CHAPTER 62-160
QUALITY ASSURANCE

PART I
QUALITY ASSURANCE

62-160.110 Purpose, Scope and Applicability.

(1) The purpose of this chapter is to assure that chemical, physical, biological, microbiological and toxicological data used by the Department are appropriate and reliable, and are collected and analyzed by scientifically sound procedures. To this end, this chapter defines the minimum field and laboratory quality assurance, methodological and reporting requirements of the Department.

(2) Except as provided in subsection (3) of this section, this chapter shall apply to all programs, projects, studies or other activities that are required by the Department, and that involve the measurement, use or submission of environmental data or reports to the Department. This chapter shall apply to all entities that participate in the process of generating environmental data. This process includes, but is not limited to: field activities (sample collection, sample preservation, field measurements, and site evaluation); sample handling, storage and/or transport (except common carriers); laboratory activities (e.g., sample receipt, analysis, data review and data validation); additional data review, summaries or data presentation activities; and all activities that impact data quality such as providing sample containers, instrument calibration services, or reagents and standards (except commercial vendors).

(3) Programs, projects, studies or activities pertaining to air quality, meteorology, atmospheric radiation, atmospheric noise, electric and magnetic fields or air pollutant emissions, and having no requirements for monitoring contamination of soil, water, or tissue are excluded from the scope of this chapter. These excluded activities include those specified in Chapters 62-204, 62-210, 62-212, 62-213, 62-214, 62-252, 62-296 and 62-297 (Air Resources Management), F.A.C.

(4) The provisions of this chapter shall take precedence over quality assurance requirements in any other Department rule except as otherwise specifically provided for elsewhere in this chapter. However, nothing in this subsection shall be construed to prevent additional or more stringent requirements imposed by any specific contract, order, permit, or Title 62 rule.

(5) All local and state programs or other organizations with delegated responsibility for Department activities shall assure that the Quality Assurance requirements of this chapter are met for the specified activities.

(6) If specifically required by the United States Environmental Protection Agency (EPA) for activities conducted for or funded by the EPA, Quality Assurance Project Plans (QAPPs) shall be prepared in accordance with "EPA Requirements for Quality Assurance Project Plans, EPA QA/R-5", which is incorporated by reference in subsection 62-160.800(4), F.A.C. These QAPPs will be reviewed and approved by the appropriate EPA office or delegated authority.

(7) This chapter supports the DEP Quality Management Plan required by the EPA for any environmental programs funded in part or in whole by the EPA.

(8) All requirements specified in this chapter shall take effect on the date that this chapter is effective. Quality assurance requirements in Department contracts, orders or permits issued or entered into prior to the effective date of this chapter shall remain

in effect until such contracts, orders or permits are modified or renewed.

Rulemaking Authority 403.061, 403.0623 FS. Law Implemented 373.026, 373.309, 373.409, 373.413, 373.414, 373.416, 373.4592, 376.303, 376.305, 376.3071, 403.0623, 403.0625, 403.087, 403.088, 403.0881, 403.504, 403.704, 403.707, 403.722, 403.853 FS. History–New 1-1-91, Amended 2-4-93, 2-27-94, Formerly 17-160.110, Amended 3-24-96, 4-9-02, 6-8-04, 12-3-08, 7-30-14.

62-160.120 Definitions and Standards.

For purposes of this chapter:

(1) "Alternative method" is a field procedure or analytical laboratory method that involves the collection or testing of environmental samples for an analyte (such as a chemical compound, component, or microorganism, etc.) in a specified matrix where a Department-approved method already exists. Approved methods are recognized or specified by the Department according to Rules 62-160.210 and 62-160.320, F.A.C. An alternative method is one intended to be used in place of an existing Department-approved laboratory method or field procedure.

(2) "Audit" is a systematic review of laboratory and field protocols to determine if proper procedures are being used and supporting documentation is present. An audit shall consist of an on-site assessment of sample collection, field sampling procedures, laboratory procedures and/or a review, assessment and/or validation of data associated with a Department program activity. If necessary, an audit shall include the submission of performance samples (for example, blind, split and/or performance check samples) to an organization for subsequent use in the evaluation of that organization's technical performance associated with a specific Department project or program activity.

(3) "Commercial Vendor" is a retail or wholesale company whose business is to sell commodities to customers and who is not a part of the process that generates environmental data. These businesses do not include organizations that purchase commodities with the intent of providing the commodities as a service to clients.

(4) "Common Carrier" is a business or agency that is available to the general public for the transportation of goods over a definite route and according to a regular schedule.

(5) "Data quality objectives" are a set of qualitative and quantitative statements derived from a systematic planning process that clarify the purpose of the study, define the most appropriate type of information to collect, determine the most appropriate conditions from which to collect that information, and specify tolerable levels of potential decision errors.

(6) "Data validation" is an evaluation of the technical usability of the verified data with respect to the planned objectives or intention of a project.

(7) "Data verification" is a consistent, systematic process that determines whether the data have been collected in accordance with project specifications with respect to compliance, correctness, consistency and completeness as compared to a method standard or contract specification.

(8) "Department" is the Florida Department of Environmental Protection.

(9) "Department-approved method" is a field procedure or laboratory analytical method specified as acceptable for use in this chapter and in any other Department contract, order, permit or Title 62 rule.

(10) "Department of Health (DOH) Environmental Laboratory Certification Program (ELCP)" is the state of Florida's environmental laboratory certification program, authorized by Section 381.00591, F.S., and recognized by the National Environmental Laboratory Accreditation Program (NELAP) Acceditation Council as an authority with responsibility and accountability for granting accreditation for specified fields of laboratory testing through Chapter 64E-1, F.A.C.

(11) "Electronic signature" means an electronic sound, symbol, or process attached to or logically associated with a record and executed or adopted by a person with the intent to sign the record.

(12) "Holding time" is the storage time allowed between sample collection and sample preparation and/or analysis as specified by regulatory requirements or by the field sample collection protocol or laboratory method.

(13) "Limited-use method" is an analytical laboratory method that is validated for the testing of environmental samples from a particular site, waste stream (e.g., facility location) or sample matrix (e.g., effluent, groundwater or drinking water). A limited-use method is validated by a single laboratory and may only be used by that laboratory.

(14) "Matrix" is the predominant material in which an analyte of interest is contained. For example, soil, groundwater and drinking water are three environmental matrices.

(15) "Method-defined analyte" is defined by the U.S. Environmental Protection Agency as an analyte whose result is totally dependent on how the measurement is made. Any changes or modifications in the preparation or determinative techniques of these

methods have the potential of changing the result. Examples are: Carbonaceous Biological Oxygen Demand, Oil and Grease, and Toxicity Characteristic Leaching Procedure (TCLP).

(16) "Method detection limit (MDL)" is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An MDL is analyte-and matrix-specific and is laboratory-dependent. The MDL for an analyte is determined from the preparation and analysis of a sample in a given matrix containing the analyte. MDLs shall be determined for each matrix/analytical technology/analyte combination reported by the laboratory, except for those tests where determination of the MDL is not appropriate for the analytical technique. MDLs shall be calculated following the procedures specified in "New and Alternative Analytical Laboratory Methods", DEP-QA-001/01, which is incorporated by reference in subsection 62-160.800(5), F.A.C., or by any other technically justifiable and scientifically sound method. A specific method must be used when mandated by the Department. For the purposes of data usability evaluation, the DEP-defined MDL is equivalent to the Limit of Detection (LOD) as defined in the TNI Standards, EL-V1-2009-ISO, which are incorporated by reference in paragraph 62-160.800(3)(b), F.A.C.

(17) "Method modification" is any modification to an approved field procedure or analytical laboratory method that is specifically allowed by the approved field procedure or analytical laboratory method.

(18) "Field of Accreditation Matrix" is defined in the Glossary of the 2003 NELAC Standards, which is incorporated by reference in paragraph 62-160.800(3)(a), F.A.C., and shall be used to determine matrices under which a laboratory must be certified by the DOH ELCP for reporting data to be used by the Department:

(a) Drinking Water: any aqueous sample that has been collected from a water source designated by the Department as a potable or potential potable water source.

(b) Non-potable Water: any aqueous sample excluded from the definition of drinking water matrix including surface water, groundwater, effluents, water treatment chemicals, or samples derived from synthetic precipitation leaching procedures (SPLP), toxicity characteristic leaching procedures (TCLP) or other extracts. To be considered as non-potable water, water treatment chemicals must be in an aqueous solution. If the laboratory receives the original environmental sample as a solid or chemical material for TCLP extraction, the laboratory must be certified for the TCLP extraction in the Solid and Chemical Material matrix. For the analytical tests to be performed on the TCLP extract, the laboratory must be certified in the non-potable water matrix for at least one method for each analytical technology/analyte combination for each reported analyte.

(c) Solid and Chemical Materials: includes soils, sediments, sludges, products and by-products of an industrial process that results in a matrix not previously defined. For purposes of accreditation, biosolids are considered a solid, unless the sample matrix comprises liquid biosolids as defined in Chapter 62-640, F.A.C. All other sample matrices not previously defined and comprising $\leq$ 15% settleable solids are liquids, and may require analysis using techniques for non-potable water or liquid chemical materials.

(d) Biological Tissue: any sample of a biological origin such as fish tissue, shellfish, or plant material.

(19) "National Environmental Laboratory Accreditation Program (NELAP)" is a program that implements standards that have been found to be acceptable to the NELAP Accreditation Council.

(20) "NELAP accreditation" is an accreditation status applied to a laboratory's field(s) of testing upon satisfying all requirements for certification as provided in Chapter 64E-1, F.A.C.

(21) "New method" is a field procedure or analytical laboratory method that involves the collection or testing of samples for an analyte (such as a chemical compound, component, or microorganism) in a specified matrix where a Department-approved method does not exist. Approved methods are recognized or specified by the Department according to Rules 62-160.210 and 62-160.320, F.A.C.

(22) "Percent relative standard deviation (% RSD)" is a calculated measure of precision from results of replicate sample analyses. It is calculated as specified in DEP-QA-001/01 (February 1, 2004), which is incorporated by reference in Rule 62-160.800, F.A.C.

(23) "Permit" is any permit or license issued by the Department pursuant to its lawful authority, or by another government agency under delegation of authority from the Department.

(24) "Practical quantitation limit (PQL)" is the lowest level of measurement that can be reliably achieved during routine laboratory operating conditions within specified limits of precision and accuracy. The value of the PQL shall be greater that the MDL value except when analytical quality control problems necessitate raising the MDL value equal to or above the PQL value for a specific sample, or when determination of the MDL is not appropriate for an analytical technique. For Departmental use, if a laboratory fails to report a PQL, the PQL shall be calculated as four times the MDL, except for those tests where determination of the MDL is not appropriate for the analytical technique. In such cases, the Department shall use all available information about the

technique to determine the PQL. For the purposes of data usability evaluation, the DEP-defined PQL is equivalent to the Limit of Quantitation (LOQ) as defined in the TNI Standards, EL-V1-2009-ISO, which are incorporated by reference in paragraph 62-160.800(3)(b), F.A.C.

(25) "Quality assurance" is an integrated system of management activities involving planning, implementation, documentation, assessment, reporting and quality improvement to ensure that a process, product or service meets defined standards of quality.

(26) "Quality assurance project plan (QAPP)" is a document required by the EPA for certain activities conducted for or funded by the EPA. The plan outlines the quality assurance criteria, as well as all protocols and quality control measures needed to meet the project data quality objectives. These plans are prepared in accordance with "EPA Requirements for Quality Assurance Project Plans, EPA QA/R-5", (EPA/240/B-01/003 March 2001). These QAPPs are reviewed and approved by the appropriate EPA office or delegated authority.

(27) "Quality control" is the overall system of technical activities that measures the attributes and performance of a process, product or service against defined standards to verify that they meet the established data quality objectives.

(28) "Relative percent difference (RPD)" is a calculated measure used to compare results from duplicate sample analyses. It is calculated as specified in DEP-QA-001/01 (February 1, 2004), which is incorporated by reference in Rule 62-160.800, F.A.C.

(29) "Research method" is a field procedure or analytical laboratory method that involves the evaluation or use of a new, innovative technology.

(30) "Secondary Use Data" means information submitted to the Department that is being considered for use for purposes other than that for which the data were originally generated.

(31) "Site-specific sampling method" is a field method that is validated for the collection of environmental samples from a particular site, waste stream (e.g., facility location), or sample matrix (e.g., effluent, groundwater or drinking water). A site-specific sampling method is approved for use on a specific site by any field organization that is conducting field activities for that site. The approval of a site-specific sampling method does not apply to a sampling organization that wishes to use the method on other sites or intended for other projects. The alternative procedure approval process is outlined in subparts FA 2100 and FA 2200 of FA 1000, which is incorporated by reference in subparagraph 62-160.800(1)(a)1., F.A.C.

(32) "Spike" is an environmental sample that has been fortified with a known chemical of interest, at a known concentration. The purpose of a spike is to determine the method recovery efficiency for the chemical of interest, at the fortified concentration level, in the particular environmental sample of interest.

(33) "Statewide method" is a field procedure or analytical laboratory method that is validated for the collection or testing of environmental samples from similar sites or waste streams within the state of Florida by multiple field sampling organizations or laboratories, as applicable. The process for the validation of a statewide method is outlined in subparts FA 2100 and FA 2200 of FA 1000, which is incorporated by reference in subparagraph 62-160.800(1)(a)1., F.A.C., and in DEP-QA-001/01, which is incorporated by reference in subsection 62-160.800(5), F.A.C.

(34) "Surrogate spikes" are samples fortified at known concentration(s) with one or more compounds having similar chemical characteristics to the compounds of interest, but which are not normally found in environmental samples.

Rulemaking Authority 403.061, 403.0623 FS. Law Implemented 373.026, 373.309, 373.409, 373.413, 373.414, 373.416, 373.4592, 376.303, 376.305, 376.3071, 403.0623, 403.0625, 403.087, 403.088, 403.0881, 403.504, 403.704, 403.707, 403.722, 403.853 FS. History–New 1-1-91, Amended 2-4-93, 2-27-94, Formerly 17-160.120, Amended 3-24-96, 4-9-02, 6-8-04, 12-3-08, 7-30-14.

PART II
FIELD PROCEDURES

62-160.210 Approved Field Procedures.

(1) All persons that conduct or support field activities and field measurements shall follow the applicable procedures and requirements described the DEP SOP collections titled Standard Operating Procedures for Field Activities, DEP-SOP-001/01 and Standard Operating Procedures for Selected Bioassessment Activities, DEP-SOP-003/11, which are incorporated by reference in paragraphs 62-160.800(1)(a) and 62-160.800(1)(c), F.A.C., respectively.

(2) Additionally, all persons performing sampling for the Stream Condition Index (SCI), the Lake Vegetation Index or a Rapid Bioassessment (BioRecon) determination shall follow the procedures and satisfy the data quality objectives discussed in the following documents, which are incorporated by reference in paragraphs 62-160.800(2)(e) and 62-160.800(2)(f), F.A.C.

(a) Department of Environmental Protection, Sampling and Use of the Stream Condition Index (SCI) for Assessing Flowing Waters: A Primer (DEP-SAS-001/11); and,

(b) Department of Environmental Protection, Sampling and Use of the Lake Vegetation Index (LVI) for Assessing Lake Plant Communities in Florida: A Primer (DEP-SAS-002/11).

(3) Any person that wishes to apply for new or alternative field procedures other than those specified in DEP-SOP-001/01 shall follow the requirements provided in Rule 62-160.220, F.A.C.

Rulemaking Authority 403.061, 403.0623 FS. Law Implemented 373.026, 373.309, 373.409, 373.413, 373.414, 373.416, 373.4592, 376.303, 376.305, 376.3071, 403.0623, 403.0625, 403.087, 403.088, 403.0881, 403.504, 403.704, 403.707, 403.722, 403.853 FS. History–New 1-1-91, Amended 2-4-93, 2-27-94, Formerly 17-160.210, Amended 3-24-96, 10-15-96, 4-9-02, 6-8-04, 12-3-08, 7-30-14.

62-160.220 Approval of New and Alternative Field Procedures.

(1) Any party may apply for use of a field procedure other than those specified in DEP-SOP-001/01 and DEP-SOP-003/11, which are incorporated by reference in paragraphs 62-160.800(1)(a) and 62-160.800(1)(c), F.A.C., respectively. Any field procedure not included in DEP-SOP-001/01 and DEP-SOP-003/11 must be approved by the Department prior to use according to the requirements of subparts FA 2100 and FA 2200 of FA 1000, which are incorporated by reference in subparagraph 62-160.800(1)(a)1., F.A.C. Field procedures previously approved for use by a contract, order or permit shall remain approved for the duration of the project. The documentation that approved the use of the procedure must be retained for at least five years after the last use of the procedure.

(2) Field procedures not included in DEP-SOP-001/01 and DEP-SOP-003/11 or not specified by Department contracts, orders or permits, fall into one of the following two categories:

(a) New – a field procedure that involves the collection of an analyte (chemical compound, component, microorganism, etc.) in a specified matrix where a Department-approved field procedure does not exist.

(b) Alternative – a field procedure that involves the collection of an analyte (such as a chemical compound, component, or microorganism) in a specified matrix where a Department-approved procedure already exists. An alternative procedure is one intended to be used in place of an existing Department-approved field procedure. Alternative procedures cannot be approved for the following methods:

1. The procedures in the following DEP SOPs, which are contained in DEP-SOP-001/01, which is incorporated by reference in paragraph 62-160.800(1)(a), F.A.C., including all parts and subparts of the DEP SOPs cited:

a. FS 7000, except that the Department shall consider proposed alternatives to sample preservation procedures in FS 7000, in accordance with subsection 62-160.220(1), F.A.C.; and

b. FT 3000.

2. The procedures in the following DEP SOPs, which are contained in DEP-SOP-003/11, which is incorporated by reference in paragraph 62-160.800(1)(c), F.A.C., including all parts and subparts of the DEP SOPs cited:

a. BRN 1000;

b. LVI 1000; and,

c. SCI 1000, except that the Department shall consider proposed alternatives to sample preservation procedures in SCI 1000, in accordance with subsection 62-160.220(1), F.A.C.

3. The procedures for sampling, description of data quality objectives and criteria for data usability assessments for the Stream Condition Index (SCI), the Lake Vegetation Index (LVI), or a Biorecon determination in DEP-SAS-001/11, which is incorporated by reference in paragraph 62-160.800(2)(e), F.A.C., and DEP-SAS-002/11, which is incorporated by reference in paragraph 62-160.800(2)(f), F.A.C.

(3) A modification to an approved field procedure that is specifically allowed by the approved procedure is not considered an alternative or new procedure and does not require approval by the Department prior to use. However, the entity performing the modified procedure shall retain all data that demonstrate that the modification produces equivalent results when applied to the relevant sample matrix. These records shall be retained for at least five years after the last use of the modification.

(4) A new or alternative field procedure shall be evaluated based on its intended use. A new or alternative field procedure falls into one of two use categories:

(a) Site-Specific Sampling Method – the field procedure is validated for a specified project. A site-specific sampling method is approved for the project, and may be used by any organization designated to perform the procedure for the project.

(b) Statewide-Use Sampling Method – the field procedure is collaboratively validated for the collection of environmental samples from similar sites, matrices, waste streams, etc. within the state of Florida by multiple parties.

(5) Research field collection procedures shall be submitted for review and approval according to the requirements provided in Rule 62-160.600, F.A.C. If a method is initially developed for research purposes but will subsequently be used for compliance or other regulatory activities, the procedure(s) shall be submitted for review and approval according to subsections 62-160.220(1), (2), (4) and (6), F.A.C.

(6) Complete requests for a new or alternative field procedure shall be approved if the Department determines that the circumstances for the modification are justified, based on technical merit or logistical limitations in the sampling design, and that the requested modification would cause no loss in the ability of the requesting organization to evaluate data quality. In addition, any alternative field procedure must be demonstrated to meet or exceed the data quality objectives of the project.

(7) The approval or disapproval of any submitted new or alternative field procedure shall be noticed as follows:

(a) For procedures that are submitted for site-specific use, the Department shall issue an order of approval or disapproval of the new or alternative field procedure to the person who submitted the procedure (including the Department). Any additional administrative or scientific information pertinent to the approval or disapproval of the procedure shall be included or incorporated by reference in the order. On the date of its issuance, the order and the new or alternative field procedure shall be posted on the Department's Internet site, and all persons enrolled to receive the Department's Quality of Science eNewsletter shall be notified of the approval or disapproval of the submitted procedure via the designated listserve.

(b) For procedures that are submitted for statewide use, the Department shall issue an order to the person who submitted the procedure (including the Department). Any additional administrative or scientific information pertinent to the approval or disapproval of the procedure shall be included or incorporated by reference in the order. A notice of the order approving or disapproving the procedure shall be published in the Florida Administrative Weekly. On the date of its issuance, the order and the new or alternative field procedure shall be posted on the Department's Internet site, and all persons enrolled to receive the Department's Quality of Science eNewsletter shall be notified of the approval or disapproval of the submitted procedure via the designated listserve.

(c) Any person substantially affected by the approval or disapproval of the new or alternative field procedure may request an administrative hearing as provided in Chapter 120, F.S., within 21 days of the date of the order for site-specific use and within 21 days of the date of publication of the order in the Florida Administrative Weekly for state-wide use.

(8) Any new or alternative field procedure approved for statewide use shall be incorporated into updates of the Department's field sampling procedures (DEP-SOP-001/01). New or alternative field procedures approved for limited use shall not be incorporated into DEP-SOP-001/01.

(9) A field procedure approved by the Department shall be removed from approval if new technical, scientific or regulatory information justifies its removal. The Department shall use the best scientific and technical information, methods and data in its possession in making the determination to remove a procedure from approval.

(a) For a new or alternative field procedure that was approved for site-specific use, the Department shall issue an order of rescission of approval of the new or alternative field procedure to the person who submitted the procedure (including the Department). Any additional administrative or scientific information pertinent to the rescission of approval of the procedure shall be included or incorporated by reference in the order. On the date of its issuance, the order shall be posted on the Department's Internet site, and all persons enrolled to receive the Department's Quality of Science eNewsletter shall be notified of the rescission of approval of the procedure via the designated listserve. Any person substantially affected by the rescission of approval of the new or alternative field procedure may request an administrative hearing as provided in Chapter 120, F.S., within 21 days of the date of the order.

(b) For a new or alternative field procedure that was approved for statewide use, the Department shall issue an order of rescission of approval of the new or alternative field procedure to the person who submitted the procedure (including the Department). Any additional administrative or scientific information pertinent to the rescission of approval of the procedure shall be included or incorporated by reference in the order. A notice of the order rescinding approval of the procedure shall be published in the Florida Administrative Register. On the date of its issuance, the order shall be posted on the Department's Internet site, and all persons enrolled to receive the Department's Quality of Science eNewsletter shall be notified of the rescission of approval of the procedure via the designated listserve. Any person substantially affected by the rescission of approval of the new or alternative field procedure may request an administrative hearing as provided in Chapter 120, F.S., within 21 days of the date of publication of the

order in the Florida Administrative Register.

Rulemaking Authority 403.061, 403.0623 FS. Law Implemented 373.026, 373.309, 373.409, 373.413, 373.414, 373.416, 373.4592, 376.303, 376.305, 376.3071, 403.0623, 403.0625, 403.087, 403.088, 403.0881, 403.504, 403.704, 403.707, 403.722, 403.853 FS. History–New 1-1-91, Amended 2-4-93, Formerly 17-160.220, Amended 3-24-96, 10-15-96, 4-9-02, 6-8-04, 12-3-08, 7-30-14.

62-160.240 Record Keeping and Reporting Requirements for Field Procedures.

(1) The record keeping requirements for entities that conduct or support field activities and field measurements are specified in the DEP SOPs contained in the following collections: DEP-SOP-001/01, which is incorporated by reference in paragraph 62-160.800(1)(a), F.A.C., including all parts and subparts of DEP SOP FD 1000, which is incorporated by reference in subparagraph 62-160.800(1)(a)3., and DEP-SOP-003/11, which is incorporated by reference in paragraph 62-160.800(1)(c), F.A.C., including all DEP SOPs, parts and subparts therein applicable to bioassessment field activities. The specified records shall contain sufficient information to allow independent reconstruction of all activities related to generating data that are submitted to the Department. These records shall be kept by the generator of the records for a minimum of five years after the date of generation or completion of the records unless otherwise specified in a Department contract, order, permit or Title 62 rules.

(2) Electronic records shall be acceptable as documentation and shall be considered as equivalent in status and function to paper records or documents, unless otherwise specified in a Department contract, order, permit or Title 62 rule.

(a) All documentation requirements in this Chapter shall apply equally to paper and electronic records.

(b) Electronic copies intended to replace original records shall contain the same information as the original records, regardless of whether the electronic copies are designated as master or duplicate records.

(3) When requested by the Department, the following field sampling information shall be provided to the Department for each site/facility and sampling location, as applicable:

(a) Project information including:

1. Project and/or program identification or name; and

2. Site and/or facility name, address and phone number.

(b) Site and/or facility locational information to include (or as specified by the Department for indicated projects):

1. Latitude measure in degrees-minutes-seconds (seconds may contain up to four decimal places);

2. Longitude measure in degrees-minutes-seconds (seconds may contain up to four decimal places);

3. Datum – the horizontal reference for measuring locations on the Earth's surface;

4. Spheroid – the ellipsoid used as a model for the surface of the Earth; and

5. Geolocational collection information:

a. Collection method – the method or mechanism used to derive the measurements;

b. Collector name – name of individual who collected the locational data;

c. Collector affiliation – collector's agency or entity affiliation;

d. Collection date – date locational data were collected;

e. Relationship of point to feature – the type of the feature for which the measurement is being made;

f. Coordinate accuracy level – the measured, estimated or deduced degree of correctness of the measurement; and

g. Verification information including name of the person verifying the measurement, the date and the time when verification was performed.

(c) Information about the collected samples:

1. Name(s) and affiliation of individual(s) collecting samples;

2. Sampling method(s) used;

3. Sample description such as sample type, sample matrix, and sample treatments (preservation, filtration, etc.);

4. Client or field identification number for each sample;

5. Date and time of sample collection, including date and time sample collection ended (if collecting a composite sample);

6. Sample collection depth;

7. Unambiguous identification of all field-generated quality control samples such as field or equipment blanks, replicate samples or split samples; and

8. Any additional information from the field documentation records specified in the DEP SOPs contained in the collections DEP-SOP-001/01 and DEP-SOP-003/11, which are incorporated by reference in paragraphs 62-160.800(1)(a) and 62-160.800(1)(c),

F.A.C., respectively.

(d) Information about field measurement activities:

1. Method(s) used to make field measurement;

2. Name of field parameter;

3. Result, result units and associated data qualifier code(s); and

4. Any additional information from the field documentation records specified in the DEP SOPs contained in the collection DEP-SOP-001/01, which is incorporated by reference in paragraph 62-160.800(1)(a), F.A.C.

(e) Information about site conditions:

1. Weather;

2. Flow (including units); and

3. Any additional information from the field documentation records specified in the DEP SOPs contained in the collection DEP-SOP-001/001/01, which is incorporated by reference in paragraph 62-160.800(1)(a), F.A.C.

(f) Any additional information specified by the Department in contracts, orders, permits, Title 62 rules or Department-approved planning documents such as quality assurance plans, sampling and analysis plans, and monitoring plans.

(g) All documentation for new or alternative field procedures as required in Rule 62-160.220, F.A.C.

(3) Field sampling data issued to a client(s) for Department-related work or directly to the Department shall be provided to the Department in an electronic format consistent with requirements for importing into Department databases, as specified by the Department in applicable contracts, orders, permits or Title 62 rules. In addition, certain Department programs specify the submission of paper reports. Field sampling information may be incorporated into laboratory reports specified in Rule 62-160.340, F.A.C. Specific electronic and paper report format requirements shall be as specified by the Department in the applicable contract, order, permit or Title 62 rule.

(4) When data are provided to the Department in a report that is a summary, a re-published format, or in a reduced form (e.g., report, table, report form), the report shall not change the original data, or delete any data qualifiers reported by the originating field organization unless specified by Department contract, order, permit, or Title 62 rule. Copies (electronic or paper) of the original field report(s) shall be submitted with all such reports unless directed to do otherwise by the Department.

(5) When data qualifiers are added through a validation or review process that is independent of the field reporting process, the reason for the addition, the date of the addition, and the person adding the qualifier(s) shall be included. These qualifiers shall be included in any documents that are summaries or re-published formats, as described in subsection (4) above.

Rulemaking Authority 403.061, 403.0623 FS. Law Implemented 373.026, 373.309, 373.409, 373.413, 373.414, 373.416, 373.4592, 376.303, 376.305, 376.3071, 403.0623, 403.0625, 403.087, 403.088, 403.0881, 403.504, 403.704, 403.707, 403.722, 403.853 FS. History–New 4-9-02, Amended 6-8-04, 12-3-08, 7-30-14.

PART III

LABORATORY CERTIFICATION AND PROCEDURES

62-160.300 Laboratory Certification.

(1) Except as provided in subsections 62-160.300(2), (3), (4) and (5), F.A.C., or other Title 62 rules, all laboratories generating environmental data for submission to the Department or for use in Department-regulated or Department-sponsored activities shall hold certification from the Florida Department of Health, Environmental Laboratory Certification Program (DOH ELCP). Such certification shall be for all matrix/test method/analyte(s) combinations being measured. The matrix of a sample is defined to be the condition under which the laboratory originally receives the sample, and shall be classified according to the Field of Accreditation Matrix groups defined by subsection 62-160.120(18), F.A.C.

(a) Certification shall be based on the matrix of the sample. The matrix of a sample is defined to be the condition under which the laboratory originally receives the sample, and shall be classified according to the Field of Accreditation Matrix groups defined by subsection 62-160.120(18), F.A.C.

(b) For laboratories reporting data for drinking water compliance, certification shall be for all matrix/text method/analyte(s) combinations being reported.

(c) For the non-potable water matrix, laboratories shall apply for and receive DOH ELCP certification in at least one method for each analytical technology/analyte combination being measured. The Department will accept any of the combinations certified by

the DOH ELCP, according to Rule 64E-1.102, F.A.C., dated 1-24-05.

1. When a Department contract, order, permit or Title 62 rule requires a specific method to be reported, laboratories shall report only that method. Laboratories may report additional analytes not published in the reported method, if the applicable requirements in Rule 62-160.330, F.A.C. are met, and the laboratory is certified according to paragraph 62-160.300(1)(c), F.A.C.

2. Except as noted in sub-paragraph 62-160.300(1)(c)1., F.A.C., above, laboratories may report results by any method that is equivalent in technology to the method for which they hold certification, provided they are certified for the analyte that is reported. When laboratories report a method for which they do not hold certification, the laboratory shall document that all requirements of the reported method are met.

3. If a laboratory is required to provide data for an analyte for which, according to subsection 62-160.320(1), F.A.C., no method is published for the non-potable water matrix, or the published method for the non-potable water matrix does not meet required data quality objectives established by the Department for a project, but a method is published for the drinking water matrix, and the Department has recognized that the published drinking water method meets the data quality objectives for the Department project for which the method will be used according to subsection 62-160.320(1), F.A.C., the laboratory is not required to obtain certification for the analytical technology/analyte combination in the non-potable water matrix. However, the laboratory must be certified in the drinking water matrix for the reported test method/analyte combination.

(d) For all other matrices, laboratories shall apply for and receive certification for all matrix/test method/analyte combinations that are reported to the Department.

(2) To the extent possible, a laboratory must be certified as specified in subsection 62-160.300(1), F.A.C., before reporting results for a given matrix/analytical technology or test method/analyte combination. However, if a laboratory makes a written request to the Department to use a method that is not certified, the Department will allow a laboratory to begin using a method before the certification process is complete if the laboratory wishes to add an analyte to a matrix/analytical technology or test method combination that is already certified; or if the laboratory is certified for a specific matrix/analytical technology or test method/analyte combination and wishes to add the capability of analyzing samples using the same analytical technology or test method/analyte combination in a different matrix.

(a) The laboratory must have met all the requirements for certification except for the on-site visit by DOH ELCP inspectors. The laboratory must be prepared to provide to the Department copies of the relevant application, applicable performance test sample results and the initial demonstration of capability.

(b) The precision, accuracy and method detection limits generated by the laboratory must meet or exceed the project specific data quality objectives.

(c) The laboratory shall notify the Department of the status of its certification application within 5 business days of receiving notification by DOH ELCP of the certification status.

(3) Laboratory certification by the DOH ELCP is not required for the following test procedures when conducted for the purposes of drinking water compliance:

(a) Alkalinity;

(b) Bromide;

(c) Calcium;

(d) Chlorite (only at entrances to distribution systems);

(e) Specific conductance;

(f) Disinfectant residual (includes residual chlorine);

(g) Orthophosphate;

(h) pH;

(i) Silica;

(j) Specific ultraviolet absorbance;

(k) Temperature;

(l) Total organic carbon;

(m) Turbidity; or

(n) Any analytes in addition to those listed in paragraphs 62-160.300(3)(a) through 62-160.300(3)(m), F.A.C., above that are exempted from laboratory certification according to subsections 62-550.550(1) and 62-550.550(2), F.A.C., for the specific compliance applications described therein.

(o) The analytes exempted in paragraphs 62-160.300(3)(a) through 62-160.300(3)(n), F.A.C., above shall be analyzed according to all applicable requirements for analyses according to subsections 62-550.550(1) and 62-550.550(2), F.A.C., for the specific compliance applications described therein.

(p) In cases where the Department has a specific field testing method standard operating procedure (e.g., FT 1100 for pH, in DEP-SOP-001/01, which is incorporated by reference in subparagraph 62-160.800(1)(a)19., F.A.C.), the laboratory or authorized person, as described in Rule 62-550.550, F.A.C., shall follow the Department's procedures. For all other analytes, a laboratory or authorized person, as described in Rule 62-550.550, F.A.C., shall only use test methods that are acceptable for drinking water compliance, as specified in Rule 62-550.550, F.A.C. and shall follow all requirements for calibration verification according to DEP SOP FT 1000 in DEP-SOP-001/01, which is incorporated by reference in subparagraph 62-160.800(1)(a)18., F.A.C.

(4) Except for drinking water compliance testing (see subsection 62-160.300(3), F.A.C.), laboratories are not required to be certified by the DOH ELCP when conducting the following test procedures:

(a) pH;

(b) Dissolved oxygen;

(c) Specific conductance;

(d) Temperature;

(e) Total residual chlorine (including free available chlorine);

(f) Transparency or light penetration;

(g) Salinity;

(h) Oxidation/reduction potential;

(i) Turbidity;

(j) Explosive gases (when monitoring for the Lower Explosive Limit);

(k) Sulfite (when performed at the sampling location);

(l) Sediment oxygen demand;

(m) Any other test with a specific holding time of fifteen minutes or less when performed at the sampling location; and

(n) Any test in which the reported result is a calculation from the results of other tests for which the laboratory holds certification by the DOH ELCP. When conducting the analyses specified in paragraphs 62-160.300(4)(a) through (n), F.A.C., laboratories shall follow the applicable standard operating procedures in DEP-SOP-001/01 (March 31, 2008). If a method is not listed in DEP-SOP-001/01, the laboratory shall use an approved laboratory method as identified in Rule 62-160.320, F.A.C.

(5) Certification is not required for:

(a) Any analyses related solely to internal process control;

(b) Geochemical parameters and bacteriological tests conducted at the sampling location for the purposes of evaluating remediation activities;

(c) Those matrix/method/analyte combinations (such as taxonomic identification) that are not included in the DOH ELCP scope of accreditation; however, if the scope of accreditation is uncertain for a specified matrix/method/analyte combination, the Department shall refer the matter of scope of accreditation to the DOH ELCP for a determination;

(d) Research-oriented methods as described in Rule 62-160.600, F.A.C.; or

(e) Methods approved for site-specific, limited-use purpose if such certification is specifically waived by the Department program for which the method will be used.

(f) Methods and procedures required to perform the Specific Oxygen Uptake Rate (SOUR) test, when performed by authorized persons according to Chapter 62-640, F.A.C.

(6) If the requirement for certification is only temporarily waived by the Department according to paragraph 62-160.300(5)(e), F.A.C., for expediency in order to meet specific Department project objectives, the laboratory shall apply for certification for the relevant tests and matrices specified in the waiver, if the Department has determined that use of the tests for long-term compliance with Department rules is necessary. In this case, the Department shall establish a deadline for applying for the certification.

(7) Even if certification is not required (see subsections 62-160.300(3), (4) and (5), F.A.C.), laboratory organizations shall follow the relevant Department-approved methods as provided in Rule 62-160.320, F.A.C., as applicable. In addition, the laboratory shall operate a quality assurance program consistent with the quality systems requirements of the TNI Standards in EL-V1-2009-ISO, which is incorporated by reference in paragraph 62-160.800(3)(b), F.A.C.

Rulemaking Authority 403.061, 403.0623, 403.0625, 403.863 FS. Law Implemented 373.026, 373.309, 373.409, 373.413, 373.414, 373.416,

373.4592, 376.303, 376.305, 376.3071, 403.0623, 403.0625, 403.087, 403.088, 403.0881, 403.504, 403.704, 403.707, 403.722, 403.803, 403.853 FS. History–New 1-1-91, Amended 2-4-93, 2-27-94, Formerly 17-160.300, Amended 3-24-96, 4-9-02, 6-8-04, 12-3-08, 7-30-14.

62-160.320 Approved Laboratory Methods.

(1) Approved laboratory methods are specified in the Department's rules, contracts, orders or permits. When methods are specified by a Department rule, contract, order or permit, only those methods shall be used. For informational purposes, the Department maintains lists of methods, method compendiums and publication sources that have been recognized the Department. When laboratory methods are not specified in Department rules, contracts, orders or permits, applicable methods from the list of recognized methods are approved, where the methods are determined by the Department to satisfy data quality objectives established for the Department project. However, these lists shall not supersede or limit the use of other methods that are required by contract, order, permit or Title 62 rule. Links for the lists of methods are posted on the Department's webpage at http://www.dep.state.fl.us/water/sas/qa/am-sources.htm. Additionally, the Environmental Protection Agency published updated lists of analytical methods in Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act; Analysis and Sampling Procedures, Final Rule, Federal Register, Vol. 77, No. 97, Friday, May 18, 2012, Rules and Regulations, pp. 29758–29846, which is incorporated by reference in subsection 62-160.800(6), F.A.C.

(2) Except as specified in subsections (3) and (4) below, laboratories performing taxonomic identification for periphyton or benthic macroinvertebrates shall use the procedures in the following DEP SOPs, which are contained in DEP-SOP-002/01, which is incorporated by reference in paragraph 62-160.800(1)(b), F.A.C.:

(a) For taxonomic identification of periphyton, LQ 1000 shall be used, including part LQ 7000, and subparts LQ 7100 through LQ 7140;

(b) For taxonomic identification of benthic macroinvertebrates, LQ 1000 shall be used, including part LQ 7000, and subparts LQ 7400 through LQ 7420.

(3) Laboratories performing taxonomic identifications or calculations for the Stream Condition Index (SCI), the Lake Vegetation Index or making a Biorecon determination shall use the procedures in the following DEP SOPs, which are contained in DEP-SOP-003/11, which is incorporated by reference in paragraph 62-160.800(1)(c), F.A.C.:

(a) For the Stream Condition Index, SCI 1000 shall be used (including part SCI 2000 and subparts SCI 2100 through SCI 2230);

(b) For the Lake Vegetation Index, LVI 1000 shall be used (including part LVI 2000 and subparts LVI 2100 through LVI 2210);

(c) For the BioRecon determination, BRN 1000 shall be used (including part BRN 2000 and subparts BRN 2100 through BRN 2110).

(4) Additionally, laboratories or persons performing taxonomic identifications, calculations or data usability assessments for the Stream Condition Index (SCI), the Lake Vegetation Index or a BioRecon determination shall follow the procedures and satisfy the data quality objectives discussed in DEP-SAS-001/11 and DEP-SAS-002/11, which are incorporated by reference in paragraphs 62-160.800(2)(e) and 62-160.800(2)(f), F.A.C., respectively.

(5) Laboratories calculating the Lake Condition Index (LCI) shall use the procedures in DEP SOP LT 7000 (including parts LT 7010, LT 7020, LT 7030, LT 7040, LT 7300 and LT 7900), which are contained in DEP-SOP-002/01, and incorporated by reference in subparagraph 62-160.800(1)(b)3., F.A.C.

(6) Laboratories calculating the Wetland Condition Indices (WCI) shall use the procedures in DEP SOP LT 7000, part LT 7600, including all subparts as listed below, which are contained in DEP-SOP-002/01, and incorporated by reference in subparagraph 62-160.800(1)(b)3., F.A.C.:

(a) For the determination of Wetland Condition Index for freshwater isolated herbaceous wetlands, DEP SOP subpart LT 7610 shall be used (including subparts LT 7611 and LT 7612).

(b) For the determination of Wetland Condition Index for freshwater isolated forested wetlands, DEP SOP subpart LT 7620 shall be used (including subparts LT 7621 and LT 7622).

Rulemaking Authority 403.061, 403.0623 FS. Law Implemented 373.026, 373.309, 373.409, 373.413, 373.414, 373.416, 373.4592, 376.303, 376.305, 376.3071, 403.0623, 403.0625, 403.087, 403.088, 403.0881, 403.504, 403.704, 403.707, 403.722, 403.853 FS. History–New 4-9-02, Amended 12-3-08, 7-30-14.

62-160.330 Approval of New and Alternative Laboratory Methods.

(1) Any person may apply for use of a laboratory method other than those described in subsection 62-160.320(1), F.A.C. Laboratory methods that have been previously approved for use in a contract, order, or permit, or approved by the Department to meet established data quality objectives according to subsection 62-160.320(1), F.A.C., shall remain approved. The documentation that approved the use of the method must be retained for at least five years after the last use of the method.

(2) All new and alternative laboratory methods that support a Department contract, order, permit or Title 62 rule must be approved by the Department prior to use. These methods fall into one of two categories:

(a) New – an analytical laboratory method that tests for an analyte (such as a chemical compound, component, or microorganism) in a specified matrix, and where a method has not been specified, recognized or approved by the Department according to subsection 62-160.320(1), F.A.C.

(b) Alternative – an analytical laboratory method that tests for an analyte (such as a chemical compound, component, or microorganism) in a specified matrix, and is intended to be used in place of a method that has been specified, recognized or approved by the Department according to subsection 62-160.320(1), F.A.C. Alternative methods cannot be approved for the following:

1. Any method that the United States Environmental Protection Agency has designated for analysis of a "method-defined analyte"; and

2. The following methods from DEP-SOP-002/01, which is incorporated by reference in subparagraph 62-160.800(1)(b)3., F.A.C., including all subparts of the methods cited:

a. LT 7300, Lake Condition Index (LCI) Determination; and

b. Part LT 7600 of LT 7000.

3. The following methods from DEP-SOP-003/11, which is incorporated by reference in paragraph 62-160.800(1)(c), F.A.C., including all parts and subparts of the methods cited:

a. BRN 1000;

b. SCI 1000, except that the Department shall consider proposed alternatives to sample preservation procedures in SCI 1000, in accordance with subsection 62-160.330(1), F.A.C.;

c. LVI 1000.

(3) A method modification is any modification to a published analytical laboratory method that changes the scope and applicability, specifications, procedures, performance criteria or requirements contained in the method, as applicable to the analytes and matrices for which the method was originally published. A published method is any method specified, recognized or approved by the Department according to subsection 62-160.320(1), F.A.C., or otherwise available to the public in the scientific literature. A modified method must satisfy the data quality objectives established by the Department project for which the modifed method will be used. Additionally, validation of the modified method shall demonstrate that the modified method produces equivalent or superior analytical performance, as compared to the unmodified method, where applicable to the analyte and matrix for which the modifed method will be used.

(a) Upon review of any request to use a modified method, the Department shall determine whether the proposed modified method is a new method or alternative method, according to subparagraph 62-160.330(2)(a) or 62-160.330(2)(b)., F.A.C. All proposals to use modified methods as new methods or alternative methods shall include the submittal of method validation documentation to the Department. Modified methods that are not determined to be new or alternative methods do not require submittal of method validation documentation, as indicated in paragraph (b) below. Methods listed in subparagraphs 62-160.330(2)(b)1. – 62-160.330(2)(b)3., F.A.C., may not be modified.

(b) Except as indicated in paragraph (c) below, method modifications specifically allowed by the published method and do not require submittal of method validation documentation to the Department prior to use. However, the laboratory shall retain all data that demonstrate that the modification meets the Department's data quality objectives established for the Department project for which the method will be used, and Department approval is limited to the specific method scope and modifications validated by the laboratory. In addition, the laboratory shall document initial and ongoing performance of the method modification, where such demonstration is required by the original, unmodified published method, and, as otherwise required in the testing module of the TNI Standard EL-V1-2009-ISO, which is incorporated by reference in paragraph 62-160.800(3)(b), F.A.C., that is applicable to the method, when laboratory certification is required according to Rule 62-160.300, F.A.C. All method validation records shall be retained for at least five years after the last use of the modification.

1. Except as indicated in subparagraph 62-160.330(2)(b)1., F.A.C., allowable modifications described by the Environmental Protection Agency (EPA) at 40 CFR, Part 136.6, which is incorporated by reference in subsection 62-160.800(10), F.A.C., are applicable to the methods listed at 40 CFR, Part 136.3, which is incorporated by reference in subsection 62-160.800(7), F.A.C. The Department shall consider all interpretations of 40 CFR Part 136.6 as published by the EPA on its webpages or in applicable EPA memoranda when responding to requests from any person for assistance in clarifying whether a modification to a method listed at 40 CFR, Part 136.3 is allowed. Where such a determination is uncertain or controversial, the Department shall refer the request to the EPA Region 4 Regional Administrator for determination. However, this determination shall not supersede any requirements in Department rules, contracts, orders or permits to use specific methods.

2. Except as indicated in subparagraph 62-160.330(2)(b)1., F.A.C, the Department has determined that methods published by the Environmental Protection Agency (EPA) as the collection entitled Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846) may be modified, to achieve Department data quality objectives, when such modifications are made according to the information and requirements for implementing flexibility in the use of SW-846 methods, alternative methods or method modifications, as discussed in Chapter Two, Section 2.1, in SW-846, which is incorporated by reference in subsection 62-160.800(13), F.A.C.. However, this determination shall not supersede any requirements in Department rules, contracts, orders or permits to use specific methods.

(c) If the modified method will be used as an alternative method as described in subsection 62-160.320(2), F.A.C., the method validation shall demonstrate that the modified method produces equivalent or superior analytical performance in meeting the data quality objectives established for the Department project, as compared to the method for which it is proposed as an alternative. Validation documentation shall be submitted to the Department according to subsection 62-160.330(4), F.A.C.

(4) New and alternative methods shall be demonstrated as appropriate for use according to the requirements in DEP-QA-001/01, which is incorporated by reference in subsection 62-160.800(5), F.A.C., unless otherwise specified in a Department contract, order, permit or Title 62 rule. Where applicable, any additional demonstrations of initial and ongoing performance shall also be evaluated and documented for the new or alternative method, where such demonstration is required by an original, published method, including a published method that has been modified, and, as otherwise required in the testing module of the TNI Standard EL-V1-2009-ISO, which is incorporated by reference in paragraph 62-160.800(3)(b), F.A.C., that is applicable to the method, when laboratory certification is required according to Rule 62-160.300, F.A.C. Except as indicated in paragraph 62-160.330(2)(b), F.A.C., method validation documentation shall be submitted to the Department for review and approval. The submitted method validation documentation for a new or alternative laboratory method shall be evaluated by the Department based on its intended use:

(a) Limited-Use Method – the laboratory method is intended only for testing environmental samples from a particular site, waste stream (e.g., facility location) or sample matrix (e.g., effluent, groundwater or drinking water). A limited-use method is validated by a single laboratory and shall only be used by that laboratory.

(b) Statewide-Use Method – the laboratory method is intended for testing environmental samples from similar matrices, sites or waste streams within the state of Florida by multiple laboratories. For a statewide method, the Department requires an interlaboratory collaborative study following the specifications in Appendix D, Official Methods of Analysis of the AOAC INTERNATIONAL, which is incorporated by reference in subsection 62-160.800(14), F.A.C. Alternatively, an interlaboratory collaborative study that is designed based on procedures published by a nationally recognized consensus-based standards organization (e.g., ASTM International) may be used. Specifications for these studies are provided in DEP-QA-001/01, which is incorporated by reference in subsection 62-160.800(5), F.A.C.

(5) Research methods shall be submitted for review and approval according to the requirements provided in Rule 62-160.600, F.A.C. If a method is initially developed for research purposes but will subsequently be used for compliance or other regulatory activities, the method shall be submitted for review and approval according to subsections 62-160.330(1), (2) and (4), F.A.C.

(6) The approval or disapproval of any submitted new or alternative method shall be noticed as follows:

(a) For methods that are submitted for limited use, the Department shall issue an order of approval or disapproval of the new or alternative method to the person who submitted the method (including the Department). Any additional administrative or scientific information pertinent to the approval or disapproval of the method shall be included or incorporated by reference in the order. On the date of its issuance, the order and the new or alternative method shall be posted on the Department's Internet site, and all persons enrolled to receive the Department's Quality of Science eNewsletter shall be notified of the approval or disapproval of the submitted method via the designated listserve.

(b) For methods that are submitted for statewide use, the Department shall issue an order to the person who submitted the method (including the Department). Any additional administrative or scientific information pertinent to the approval or disapproval of the method shall be included or incorporated by reference in the order. A notice of the order approving or disapproving the method shall be published in the Florida Administrative Register. On the date of its issuance, the order and the new or alternative method shall be posted on the Department's Internet site, and all persons enrolled to receive the Department's Quality of Science eNewsletter shall be notified of the approval or disapproval of the submitted method via the designated listserve.

(c) Any substantially affected party may request an administrative hearing as provided in Chapter 120, F.S., within 21 days of the date of the order for limited use or within 21 days of the date publication of the order in the Florida Administrative Weekly for state-wide use.

(7) Applicants who are analyzing discharges regulated under the National Pollutant Discharge Elimination System (NPDES) permit system shall comply with applicable regulations in 40 CFR Part 136 sections 136.4, 136.5 and 136.6 , which are incorporated by reference in subsections 62-160.800(8)-(10), F.A.C., respectively. Applicants shall submit the application to the Department, which shall forward the application to the United States Environmental Protection Agency Administrator of Region 4 for review and approval. The determination for approval or rejection shall be made by the United States Environmental Protection Agency. If requested by the applicant, the Department shall assist the applicant in determining whether an application is required for modifications to methods listed at 40 CFR, Part 136.3, according to subparagraph 62-160.330(2)(b)1., F.A.C.

(8) Applicants who are analyzing compliance samples under the Safe Drinking Water Act shall comply with the applicable provisions 40 CFR Part 141, section 141.27, which is incorporated by reference in subsection 62-160.800(11), F.A.C. and Rule 62-550.550, F.A.C. Use of an alternative analytical technique requires written permission from the Department and United States Environmental Protection Agency.

(9) Except for methods promulgated by the United States Environmental Protection Agency in the Federal Register, a new or alternative laboratory method approved by the Department shall be removed from approval if new technical, scientific or regulatory information justifies its removal. The Department shall use the best scientific and technical information, methods and data in its possession in making the determination to remove a laboratory method from approval.

(a) For a new or alternative laboratory method that was approved for limited use, the Department shall issue an order of rescission of approval of the new or alternative laboratory method to the person who submitted the method (including the Department). Any additional administrative or scientific information pertinent to the rescission of approval of the method shall be included or incorporated by reference in the order. On the date of its issuance, the order shall be posted on the Department's Internet site, and all persons enrolled to receive the Department's Quality of Science eNewsletter shall be notified of the rescission of approval of the method via the designated listserve. Any person substantially affected by the rescission of approval of the new or alternative laboratory method may request an administrative hearing as provided in Chapter 120, F.S., within 21 days of the date of the order.

(b) For a new or alternative laboratory method that was approved for statewide use, the Department shall issue an order of rescission of approval of the new or alternative laboratory method to the person who submitted the method (including the Department). Any additional administrative or scientific information pertinent to the rescission of approval of the method shall be included or incorporated by reference in the order. A notice of the order rescinding approval of the method shall be published in the Florida Administrative Register. On the date of its issuance, the order shall be posted on the Department's Internet site, and all persons enrolled to receive the Department's Quality of Science eNewsletter shall be notified of the rescission of approval of the method via the designated listserve. Any person substantially affected by the rescission of approval of the new or alternative laboratory method may request an administrative hearing as provided in Chapter 120, F.S., within 21 days of the date of publication of the order in the Florida Administrative Register.

Rulemaking Authority 403.061, 403.0623 FS. Law Implemented 373.026, 373.309, 373.409, 373.413, 373.414, 373.416, 373.4592, 376.303, 376.305, 376.3071, 403.0623, 403.0625, 403.087, 403.088, 403.0881, 403.504, 403.704, 403.707, 403.722, 403.853 FS. History–New 4-9-02, Amended 6-8-04, 12-3-08, 7-30-14.

62-160.340 Record Keeping and Reporting Requirements for Laboratory Procedures.

(1) Laboratory record keeping requirements shall follow those specified by the DOH ELCP in Rule 64E-1.005, F.A.C., dated 1-24-05 and this Chapter.

(a) The laboratory records shall contain sufficient information to allow independent reconstruction of all activities related to generating data that are submitted to the Department.

(b) In addition, the laboratory shall ensure that its records include all information necessary to support the analytical report (subsection 62-160.340(3), F.A.C.).

(c) Records shall be retained for a minimum of five years after the date of generation or completion of the records unless otherwise specified in a Department contract, order, permit or Title 62 rules.

(d) Electronic records shall be acceptable as documentation and shall be considered as equivalent in status and function to paper records or documents, unless otherwise specified in a Department contract, order, permit or Title 62 rule.

1. All documentation requirements in this Chapter shall apply equally to paper and electronic records.

2. Electronic copies intended to replace original records shall contain the same information as the original records, regardless of whether the electronic copies are designated as master or duplicate records.

(2) When requested by the Department, the laboratory shall provide applicable records or copies of the records to the Department. These records shall include, but are not limited to:

(a) Laboratory and project information including:

1. Signed and dated final report (laboratory analytical report) as specified in subsection (3) below;

2. Project information such as client name, site name, client project number, or client project name;

3. When applicable, the quality assurance project plan associated with the project;

4. Client or field identification number for each sample;

5. Date and time of sample collection;

6. Sample matrix (e.g., groundwater, effluent, waste, soil, etc.);

7. Sample type (e.g., environmental sample, field blank, matrix spike); and

8. Identification of all laboratories providing analytical results in the report and the appropriate laboratory certification numbers from the DOH ELCP (if applicable) for each laboratory.

(b) Sample receipt, preparation and analysis information including:

1. Laboratory identification number for each sample fraction;

2. Sample receipt conditions such as proper and intact custody seals;

3. Positive verification of chemical and/or physical sample preservation during sample receipt and/or before sample analysis. The information shall include the preservation acceptance criteria, an indication of acceptability, and the value(s) if the criteria are not met;

4. Sample preparation information, if applicable, including method, date of sample preparation and time of sample preparation if the holding time specified in Rule 62-160.400, F.A.C., is less than or equal to 72 hours;

5. Sample analysis information including analytical method, date of sample analysis, and time of sample analysis if the holding time specified in Rule 62-160.400, F.A.C., is less than or equal to 72 hours; and

6. Analysis records of original data. Original data is information generated at the time of or as the result of performing laboratory procedures or tests; e.g., “raw” data automatically reported or logged from analytical instrumentation, such as strip chart recordings or chromatograms; handwritten laboratory notes, laboratory notebooks or drawings; completed laboratory forms or bench sheets; and photographs.

(c) Sample result information including:

1. Analyte or organism name as applicable;

2. Test result with all applicable data qualifiers, as specified in Table 1: Data Qualifier Codes;

3. Test result units;

4. Other sample characteristics such as percent moisture or fraction (i.e., total or dissolved); and

5. Textual comments, if applicable, that specify any deviations (such as failed quality control), additions to, or exclusions from, the analytical method, and any non-standard conditions (such as sample matrix or environmental conditions) that have affected the quality of results.

(d) Laboratory quality control information including:

1. Identification that unambiguously links groups of samples to a specified set of activities such as preparation, analysis, shipping, reporting, or quality control;

2. Laboratory blank results (results for any laboratory blank analysis as required by the DOH ELCP certification or the

analytical method); and

3. Information pertaining to replicate sample analysis including an unambiguous designation of the replicate sample (e.g., sample duplicate, sample matrix spike duplicate, laboratory control spike duplicate, etc.); result of laboratory replicate analysis; replicate precision expressed in terms required by the reported method or as Relative Percent Difference or Percent Relative Standard Deviation (defined in DEP-QA-001/01 (February 1, 2004)); and acceptance limits for controlling replicate precision (in-house control limits used by the data generator when control limits are not specified by the reported method or data quality objectives identified by the Department).

(e) Instrument Calibration/Verification including:

1. Number of standards;

2. Acceptability requirements for initial calibration, and initial and continuing calibration verifications; and

3. Origin, and preparation (if applicable) for all standards used for calibration.

(f) For chemical testing:

1. When applicable, indication that a sample was filtered in the laboratory;

2. For each analyte, records to support:

a. When applicable, determination of method detection limit(s) and practical quantitation limit(s) including the method by which each are determined; the raw and processed data supporting the determination(s); and effective dates; and

b. Dilution factor (if applicable).

3. Matrix or laboratory control spike information including concentration level (level of analyte added to a spiked sample), matrix or laboratory control spike recovery (results for matrix spike/duplicate sample analysis including those required by methods) and matrix or laboratory control spike recovery limits (in-house recovery limits used by the data generator when control limits are not specified by the reported method or data quality objectives identified by the Department); and

4. When performed, surrogate spike information including concentration level (level of analyte added to the sample), surrogate spike recovery, and surrogate recovery limits (in-house recovery limits used by the data generator when control limits are not specified by the reported method or data quality objectives identified by the Department).

(g) For microbiological testing:

1. Results of all applicable reagent or dilution water quality or suitability test associated with samples;

2. Results of all media quality control tests; and

3. Sample ID of sample used to verify positive results and results of such verifications.

(h) For toxicity (bioassay) testing:

1. Test type (acute or chronic);

2. Test organism(s) used;

3. Age(s) of test organism(s);

4. Test result(s);

5. Statistical method used to generate the result(s);

6. Control data (mortality/weight/reproduction, etc.) as appropriate to test type;

7. Test end points and confidence intervals;

8. Standard reference toxicant data associated with batch of test organisms; and

9. Physical and chemical measures that are associated with the test (pH, temperature, dissolved oxygen, etc.).

(i) For benthic invertebrate taxonomic identification:

1. Sorting efficiency, as percent (%);

2. Number and identity of taxa in sample;

3. Percent agreement between or among identifications performed by two or more independent taxonomists associated with the period when results were generated;

4. Indication of which organisms were verified against standard reference collection; and

5. Indication of whether the organism range includes Florida.

(j) For algal taxonomic identification:

1. Percent agreement between or among identifications performed by two or more independent taxonomists associated with the period when results were generated;

2. Number and identity of taxa in the sample;

3. Microscope magnification;

4. Dilution factor;

5. Surface area sampled (periphyton) or volume sampled (phytoplankton);

6. Number of fields counted; and

7. Counting chamber dimensions.

(k) Field quality control results including trip blanks, field blanks, equipment blanks, and field replicates as required by individual DEP SOPs in DEP-SOP-001/01, which is incorporated by reference in paragraph 62-160.800(1)(c), F.A.C., or the applicable contract, order, permit, or Title 62 rule;

(l) Any additional elements specified by the Department in contracts, orders, permits, Title 62 rules, or Department-approved planning documents such as quality assurance plans, sampling and analysis plans, and monitoring plans;

(m) All documentation for modified, new and alternative methods, as required in Rule 62-160.330, F.A.C.; and

(n) Any additional records required in individual DEP SOPs in DEP-SOP-002/01, which is incorporated by reference in paragraph 62-160.800(1)(b), F.A.C., including DEP SOP LD 1000 and all parts and subparts of LD 1000 therein; and, any additional records required in individual DEP SOPs in DEP-SOP-003/11, incorporated by reference in paragraph 62-160.800(1)(c), F.A.C., including all DEP SOP parts and subparts therein, as applicable to the documentation of bioassessment activities.

(3) Except as noted in subsection (4) below, a laboratory shall generate an analytical report that meets the requirements of the DOH ELCP, as specified in Rule 64E-1.005, F.A.C., dated 1-24-05, and the TNI Standards (EL-V1-2009-ISO), which is incorporated by reference in paragraph 62-160.800(3)(b), F.A.C. The report shall contain all applicable reporting elements specified in and shall otherwise comply with requirements specified in Sections 5.10 through 5.10.11 of Module 2 of the TNI Standards (General Quality Systems Requirements) in EL-V1-2009-ISO, and shall use the applicable qualifiers as defined in Table 1: Data Qualifier Codes (Rule 62-160.700, F.A.C.). In addition to the stated requirements, laboratories shall ensure that the following requirements are met or reported:

(a) All results that are less than the laboratory's practical quantitation limit shall be reported using the applicable data qualifiers.

(b) Except for tests in which a method detection limit is not required, non-detected analytes shall be indicated by the method detection limit value, followed by the code "U".

(c) For tests that do not require a method detection limit study, values below the reporting limit attributed to the test shall be reported as the reporting limit value followed by the code "U".

(d) When the holding time for a preparation step is specified, the date of sample preparation shall be reported. The time shall also be reported if the holding time for sample preparation is equal to or less than 72 hours.

(e) Any additional information specified by the Department in contracts, orders, permits or Title 62 rules shall be reported.

(4) Laboratories that are operated by a facility and whose sole function is to provide data to the facility management for compliance purposes (i.e., in-house or captive laboratories as described in section 5.10.10 of TNI Standard EL-V1-2009-ISO, Module 2 (General Quality Systems Requirements), which is incorporated by reference in paragraph 62-160.800(3)(b), F.A.C., shall meet the requirements specified in that standard.

(5) If required by the Department in an applicable contract, order, permit or Title 62 rule, or requested by a Department program, laboratory data issued to a client(s) for Department-related work or directly to the Department shall be provided in the Department-specified paper format or in an electronic format meeting Department requirements for importing into Department databases or for other electronic submission requirements.

(6) Once issued, a laboratory report is considered final and shall not be amended. Amendments or corrections to a final laboratory report shall be made in accordance with the requirements of section 5.10.9 of TNI Standard EL-V1-2009-ISO, Module 2 (General Quality Systems Requirements), which is incorporated by reference in paragraph 62-160.800(3)(b), F.A.C.

(7) When data are provided to the Department in a document that is a summary, a re-published format or in a reduced form (e.g., report, table, report form), the document shall not change the original data, or delete any data qualifiers reported by the originating laboratory unless specified by Department contract, order, permit, or Title 62 rule. Copies of the original laboratory report(s) shall be submitted with all such reports unless directed to do otherwise by the Department.

(8) When data qualifiers are added through a validation or review process that is independent of the laboratory reporting process, the reason for the addition, the date of the addition, and the person adding the qualifier(s) shall be included. These qualifiers shall be included in any documents that are summaries or re-published formats, as described in subsection (7) above.

Rulemaking Authority 403.061, 403.0623 FS. Law Implemented 373.026, 373.309, 373.409, 373.413, 373.414, 373.416, 373.4592, 376.303,

376.305, 376.3071, 403.0623, 403.0625, 403.087, 403.088, 403.0881, 403.504, 403.704, 403.707, 403.722, 403.853 FS. History–New 4-9-02, Amended 6-8-04, 12-3-08, 7-30-14.

62-160.400 Sample Preservation and Holding Times.

(1) Except as noted in subsection (2) below, or as otherwise provided for in the rules of a specific Department program, sample preservation methods, container types and holding times shall follow those requirements specified in DEP-SOP-001/01 (March 31, 2008), section FS 1006 in FS 1000, which is incorporated by reference in Rule 62-160.800, F.A.C.

(2) Sample preservation procedures, container material and maximum allowable holding times for analytes not specified in DEP-SOP-001/01 (March 31, 2008) shall follow the preservation, container and holding time requirements specified in the selected analytical method. If no method-specified requirements exist, the best available scientific knowledge shall be used as guidance for determining the appropriate procedures for use.

Rulemaking Authority 403.061, 403.0623 FS. Law Implemented 373.026, 373.309, 373.409, 373.413, 373.414, 373.416, 373.4592, 376.303, 376.305, 376.3071, 403.0623, 403.0625, 403.087, 403.088, 403.0881, 403.504, 403.704, 403.707, 403.722, 403.853 FS. History–New 1-1-91, Amended 2-4-93, Formerly 17-160.400, Amended 3-24-96, 10-15-96, 4-9-02, 6-8-04, 12-3-08.

62-160.405 Electronic Signatures.

Laboratory and field documents signed with an electronic signature are acceptable as written signatures when:

(1) The integrity of the electronic signature can be assured;

(2) The signature is unique to the individual;

(3) The organization using electronic signatures has written policies for the generation and use of electronic signatures; and

(4) The organization using electronic signatures has written procedures for ensuring the security, confidentiality, integrity and auditability of each signature.

Rulemaking Authority 403.061, 403.0623, 668.006 FS. Law Implemented 668.006, 668.50 FS. History–New 12-3-08.

PART IV
MISCELLANEOUS

62-160.600 Research Field and Laboratory Procedures.

(1) Research field sampling and laboratory procedures involve one or more of the following:

(a) Evaluation, development or use of new, innovative technologies not yet approved by the Department;

(b) Evaluation, development or use of innovative field sampling or analytical laboratory methods not yet approved by the Department;

(c) Evaluation of new methodology or technology to be used in lieu of a Department-approved method; and

(d) Other projects not included in the above areas but designated as research by the relevant Department project or contract manager.

(2) If a research field sampling or laboratory method is being developed for subsequent use in compliance or other regulatory activities, the method shall be reviewed and approved according to the requirements provided in Rules 62-160.220 and 62-160.330, F.A.C.

(3) All research field sampling and laboratory procedures shall be described in a Department-approved work or study plan or in direct contract language. The following minimum elements shall be addressed, as applicable:

(a) Project purpose and intended end use of the data, including specific hypotheses;

(b) Brief historical overview or literature searches;

(c) Statement of anticipated results or effects of the research project;

(d) Description of work to be conducted, including the types of analyses to be performed to monitor the effectiveness of the research;

(e) The information and records to be included in the data report package and the reporting format for hard copy and electronic reports. Minimum requirements for record keeping shall follow those specified in Rules 62-160.240 and 62-160.340, F.A.C., as applicable;

(f) Identification of any specialized training or certification needed by personnel in order to successfully complete the project or

task. This requirement includes specifying any laboratory certification requirements as provided in Rule 62-160.300, F.A.C. The Department project manager may waive the requirement for laboratory certification as provided in paragraph 62-160.300(5)(e), F.A.C. Regardless of a waiver of certification requirement, laboratories conducting work for a research projects shall operate a quality assurance program consistent with the quality systems standards of The NELAC Institute (TNI Standard EL-V1-2009-ISO, which are incorporated by reference in paragraph 62-160.800(3)(b), F.A.C. The Department shall assist the researcher in determining which specific TNI standards are relevant to the research project.

(g) All aspects of data generation and acquisition to ensure appropriate methods for sampling, measurement and analysis, data collection or generation, data handling, and quality assurance and quality control activities are employed and documented;

(h) The experimental data generation or data collection design for the project, including as appropriate:

1. Types and numbers of samples required;

2. Design of the sampling network;

3. Sampling locations and frequencies;

4. Sample matrices;

5. Analytes of interest;

6. Rationale for the design;

7. Procedures for collecting samples, including sample handling, preservation and custody in the field, laboratory and transport, and sampling equipment specifications and equipment decontamination procedures;

8. Sample preparation (if applicable) and analytical methods used;

9. Quality control activities needed for sampling and analysis, and the assessment of the quality control results. Quality control activities for the field and the laboratory include, but are not limited to, the use of blanks, duplicates, matrix spikes, laboratory control samples and surrogates;

10. Quality assurance activities that occur after the data collection or generation phase of the project, such as data verification validation, and field and laboratory audits;

11. Criteria to be used to objectively and consistently review, verify and validate project data, including the chain of custody for data throughout the life of the project or task;

12. Proposed methods to analyze the data and determine possible anomalies or departures from assumptions established in the planning phase of data collection; and

13. Any additional elements specifically required by the Department project manager.

(4) The Department shall conduct a technical review of the project work plan prior to the project's initiation in order to assess its technical and scientific merit and appropriateness.

Rulemaking Authority 403.061, 403.0623 FS. Law Implemented 373.026, 373.309, 373.409, 373.413, 373.414, 373.416, 373.4592, 376.303, 376.305, 376.3071, 403.0623, 403.0625, 403.087, 403.088, 403.0881, 403.504, 403.704, 403.707, 403.722, 403.853 FS. History–New 1-1-91, Amended 2-4-93, Formerly 17-160.600, Amended 3-24-96, 10-15-96, 4-9-02, 7-30-14.

62-160.650 Field and Laboratory Audits.

(1) The Department and agencies or individuals with delegated authority from the Department shall conduct periodic audits of field and laboratory procedures and/or records to determine if approved protocols are being followed as required and to ensure data are being generated in compliance with the requirements of this chapter.

(2) An audit shall consist of one or more of the following:

(a) An on-site assessment of field sampling and/or laboratory procedures;

(b) A review, assessment and/or validation of data associated with a Department program activity;

(c) The submission of performance samples (e.g., blind, split and/or performance check samples) to an organization for subsequent use in the evaluation of that organization's technical performance associated with a specific Department project or program activity; or

(d) Other relevant information as specified in a Department contract, order, permit or Title 62 rule.

(3) Upon request, the audited field sampling organization, individual consultant or responding party shall provide copies of all applicable records as specified in Rule 62-160.240, F.A.C. Sufficient information shall be provided to enable the auditor to independently reconstruct all field procedures related to the project.

(4) Upon request, the audited laboratory, individual consultant or responding party shall provide copies of those applicable

records as specified in Rule 62-160.340, F.A.C. Sufficient information shall be provided to enable the auditor to independently reconstruct all laboratory procedures related to the project.

(5) Within ninety (90) days of the audit, the Department shall provide a preliminary audit report to the audited field sampling or laboratory organization, individual, consultant or responding party ("audited party"). The audited party shall have forty-five (45) days thereafter to respond with a detailed plan of corrective actions and an implementation schedule for the deficiencies that were noted in the preliminary audit report; justification for noted deficiencies that will not be addressed or corrected; and any corrections or rebuttals to the audit findings. If different than the above, the Department shall specify in rules, contracts, orders or permits any alternative schedules and procedures for the distribution of preliminary audit reports to designated recipients and for any required corrective action plans or other responses from designated respondents.

(6) Failure to respond with a plan of corrective action or to additional requests by the Department for a plan of corrective action shall result in a recommendation to the affected program that the data not be used.

(7) Once a response has been received, the Department shall evaluate the response for technical applicability and completeness. The Department will issue a final response to the audited party and any affected organization or individual that specifies acceptance or rejection of the audited party's plan of corrective actions, provides recommendations concerning the usability of the audited data, and includes a statement of any substantially affected person's rights under Chapter 120, F.S. If different than the above, the Department shall specify in rules, contracts, orders or permits any alternative schedules and procedures for the distribution of the Department's final response to designated recipients, to include acceptance or rejection of the audited party's plan of corrective actions, recommendations concerning the usability of the audited data and any other relevant information. Any substantially affected organization or person (e.g., field sampling or laboratory organization, individual, consultant, responding party, permittee, or facility owner/operator) may request an administrative hearing as provided in Chapter 120, F.S., within 21 days of receipt of the final response.

(8) The requirements in subsections 62-160.650(4) through 62-160.650(7), F.A.C shall not apply to field proficiency audits of organizations or persons conducting field bioassessment procedures according to DEP SOPs BRN 1000, LVI 1000 or SCI 1000, which are incorporated by reference in subparagraphs 62-160.800(1)(c)1.-3., F.A.C., respectively.

Rulemaking Authority 403.061, 403.0623 FS. Law Implemented 373.026, 373.309, 373.409, 373.413, 373.414, 373.416, 373.4592, 376.303, 376.305, 376.3071, 403.0623, 403.0625, 403.087, 403.088, 403.0881, 403.504, 403.704, 403.707, 403.722, 403.853 FS. History–New 1-1-91, Formerly 17-160.650, Amended 3-24-96, 4-9-02, 12-3-08, 7-30-14.

62-160.670 Data Validation by the Department.

(1) All data generated for Department activities are subject to data verification and data validation to determine if the data are suitable and usable for a specified purpose. Data shall be verified and validated based on the assessment of the following:

(a) Completeness of the Department requested data package(s) and the response of involved parties to any Department requests for additional data;

(b) Integrity of samples as determined by complete and proper sample transmittal documentation, and records that demonstrate adherence to proper preservation, transport or other sample handling protocols, as applicable;

(c) Proper use of sample collection methods;

(d) Proper selection and use of analysis methods;

(e) Sufficient use and routine evaluation of quality control measures to establish the precision, accuracy, sensitivity, selectivity, and potential bias associated with the analytical system and associated results;

(f) Proper instrument calibration and verification procedures;

(g) Documentation of all generated data as provided in Rules 62-160.240 and 62-160.340, F.A.C.;

(h) Ability to reconstruct all field sampling and laboratory procedures through the documentation and records of the laboratory or field sampling organization as provided in Rules 62-160.240 and 62-160.340, F.A.C.;

(i) Ability to trace data in the final report to a specific sampling site, date and time;

(j) Status of the laboratory's certification through the DOH ELCP as provided in Chapter 64E-1, F.A.C., for any given analyte or category of analytes; and

(k) Appropriateness of the collected data as related to the specific data quality objectives of the Department program activity or project for which they were collected including those data being considered for secondary use.

(2) The Department will evaluate data according to the criteria in paragraphs (a) through (k) above and determine if the data are

usable.

(3) In addition to subsection (2) above, the Department shall also evaluate data according to the procedures outlined in the Department's document "Department of Environmental Protection Process for Assessing Data Usability (DEP-EA-001/07)," dated March 31, 2008, which is incorporated by reference in Rule 62-160.800, F.A.C.

(4) If the audited data were originally generated for a specific purpose but are being considered for a secondary use for another purpose (secondary use), and the Department determines from the evaluation process, as described in subsections 62-160.670(2) and 62-160.670(3), F.A.C., above, that the data do not meet the data quality objectives for the secondary use, the Department will recommend that the data not be used by the program that is considering the secondary use. The recommendation not to use secondary data does not impact the usability or validity of the data for the program for which the data were originally intended.

Rulemaking Authority 403.061, 403.0623 FS. Law Implemented 373.026, 373.309, 373.409, 373.413, 373.414, 373.416, 373.4592, 376.303, 376.305, 376.3071, 403.0623, 403.0625, 403.087, 403.088, 403.0881, 403.504, 403.704, 403.707, 403.722, 403.853 FS. History–New 1-1-91, Amended 2-4-93, 2-27-94, Formerly 17-160.670, Amended 3-24-96, 4-9-02, 12-3-08.

62-160.700 Tables.

The following table have been referenced in this chapter and is identified by this Title:
Table 1: Data Qualifier Codes.

Table 1
DATA QUALIFIER CODES

The following codes shall be used by laboratories and/or field organizations when reporting sample data values that either meet the specified descriptions outlined below or do not meet the applicable quality control criteria specified for the laboratory or field result. Data qualifier codes listed in summary reports or other presentations comprising information that has been reformatted from original reports generated by field or laboratory organizations or individuals shall meet the requirements of subsections 62-160.240(4) and 62-160.340(7), F.A.C. Data qualifier codes added to sample results during data review procedures conducted by organizations or individuals other than the generators of original reports shall meet the requirements of subsections 62-160.240(5) and 62-160.340(8), F.A.C.

CODE	DEFINITION
A	Value reported is the arithmetic mean (average) of two or more determinations. This code shall be used if the reported value is the average of results for two or more discrete and separate samples. These samples shall have been processed and analyzed independently. Do not use this code if the data are the result of replicate analysis on the same sample aliquot, extract or digestate.
B	Results based upon colony counts outside the acceptable range. This code applies to microbiological tests and specifically to membrane filter colony counts. The code is to be used if the colony count is generated from a plate in which the total number of coliform colonies is outside the method indicated ideal range. This code is not to be used if a 100 mL sample has been filtered and the colony count is less than the lower value of the ideal range.
F	When reporting species: F indicates the female sex.
H	Value based on field kit determination; results may not be accurate. This code shall be used if a field screening test (e.g., field gas chromatograph data, immunoassay, or vendor-supplied field kit) was used to generate the value and the field kit or method has not been recognized by the Department as equivalent to laboratory methods.
I	The reported value is greater than or equal to the laboratory method detection limit but less than the laboratory practical quantitation limit.
J	Estimated value. A "J" – qualified sample value shall be accompanied by a detailed explanation to justify the reason(s) for designating the value as estimated. Where possible, the organization shall report whether the actual sample value is estimated to be less than or greater than the reported value, to assist data users in any evaluation of the usability of the sample value. A "J" data qualifier code shall not be used as a substitute for G, K, L, M, S, T, V, or Y, however, if additional reasons exist for identifying the value as an estimate (e.g., laboratory control spike or matrix spiked failed to meet acceptance criteria), the "J" code may be added to a G, K, L, M, T, U, V, or Y qualifier. Examples of situations in

	which a "J" code must be reported include: instances where a quality control item associated with the reported value failed to meet the established quality control criteria (the specific failure must be identified); instances when the sample matrix interfered with the ability to make any accurate determination; instances when data are questionable because of improper laboratory or field protocols (e.g., composite sample was collected instead of a grab sample); instances when the analyte was detected at or above the method detection limit in an analytical laboratory blank other than the method blank (such as a calibration blank) and, the blank value is greater than 10% of the associated sample value; or, instances when the field or laboratory calibrations or calibration verifications did not meet calibration acceptance criteria, including quantitative or chronological bracketing requirements for field testing data.
K	Off-scale low. Actual value is known to be less than the value given. This code shall not be used for microbiological tests or for biochemical oxygen demand. This code shall not be used for field-testing measurements where quantitative bracketing is required. This code shall be used if:
	1. The value is less than the lowest calibration standard and the calibration curve is known to be non-linear; or
	2. The value is known to be less than the reported value based on sample size, dilution.
	This code shall not be used to report values that are less than the laboratory practical quantitation limit or laboratory method detection limit.
L	Off-scale high. Actual value is known to be greater than value given. This code shall not be used for microbiological tests or biochemical oxygen demand. This code shall not be used for field-testing measurements where quantitative bracketing is required. To be used when the concentration of the analyte is above the acceptable level for quantitation (exceeds the linear range or highest calibration standard) and the calibration curve is known to exhibit a negative deflection.
M	When reporting chemical analyses: presence of material is verified but not quantified; the actual value is less than the value given. The reported value shall be the laboratory practical quantitation limit. This code shall be used if the level is too low to permit accurate quantification, but the estimated concentration is greater than or equal to the method detection limit. If the value is less than the method detection limit use "T" below.
N	Presumptive evidence of presence of material. This qualifier shall be used if:
	1. The component has been tentatively identified based on mass spectral library search; or
	2. There is an indication that the analyte is present, but quality control requirements for confirmation were not met (i.e., presence of analyte was not confirmed by alternative procedures).
O	Sampled, but analysis lost or not performed.
Q	Sample held beyond the accepted holding time. This code shall be used if the value is derived from a sample that was prepared or analyzed after the approved holding time restrictions for sample preparation or analysis.
T	Value reported is less than the laboratory method detection limit. The value is reported for informational purposes only and shall not be used in statistical analysis.
U	Indicates that the compound was analyzed for but not detected. This symbol shall be used to indicate that the specified component **was not** detected. The value associated with the qualifier shall be the laboratory method detection limit. Unless requested by the client, less than the method detection limit values shall not be reported (see "T" above).
V	A "V" – qualified sample value indicates that the analyte was detected at or above the method detection limit in both the sample and the associated method blank and the blank value was greater than 10% of the associated sample value. The 10% criterion shall not apply to blank results for biochemical oxygen demand (BOD) or microbiological tests. For BOD tests, the "V" code shall be used for all sample results where the associated method blank result exceeds the maximum blank DO depletion specified in the analytical method. For microbiological tests, the "V" code shall be used for all samples where the associated method blank indicates growth of the target organism. Note: unless specified by the method, the value in the blank shall not be subtracted from associated samples.
X	Indicates, when reporting results from a Stream Condition Index Analysis (SCI 1000), that insufficient individuals were present in the sample to achieve a minimum of 280 organisms for identification (the method calls for two aliquots of 140-160 organisms), suggesting either extreme environmental stress or a sampling error.
Y	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
Z	Too many colonies were present for accurate counting. Historically, this condition has been reported as "too numerous to count" (TNTC). The "Z" qualifier code shall be reported when the total number of colonies of all types is more than 200 in all dilutions of the sample. When applicable to the observed test results, a numeric value for the colony count for the

	microorganism tested shall be estimated from the highest dilution factor (smallest sample volume) used for the test and reported with the qualifier code. Atypical, non-target, spreading colonies or other interferences may prevent estimation of typical target organism counts.
?	Data are rejected and should not be used. Some or all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
*	Not reported due to interference.

The following codes deal with certain aspects of field activities. The codes shall be used if the laboratory has knowledge of the specific sampling event. The codes shall be added by the organization collecting samples if they apply:

CODE	DEFINITION
D	Measurement was made in the field (i.e., in situ). This code applies to any value (**except** field measurements of pH, specific conductance, dissolved oxygen, temperature, total residual chlorine, transparency, turbidity or salinity) that was obtained under field conditions using approved analytical methods. If the parameter code specifies a field measurement (e.g., "Field pH"), this code is not required.
E	Indicates that extra samples were taken at composite stations.
G	A "G" – qualified sample value indicates that the analyte was detected at or above the method detection limit in both the sample and the associated field blank, equipment blank, or trip blank, and the blank value was greater than 10% of the associated sample value. The value in the blank shall not be subtracted from associated samples.
R	Significant rain in the past 48 hours. (Significant rain typically involves rain in excess of 1/2 inch within the past 48 hours.) This code shall be used when the rainfall might contribute to a lower or higher than normal value.
S	Secchi disk visible to bottom of waterbody. The value reported is the depth of the waterbody at the location of the Secchi disk measurement.
!	Data deviate from historically established concentration ranges.

Rulemaking Authority 403.061, 403.0623 FS. Law Implemented 373.026, 373.309, 373.409, 373.413, 373.414, 373.416, 373.4592, 376.303, 376.305, 376.3071, 403.0623, 403.0625, 403.087, 403.088, 403.0881, 403.504, 403.704, 403.707, 403.722, 403.853 FS. History–New 1-1-91, Amended 2-4-93, 2-27-94, Formerly 17-160.700, Amended 3-24-96, 4-9-02, 6-8-04, 12-3-08, 7-30-14.

62-160.800 Documents Incorporated by Reference.

The following documents and collections are incorporated herein by reference for use in complying with the requirements of this Chapter. Except as otherwise indicated below, copies of incorporated documents are available for review during normal business hours at the Department of Environmental Protection, Water Quality Standards Program, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, or may be obtained from the Department's internet site at http://www.dep.state.fl.us/water/sas/qa/, or by writing to the Florida Department of Environmental Protection, Water Quality Standards Program, 2600 Blair Stone Road, MS 6511, Tallahassee, FL 32399-2400.

(1) Department of Environmental Protection Standard Operating Procedures (DEP SOPs) are organized into the three numbered collections designated below. The DEP SOPs contained in each collection are listed following the title and number of the indicated collection. References in this Chapter to the alphanumeric designation for each individual DEP SOP as listed below include reference to all parts, subparts and sections of the cited DEP SOP, unless otherwise cited in a specific rule.

(a) Standard Operating Procedures for Field Activities, DEP-SOP-001/01, dated 3/1/14:

1. FA 1000, Regulatory Scope and Administrative Procedures for Use of DEP SOPs, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04300);
2. FC 1000, Cleaning/Decontamination Procedures, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04301);
3. FD 1000, Documentation Procedures, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04302);
4. FM 1000, Field Planning and Mobilization, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04303);
5. FQ 1000, Field Quality Control Requirements, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04304);
6. FS 1000, General Sampling Procedures, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04305);
7. FS 2000, General Aqueous Sampling, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04306);
8. FS 2100, Surface Water Sampling, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04307);

9. FS 2200, Groundwater Sampling, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04308);
10. FS 2300, Drinking Water Sampling, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04309);
11. FS 2400, Wastewater Sampling, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04310);
12. FS 3000, Soil, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04311);
13. FS 4000, Sediment Sampling, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04312);
14. FS 5000, Waste Sampling, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04313);
15, FS 6000, General Biological Tissue Sampling, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04314);
16. FS 7000, General Biological Community Sampling, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04315);
17. FS 8100, Contaminated Surface Sampling, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04316);
18. FS 8200, Clean Sampling for Ultratrace Metals in Surface Waters, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04317);
19. FT 1000, General Field Testing and Measurement, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04318);
20. FT 1100, Field Measurement of Hydrogen Ion Activity (pH), dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04319);
21. FT 1200, Field Measurement of Specific Conductance (Conductivity), dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04320);
22. FT 1300, Field Measurement of Salinity, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04321);
23. FT 1400, Field Measurement of Temperature, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04322);
24. FT 1500, Field Measurement of Dissolved Oxygen, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04323);
25. FT 1600, Field Measurement of Turbidity, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04324);
26. FT 1700, Field Measurement of Light Penetration (Secchi Depth and Transparency), dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04325);
27. FT 1800, Field Measurement of Water Flow and Velocity, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04326);
28. FT 1900, Continuous Monitoring With Installed Meters, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04327);
29. FT 2000, Field Measurement of Residual Chlorine, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04328); and,
30. FT 3000, Aquatic Habitat Characterization, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04329).

(b) Standard Operating Procedures for Laboratory Activities, DEP-SOP-002/01, dated 3/1/14:

1. LD 1000, Laboratory Documentation, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04330);
2. LQ 1000, Laboratory Quality Control, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04331); and,
3. LT 7000, Determination of Biological Indices, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04332).

(c) Standard Operating Procedures for Selected Bioassessment Activities, DEP-SOP-003/11, dated 3/1/14:

1. BRN 1000, Biological Reconnaissance Field Method, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04333);
2. LVI 1000, Lake Vegetation Index Methods, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04334); and
3. SCI 1000, Stream Condition Index Methods, dated 3/1/14 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04335).

(2) The following documents and DEP forms are cited in certain DEP SOPs included in the numbered collections DEP-SOP-001/01, DEP-SOP-002/01 or DEP-SOP-003/11 (citation locations in parentheses).

(a) Methods and other documents published by the United States Environmental Protection Agency (EPA), as listed below.

1. EPA Method 5035, Revision 0, December 1996, in SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (DEP-SOP-001/01) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04336);
2. EPA Method 1623, *Cryptosporidium* and *Giardia* in Water by Filtration/IMS/FA, EPA 815-R-05-002, December 2005 (DEP-SOP-001/01) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04337); and,

3. U.S. EPA ICR Microbial Laboratory Manual, EPA/600/R-95/178, April 1996, Section VII, Part 9, Sampling (DEP-SOP-001/01) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04338).

(b) Code of Federal Regulations:

1. Table II, Required Containers, Preservation Techniques, and Holding Times, 40 CFR, Ch. I, Part 136.3, Identification of Test Procedures, 7-1-13 Edition, including all footnotes (DEP-SOP-001/01) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04339); and,

2. 29 CFR, 1910.120, Hazardous Waste Operations and Emergency Response, 7-1-13 Edition (DEP-SOP-001/01) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04340).

(c) Methods and sections included in Standard Methods for the Examination of Water and Wastewater, as listed below. Copies of these documents are available for review during normal business hours at the Department of Environmental Protection, Water Quality Standards Program, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 or from the publisher at http://standardmethods.org/store/.

1. Section 1060, Collection and Preservation of Samples, subsection 1060 A.2., Safety Considerations 2011 (DEP-SOP-001/01);

2. Section 9060, Samples, subsection 9060 A.3.a., Potable Water, 2006 (DEP-SOP-001/01);

3. Method 2130 B, Turbidity, section 3., Reagents, 2011 (DEP-SOP-001/01);

4. Method 2510, Conductivity, 2011 (DEP-SOP-001/01);

5. Method 2520, Salinity, 2011 (DEP-SOP-001/01);

6. Methods 4500-Cl B, C, D, E, F, and G, 2011 (DEP-SOP-001/01);

7. Methods 4500-O C and G, Oxygen (Dissolved), 2011 (DEP-SOP-001/01); and,

8. Table 4500-H^+:I, Preparation of pH Standard Solutions, in method 4500-H^+-B, 2011 (DEP-SOP-001/01).

(d) Methods published by ASTM International, as listed below. Copies of these methods are available for review during normal business hours at the Department of Environmental Protection, Water Quality Standards Program, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, or from the publisher at ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959, or from the publisher's website at http://www.astm.org/Standard/index.html.

1. ASTM E1391-03 (2008), Standard Guide for Collection, Storage, Characterization, and Manipulation of Sediments for Toxicological Testing and for Selection of Samplers Used to Collect Benthic Invertebrates, 2003, ASTM International (DEP-SOP-001/01); and,

2. ASTM D888-12e1, Standard Test Methods for Dissolved Oxygen in Water, 2012, ASTM International (DEP-SOP-001/01).

(e) Department of Environmental Protection, Sampling and Use of the Stream Condition Index (SCI) for Assessing Flowing Waters: A Primer, DEP-SAS-001/11, dated 10/24/11 (DEP-SOP-003/11) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04341).

(f) