1.4 Identification of Agents and Contractors

1.4.1 Applicant – Program Manager

Westinghouse Electric Company, LLC (Westinghouse), is responsible for the overall design and design certification of the AP1000 nuclear power plant. A significant portion of the AP1000 design is the same as the design of AP600. Westinghouse Electric Company was also responsible for the overall design and design certification of AP600.

Westinghouse has designed, developed, and manufactured nuclear facilities since the 1950s, beginning with the world's first large central station nuclear plant (Shippingport), which produced power from 1957.

Westinghouse has designed and delivered more than 100 commercial nuclear power plants with a combined electrical generating capacity in excess of 90,000 MW. The company's manufacturing facilities include the commercial nuclear fuel fabrication facility at Columbia, South Carolina; and nuclear component manufacturing facilities at Blairsville, Pennsylvania; and Newington, New Hampshire.

Westinghouse has been involved with advanced light water reactor plant design efforts for over fifteen years. Included is the development of the advanced, passive pressurized water reactors known as the AP600 and AP1000.

Westinghouse has substantial, proven experience, knowledge, and capability to design, manufacture and furnish technical assistance for the installation, startup and service of nuclear power plants.

1.4.2 Other Contractors and Participants

Under the direction of Westinghouse, a number of highly qualified organizations provide design and analysis in support of the AP600 and AP1000. Each has a specific responsibility to Westinghouse as defined by various contracts and agreements. Where design features are the same between AP600 and AP1000, the design and analysis performed for AP600 by organizations other than Westinghouse are applied directly to AP1000. The major contributors are identified in this section. They are included here if they have contributed to the base AP600 design or if they have contributed specifically to the AP1000 design.

Throughout the design process, lines of communication have been established among all participants. Design information is generated using common formats, electronic tools and software. Common requirement and compliance documentation has been established and followed. This has allowed design to progress in a complete and consistent manner with interfaces explicitly managed.

1.4.2.1 Bechtel North American Power Corporation

Bechtel North American Power Corporation (Bechtel) is one of the foremost architect-engineering firms in the United States, with the design and construction of 150 nuclear power projects in

25 countries to its credit. In addition to new construction, Bechtel has first-hand experience in operating plant retrofit design and construction, as well as maintenance and management.

1.4.2.2 Southern Electric International

Southern Electric International (SEI) is a wholly owned subsidiary of The Southern Company. The Southern Company is comprised of Southern Company Services, Inc. (an engineering technical services company), six operating utility companies, and Southern Electric International (a commercial engineering consulting services company).

Southern Electric International has benefited from over 99 years of engineering and consulting services experience with the Southern electric utility system. This expertise is derived from experience in designing, constructing, operating, maintaining, and modernizing the 251 generating units of the Southern electric system and those of Southern Electric International's clients. Southern Electric International provides a unique perspective and expertise of an operating electric utility.

1.4.2.3 Burns & Roe Company

Burns & Roe Company is an architect-engineering firm with considerable nuclear expertise. Burns & Roe has provided design, construction management and modernization services to a wide variety of domestic and foreign operating utilities. Burns & Roe contributed to the design and installation of a number of commercial nuclear power plants. Burns & Roe has also been involved with the development of advanced light water reactors since their inception.

1.4.2.4 Washington Group (MK-Ferguson Company)

MK-Ferguson Company is one of the larger construction firms in the world. Their planning and construction management work extends to commercial and industrial projects as well as power generation units. They are a DOE-approved subcontractor on the defense waste processing facility at Savannah River and have worked on such diverse nuclear plant challenges as the replacement of the steam generator at the D.C. Cook Nuclear Plant, decommissioning of the Shippingport Plant and nuclear reactor modifications at Bettis Atomic Power Laboratory.

1.4.2.5 Avondale Industries, Inc.

Avondale Industries, Inc. is the United States pioneer and leader in modular construction. Their modern shipyards prove ideally suited for the modular construction of industrial and commercial facilities. They have the sophisticated infrastructure in engineering, program management, materials and cost control needed to support large, complex projects.

1.4.2.6 Chicago Bridge & Iron Services, Inc.

Chicago Bridge & Iron Services (CBI) is the leading designer and maker of nuclear reactor containment vessels and liners. They have successfully erected 107 containment structures, 70 percent of all containments built in the United States. Chicago Bridge & Iron Services also specializes in operating plant modification and maintenance upgrades; their service expertise

includes planning, development, scheduling and implementation of work procedures, ALARA, and decontamination.

1.4.2.7 Other Participants

Westinghouse has also received support from a variety of engineering and testing firms on a subcontract basis. The organizations providing important design or testing services include: SOPREN/ANSALDO of Italy, University of Western Ontario of Canada, ENEL of Italy, BATAN of Indonesia, ENEA of Italy, BPPT of Indonesia, FIAT of Italy, INITEC of Spain, UNESA of Spain, UTE of Spain, PLN/BPPT of Indonesia, Oregon State University, EdF of France, SNERDI of China, MHI of Japan, UAK of Switzerland, DTN of Spain, Fortum of Finland, IBF of Italy, Tioga of the United States, Pennsylvania State University, Ishikawajima-Harima Heavy Industries Co., Ltd. of Japan, SPX/Copes Vulcan of the United States, Doosan of the Republic of Korea, KOPEC of the Republic of Korea, KSB of Germany, EMD of the United States, Toshiba of Japan, Obayashi of Japan, and Shaw Stone & Webster of the United States.

1.4.3 Combined License Information

This section has no requirement for additional information to be provided in support of the combined license application.