



Quality Assurance Deliverable Requirements for Subcontractors

Institutional Quality & Performance Assurance Division

EXHIBIT "H" PART 1

SUBCONTRACTOR shall comply with the clauses in this Exhibit that have been indicated as being incorporated in this subcontract.

QD-01, CERTIFICATE OF CONFORMANCE

SUBCONTRACTOR must provide with or prior to delivery, a Certificate of Conformance for this subcontract in accordance with their approved certification system. The Certificate must identify the material(s) and/or equipment purchased under this subcontract, the specific procurement requirements met including any approved changes, waivers, or deviations, and any specific procurement requirement that were not met. SUBCONTRACTOR may identify these by listing the specific materials or equipment and the requirements met or not met, or by providing a copy of the purchase order with the certificate including any nonconformance reports identifying any requirements not met. The certificate must be signed by a person defined as having responsibility to sign in SUBCONTRACTOR's approved certification system.

QD-02, INSPECTION AND TEST REPORTS

SUBCONTRACTOR must provide with or prior to delivery, inspection and/or test reports for the items and attributes thereof described or referenced below. These inspection and/or test reports must demonstrate compliance to the specific subcontract requirements and acceptance criteria described or referenced below.

Items and attributes:

Detail item(s), attribute(s), requirement(s), and acceptance criteria, or provide references to document(s) where that information is provided.

QD-03, ENGINEERING DRAWINGS

SUBCONTRACTOR must provide with or prior to delivery, engineering drawings detailing the design of the items/systems as required by the subcontract. These must be traceable to the item(s) provided and must be submitted in the following way(s) as required by the subcontract: either with or prior to completion of design deliverables; or prior to fabrication; or with or prior to the shipment of any applicable items. For specific items, this requirement may be satisfied by inclusion of existing drawings in a technical operations/maintenance manual. Further, drawings may be for design only or for fabrication/construction to occur at a later date and may include, during or after fabrication/construction, any applicable as-built drawings.

QD-04, CERTIFICATE OF CALIBRATION FOR SUBCONTRACTOR OWNED MEASURING AND TEST EQUIPMENT (M&TE)

SUBCONTRACTOR must provide with or prior to delivery of items or services, records demonstrating the calibration status of any M&TE used to perform required inspections or tests as specified in the procurement documents. These records must include, at a minimum, the following:

- a. title (e.g., "Test Report", "Calibration Certificate", or "Report of Sampling");
- b. the name and address of the laboratory;



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- c. the location of performance of the laboratory activities, including when performed at a customer facility or at sites away from the laboratory's permanent facilities, or in associated temporary or mobile facilities;
- d. unique identification that all its components are recognized as a portion of a complete report and a clear identification of the end;
- e. the name and contact information of the customer;
- f. identification of the method used;
- g. a description, unambiguous identification, and, when necessary, the condition of the item;
- h. the date of receipt of the test or calibration item(s), and the date of sampling, where this is critical to the validity and application of the results;
- i. the date(s) of performance of the laboratory activity;
- j. the date of issue of the report;
- k. reference to the sampling plan and sampling method used by the laboratory or other bodies where these are relevant to the validity or application of the results;
- l. a statement to the effect that the results relate only to the items tested, calibrated or sampled;
- m. the results with, where appropriate, the units of measurement;
- n. additions to, deviations, or exclusions from the method;
- o. identification of the person(s) authorizing the report;
- p. clear identification when results are from external providers;
- q. the measurement uncertainty of the measurement result presented in the same unit as that of the measurand or in a term relative to the measurand (e.g., percent);
NOTE According to ISO/IEC Guide 99, a measurement result is generally expressed as a single measured quantity value including unit of measurement and a measurement uncertainty.
- r. the conditions (e.g., environmental) under which the calibrations were made that have an influence on the measurement results;
- s. a statement identifying how the measurements are metrologically traceable;
- t. the results before and after any adjustment or repair, if available;
- u. where relevant, a statement of conformity with requirements or specifications;
- v. where appropriate, opinions and interpretations.

