APPENDIX 3

CNSC REGULATORY DOCUMENTS IN PROGRESS/PROPOSED, AND IAEA DOCUMENTS ORGANIZED BY PRSL SAFETY AREA AND PROGRAMS

CNSC Regulatory Documents, Guides, Policies, Standards and Consultative Documents are presented as follows:

- **Bold, red text – Draft regulatory documents (from the CNSC external website)**
- Blue text – regulatory documents in progress
- Green text – proposed regulatory documents
- Plum text – unfunded or on new DPRR/DAA list of regulatory documents
- ***Black text – additional documents not identified on any other lists***

SAFETY AREAS	PROGRAMS	CNSC DOCUMENTS (Draft, In Progress, Proposed, New/Unfunded)	IAEA DOCUMENTS	COMMENTS
Required for the Licensing of Nuclear Power Plants		**High** S-xxx Site Preparation Requirements for NPPs (based on Siting Requirements IAEA NS-R-3) **High** S-xyz Construction Requirements for NPPs (in part based on Design Requirements, IAEA NS-R-1) ***High EA Guidelines for New NPPs*** ***High EA Review Plan*** ***High Review Guide for Assessment of Application for a Site Preparation Licence*** ***High Review Guide for Assessment of Application for a Construction Licence*** **Medium** S-xyx Operating Requirements for NPPs (based on IAEA NS R2, and use IAEA Commissioning Guide NS-G-2.9) ***Medium Process Instructions for Verification of***	**IAEA Siting Documents** **High** Site Evaluation for Nuclear Installations Safety Standards Series No. NS-R-3 2003 **High** External Human Induced Events in Site Evaluation for Nuclear Power Plants Safety Standards Series No. NS-G-3.1 2002 **High** Dispersion of Radioactive Material in Air and Water and Consideration of Population Distribution in Site Evaluation for Nuclear Power Plants Safety Standards Series No. NS-G-3.2, 2002 **High** Evaluation of Seismic Hazards for Nuclear Power Plants Safety Standards Series No. NS-G-3.3 2002 **High** Meteorological Events in Site Evaluation for Nuclear Power Plants Safety Standards Series No. NS-G-3.4 2003 **High** Flood Hazard for Nuclear Power Plants on Coastal and River Sites Safety Standards Series No. NS-G-3.5 2003	1. CNSC documents on Siting, Construction, Operation, Commissioning, Decommissioning to be based on the IAEA NSR-x series of documents 2. Need to develop EA Guidelines, INDEPENDENT of the Siting Requirements (there is likely a lot of overlap, but for no, they are separate, distinct steps in the Regulatory Process 3. IAEA had a number of very useful documents to support Siting, Design, Operation (documents to support Design, Operation are listed in the Operations (Section 1.2), and in Design (Section 3.3) 4. Review Plans/Guides important for supporting the assessment of applications by CNSC staff

