sections of the mat shall only be connected after first being jumpered using hot methods by qualified electrical workers under the supervision of the COTR.

(2) Do not perform work on ground mat conductors with lightning in the area.

(3) For employee protection, the local substation operator shall be notified whenever any work is being performed on the ground grid.

(i) Grounding Equipment. Manlifts, cranes, booms, and any other overhead lift equipment working in proximity to energized lines or equipment shall be grounded with 2/0 AWG copper ground cables. Multiple (parallel) ground leads may be required at some locations on the BPA power system when the anticipated fault current exceeds the capacity of a single 2/0 copper ground. These locations (if applicable) will be provided by BPA in the contract technical specifications.

(j) Trenching and Excavation.

(1) Before any trenching or excavation work commences, the contractor must submit to BPA for review, an excavation site safety plan for the specific excavation work proposed.

(2) This plan must conform to all applicable state and federal trenching, shoring and excavation safety standards.

(3) The contractor shall be responsible for obtaining all necessary locates before any work commences.

(k) Welding in Substations.

(1) Welding ground leads must be placed on the equipment being welded to assure a solid return path to the welding machine. Do not use ground mat risers for welding ground return paths to avoid causing stray currents entering the ground mat.

(2) Welders and helpers shall not "come between" welding current paths to avoid becoming part of the welding circuit.

(l) Safety Watchers.

(1) The Contractor shall take adequate safety measures to protect its employees and others from induced voltages as well as direct contact. The Contractor shall provide qualified safety watchers for the protection of workers and BPA facilities for the phases of the work where required by these specifications, law or regulation, or where it considers them to be necessary. A safety watcher's main responsibility is to limit the movement of personnel or equipment to prevent contact with energized overhead or underground electrical facilities. Safety watchers shall take a suitable location and give undivided attention to ensure that no action on the part of the workers being watched can result in violation of the minimum approach distances set forth below in Table 2. There must be a definite understanding

between the safety watcher and the persons being watched as to when the watching begins and ends. Safety watchers, who must leave their assigned jobs, shall first make sure that all workers are in the clear and remain in the clear until the safety watcher returns or is replaced. Safety watchers have the authority to halt the work operation whenever any unsafe act or condition is imminent. The safety watcher shall wear a red or orange vest or hard hat (as designated by the COTR) at all times.

(A) Safety watchers are required under any of the following conditions:

(i) Whenever inadvertent movement by a worker could result in violating the Minimum Approach Distance as specified in Table 2.

(ii) When operating or moving motor-driven equipment in the vicinity of high-voltage circuits and the possibility of violating the MAD in Table 2 exists.

(iii) Whenever the contractor otherwise determines a safety watcher is necessary.

(2) All safety watchers shall be qualified electrical workers, having satisfactory experience with energized high-voltage facilities of the type located in proximity to the employees they are assigned to watch. Additionally, safety watchers must pass a test administered by BPA and participate in an interview prior to performing any safety watcher duties.

(3) A list of currently qualified Contractor Substation Safety Watchers may be obtained from the B.P.A. Contracting Officer (C.O.).

(4) If "Safety Watcher" is not specified separately in the Schedule of Prices, the costs therefore shall be considered included in the contract price specified for the contract item(s) listed. If separately priced as a separate unit-priced item, the estimated hours of safety watcher and the price for same are set forth in the schedule of prices. The "Variation in Estimated Quantity " clause, whether or not included herein, is inapplicable to this safety watcher requirement. The Contractor will be compensated at the specified rate for the actual hours of safety watcher hours performed.

(m) Fall Protection.

(1) Contractors performing work on structures over four feet above a lower level shall use approved fall protection.

(2) Contractors working in aerial manlifts shall use approved fall protection.

(3) Contractors performing work at a height of ten feet (10') or greater shall have an approved, written, site specific fall protection work plan in place prior to the commencement of work.

(4) The contractor shall insure that portable ladders are inspected and contain no defects, be adequately secured, extend at least three feet above any upper landing surface, and shall not be loaded past their manufacturer's rated load capacity.

(n) Confined Spaces.

(1) The contractor shall identify any needed or required employee entry into a confined space as defined by federal OSHA standard 1910.146 (b) and/or any applicable state standard or regulation.

(2) The contractor shall identify any permit required confined space and implement a confined space entry program as required by OSHA 1910.146 and/or any applicable state standard or regulation.

(3) The contractor shall monitor for hazardous atmosphere before and during any employee entry into an identified or suspected confined space.

(o) Lockout/Tagout (LOTO).

(1) The contractor shall insure that no employees are exposed to injury from the unexpected startup or release of stored energy systems.