QD-05, CERTIFIED MATERIAL TEST REPORTS

SUBCONTRACTOR must provide with or prior to delivery, Certified Material Test Reports (CMTRs) for the materials specified or referenced below. CMTRs must report physical and chemical properties of the material(s) as described below and be in accordance with the referenced national or international material standards (e.g., ASTM, ANSI) for the material type. CMTRs must be the results of test performed by the material manufacturer or by a material verification process, if such a process is allowed by the standard governing the material type and must specify the test method and the source of the acceptance criteria. Each CMTR must be signed by an authorized representative of the testing entity, be traceable to the materials delivered via heat, lot, or other identification, and must meet any content requirements of the applicable national or international standards invoked for the material type.

Materials:

Detail material(s) and standard(s) or provide references to document(s) where the information is provided.

QD-06, SHELF-LIFE CERTIFICATION / STORAGE REQUIREMENTS

The items described or referenced below with limited shelf life, expirations dates, or similar must be



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delivered with accompanying documentation or labeling which defines the lifecycle for those items and their expiration date. The documentation must also specify storage requirements for the specific item(s) provided.

Items:

Detail item(s) or provide references to document(s) where the information is provided.

QD-07, CERTIFICATE OF PROOF LOAD TEST

The items or assemblies described or referenced below must be accompanied by test reports and records of performance which demonstrate successful Proof Load Testing of the items delivered in accordance with the specified standards for the item type.

Items or assemblies:

Detail item(s) and standard(s) to be used for testing or provide references to document(s) where the information is provided.

QD-08, SERIALIZATION AND MARKING

Items associated with this procurement must be marked with unique identification as described or referenced below:

Detail which item(s) and the marking requirement(s) or provide references to document(s) where the information is provided.

QD-09, HOLD POINTS

Mandatory hold points (as defined below) are associated with this subcontract beyond which work may not proceed unless written authorization is received from CONTRACTOR in accordance with subcontract requirements. This procurement requires that SUBCONTRACTOR notify CONTRACTOR a minimum of seven (7) working days in advance of performing the following activities so that CONTRACTOR may witness the activities.

Hold points:

Detail activities to be held or provide references to document(s) where the information is provided.

QD-10, AUDIT REPORT

SUBCONTRACTOR must provide to CONTRACTOR copies of the following:

- a. Audit plan(s),
- b. Audit Report(s), and
- c. any additional records as specified in the subcontract.

QD-11, CERTIFICATE OF COMPLIANCE

SUBCONTRACTOR shall provide with or prior to delivery, a certificate signed by an authorized representative of the item(s) manufacturer stating that item(s) provided under this subcontract have been manufactured in accordance with the applicable national codes and standards specified below:



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Detail codes or provide references to document(s) where the information is provided.

QD-12, CERTIFICATE OF PRODUCT TRACEABILITY

SUBCONTRACTOR shall provide with or prior to delivery, the following:

- a. a signed certificate stating that items provided under this subcontract were purchased from the original equipment manufacturer specified in the procurement documents.
- b. objective evidence of this traceability (e.g., purchase documents from SUBCONTRACTOR to original equipment manufacturer) with the certificate.

QD-13, CERTIFICATE OF CALIBRATION

SUBCONTRACTOR shall provide with or prior to delivery, for each instrument/system, a certificate of calibration stating the calibration instrument/system has been calibrated, the calibration results, and, if required by procurement documentation, the SUBCONTRACTOR was ISO/IEC 17025 accredited through a Signatory to the ILAC Mutual Recognition Arrangement (e.g., A2LA, NVLAP, ANAB, PJLA, Dakks, etc.). The certification shall contain, at a minimum, the following:

- a) title (e.g., "Test Report", "Calibration Certificate" or "Report of Sampling");
- b) the name and address of the laboratory;
- c) the location of performance of the laboratory activities, including when performed at a customer facility or at sites away from the laboratory's permanent facilities, or in associated temporary or mobile facilities;
- d) unique identification that all its components are recognized as a portion of a complete report and a clear identification of the end;
- e) the name and contact information of the customer;
- f) identification of the method used;
- g) a description, unambiguous identification, and, when necessary, the condition of the item;
- h) the date of receipt of the test or calibration item(s), and the date of sampling, where this is critical to the validity and application of the results;
- i) the date(s) of performance of the laboratory activity;
- j) the date of issue of the report;
- k) reference to the sampling plan and sampling method used by the laboratory or other bodies where these are relevant to the validity or application of the results;
- l) a statement to the effect that the results relate only to the items tested, calibrated or sampled;
- m) the results with, where appropriate, the units of measurement;
- n) additions to, deviations, or exclusions from the method;
- o) identification of the person(s) authorizing the report;
- p) clear identification when results are from external providers;
- q) the measurement uncertainty of the measurement result presented in the same unit as that of the measurand or in a term relative to the measurand (e.g., percent);
NOTE According to ISO/IEC Guide 99, a measurement result is generally expressed as a single measured quantity value including unit of measurement and a measurement uncertainty.
- r) the conditions (e.g., environmental) under which the calibrations were made that have an influence on the measurement results;
- s) a statement identifying how the measurements are metrologically traceable;
- t) the results before and after any adjustment or repair, if available;
- u) where relevant, a statement of conformity with requirements or specifications;
- v) where appropriate, opinions and interpretations.