SAFETY AREAS	PROGRAMS	CNSC DOCUMENTS (Draft, In Progress, Proposed, New/Unfunded)	IAEA DOCUMENTS	COMMENTS
		Construction Activities *Medium Process Instructions for Verification of Commissioning Activities* *Medium Oversight of Site Preparation Activities* *Low Review Guide for Assessment of Application for a Operation Licence* *Low Process Instructions for Verification of Operations (Heavy Water Load, Fuel Load, Removal of GSS, Power increases up to Commercial Operation)*	**High** Geotechnical Aspects of Site Evaluation and Foundations for Nuclear Power Plants Safety Standards Series No. NS-G-3.6, 2005 **IAEA Basic Operations Documents** **IAEA Document** Safety of Nuclear Power Plants: Operation Safety Standards Series No. NS-R-2, 2000 **High IAEA Document** Commissioning for Nuclear Power Plants Safety Standards Series No. NS-G-2.9, 2003 **IAEA Decommissioning Documents** **Low** Decommissioning of Nuclear Power Plants and Research Reactors Safety Standards Series No. WS-G-2.1 1999 **Low** Draft Safety Standard DS332 - Release of Sites from Regulatory Control upon Termination of Practices **Low** Draft Safety Standard DS333 - Decommissioning of Nuclear Facilities **Low** Planned Safety Standard DS376 -Safety Assessment for Decommissioning of Nuclear Facilities	5. Regulatory Oversight Guides outline compliance activities to undertake once a licence is granted
1. Operating Performance *G-3(1)(a)* *G-3(1)(b)* *G-15-(a)* *G-15(b)* *C-3(c)* *C-3(j)* *C-3(a), C-3(b)* *G-5(b)*	1.1 Organization and Plant Management	*S-213 Draft Regulatory Standard: Quality Assurance Program Requirements for Nuclear Facilities 5 (see section 2.1, below)* **High** P-319 Financial Guarantees for Nuclear Facilities and Licensed Activities **Medium** G-319 Financial Guarantees for Nuclear Facilities and Licensed Activities **High** G-152 Deterministic and Probabilistic Criteria in Decision-Making for Nuclear Power Plants	**High IAEA Document** The Operating Organization for Nuclear Power Plants Safety Standards Series No. NS-G-2.4, 2002 *CSA N286-05, Management System Requirements for Nuclear Power Plants, February 2005*	1. Decision-making and Decommissioning included here (no better place for it) There is overlap 2. Combine IAEA Management System Documents in 1 document - IAEA Management System Documents have a greater scope than the CSA N286-series of standards AND potential overlap with the CNSC G-329 Safety Culture Self Assessment

SAFETY AREAS	PROGRAMS	CNSC DOCUMENTS (Draft, In Progress, Proposed, New/Unfunded)	IAEA DOCUMENTS	COMMENTS
G-3(1)(l) *C-3(k)* *G-3(1)(k)* *G-28 to G-32 and C-14(1) to (5)* *C-6(d)* *C-3(e), C-3(f), C-6(e)*		Medium G-242 Cost-Benefit Analysis Low G-99 Reporting Requirements for Operating Nuclear Power Plants Low G-329 Safety Culture Self-Assessments Low S-326 Criteria for the Release of Nuclear Facilities from Licensing after Decommissioning		3. OVERLAP with the CSA Management System Documents, the N286 series of documents, including the new N286-05 and the CNSC Draft S-213, and the IAEA QA documents (see Section 2.1, below) 4. **We need to decide what Management System documents and QA documents we wish to employ – have 3 possible sources right now**
	1.2 Operations	**Medium** S-327 Requirements for Nuclear Criticality Safety **Medium** G-349 Safe Use of Nuclear Fuel	**High IAEA Document** Operational Limits and Conditions and Operating Procedures for Nuclear Power Plants Safety Standards Series No. NS-G-2.2, 2000 **High IAEA Document** Core Management and Fuel Handling for Nuclear Power Plants Safety Standards Series No. NS-G-2.5, 2002 **High IAEA Document** Operation of Spent Fuel Storage Facilities Safety Series No. 117, 1995	1. IAEA NS-G-2.2 is a very useful document. 2. Some overlap between G-349 and the IAEA documents on core management, fuel handling and fuel storage 3. S-327 seems to be a more generic document for use by all three service lines.
	1.3 Occupational Health & Safety (Non-radiological)			1. Jurisdiction nor clear No standards, guides
2. Performance Assurance	2.1 Quality Management *C-3(d)*	**Medium S-213 Draft Regulatory Standard: Quality Assurance Program Requirements for Nuclear Facilities**	Quality Assurance *CSA N286 series (refer to Appendix 1)*	1. Overlap between S-213, N286-05 and the IAEA Management System Documents (see comments in Section 1.1, above), and the IAEA QA documents
	2.2 Human Factors			1. No additional documents needed
	2.3 Training *C-6(m), C-6(n)*	**High C-204 Certification of Persons Working at Nuclear Power Plants 6** (in progress, S-204 Certification of Persons Working at a Nuclear Power Plant???) **High G-323 Ensuring the Presence of Sufficient Qualified Staff at Class I Facilities – Minimum Staff Complement (October 2005)** could be		1. Will use CNSC documents instead of IAEA documents

