



February 2, 2007

License No. 06-00217-06
Docket No. 030-03754
Control No. 139684

Ms. Laurie Kauffman
U.S. Nuclear Regulatory Commission, Region I
475 Allentown Road
King of Prussia, PA 19406-1415

Subject: **License Amendment Request**

Reference: Letter, M. Roberts (NRC) to J. F. Conant (ABB), dated January 22, 2007

Dear Ms. Kauffman:

Consistent with the Reference letter, ABB is resubmitting its license amendment request of October 19, 2006. No changes have been made to the original request. This resubmittal facilitates NRC's review of ABB's name change request for both of its NRC licenses. A separate request was submitted February 1, 2007, for NRC License No. SNM-1067.

Enclosure I provides a brief explanation of each change requested. Enclosure II provides the revised license amendment request in its entirety for your convenience. If there are any questions or comments concerning this submittal, please contact me at (860) 285-5002, or by E-mail at john.conant@us.abb.com.

Sincerely,

ABB INC.

John F. Conant
Senior Project Manager

JFC/et

Enclosures

xc: Charles Petrillo (Town of Windsor)
Mark Roberts (NRC Region I) (Electronic)
William Taylor (USACE)
Edward Wilds (CTDEP)

ABB Inc.

Enclosure I

Description of Proposed Changes

Description of Proposed Changes

This license amendment application proposes to incorporate a name change for the licensee from “ABB Prospects Inc.” to “ABB Inc.”, and to make other administrative and minor technical revisions to update the license to the contemporary status of the CE Windsor Site.

- At all locations, “ABB Prospects Inc.” has been replaced with “ABB Inc.” due to the merger of ABB Prospects Inc. into ABB Inc., as noticed to the NRC by ABB letter dated January 19, 2006.
- Page 2, Section 1.0: Wording change to reflect the purpose of this license amendment request.
- Page 3, Section 5.0: Under part E of the possession table, delete “including less than 5 kilograms UF₆”. This entry is a holdover from historical requirements for the license during fuel manufacturing operations, and is no longer necessary.
- Page 4, Section 7.1:
 - Change section title to “Management” to more accurately reflect content of the section.
 - The organization chart is modified to be consistent with NRC License No. SNM-1067 and reflect contemporary site conditions.
 - Change “CORPORATE” in organization chart to “MANAGEMENT” to more closely align chart terminology with that of text in the section.
 - Under Note 1, add RSO as a part-time function, since all facilities under the Decommissioning Plan have been removed, thus eliminating virtually all authorized work with licensed material. FUSRAP areas and buildings will remain until the U.S. Army Corps of Engineers authorizes removal action.
- Page 5, Section 7.3:
 - In paragraph one, delete “The RSO provides independent oversight of the radiation protection program administered by the Decommissioning Contractor.” With the completion of remediation activities under the Decommissioning Plan, this function no longer exists.
 - In paragraph three, clarify the contact provisions for the RSO, and that the RSO’s primary obligations to ABB are his RSO duties. However, the RSO is a contracted vendor, will not be resident at the Site until significant work with FUSRAP mobilizes, and most of the time will be working on other tasks.
 - In paragraph four, a revision is made to allow the RSO to designate an alternate RSO in addition to ABB management. This permits the RSO to accommodate travel, vacation, sick time, etc. However, except in an emergency or under exigent conditions, an alternate RSO normally would be designated with ABB concurrence.

- Page 6, Figure 7.3.1, Item 10: Wording change to refine the RSO obligation for sealed sources.
- Page 9, Section 7.7: Delete “and Environment Program.” This program is subsumed within the Radiation Protection Program already mentioned.
- Page 12, Section 9.0: Changes to paragraph two reflect that all buildings potentially containing licensed radioactive materials have been removed to four feet below grade, along with underground piping and utility systems. This work was performed under the Decommissioning Plan, and Final Status Surveys submitted to the NRC demonstrate compliance for unrestricted release in accordance with regulations.
- Page 13, Figure 9.1: The CE Site Plan has been updated and revised to depict removed buildings.
- Page 14, Section 10.1: In paragraph two, the reference to Regulatory Guide 1.86 (1974) in the second sentence is changed to reflect a more contemporary version of the Guide, dated April 1993 and be consistent with NRC License SNM-1067.
- Page 14, Section 10.2.1: Environmental monitoring is modified to remove prescriptive language relative to sample collection and analysis from the license. Environmental monitoring requirements are included in the Radiation Protection Program as procedures, or at the direction of the RSO.

