Appendix 1

Limited License - Scope of Practice Form

PEGNL Limited License

Scope of Practice Form

In order for the Limited License Assessment Committee to determine whether a requested limited scope is acceptable, the applicant must complete the following form as concisely as possible.

1. Why are you seeking a limited license? What is the intended purposes of the license?

_____

_____

_____

_____

2. Who currently assumes professional responsibility for the engineering or geoscience work described in your proposed scope of practise?

_____

_____

_____

3. Please provide details on the application of the scope: how do you intend to apply the scope? What is the end product or service?

_____

_____

_____

_____

4. The scope of practice cannot be so broad as to cover all aspects of practice within a primary discipline: What areas of practice are being excluded from your scope?

_____

_____

_____

5. If you intend to stamp drawings or documents, what type of drawings or documents will be you be stamping?

_____

_____

_____

_____

6. The applicant's practice must be limited to a defined scope within a recognized engineering or geoscience discipline. The applicant's academic and experience qualifications must align with the scope being requested. *A list of the current primary disciplines of practice recognized by PEGNL is attached. Examples of previously approved limited scopes of practice is also attached.*

Formulate your Scope here, based upon your answers in questions 3 and 4.
The proposed wording of your scope of practice (the proposed scope should begin with "Within the discipline of…."**):**

_____

_____

_____

_____

Name: _____

Date: _____

Signature: _____

PEGNL Recognized Disciplines of Practice

ENGINEERING

Automotive Engineering

Aeronautical Engineering

Aerospace Engineering
- Avionics
- Propulsion
- Mechanical systems
- Structures
- Space systems
- Environmental
- Aerodynamics/flight test engineering

Agricultural Engineering

Biological Engineering

Biosystems Engineering
- Agricultural
- Biotechnology
- Fisheries/aquaculture
- Environmental

Biochemical Engineering

Biomedical Engineering

Bioresource Engineering

Building Engineering

Ceramic Engineering

Computer Engineering
- Hardware design/ architecture
- Information systems/data processing
- Software design
- System integration

Chemical Engineering
- Chemical
- Process design or control
- Advanced materials & polymers
- Environmental
- System integration

Civil Engineering
- Building Engineering

- Construction
- Environmental
- Municipal/urban
- Geotechnical
- Hydrotechnical
- Structural
- Transportation

Communications Engineering
- Telecommunications

Electrical Engineering
- Electrical
- Control systems
- Environmental
- Power generation/ transmission/distribution
- Fire Protection
- Instrumentation

Electronics Engineering

Engineering Chemistry

Engineering Physics

Environmental Engineering

Food Engineering

Forestry Engineering

Geological Engineering
- Geophysics
- Geochemistry
- Geology
- Hydrogeology
- Mining/rock mechanics
- Environmental
- Geotechnical

Geomatics Engineering

Industrial Engineering
- Industrial
- Environmental
- Production Systems

Integrated Engineering

Manufacturing Engineering
- Manufacturing Process
- Quality Assurance, quality control/safety

Marine Engineering

Materials Engineering

Mechatronics Engineering

Mechanical Engineering
- Mechanical systems
- Controls/robotics
- Solid mechanics/material/ stress analysis
- Heating, ventilation & air conditioning

- Thermodynamics/fluids
- Environmental

Metallurgical Engineering
- Metallurgy
- Environmental

Mineral Engineering
- Mineral Processing

Mining & Mineral Processing Engineering
- Mining
- Mineral processing
- Exploration
- Environmental

Nanotechnology Engineering

Naval Architectural Engineering

Nuclear Engineering

Oil & Gas Engineering

Petroleum Engineering
- Operations
- Refinery
- Environmental
- Oil and Gas
- Reservoir

Software Engineering

Space Engineering

Structural Engineering

Surveying Engineering

Systems Engineering

Water Resources Engineering

GEOLOGY

- General geology
- Environmental geology
- Geomorphology
- Glacial geology
- Marine geology
- Petroleum geology
- Igneous petrology
- Metamorphic petrology
- Sedimentary petrology
- Sedimentology
- Stratigraphy
- Structural geology
- Tectonics
- Atmospheric sciences
- Land use/urban geology

Economic Geology
- General
- Coal
- Metals
- Non-metals
- Oil & gas
- Mineral exploration

Geochemistry
- General geochemistry
- Analytical geochemistry
- Experimental petrology/ phase equilibria
- Exploration geochemistry
- Low-temperature geochemistry
- Marine geochemistry
- Organic geochemistry
- Stable isotopes

Paleontology
- General paleontology
- Biostratigraphy
- Micropaleontology
- Paleobotany & palynology
- Vertebrate paleontology
- Invertebrate paleontology
- Paleobiology
- Paleoecology/ paleoclimatology

Hydrology
- General hydrology
- Ground water/hydrogeology
- Quantitative hydrology
- Surface waters
- Geohydrology

Soil Science
- Soil physics/hydrology
- Soil chemistry
- Mineralogy
- Pedology/classification/ morphology
- Forest soils/rangelands/ wetlands
- Soil biology/biochemistry