SAFETY AREAS	PROGRAMS	CNSC DOCUMENTS (Draft, In Progress, Proposed, New/Unfunded)	IAEA DOCUMENTS	COMMENTS
		under Operations **High** S-323 Ensuring the Presence of Sufficient Staff at Nuclear Power Plants???) **High** G-317 Developing and Conducting Simulator-based Examinations for Certification at Nuclear Power Plants **High** G-318 Developing and Conducting Written Examinations for Certification at Nuclear Power Plants		
3. Design and Analysis	3.1 Safety Analysis *G-3(1)(d), G-3(1)(i), C-6(a), C-6(b), C-6(c), C-6(h)*	**High G-144 Trip Parameter Acceptance Criteria for the Safety Analysis of CANDU Nuclear Power Plants (2005)** **High S-310 Safety Analysis for Nuclear Power Plants (2005) 13 – OVERLAP/CONFLICT with** S-337 Requirements for Design of Nuclear Power Plants (2005) **High** P-324 Safety Goals for Nuclear Power Plants **High** G-42 Attributes of a Probabilistic Safety Assessment **Medium** G-310 Safety Analyses for Nuclear Power Plants 16 – **OVERLAP/CONFLICT with** S-337 Requirements for Design of Nuclear Power Plants (2005)	**IAEA Assessment and Verification Documents (Safety Analysis)** **High** Format and Content of the Safety Analysis Report for Nuclear Power Plants Safety Standards Series No. GS-G-4.1, 2004 **High** Safety Assessment and Verification for Nuclear Power Plants Safety Standards Series No. NS-G-1.2, 2002 **Low** Planned Safety Standard DS384 - Source Term Evaluation for Nuclear Facilities	1. The IAEA documents are very important, in particular , NS-G-1.2, and NS-G-4.1 2. The CNSC documents on Safety Analysis are not systematic 3. Overlap/conflict between S-310 and S-337
	3.2 Safety Issues			
	3.3 Design *C-6(a), C-6(b), C-6(g)*	**High C-138 Software in Protection and Control Systems (1999)** **High G-306 Severe Accident Management (SAM) Programs for Fission Reactors (2004) 18 (could be in Emergency Preparedness as well)** **High** S-233 Configuration Management Programs	**IAEA Design Documents** **High** Safety of Nuclear Power Plants: Design Safety Standards Series No. NS-R-1 2000 - *(see cross-reference to Construction, and to S-337)* **High** Software for Computer Based Systems Important to Safety in Nuclear Power Plants Safety Standards Series No.	1. S-337 based on IAEA document Safety of Nuclear Power Plants: Design Safety Standards Series No. NS-R-1 2000 2. Overlap between S-335 and CSA N285 series of standards 3. Overalap between G-311 an d CSA N293