Thirty years of environmental sampling data obtained during site operations and decommissioning demonstrate minimal release of radioactivity to the environment. No radioactive material has been released in quantities that would result in a violation of the limits of 10 CFR 1301. All facilities under the Decommissioning Plan have been removed, thus eliminating virtually all potential sources and authorized work with licensed material that would result in a release of licensed radioactive materials to the environment.

- Page 15, Section 10.3.1: Revise paragraph two to refine the frequency requirements for instrument evaluation. With cessation of Decommissioning Plan remediation activities, daily checks of instruments are unnecessary, but instrument verification prior to use is still required if not performed daily.
- Page 16, Section 11.3: Delete the parenthetical reference to possible LLRW disposal facilities.

Enclosure II

License Amendment Application

ABB INC.

**COMBUSTION ENGINEERING SITE
Windsor, CT.**

**Application for Amendment
US NRC License Number 06-00217-06
Docket Number 030-03754**

October 19, 2006

Table of Contents

1.0 License Information	2
2.0 Applicant's Name and Address.....	2
3.0 Address Where Licensed Material Will Be Used or Possessed.....	2
4.0 Person to be Contacted About the Application (Mail Address).....	2
5.0 Radioactive Materials Possession Limits.....	3
6.0 Purpose of Use of Licensed Material	3
7.0 Organization and Administration.....	4
7.1 Senior Management	4
7.2 ALARA.....	5
7.3 Radiation Safety Officer	5
7.4 Radiation Safety Officer Support.....	8
7.5 Procedures.....	8
7.6 Licensed Material Inventory and Accountability	8
7.7 Audits and Appraisals	9
7.8 Training.....	9
8.0 Records	12
9.0 Facilities and Equipment.....	12
10.0 Technical Requirements.....	14
10.1 Exposure Control and Monitoring	14
10.2 Environmental Monitoring.....	14
10.3 Radiation Monitoring Instrumentation.....	15
11.0 Waste Management.....	15
11.1 Waste Collection.....	15
11.2 Waste Storage	16
11.3 Waste Disposal.....	16

1.0 License Information

This is an application for amendment of License Number 06-00217-06. The intent of this amendment is to revise and update the current license application for the Combustion Engineering (CE) Windsor Site in order to reflect the contemporary status of the CE Windsor Site.

2.0 Applicant's Name and Address

ABB Inc.
501 Merritt 7
Norwalk, CT 06856-5308

3.0 Address Where Licensed Material Will Be Used or Possessed

The location of use or possession of material associated with this license is:

2000 Day Hill Road
Windsor, CT 06095-0500

4.0 Person to be contacted About the Application (Mail Address)

Attn: Mr. John F. Conant
Sr. Project Manager
ABB Environmental Control & Support
2000 Day Hill Road
Windsor, CT 06095-0500

Telephone: (860) 285-5002
Facsimile: (860) 285-5832

5.0 Radioactive Materials Possession Limits

	Byproduct, source, and/or special nuclear material	Chemical and/or physical form	Maximum amount that licensee may possess at any one time under this license
A.	Any byproduct material with Atomic Numbers 1 through 83	Irradiated and/or contaminated debris, inspection and test equipment, test samples, calibration standards, or residues	0.5 curies
B.	Any byproduct material with Atomic Numbers 84 through 103	Irradiated and/or contaminated debris, inspection and test equipment, test samples, calibration standards, or residues	Not to exceed 3 millicuries per nuclide and 30 millicuries total
C.	Source material	Irradiated and/or contaminated debris, inspection and test equipment, test samples, calibration standards, or residues	1 kilogram
D.	(Deleted)		
E.	Uranium-235	Irradiated and/or contaminated debris, inspection and test equipment, test samples, calibration standards, or residues	325 grams

φ

6.0 Purpose of Use of Licensed Material

Possession and use for those activities directly or indirectly related to decontamination, and decommissioning of buildings, systems, facilities and property at the CE Windsor Site. The licensee may under this license perform decontamination, monitoring, packaging, storage, and shipment of residual waste and receipt of licensed calibration standards without prior NRC approval. The licensee may perform decontamination and decommissioning activities as described in the CE Windsor Site Decommissioning Plan.