(2) Contractors performing work on machinery or equipment where such hazards may exist shall have a documented LOTO training and work program in place before performing such work. This program shall conform to all the requirements of federal OSHA 1910.147 and any other applicable federal or state standards and regulations.

(3) The contractor shall supply all required locks, tags, and devices required for locking out and tagging the machinery or equipment to be worked on.

(End of clause)

Clause 15-3 PROPERTY PROTECTION (Sep 98)(BPI 15.2.1)

(a) The Contractor shall construct and maintain such temporary fences, gates and other facilities as shall be necessary for preservation of crops, control of livestock, and protection of property. Before cutting a fence, the Contractor shall take necessary precautions to prevent the straying of livestock and shall prevent the loss of tension in or damage to adjacent portions of the fence. The Contractor shall immediately replace all fencing and gates that it cuts, removes, damages, or destroys with new materials to the original standard, with the exception that undamaged gates may be reused.

(b) The Contractor shall comply with the request of the property owner relative to leaving gates open or closed.

(c) The Contractor shall use all necessary precautions to avoid the destruction of surveying markers such as section corners, witness trees, property corners, mining claim markers, bench markers, triangulation stations, and the like. If any such marker must be destroyed, the Contractor shall first notify the agency responsible for the marker, as well as the CSR, and assume all responsibility for replacing markers.

(d) The Contractor shall use care to prevent unnecessary damage caused by performance of its work to property in or near the work area. Unnecessary damage is that which can be avoided through efficient and careful performance of the work in a careful manner, taking into account the land rights which have been secured. If the Contractor damages any property, the contractor shall at once notify the owner or custodian and shall make or arrange to make prompt and full restitution.

(e) Maps and specifications provided by BPA may not give the location of all water supply, drainage, irrigation, and other underground facilities. Prior to entering a tract of land for contract purposes, the Contractor shall ascertain from the property owner or other reasonably available source the location of any irrigation system, domestic water system, source of water, and drainage system existing on the property, whether serving that property or other property. The Contractor shall avoid damaging or obstructing these facilities or polluting water supplies.

(f) The Contractor shall hold BPA harmless from any and all suits, actions, and claims for damages, including environmental impairment, to property arising from any act or omission of the contractor, its subcontractors, or any employee of the Contractor or subcontractors, in any way related to the work or operations under this contract.

(g) The Contractor shall indemnify and hold harmless the property owners or parties lawfully in possession against all claims or liabilities asserted by third parties, including all governmental agencies, resulting directly or indirectly from the Contractor's wrongful or negligent acts or omissions.

(End of Clause)

Alternate I (Sep 98)

(h) The management and disposal of hazardous wastes and materials exposes the contractor and BPA to short- and long-term liabilities. In order to reduce these potential liabilities it is critical that the contractor be fully aware of the hazards and regulatory requirements associated with the hazardous materials involved in this project. Only qualified personnel shall be used in their handling and transportation.

(i) Before commencing work, the Contractor shall:

(1) Perform an environmental assessment of the work required under the contract identifying tasks which involve the use, handling or transportation of hazardous materials or wastes. The following items of work are known to involve such substances:

- (A) _____,
- (B) _____, etc.(CO to list)

(2) Submit an environmental plan to the CO identifying and dealing with each specific task involving the wastes. The plan must be specific enough to demonstrate a thorough understanding of the environmental risks and the appropriate methodology for dealing with them. The plan shall also list the required permits and reference the relevant regulations which govern the activities involved in dealing with the materials or wastes.

(3) Meet with representatives of the Contracting Officer during the preconstruction conference to discuss and to develop a mutual understanding on implementation of the plan.

(4) The CO, or her or his representatives may require other tasks to be added to the plan. If planned methodologies for dealing with the risks are deemed insufficient, the CO, or a designated representative, may require revision. Work involving hazardous materials or wastes shall not commence until adequate plans have been submitted and reviewed. BPA's review of the Contractor's plan shall in no way relieve the Contractor of its liability for environmental law and regulatory compliance.

(End of Alternate I)

Clause 15-4 RESERVED.

Clause 15-5 PROTECTION OF EXISTING VEGETATION, STRUCTURES, AND IMPROVEMENTS (Sep 98)(BPI 15.2.1)

(a) The Contractor shall preserve and protect all structures, equipment, utilities, other improvements, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this contract. The Contractor shall only remove trees when specifically authorized to do

so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, or by the careless operation of equipment, or by workers, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the CO's representative.

(b) If the Contractor fails or refuses to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

(End of clause)

Clause 15-6 HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA (Sep 98)(BPI 15.3.1)

(a) The Contractor agrees to submit a Material Safety Data Sheet (Department of Labor Form OSHA-20), as prescribed in Federal Standard No. 313C, for all hazardous material 5 days before delivery of the material whether or not it is listed in Appendix A of the Standard. This obligation applies to all materials delivered under this contract which will involve exposure to hazardous materials or items containing these materials.