EngineeringGeology
- General engineering geology
- Earthquake engineering
- Mining engineering
- Petroleum engineering
- Rock mechanics

ENVIRONMENTAL GEOSCIENCE

GEOPHYSICS

General Geophysics
- Exploration geophysics
- Geodosy
- Geomagnetism & palcomagnetism
- Gravity
- Heat flow
- Seismology
- Marine geophysics

Petroleum Geophysics
- Data acquisition
- Data processing
- Data interpretation

Environmental Geophysics
- Data acquisition
- Data processing
- Data interpretation

Mining Geophysics
- Data acquisition
- Data processing
- Data interpretation

Remote Sensing
- Data acquisition
- Data processing
- Data interpretation

Sample #1:

"Within the discipline of Electrical Engineering: For the reviewing, reporting on, planning and inspection for maintenance, construction and commissioning of the Fire and Gas Systems, Emergency Shutdown Systems, low and high voltage (up to 13.8 kV) Systems for offshore oil and gas."

Application of Scope:

Providing support to the engineering and design office to review the design of each modification and to coordinate the scope from initial kickoff to completion and sign off. This consists of a continual design review according to specification and applicable codes, to advise of any material, technical, safety or operational issues, communicate with client, and coordinate with plan personnel to have work scope completed, commissioned, and placed into operation. During any maintenance scopes, responsibility to identify and resolve any material, technical, safety, or operational issues and coordinate all inspection and testing with the Regulator. Reviewing and approving work packs for all instrument and electrical work scopes to be completed offshore. Each work pack consists of a section on Scope Overview, Health Safety and Environment, Execution, Methodology, Permits, and Isolations, Job cards, Drawings, Materials, Mechanical Completion, and Closeout.

Sample #2:

"Within the discipline of Petroleum Engineering: coordinate and design implementation of oil and gas well abandonments, workovers and completion projects, as well as advising on and preparing plans for well integrity management."

Application of Scope:

- Wellwork project budgets, cost estimates, and AFE's
- Wellwork programs – develop procedures/guidelines designed for execution of a wellwork scope of work including wellwork categorization, and stewarding the management of change process for deviations from approved programs
- Risk assessments – documents evaluating the risks associated with wellwork projects, risk mitigators, and ultimate risk ranking based on corporate best practice. Also used for evaluating the risks associated with wellbore integrity concerns
- Regulatory approval documents – approval to alter the condition of a well; documents to be submitted to regulatory bodies to obtain approval to execute wellwork operations in a well
- Well integrity documents/reports – includes trouble shooting procedures for problem wells and/or well integrity issues, enhanced maintenance plans for problem wells, developing operating envelopes, etc.
- Capture of lessons learned for sharing in the global corporation, as well as applying global lessons learned to local assets

Sample #3:

"Within the discipline of Mechanical Engineering: reporting on, planning, and directing construction and supervision of maintenance activities for Floating, Production, Storage, and Offloading Vessels (FPO)."

Application of Scope:

- Approve bulk requisitions (material list) for construction materials
- Approve maintenance workpacks that doesn't require engineering input for design (i.e. pressure vessel inspections, like-for-like replacement, etc.); multidiscipline engineering workpacks have sign off for each engineering lead to approve their scope within
- Approve constructability reports

Sample #4:

"Within the discipline of electrical engineering: reviewing, reporting on, planning, and approving electric utility overhead and underground distribution level layouts, associated capital budget engineering reports and revisions"

Application of Scope:

- Geographic layout drawings for new or replacement overhead or underground electrical utility distribution systems up to 25kV
- Capital budget application engineering reports for new construction, replacement and maintenance of utility distribution systems up to 25kV provided to management and to the Public Utilities Board
- Revisions to existing overhead and underground company standard design drawings and associated equipment purchasing specifications for electric utility distribution hardware and framing up to 25kV
- Approve electrical utility distribution system layout drawings for overhead and underground systems up to 25kV based on existing company electric utility distribution system standards; in compliance with CSA Standards C22.1/C22.3
- Approve engineering reports for proposed electric utility overhead and underground distribution system capital budget projects up to 25kV based on existing distribution system standards and planning criteria; in compliance with CSA Standards C22.1/C22.3
- Approve revisions to existing electric utility overhead and underground distribution system standard drawings and purchasing specifications up to 25kV; in compliance with CSA Standards C22.1/C22.3

Sample # 5:

"Within the discipline of Electrical Engineering: Control Systems Hardware Design, Implementation, Review, Test and Approve Hardware (cabinets and cabinet modifications) for offshore installations."

- *Application of Scope:*
    - *Includes taking responsibility for hardware designs such as cabinet equipment layouts, cabinet power and heat calculations, cabinet wiring schematics/tables/diagrams, bill of materials, installation & test procedures, reports, commissioning, startup and preservation details, network details, computer equipment, communications equipment and cable diagrams.*

    - *Does not include taking responsibility for overall control system specifications, software designs, selection of field instrumentation, control system philosophies, safety system philosophies, safety system cause and effect charts, shutdown philosophies and control system UPS design*