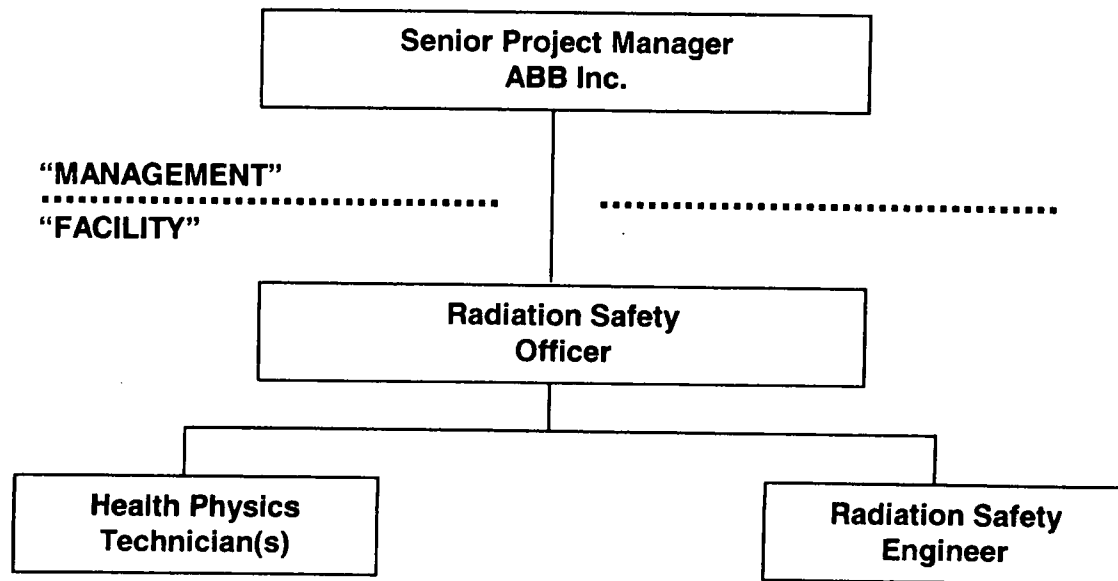
7.0 Organization and Administration

7.1 Management

Senior management appreciates the need for strong management controls for an effective radiation safety program for its license. The Radiation Safety Officer (RSO) has been delegated sufficient time, authority, organizational freedom, management prerogative, and resources to communicate with and direct personnel of the radiation safety staff and others regarding NRC regulations and license provisions. The RSO has and will continue to receive the support of the Management responsible for this license in ensuring that all licensed activities will be conducted in accordance with NRC regulations and the specific terms of this license.

Figure 7.1-1 provides an organization chart depicting the organizational relationships of personnel related to radiation safety for this license application.

Management oversight ensures sufficient mechanisms are in place for adequate control over licensed activities. These include regular reports to management. Annual audits of the program are performed and reports to management are provided to assure safe operations and compliance with regulatory requirements. Section 10 provides further information concerning the radiation safety program.



Note 1: RSO, Technician, and Engineer positions may be part-time, temporary, or non-functioning as required for contemporary licensed activities.

7.2 ALARA

ABB Inc. has a strong commitment to the ALARA philosophy. In support of this commitment, corporate management periodically reviews safety related activities, including the ALARA program. The following ALARA policies are implemented for all work at the CE Windsor Site:

- (1) The key ALARA objective is to minimize exposure to radioactive material for the public, workers and the environment at the CE Windsor Site.
- (2) In the interest of limiting exposures to the public and the environment, radioactive effluents are minimized to the maximum extent possible.
- (3) The preferred method of limiting internal exposure of workers is through the use of engineered controls.

7.3 Radiation Safety Officer

The Radiation Safety Officer (RSO) is appointed by a higher level of management. The RSO is responsible for oversight of the day-to-day radiation protection program. He is responsible for communication with management regarding program implementation and compliance status, and he is available to provide advice and assistance on radiological safety matters.

The required education and experience of the RSO are an academic degree in the physical or biological sciences or engineering, or equivalent experience, and at least 5 years' experience with a broad spectrum of radioactive materials. A listing of the duties and responsibilities of the RSO is given in Figure 7.3-1.

The RSO may be contacted during emergencies or when away via telephone (company phone system or home/cellular phone during off-hours). The RSO's primary obligations to ABB are his RSO duties.