(b) "Hazardous material," as used in this clause, is as defined in Federal Standard, No. 313C, in effect on the date of this contract.

(c) Neither the requirements of this clause nor any act or failure to act by BPA shall relieve the Contractor of any responsibility or liability for the safety of BPA, Contractor, or subcontractor personnel or property.

(d) The Contractor shall comply with applicable Federal, state, and local laws, codes, ordinances, and with regulations (including the obtaining of licenses and permits) in connection with hazardous material.

(e) The Contractor shall insert this clause, including this paragraph (e), with appropriate changes in the designation of the parties, in subcontracts at any tier (including purchase orders) under this contract involving hazardous material.

(End of Clause)

Clause 15-7 OZONE-DEPLETING SUBSTANCES (Aug 11)(BPI 15.4.2.1)

(a) In the performance of this contract, the Contractor shall advance the use of non-ozone depleting products that are Environmental Protection Agency (EPA)-designated items unless—

(1) The product cannot be acquired—

(A) Competitively within a time frame providing for compliance with the contract performance schedule;

(B) Meeting contract performance requirements; or

(C) At a reasonable price.

(b) "Ozone-depleting substance," as used in this clause, means any substance the Environmental Protection Agency designates in 40 CFR Part 82 as—

(1) Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or

(2) Class II, including, but not limited to, hydrochlorofluorocarbons.

(c) The Contractor shall label products which contain, or are manufactured with, ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j (b), (c), and (d) and 40 CFR Part 82, Subpart E, as follows:

Warning

Contains (or manufactured with, if applicable) * _____, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere.

* The Contractor shall insert the name of the substance(s).

(End of clause)

Clause 15-8 REFRIGERATION EQUIPMENT (Aug 11)(BPI 15.4.2.1)

The Contractor should make every effort to comply with the applicable requirements of Sections 608 and 609 of the Clean Air Act (42 U.S.C. 7671g and 7671h) as each or both apply to this contract. For more information on Section 608 (general refrigeration), see: http://www.epa.gov/ozone/title6/downloads/Section_608_FactSheet2010.pdf. For more information on Section 609 (motor vehicle air conditioning), see: http://www.epa.gov/ozone/title6/downloads/Section_609_FactSheet2010.pdf.

(End of clause)

Clause 15-9 ENERGY EFFICIENCY IN ENERGY CONSUMING PRODUCTS (Aug 11)(BPI 15.4.3.1)

(a) "Energy-Efficient Product" means a product that meets Department of Energy and Environmental Protection Agency criteria for use of the Energy Star trademark label; or is in the upper 25 percent of efficiency for all similar products as designated by the Department of Energy's Federal Energy Management Program.

(b) Unless otherwise approved in writing by the CO, the Contractor and its subcontractors shall make every effort to ensure that energy-consuming products are Energy-Efficient Products at the time of contract award, for products that are—

(1) Delivered; or acquired by the Contractor for BPA use or for performing services at a BPA facility; or

(2) Specified in the design of a building or work, or incorporated during its construction, renovation, or maintenance.

(c) Information about these products is available for—

(1) ENERGY STAR® at <http://www.energystar.gov/products>; and

(2) FEMP at http://www1.eere.energy.gov/femp/procurement/eep_requirements.html.

(End of clause)

Clause 15-10 RECOVERED MATERIALS (Aug 11)(BPI 15.4.4.1)

(a) In the performance of this contract, the Contractor shall advance the use of products containing recovered materials as designated by the EPA's Comprehensive Procurement Guideline (CPG) program unless the product cannot be acquired—

- (1) Competitively within a timeframe providing for compliance with the contract performance schedule;
- (2) Meeting contract performance requirements; or
- (3) At a reasonable price.

(b) Information about this requirement is available at EPA's Comprehensive Procurement Guidelines web site, <http://www.epa.gov/osw/consERVE/tools/cpg/database.htm>. The list of EPA designated items is available at <http://www.epa.gov/osw/consERVE/tools/cpg/index.htm>.

(End of clause)

Clause 15-11 BIO-BASED PRODUCTS (Aug 11)(BPI 15.4.4.1)

(a) In the performance of this contract, the Contractor shall advance the use of bio-based products that are United States Department of Agriculture (USDA)-designated items unless—

- (1) The product cannot be acquired—
 - (A) Competitively within a time frame providing for compliance with the contract performance schedule;
 - (B) Meeting contract performance requirements; or
 - (C) At a reasonable price.

(b) Information about this requirement and these products is available at www.usda.gov/biopreferred.

(End of clause)