

EPA REGION 7 CONTRACT- GREEN LEASE RIDER

CEMENT/CONCRETE— PROCUREMENT LANGUAGE

PRODUCT-SPECIFIC LANGUAGE

6.5.3 Note on Coal Fly Ash and Ground Granulated Blast Furnace Slag EPA's Comprehensive Procurement Guidelines recommend the use of Cement and Concrete containing Coal Fly Ash and Ground Granulated Blast Furnace Slag (GGBF), but due to variation in coal fly ash, GGBF slag, cement, strength requirements, costs, and construction practices, EPA is not recommending and does not recommend recovered materials content levels for cement or concrete containing coal fly ash or GGBF slag. EPA is however, providing the following information about recovered materials content:

- Replacement rates for coal ash for cement in the production of blended cement generally do not exceed 20 to 30 percent, although fly ash blended cement may range from 0 to 40 percent coal fly ash by weight, according to the American Society for Testing and Materials (ASTM) C 595, for cement types IP and I (PM). Fifteen percent is a more accepted rate when coal fly ash is used as a partial cement replacement as an add mixture in concrete.
- According to ASTM C 595, GGBF slag can replace up to 70 percent of the Portland cement in some mixtures. Most GGBF slag concrete mixtures contain between 25 and 50 percent GGBF by weight. EPA recommends that the offeror refer, at a minimum, to ASTM C 595 for the GGBF slag content appropriate for the intended use of the cement and concrete.

6.5.2 Use of Coal Fly Ash as a Partial Replacement for Cement in Concrete: Consistent with the performance requirements of cement and concrete products required in this SFO and all applicable State, local, and other building codes, the contractor shall use Coal Fly Ash, a finely divided residue resulting from the combustion of coal, as a partial replacement for cement in concrete to the maximum extent practicable within the given constraints of cost and performance and in accordance with ANSI/ASTM standards and all applicable codes. For additional information on the use of Coal Fly Ash and GGBF, see the following:

Cement Specifications

- A. ASTM C 595 Standard Specification for Blended Hydraulic Cements.
- B. ASTM C 150 Standard Specifications for Portland Cement
- C. AASHTO M 240 Blended Hydraulic Cements.

Concrete Specifications

- A. ASTM C 618 Standard Specification for Fly Ash and Raw or Calcined

- Natural Pazzolan for use as a Mineral Admixture in Portland Cement Concrete
- B. ASTM C 311 Standard Methods of Sampling and Testing Fly Ash and Natural Pazzolans for use as a Mineral Admixture in Portland Cement Concrete.
- C. ASTM C 989 Ground Granulated Blast Furnace Slag for use in Concrete and Mortars
- D. ACI 226.RI Ground Granulated Blast Furnace Slag as a Cementitious Constituent in Concrete.

OTHER APPLICABLE CONTRACT LANGUAGE

General References

p 5 2.1.3.3 Building to Reflect EPA's Mission. Offerors are encouraged to design, build, and operate a safe, reliable, and cost-competitive facility that reflects, to the maximum extent possible within the requirements of this Solicitation for Offers, EPA's environmental protection mission and its commitment to having a positive impact on the communities where it is located. The following are concepts that should be considered during the design, construction, and operation of this facility:

Energy Conservation, via careful consideration of building siting, passive solar design approaches, day lighting, energy efficient building shell design, low E glass, efficient mechanical systems, minimizing waste energy and recapturing waste energy streams, use of solar power and other renewable or innovative energy sources, "Greenlights", advance building and mechanical control systems, thoughtful building maintenance and operation, etc.

Water Conservation, via use of low flow toilet fixtures and through sensitive mechanical system design, landscape design using native species and drip irrigation systems, and thoughtful site design.

Resource Conservation, via the use of materials with recycled contents or above average recycled contents, use of materials that are manufactured, packaged, or transported in a way that reduces energy or material expenditures, construction period recycling and waste minimization, and designing, building, and operating the building to accommodate EPA's active recycling program.

Indoor Air Quality, via careful placement of exhaust and air intakes in relative positions that prevent cross contamination, consideration regarding radon in the building, protection of the HVAC system during construction, the use of low VOC adhesives, paints, sealants, and caulks, construction period installation sequencing, sensitive janitorial and cleaning approaches during the building's operating life. No use of asbestos or asbestos containing materials.

