

- Biophysical research laboratories with expertise in virology, cell biology, radiobiology, biochemistry and biophysics.
- A geotechnical research capability which, by 1986, will include an underground research laboratory for excavation damage experiments for different excavation techniques, development of in-situ stress measurement techniques, evaluation of rock thermal/mechanical properties, hydraulic conductivity and rock porosity measurements and various geochemistry experiments.
- Expertise in modelling fluid heat transport systems and high pressure steam/water behavior.
- Consulting service groups encompassing nuclear engineering, risk analysis, development of computer models, mathematical analyses and meteorological assessments.

Experience: AECL has been in existence for approximately 36 years. During this time, it has developed the CANDU-pressurized heavy water reactor system. It has helped to commercialize the radioisotope industry in the medical, pharmaceutical and industrial fields; developed and commercialized the Canadian heavy water industry. Canada is currently the world's largest producer of this commodity. In addition, AECL has been instrumental in developing the Canadian nuclear fuel industry and has played a large part in developing the US nuclear fuel designs, for both military and civilian reactors. It has also played a major role in developing and commercializing zirconium alloys.

More recently, AECL has been charged with the responsibility of managing the Canadian Waste Management program. It includes conceptual planning, fundamental research, development, testing, piloting, verification, acceptance, optimization, and providing specifications for the commercial system.

Spent fuel storage (wet and dry), transportation, fission products removal and waste disposal are sub-sets of the total program. All of this work is being coordinated from WNRE.

AECL's major assets are experienced staff and state-of-the-art facilities and equipment. Its reputation as a respected leader in the nuclear and non-nuclear industries is acknowledged both domestically and internationally.

Keywords: 4 = Chemistry; 6 = Computers; 7 = Electronics; 8 = Energy; 9 = Environment; 16 = Security & Safety; 19 = Testing/Test Equipment; 20 = Miscellaneous; ASME Codes = 20; Biological Environment = 9; Chemical Analysis = 4; Chemical Processes = 4; Chemistry = 4; Colloid Chemistry = 4; Combustion = 20; Computer Code Development = 6; Contract Research = 20; Corrosion = 19; Derived Release Limits = 9; Detonation = 20; Disposal = 9; Electrochemistry = 4; Electronics-Nuclear = 7; Environment = 9; Explosions = 20; Fluid Dynamics = 20; Fracture Mechanics = 19; Health Physics = 20; Hydraulics = 20; Instruments-Nuclear = 7; Irradiations = 20; Isotopes = 20; Materials Characterization = 19; Materials Testing & Development = 19; Mechanical Testing = 19; Medical Biophysics = 20; Metallography = 19; Metallurgical = 19; Mathematics = 20; Neutron Activation = 20; Non-Destructive Testing = 19; Nuclear = 8; Nuclear Design = 20; Pathways Analysis = 9; Professional Services = 20; Physics = 20; Quality Assurance = 19; Rail Transport = 20; Reactors = 20; Radiation = 20; Radiation Shielding = 20; Radioactive Wastes = 9; Research & Development = 20; Risk Analysis = 20; Safeguards = 16; Separation Processes = 4; Surface Chemistry = 4; Tailings = 9; Thermal Analysis = 20; Toxic Chemicals = 9; Trace Analysis = 4; Vitrification = 4; Waste Management = 9.

Revised: Dec 83