The duties, obligations, responsibilities, and authorities of the RSO may be conducted, alternatively, by an individual possessing the required education and experience. This individual shall be designated by the RSO or a higher level of management, and does not require NRC approval.

Figure 7.3-1

Duties and Responsibilities of Radiation Safety Officer

The Radiation Safety Officer is responsible to assure the following:

1. Surveillance of overall activities involving radioactive material, including monitoring and surveys of all areas in which radioactive material is used.
2. Determine compliance with rules and regulations, and license conditions.
3. Monitor and maintain absolute and other special filter systems associated with the use, storage, and disposal of radioactive material.
4. Provide necessary information on all aspects of radiation protection to personnel at all levels of responsibility, pursuant to 10 CFR 19, and 10 CFR 20.
5. Proper delivery, receipt, and conduct of radiation surveys of all shipments of radioactive material arriving at or leaving the site within the scope of this license, including proper packaging and labeling of that radioactive material.
6. Distribute and process personnel monitoring equipment, determine the need for evaluation of bioassays, monitor personnel exposure and bioassay records for trends and high exposures, and notify individuals and their supervisors of exposures approaching maximum permissible amounts and recommend appropriate remedial action.
7. Conduct training programs and otherwise instruct personnel in the proper procedures for the use of radioactive material prior to use, at periodic intervals (refresher training) and as required by changes in procedures, equipment and regulations, etc.
8. Supervise and coordinate the radioactive waste disposal program, including effluent monitoring and maintenance of waste storage and disposal records.
9. Store radioactive materials not in current use, including wastes.
10. Perform or arrange for leak tests on all sealed sources as required by license or regulations and calibration of radiation survey instruments.
11. Maintain an inventory of radioisotopes on site and limit the quantity of radionuclides on site to the amounts authorized by the license.
12. Immediately terminate any activity that could pose a threat to public, workers or the environment.
13. Supervise decontamination, renovation, material control, remediation, and decommissioning operations.

14. Maintain other records not specifically designated above, e.g., receipt, transfer, and survey records as required by 10 CFR 30.51, "Records," and 10 CFR Part 20, Subpart L, "Records" (guidance is provided in NUREG-1460, dated November 1992, "Guide to Reporting and Record Keeping Requirements").
15. Periodic meetings with and reports to management.
16. Read and understand the NRC regulations applicable to this license and the specific conditions in this license.
17. Designate and maintain a list of qualified supervisors and users of licensed materials. Qualified individuals will be identified through evaluation of previous job experiences, education, and/or site-specific training programs.
18. Develop and maintain training programs in accordance with 10 CFR Part 19.12.
19. Develop and maintain operational Radiation Protection procedures to ensure program implementation and compliance with regulatory requirements.

7.4 Radiation Safety Officer Support

The RSO may, as licensed activities require, be supported by health physics (HP) professionals who assist in the implementation and control of the licensed program. This staff fluctuates according to need. General staff structure is provided by Figure 7.1-1.

7.5 Procedures

Activities involving licensed materials shall be conducted in accordance with approved, written procedures and/or Radiation Work Permits (RWPs). Radiation safety duties shall be conducted in accordance with written procedures approved by the RSO. Procedures shall be reviewed and re-approved, at a minimum, biennially. Changes, deletions, or additions to procedures shall be accomplished under the cognizance of, and with the approval of, the RSO.

7.6 Licensed Material Inventory and Accountability

Inventory control and accountability is accomplished by keeping track of receipts and outgoing shipments of material in logs. Running totals are maintained to ensure that possession limits are not exceeded. Purchases of licensed calibration standards shall be from licensed vendors and only with the approval of the RSO.

A physical inventory of sources and/or devices possessed under the license shall be performed every six months. Records of inventories are maintained for a minimum of five years from the date of the inventory. Leak tests of sealed radioactive sources shall be accomplished in accordance with the following:

- (1) Each sealed source containing licensed material, other than Hydrogen-3, with a half-life greater than thirty days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed six months except that each source designed for the purpose of emitting alpha particles shall be tested at intervals not to exceed three months. Any sealed source received that is not accompanied by a certificate indicating that a test was performed within 6 months before the transfer shall not be put into use until tested.
- (2) Any licensed sealed source is exempt from such leak tests when the source contains 100 microcuries or less of beta and/or gamma emitting material or 10 microcuries or less of alpha emitting material.
- (3) The periodic leak test interval for sealed sources that are stored and not being used will not exceed 10 years. The sources held in long term storage shall be tested for leakage prior to any use or transfer to another person unless they have been leak tested within six months prior to the date of use or transfer.
- (4) The test shall be capable of detecting the presence of 185 Bq (0.005 microcurie) of radioactive material on the test sample. The test sample shall be taken from the sealed source or from the surfaces of the device in which the

sealed source is permanently or semi-permanently mounted or stored on which one might expect contamination to accumulate. Records of leak test results shall be kept in units of microcuries and maintained for inspection.

