

Site Assessment and Reclamation Profile

September 2016

ID	Competency Statement	Type
CATEGORY A: Environmental and Social Impact Assessment		
SUB-CATEGORY 1: Conducting Environmental and Social Impact Assessments		
1	Ensures that the impact assessment scope, criteria and conditions (geographic, environmental, economic, social, and cultural) are defined adequately.	2
6	Identifies which areas are likely to be significantly impacted by development activities, e.g. biophysical, economic, social, cultural, and heritage resources.	2
7	Assesses environmental and/or social issues, risks or problems, including their cumulative effect and corresponding economic, social and cultural impacts.	2
9	Prepares environmental impact assessment report(s) that may include mitigation, environmental protection, and recovery plans.	2
CATEGORY B: Site Assessment (RRR)		
SUB-CATEGORY 2: Conducting Environmental Site Assessments (ESA - Phase 1 and Phase 2)		
10	Identifies the scope of the site assessment (phase 1 and 2) project, including identification of the standards to be followed.	1
11	Reviews historical records for the site (e.g. site plans, fire insurance maps, legal title searches, business directories, air photos, satellite images, etc.) to determine previous land use.	1
12	Carries out visual inspection of site and neighbouring properties as part of the site assessment.	1
13	Collects related information from key stakeholders (e.g. owners and staff, municipalities, regulators) regarding land use, facility operations, permits, relevant legislation, etc.	1
14	Conducts investigation, sampling, screening, and analysis (including geophysical mapping) activities of landforms, soil, ground water, sediments, airborne contaminants, etc., as required.	1
15	Characterizes environmental aspects of site (such as landforms, drainage, plant communities, and soil properties) based on interpretation of data collected during site investigation, sampling and analysis (for example, contaminants, their concentration and general extent).	1
16	Prepares site assessment report(s) to meet regulatory and other requirements, identifying potential risk and scope of further action by appropriate stakeholders, if necessary.	1

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SUB-CATEGORY 3: Developing/Implementing Site Remediation (Phase 3) Plans		
19	Evaluates possible remediation/restoration/reclamation alternatives, taking into account costs, technological constraints, characteristics of the contaminant, characteristics of the affected land, and stakeholders' concerns.	1
20	Recommends remediation clean-up targets to make the site fit for its intended use or return it to its original condition (applies to all sites including watershed restoration, forestry site reclamation, mine closures, etc.).	1
21	Develops site remediation/restoration/reclamation plans and programs, including objectives, targets, contamination description, issue resolution process, pilot requirements, time schedule, and cost estimate.	1
23	Conducts full-scale remediation activities (e.g. thermal, biological, chemical or physical treatment, containment, vapour extraction, excavation, removal of heritage objects, etc.).	1
24	Monitors post-remediation conditions and results to assess if targets and regulatory requirements have been met.	2
25	Prepares remediation completion report, including documentation of remediation and post-remediation monitoring data, and review of environmental outcomes relative to standards, for submission to regulators and stakeholders.	1
SUB-CATEGORY 4: Developing/Implementing Site Restoration/Reclamation (Phase 3) Plans		
26	Investigates attributes of materials, such as physical, chemical, and geotechnical involved in the restoration/reclamation.	3
29	Provides environmental inspection during construction and reclamation to ensure that regulatory requirements are met and that procedures and plans are being followed.	2
32	Monitors post-restoration/reclamation conditions and results to assess if targets and regulatory requirements have been met.	2
33	Prepares site restoration and site reclamation report(s) for submission to the appropriate regulators and stakeholders.	2
CATEGORY C: Regulatory & Enforcement		
SUB-CATEGORY 5: Interpreting/Enforcing/Complying with Environmental Regulations and Environmental or Sustainability Standards		
34	Provides advice and/or testimony to sr. management, internal staff, regulatory bodies, interest groups and the public regarding environmental regulations and environmental or sustainability standards' issues.	2
35	Applies environmental legislation regarding issues such as contaminated sites, hazardous materials and waste, pesticide use, storage tanks, etc. to specific applications as appropriate.	1

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37	Prepares regulatory applications.	2
38	Prepares permits and operational permit reports (including air permits, waste disposal permits, resource harvesting permits, etc.).	2
40	Develops plans and programs to meet environmental regulatory requirements and/or environmental and sustainability standards.	2
41	Implements programs, including monitoring activities, to ensure regulatory compliance and standards conformance.	2
42	Evaluates compliance with environmental regulations and conformance to environmental and sustainability standards.	2
43	Prepares compliance and regulatory reports for internal use and for filing with regulatory or reporting agencies.	2
CATEGORY H: Environmental Sampling & Analytical Work		
SUB-CATEGORY 11: Developing Environmental Sampling, Testing and Monitoring Programs		
86	Determines the need and scope for sampling program, including environmental indicators, chemicals of concern, and sampling constraints	1
87	Develops environmental sampling protocols, including data quality objectives, the frequency and timing of sampling, optimum locations for continuous or discrete sampling, data capture systems, sampling procedures, sampling methodology, personnel, and parameter list for analysis.	1
88	Develops site-specific work plans, including Quality Assurance/Quality Control (QA/QC) methods, measuring/monitoring procedures and analytical equipment (both field and lab equipment) to be used for the specific application (e.g. air, water, soil, sediments, rock, fauna, flora, human, workplace, etc.).	2
90	Modifies existing sampling programs to reflect changing research priorities and/or environmental circumstances.	2
SUB-CATEGORY 12: Collecting Samples and Data for Environmental Purposes		
92	Determines the appropriate sample size, sampling containers, protocols, preservation methods, collection apparatus and transportation, etc.	1
93	Selects, assembles and deploys analytical test instruments or sampling equipment (such as data capture systems, continuous monitoring devices, drilling cores, water bailers, etc.), including assembly and documentation of deployment and operational conditions and other pertinent details, such as any deviation to standard procedures.	2

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94	Collects samples and specimens as per established protocol, using more routine sampling procedures and apparatus.	1
95	Collects samples and specimens as per established protocol, using more complex sampling procedures and apparatus.	2
96	Uses appropriate techniques to prepare (code, preserve, pretreat and transport) samples for analysis while maintaining chain of custody requirements and sample integrity.	1
102	Maintains appropriate records and ongoing documentation pertaining to field and laboratory analytical work, including regulatory documentation.	1
SUB-CATEGORY 13: Analyzing and Interpreting Environmental Samples and Data		
111	Interprets analytical data to identify trends, significant changes from historical patterns, deviations, or evidence of environmental stresses, etc.	1
113	Conducts quality control reviews of data collection, processing, and analysis to ensure data is 'fit for purpose' using accepted scientific practices and proper Quality Assurance/Quality Control (QA/QC) protocols.	2
114	Prepares summary reports of analysis results to be added into technical reports or presentations to expert and/or non-expert audiences	2