Other Environmental Factors, such as Protection of the Ozone Layer through the avoidance of CFC's as refrigerants and blowing agents for insulation; Protection of Endangered Ecosystems and support of sustainable forestry practices by avoiding consumptive use of endangered rain forest species and obtaining products from certified sustainable sources, use of non leaded paints, and provision of plumbing systems that prevent elevated lead levels in water. Consider partnerships with local utilities and energy savings companies to assist in financing low emissions low operating cost mechanical systems.

The challenge is to minimize the conflicts between and maximize the benefits of these environmental requirements while meeting the other goals and specification associated with this project.

- p. 5 2.1.3.6 LEED Building Bronze™ Certification. The Building's design should, at a minimum, meet the level of performance consistent with criteria assigned to the LEED™ Building Bronze™ Certification. The Leadership in Energy and Environmental Design (LEED™) GREEN Building Rating System has been developed by the US GREEN Building Council. Description and criteria for the LEED™ system can be viewed at <http://www.usgbc.org/programs/leed.htm> or received from the US Green Building Council at 90 New Montgomery Street, Suite 1001, San Francisco, CA 94105 or dialing 415-543-3001. Offerors shall provide (3) copies of supporting documentation that demonstrates its participation in the LEED™ Rating system (i.e. a notebook detailing how the building earned the LEED™ Bronze Certification).

5.17.1 General: This solicitation requires that energy conservation features be designed into the facility. These features, if not in conflict with specific requirements of this Solicitations, shall be those described in the "GSA Energy Conservation Guidelines for New Buildings" Handbook.

5.17.5 Environmental Design Requirements:(A) Energy Conscious Facility Design: Fundamental design decisions related to energy conservation shall be made during conceptual planning stages. The new design shall utilize passive design techniques to minimize heating and cooling loads. When necessary, the Offeror shall use window reveals sized to allow maximum window shading in summer and minimize shading of windows in winter months. Siting of the facility in relation to sun and prevailing wind paths and vegetation, efficient design of building form and envelope in response to the climate, reduced cooling load through use of day lighting, and reduced solar heat gains through proper design of solar shading devices should be combined with proper selection of building materials and of HVAC system design for an integrated energy conserving facility. The new facility shall meet Energy Efficiency Standards set by ASHRAE 90-1 (1989) for Buildings. The building design and all construction features (materials, methods of installation, including mechanical and electrical systems) should provide concepts that will reflect and provide reduced energy consumption within the other requirements and constraints of this solicitation.

Recycled Materials Uses/Comprehensive Procurement Guidelines

5.17.7 Use of Recycled Materials: Under Section 6002 of the Resource Conservation and Recovery Act (RCRA), the EPA has set guidelines for Federal State and local procuring agencies, using appropriated Federal funds, to purchase items composed of the highest percentage of recovered materials practicable. The EPA requires that its facilities follow the guidelines of the Comprehensive Guidelines for Procurement of Products containing Recovered Materials, Final Rule 40 CFR 247, Federal Register, Monday, May 1, 1995; Recovered Materials Advisory Notice (SWH-FRL-5198-8) Federal Register Monday, May 1, 1995; Comprehensive Procurement Guide II, 62 Federal Register 60961, November 13, 1997; and Recovered Materials Advisory Notice II, 62 Federal Register 60976, November 13, 1997. If CPG products are not used, provide documentation. The following exceptions are allowed: (1) when the cost is unreasonable: (2) inadequate competition exists: (3) items are not available within a reasonable period of time; or (4) items do not meet the solicitation performance standards.

5.29.1 Off-Gassing after completion of interior fit up/furniture installation. At a minimum, following completion of the interior build out and installation of tenant furniture, the facility should be off-gassed for at least 48 hours prior to occupancy. Provide the maximum rate of fresh air to the HVAC system while maintaining other normal operating parameters and conditions regarding humidity and temperature.

Where construction and finish work is being performed in portions of a building while other parts of the building are being occupied, each construction and finish work area shall be segregated from the HVAC system so that exhaust from the construction and finish work area does not enter into the HVAC system and contaminate parts of the building where construction and finish work and/or furniture installation is complete.

HVAC ductwork should be sealed and protected from dust and dirt infiltration during construction, especially for dust generating activities such as gypsum wall board finishing and sanding.