SAFETY AREAS	PROGRAMS	CNSC DOCUMENTS (Draft, In Progress, Proposed, New/Unfunded)	IAEA DOCUMENTS	COMMENTS
		for Nuclear Power Plants High G-311 Fire Protection at Nuclear Facilities and Uranium Mines and Mills High S-337 Requirements for Design of Nuclear Power Plants (2005) 21 (based on Safety of Nuclear Power Plants: Design Safety Standards Series No. NS-R-1 2000) **High** S-335 Pressure Retaining Components OVERLAP with CSA N285 standards **Low** S-52 Radioisotope Laboratory Design, Classification and Radiation Protection Requirements	NS-G-1.1, 2000 Safety Assessment and Verification for Nuclear Power Plants Safety Standards Series No. NS-G-1.2, 2002 (also listed under Safety Analysis, cf Section 3.1) **High** Instrumentation and Control Systems Important to Safety in Nuclear Power Plants Safety Standards Series No. NS-G-1.3, 2002 **High** Design of Fuel Handling and Storage Systems in Nuclear Power Plants Safety Standards Series No. NS-G-1.4, 2003 **High** External Events Excluding Earthquakes in the Design of Nuclear Power Plants Safety Standards Series No. NS-G-1.5, 2003 **High** Seismic Design and Qualification for Nuclear Power Plants Safety Standards Series No. NS-G-1.6, 2003 (*some overlap with CSA N289 standards*) **High** Protection Against Internal Fires and Explosions in the Design of Nuclear Power Plants Safety Standards Series No. NS-G-1.7, 2004 **High** Design of Emergency Power Systems for Nuclear Power Plants Safety Standards Series No. NS-G-1.8 2004 **High** Design of the Reactor Coolant System and Associated Systems in Nuclear Power Plants Safety Standards Series No. NS-G-1.9, 2004. **High** Design of Reactor Containment Systems for Nuclear Power Plants Safety Standards Series No. NS-G-1.10, 2004 (*some overlap with CSA N287 standards*) **High** Protection against Internal Hazards other than Fires and Explosions in the Design of Nuclear Power Plants Safety Standards Series No. NS-G-1.11 2004. **High** Design of the Reactor Core for Nuclear Power Plants	standards 4. Different approaches between CNSC documents (S-337 is comprehensive, but others look like a hodge-podge), CSA standards and IAEA guides 5. CSA standards appear to be Component-based while IAEA guides are System-based. CNSC documents are both System- and Component-based **6. NOT SURE OF WHAT TO DO WITH REGARDS TO THE IAEA DESIGN GUIDES AND THE CSA STANDARDS????? WILL ASSUME OUR WORK IS BASED ON ADOPTION OF IAEA DESIGN GUIDES, + COMPLETION OF THE CNSC DOCUMENTS** 7. NOTE: There is some overlap between CSA and IAEA documents (e.g., Seismic, Instrumentation & Control); however, only the CSA N285 series, CSA N286 series and CSA N293 documents are referenced in Power Reactor Operating Licences

SAFETY AREAS	PROGRAMS	CNSC DOCUMENTS (Draft, In Progress, Proposed, New/Unfunded)	IAEA DOCUMENTS	COMMENTS
			Safety Standards Series No. NS-G-1.12, 2005 **High** Design Aspects of Radiation Protection for Nuclear Power Plants Safety Series No. 50-SG-D9 1985 **High** Design of Radioactive Waste Management Systems at Nuclear Power Plants Safety Series No. 79, 1986 **High** Design of Spent Fuel Storage Facilities Safety Series No. 116, 1995	
4. Equipment Fitness for Service	4.1 Maintenance *C-6(d)*	**High** S-210 Maintenance Programs for Nuclear Power Plants??? **Medium** S-334 Ageing Management Programs for Nuclear Power Plants		1. S-334 should be a guide 2. Overlap between IAEA and CNSC Maintenance and Ageing Management documents
	4.2 Structural Integrity *C-6(d)*			
	4.3 Reliability *C-6(d)*	**Medium** G-98 Reliability Programs for Nuclear Power Plants		
	4.4 Equipment Qualification *C-6(d)*			
5. Emergency Preparedness *C-6(k)*	5.1 Emergency Preparedness	**High P-325 Nuclear Emergency Management (2005)** **Low**??? Criteria for Evaluation of Licensee Emergency Management Plans 28 (Compliance document)	**IAEA Emergency Preparedness Documents** **High** Planned Safety Standard DS44 - Criteria for Use in Planning Response to Nuclear and Radiological Emergencies (to supersede Safety Series 109) **High** Preparedness of the Operating Organization (Licensee) for Emergencies at Nuclear Power Plants Safety Series No. 50-SG-O6, 1982 **Medium** Preparedness of Public Authorities for Emergencies at Nuclear Power Plants Safety Series No. 50-	1. IAEA Fire Safety document overlaps with G-311 and CSA N293, but still applicable to Emergency Preparedness 2. The SAM program has Emergency Preparedness aspects, but do not need IAEA document 3. Re: Transport-related accidents, it is possible that an accident could occur during on-site transportation of nuclear materials

SAFETY AREAS	PROGRAMS	CNSC DOCUMENTS (Draft, In Progress, Proposed, New/Unfunded)	IAEA DOCUMENTS	COMMENTS
			SG-G6, 1982 **Medium** On-site Habitability in the Event of an Accident at a Nuclear Facility: Guidance for Assessment and Improvement Safety Series No. 98, 1989 **Low** Intervention Criteria in a Nuclear or Radiation Emergency Safety Series No. 109, 1994 **Low** Planning and Preparing for Emergency Response to Transport Accidents Involving Radioactive Material Safety Standards Series No. TS-G-1.2 (ST-3), 2002	
6. Environmental Performance	6.1 Environmental Management Systems *C-3(g), C-6(h), C-6(i)*	**High S-296 Environmental Protection Policies, Programs and Procedures at Class I Nuclear Facilities and Uranium Mines and Mills (2004)** **High G-296 Developing Environmental Protection Policies, Programs and Procedures at Class I Nuclear Facilities and Uranium Mines and Mills (2004)**		1. Use CNSC documents
	6.2 Effluent and Environmental Monitoring *C-3(h), C-6(i), C-6(j)*	**High S-224 Environmental Monitoring Program at Class I Nuclear Facilities and Uranium Mines and Mills (2004)** **High G-224 Environmental Monitoring Program at Class I Nuclear Facilities and Uranium Mines and Mills (2004)**		1. Use CNSC documents
7. Radiation Protection	7.1 Personnel Exposure *G-3(1)(e), G-3(1)(f), C-6(e)*	**Low S-106, Rev. 1 Technical and Quality Assurance Standards for Dosimetry Services in Canada (2005)** **Low** S-116 Requirements for Leak Testing Sealed Sources Containing Nuclear Substances **Low** S-117 Calibration of Gamma Radiation Detection Instruments **Low** G-100 Tritium Bioassay Program **Low** G-136 Reporting Occupational Doses to the		1. Use CNSC documents

SAFETY AREAS	PROGRAMS	CNSC DOCUMENTS (Draft, In Progress, Proposed, New/Unfunded)	IAEA DOCUMENTS	COMMENTS
		National Dose Registry When More Than One Organization is Involved **Low** G-150 Designing and Implementing a Bioassay Program **Low** G-153 External Dosimetry for Non-Uniform Radiation Exposures		
	7.2 Plant Waste Management *G-3(l)(j), C-3(e), C-6(i), C-6(j)*	**Medium G-320 Assessing the Long term Safety of Radioactive Waste Management (2005)** **Low** S-307 Disposing of Nuclear Substances In Accordance With a Licence	**IAEA Waste management Documents** **Low** Predisposal Management of Radioactive Waste, Including Decommissioning Safety Standards Series No. WS-R-2 2000 (combine pre-disposal guides) **Low** Predisposal Management of Low and Intermediate Level Radioactive Waste Safety Standards Series No. WS-G-2.5, 2003 (combine pre-disposal guides) **Low** Predisposal Management of High Level Radioactive Waste Safety Standards Series No. WS-G-2.6, 2003 (combine pre-disposal guides)	1. Could combine the IAEA "pre-disposal" documents into one, the CNSC does not have anything to address this, not a high priority though
8. Site Security	8.1 Site Security *G-3(l)(e), G-3(l)(g), G-3(l)(h), C-3(i), C-6(l)*	**High** S-321 Technical and Performance Requirements for Certain Security Systems and Equipment **High** S-322 Security Requirements for the Storage and Transportation of Selected Nuclear Substances **High** G-350 Threat and Risk Assessment for Licensed Facilities **High** S-348 Access Control Systems **High** S-347 Security Drill/Exercise Planning and Evaluation **Medium** P-357 Dissemination for Prescribed/Classified Information **Low** G-351 Guide for Evaluation of the Licensee Security Program		

SAFETY AREAS	PROGRAMS	CNSC DOCUMENTS (Draft, In Progress, Proposed, New/Unfunded)	IAEA DOCUMENTS	COMMENTS
		Low??? Update of Design-basis Threats		
9. Safeguards	9.1 Safeguards *C-6(f), G-3(1)(g), G-3(1)(h)*	**High** S-336 Reporting Requirements to Satisfy IAEA Safeguards and Canadian Nuclear Non-Proliferation Commitments		