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QD-14, NONCONFORMANCE REPORTS

SUBCONTRACTOR shall notify CONTRACTOR's representative, as identified for this subcontract, in writing of each nonconformance against items and services that do not meet Subcontract requirements within forty-eight (48) hours of discovery. This includes, but is not limited to, nonconformance with documentation requirements and technical or material requirements, including situations where an item may be restored so as to function unimpaired, but it does not meet the original subcontract/design requirement. SUBCONTRACTOR shall document and evaluate nonconformance using Form 2276 and submit Form 2276 to CONTRACTOR within four (4) calendar days of discovery. Documentation and evaluation of a nonconformance shall consist of the completed subcontractor section of Form 2276, which includes a written description of the nonconformance (with sketches and pictures highlighting the nonconforming condition if necessary to clearly describe the condition), and when available, an assessment of the cause and the proposed disposition/corrective action, including technical justifications for any proposed dispositions which would result in a deviation from established requirements (i.e., a Use-As-Is or Repair disposition). CONTRACTOR must approve the disposition of the nonconformance with corresponding disposition implementation verified as described in the disposition via Form 2276. Completed nonconformance documentation must be supplied by SUBCONTRACTOR to CONTRACTOR with or prior to delivery or acceptance of the items by CONTRACTOR and all records of nonconformance shall be maintained by the SUBCONTRACTOR in accordance with Subcontract requirements. SUBCONTRACTOR shall not intentionally perform work that will result in a nonconforming condition without express written approval by CONTRACTOR.

QD-15, PROJECT SPECIFIC QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) PLAN

SUBCONTRACTOR shall develop and submit to CONTRACTOR for review and approval prior to performing quality affecting work under this subcontract a Quality Assurance/Control Plan specific to the work or project prescribed by this subcontract. The plan shall describe the specific work control documents that will be used to control the work activities to be performed and shall identify which activities will be controlled by which documents. The plan shall identify any required training or certification requirements for personnel to be able to perform specific work tasks under this subcontract and identify the method of ensuring personnel have met those requirements prior to performing the task(s). The plan shall identify any procedures, test plans, test methods, or other processes to be used to verify quality of work performed in accordance with the subcontract documents. All work performed under this subcontract must be performed in accordance with the approved Quality Assurance/Control Plan. The plan and any quality affecting revisions to the plan must be reviewed and approved by CONTRACTOR prior to SUBCONTRACTOR performing work under this subcontract.

Specific requirements and content for the Quality Assurance/Control Plan are specified and/or referenced below:

Detail requirements or provide references to document(s) where the information is provided.

QD-16, SPARE AND REPLACEMENT PART IDENTIFICATION

SUBCONTRACTOR must provide with or prior to delivery, information on the identification of any spare or replacement parts for the items or assemblies provided, and the necessary information to be able to order those parts, such as part numbers, manufacturer identification numbers, product



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lines, etc.

QD-17, AS-BUILT DRAWINGS

SUBCONTRACTOR must provide with or prior to delivery, drawing(s) detailing the as-built condition of any items, assemblies, and/or components provided to CONTRACTOR under this subcontract. As-built drawings must be generated using the approved final drawing(s) for the subcontract, including any changes made during subcontract performance (usually required to be captured using Form 2178, *Subcontractor Deviation Disposition Request*), by adding as-built condition information to the drawing(s). As-built drawings must be authenticated by SUBCONTRACTOR personnel who are responsible for verifying the as-built conditions. The as-built condition includes identifying as applicable: final dimensions, material identification, weld maps including filler material used, serial numbers, and test results.

QD-18, SUBCONTRACTOR PERSONNEL QUALIFICATIONS / CERTIFICATIONS

SUBCONTRACTOR must provide with or prior to delivery of products/services records showing that personnel who have or will perform the work have the necessary qualifications and/or certifications to perform the work as determined by SUBCONTRACTOR's Quality Assurance Program or as specified in this subcontract. These may include but are not limited to non-destructive examination certifications, welder certifications, inspection personnel certifications, auditor qualifications/certifications, etc.

QD-19, CERTIFICATE OF ANALYSIS

SUBCONTRACTOR shall provide with or prior to delivery, to CONTRACTOR a Certificate of Analysis (C of A) for the material(s) supplied and any associated Safety Data Sheet (SDS). The C of A shall include:

- a) Name of chemical/product
- b) Purchase Order # and/or Lot # traceable to purchase document and/or chemical container
- c) Name and address of facility manufacturing/supplying product
- d) Quantity of certified material
- e) Analyzed concentration/purity
- f) Analytical accuracy
- g) Date of manufacture and/or date of shelf-life expiration (only applicable for items which are identified by the manufacturer as having an expiration date)
- h) Signature and date of SUBCONTRACTOR's certifying authority

QD-20, MANUALS / INSTRUCTIONS

SUBCONTRACTOR shall submit with or prior to delivery manuals, instructions, or other documents that identify the items/software provided and include as applicable safety precautions, installation/test instructions, and operating and maintenance instructions. The manual/instructions shall be provided in English, written in clear, concise language readily understandable by a technician, craftsman, or programmer, and shall conform to applicable industry standards for the preparation of such documents.



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QD-21, COMMERCIAL GRADE DEDICATION PLAN

SUBCONTRACTOR shall develop and submit to CONTRACTOR for review and approval prior to commencing work under this subcontract, a Commercial Grade Dedication (CGD) Plan specific to the work or project prescribed by this subcontract. The CGD Plan shall describe at a minimum the critical characteristics of the item(s) to be dedicated, the method(s) of dedication for each critical characteristic, the acceptance criteria where applicable, and the document(s) to be generated demonstrating verification of the critical characteristics. The CGD Plan shall identify any procedures, test plans, test methods, or other processes to be used to perform the identified dedication method(s). When applicable, the CGD Plan must also include documented identification of critical characteristics based on defined safety functions for the item(s) to be dedicated. All work performed under this subcontract must be performed in accordance with SUBCONTRACTOR's approved Commercial Grade Dedication program and the approved CGD Plan. The CGD Plan and revisions to the CGD Plan must be reviewed and approved by CONTRACTOR prior to SUBCONTRACTOR performing or continuing work under this subcontract. Any document(s) demonstrating the commercial grade dedication process for this subcontract as defined in NQA-1 2008;2009a, Part II, Subpart 2.14, *Quality Assurance Requirements for Commercial Grade Items and Services*, section 800 must be submitted to CONTRACTOR with, or prior to, shipment of the item(s) being dedicated by SUBCONTRACTOR.

QD-22, TECHNICAL EVALUATION

SUBCONTRACTOR shall submit with or prior to delivery technical evaluation documentation that meets the applicable requirements of NQA-1 2008;2009a, Part II, Subpart 2.14, *Quality Assurance Requirements for Commercial Grade Items and Services*.

QD-23, SUBCONTRACTOR'S QUALITY ASSURANCE PROGRAM IMPLEMENTATION RECORDS

SUBCONTRACTOR shall submit with or prior to delivery documentation demonstrating that the applicable requirements for SUBCONTRACTOR's QA program have been implemented for this subcontract. SUBCONTRACTOR is not required to submit their QA program documents (i.e., procedures, plans, etc.) unless requested in this subcontract. The documents SUBCONTRACTOR shall submit are the associated forms, reports, qualification records, etc. that result from the use of their QA program documents as related to performance of this subcontract.

QD-24, ITEM/COMPONENT TRACEABILITY DOCUMENTATION

SUBCONTRACTOR shall submit with or prior to delivery documentation demonstrating the traceability of items, components, and/or materials used in products provided for this subcontract. This traceability must be established from the unique item, component, and/or material to its end use in the product(s) supplied and must be traceable to any supporting documentation of the item, component, and/or material.