- (5) If the test reveals the presence of 185 Bq (0.005 microcurie) or more of removable contamination, the sealed source shall immediately be withdrawn from use and shall be decontaminated and repaired or be disposed of in accordance with regulations. A report shall be filed within 5 days of the test with the U.S. Nuclear Regulatory Commission, describing the equipment involved, the test results, and the corrective actions taken.

7.7 Audits and Appraisals

Inspections, audits and/or assessments shall be performed to determine if materials operations are being conducted in accordance with applicable license conditions and written procedures. Annual audits cover the Radiation Protection Program and are conducted based upon a written plan. A written report shall be prepared and distributed to management and the RSO including the results of the inspection, including non-compliances, if any. Written corrective action plans shall be prepared to address non-compliances, and corrective actions shall be tracked to completion. Radiation Protection Program areas subject to annual review include, but are not limited to:

- (1) Radiation Work Permits
- (2) Procedures for controlling and maintaining inventories, procurement of radioactive material, individual user and institutional cumulative possession limits, transfer of radioactive materials within the institution, and transfer of radioactive material to other persons/licensees.
- (3) Review of previous audit findings and corrective actions.

Radiation protection audits shall be accomplished under the direction of the RSO. Revisions to the audit program shall be accomplished under the cognizance of, and with the approval of, the RSO. The RSO shall be responsible for ensuring that changes to the audit program maintain compliance with this license and applicable regulations.

7.8 Training

Training for personnel working with licensed material is provided commensurate with the hazards faced by the worker. The training program defines training requirements for workers, contractors and visitors. Personnel shall not be allowed to work unsupervised with licensed material prior to completion of the minimum training requirements. The training program will be approved and conducted under the cognizance of the RSO, and will be reviewed and updated, as necessary.

Training shall be conducted in accordance with written, approved procedures. Radiation safety training is scheduled so that each individual assigned to a restricted area is ordinarily trained in radiation protection before entering the area. In special cases where a

worker or visitor must enter a restricted area prior to completion of the training, the individual will be escorted by a trained and qualified individual.

The Radiation Safety Training Program includes periodic refresher training, as necessary, to maintain awareness of the need, and each individual's responsibility, for maintaining exposures ALARA and to update and renew each individual's knowledge of appropriate subjects including emergency procedures and response criteria. Refresher training is normally conducted at intervals not exceeding 24 months. As a practical matter, in instances where a worker's refresher training has lapsed due to changing job assignments or other similar reasons, the worker may resume duties in a restricted area provided the refresher training is completed in a timely manner (ordinarily within 30 days).

Meetings, postings, memos or other means of communication may be used, as necessary, to inform workers of important new developments in procedures, equipment, and regulations that have an immediate impact on the radiation protection aspects of their work.

All revisions to the training required by this license shall be accomplished under the cognizance of, and with the approval of, the RSO. The RSO shall be responsible for ensuring that all changes to training programs maintain compliance with this license and applicable regulations.

The training requirements for NRC licensed activities on the CE Windsor Site are described in a training and qualification procedure, which establishes the training requirements for activities involving potential exposure to radioactive materials. The ABB training program includes: Right to Know Training, Radiological Worker I Training, Radiological Worker II Training, Health Physics Technician Training, and Radiation Safety Staff Training.

7.8.1 Right To Know Training

Training for non-radiological workers, who require unescorted access to health physics Restricted Areas.

7.8.2 Radiological Worker I (RWI) Training

Training for radiological workers whose job assignments require routine, unescorted access to health physics Restricted Areas and Radiation Areas. Workers are required to complete Radiological Worker I training initially, at intervals not to exceed 24 months, and when there are significant changes to health physics policies and procedures that may affect the health and safety of the individual. Radiological Worker I training is also required for personnel who may operate or use devices or equipment that contain accessible controlled radioactive material, be involved in the transport of radioactive material; receive more than 100 mrem in a year from occupational exposure; and/or respond as a member of an Emergency Response Team that may enter health physics Restricted Areas.

7.8.3 Radiological Worker II (RWII) Training

Training for radiological workers whose job assignments require routine, unescorted access to health physics Contamination Areas, and/or Airborne Radioactivity Areas. Workers are required to complete RWII training initially, at intervals not to exceed 24 months, and when there are significant changes to health physics policies and procedures that may affect the health and safety of the individual. Radiological Worker II training is also required for personnel that may perform work involving direct contact with radioactive material that could result in contamination of the worker or the environment.

7.8.4 RWI or RWII Applied Training

Upon successful completion of the academic portion of RWI or RWII Training, students participate in appropriate applied ("hands-on") training. The content and level of difficulty of applied training will be commensurate with the level of Radiological Worker qualification being pursued and commensurate with the associated worker hazards. Applied training is structured to be as realistic as possible to situations and radiological conditions that could be encountered at the CE Windsor Site.

7.8.5 Health Physics Technician (HPT) Training

Health Physics Technicians are trained to the level of knowledge and skills commensurate with their job duties and responsibilities. Health Physics Technicians complete training on procedures specific to their job assignment. The HPT training program ensures that HPTs are trained to meet the requirements of their position. Personnel may be utilized that have previous HPT qualification.

Personnel having previous HPT qualifications will be evaluated according to the following criteria:

HPTs Should:

- Possess a H.S. diploma (or equivalent) and should have at least two years of documented, relevant experience, or
- Possess at least an Associates Degree (or equivalent) in a related field and have at least one years of documented, relevant experience, or
- Possess NRRPT registration.

The RSO evaluates the individual's qualification upon assignment or hire relative to the anticipated scope of work at the CE Windsor Site. If the RSO determines that the individual is qualified, such determination will be documented and placed into the individual's site training records. If the RSO determines that the individual needs site-specific training, he shall assure accommodations to provide it, including appropriate documentation.

Individuals may, at the discretion of the RSO, be assigned to perform specific, limited duties without full HPT qualifications. If this is done, the RSO shall provide documentation to substantiate the individual's specific qualifications, including justification for such.

7.8.6 Radiation Safety Staff

A health physics professional with knowledge and experience sufficient to develop, implement, and audit a Radiation Protection Program at a work site may be assigned as a Radiation Safety Engineer, Radiological Engineer, or similar title. Individuals assigned to such work must be qualified to perform the specific tasks that they will be assigned to perform. Due to the individualized nature of such assignments, *a priori* training and qualification criteria cannot be established. Generally, individuals assigned to such positions will have a related degree, or equivalent, and several years of related experience. The RSO shall make the final determination on an individual's qualification for such assignments and will be responsible for providing documentation for such determination.

7.8.7 Prenatal Radiation Exposure

Women participating in the Radiation Worker training program, to be occupationally exposed, will be provided additional information regarding dose to the Embryo/Fetus. This program will be based on NRC Regulatory Guide 8.13.

8.0 Records

Records pertaining to the Radiation Protection Program, unusual occurrences, inspections, audits, ALARA, personnel exposures, radiation and contamination surveys, effluent monitoring, Environmental Monitoring Program, calibrations, and decommissioning are retained to demonstrate compliance with the conditions of the license and with applicable Federal, State and local regulations. Such records are retained, as a minimum, for the times specified in governing regulations.

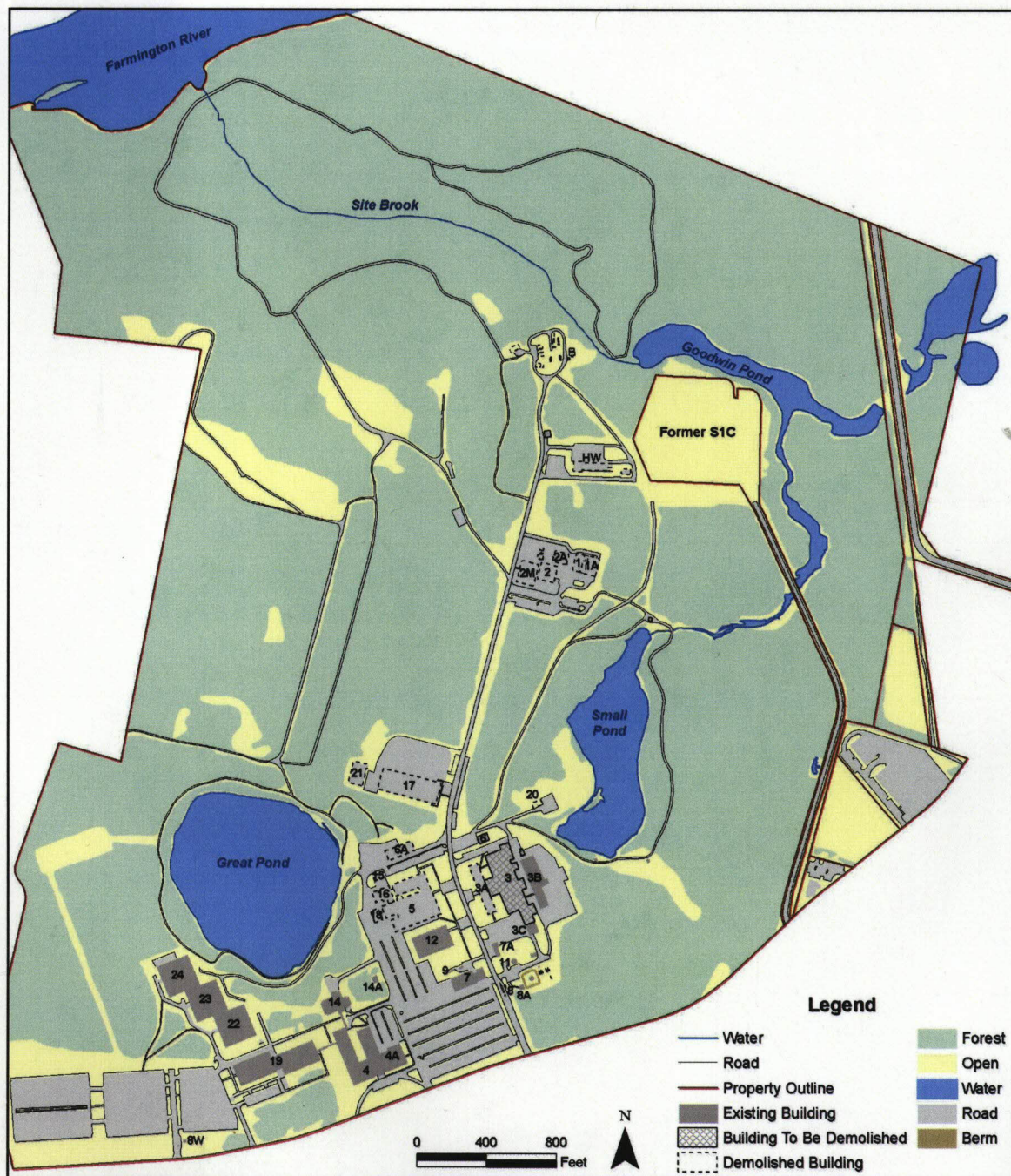
9.0 Facilities and Equipment

The CE Windsor Site is an approximately 600-acre tract of land located in the town of Windsor, Connecticut. The Farmington River flows along the northern boundary of the site. The land adjacent to the North, East, South and West boundaries of the site consists of heavily wooded sections and open fields which have been cultivated for the production of broad leaf tobacco and other farm products. The land area within five miles of the site is somewhat rural, with rolling farmland interspersed among woodland tracts. In recent years, the area has become a bedroom community suburb of the greater Hartford area, with some light industry. Figure 9-1 shows the buildings and facilities presently located on the CE Windsor Site.

Buildings potentially containing licensed radioactive materials were: Buildings 1, 1A, 2, 2A, 5, 6, 6A, 16, 17 and 18. Descriptions and the prior radiological status of buildings 1, 1A, 2, 2A, 5, 6A, 16, 17, and 18 are contained in the CE Windsor Site Decommissioning Plan. These buildings, slabs, foundations (to four feet below grade), and all underground piping and utility systems have been removed under the Plan. Final Status Surveys submitted to the NRC demonstrate compliance for unrestricted release in accordance with 10CFR20.1402.

Figure 9-1

C-E Site Plan



10.0 Technical Requirements

10.1 Exposure Control and Monitoring

Personnel dose control and monitoring for licensed activities is described in Sections 10.1.1 and 10.1.2. Monitoring shall be performed for individuals likely to receive in excess of 10% of the applicable limit in 10 CFR 20. Work restrictions shall be implemented if an individual reaches 50% of the applicable limit.

The licensee will survey applicable portions of the facility and maintain contamination levels in accordance with the survey frequencies contained in written procedures. Release of equipment and materials from restricted areas shall be in accordance with the NRC's "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," dated April, 1993. The DCGLs for the CE Windsor Site for soils and sediments are:

Uranium – 557 pCi/g total uranium
Reactor Byproduct Material – 5.0 pCi/g Co-60

Radiological surveys are conducted on a routine basis, both in and adjacent to restricted areas. The type, location and frequency of surveys shall be specified in written procedures. Radiation and contamination surveys are performed only by qualified personnel, with qualification as determined by the RSO.

10.1.1 External Dose Monitoring

Personnel monitoring devices (e.g., TLDs; extremity badges) are used as determined by the RSO. If used, they shall be processed at least quarterly by a vendor accredited by NVLAP.

10.1.2 Internal Dose Monitoring

In vivo and/or in-vitro monitoring may be performed, upon direction of the RSO, to assess and monitor workers' internal dose. Such monitoring may include body/lung counts, bioassay monitoring and/or breathing zone air sampling.

10.2 Environmental Monitoring

10.2.1 Environmental Monitoring, Sampling and Counting

The Site Radiation Protection Program includes environmental monitoring to demonstrate compliance with 10 CFR 1301. Samples obtained from surface and well water, sediment, and soil are analyzed for the presence of radioactive materials. Sample location and frequency is specified in written procedures, or at the direction of the RSO.

10.3 Radiation Monitoring Instrumentation

An adequate number of instruments of sufficient accuracy and sensitivity shall be available to ensure compliance with the monitoring requirements of this license and 10 CFR 20. Instruments shall be approved by the RSO, who shall assure that a current list of available calibrated instruments is maintained. Additions, deletions, or substitutions may occur at the discretion of the RSO.

10.3.1 Calibration of Instruments

Hand-held portable radiation survey instruments utilized for radiation protection purposes shall be calibrated at least annually or following instrument maintenance, repair, or adjustment likely to affect the primary calibration. Calibration shall be performed according to written procedures, instructions or other guidance documents reviewed and approved by the RSO and shall be performed using standard sources traceable to NIST or by a commercial calibration service. Check sources shall be used daily or prior to use. An instrument will be removed from service if the source check is not within ± 20 percent of the initial post-calibration value.

Laboratory instruments used for radioactivity measurements are evaluated daily or prior to use via check sources and efficiency checks. Source checks and efficiency determination shall be made daily or before use. Maintenance and repair shall be performed if the daily source or background checks are not within prescribed ranges. Calibration, repair and efficiency determination shall be performed according to written procedures, instructions or other guidance documents reviewed and approved by the RSO, and shall be performed using standard sources traceable to NIST or by a commercial calibration service authorized by the NRC or Agreement State to provide radiation detection instrumentation services.

The model survey meter calibration program published in Appendix M to NUREG-1556, Vo. 7, ' Program-Specific Guidance About Academic, Research and Development, and Other Licenses of Limited Scope,' dated December 1999 will be implemented. Gamma spectrometry system(s) measurements may be performed using High Purity Germanium (HPGe) detectors that have been specifically characterized by the vendor to enable a sourceless efficiency calibration methodology. When this method is selected, the vendor's computer software performs a mathematical efficiency calibration without the use of sources.

11.0 Waste Management

11.1 Waste Collection

Collection of radioactive material deemed to be waste shall be accomplished with written procedures approved by the RSO.

11.2 Waste Storage

Low-level radioactive waste (LLRW) that is collected will typically be packaged for shipment, staged until a full load is accumulated, and then sent for disposal. LLRW produced as a result of site operations is collected, packaged, surveyed, and stored in closed containers in a location prescribed by the RSO. LLRW produced as a result of decontamination and decommissioning activities will be handled as described in Section 12 of the CE Windsor Site Decommissioning Plan.

11.3 Waste Disposal

LLRW will be transferred to a recipient who is properly licensed to receive such waste in accordance with applicable regulations. LLRW may be transferred to a licensed broker or shipped directly to an authorized LLRW disposal facility or other authorized waste processor.

Φ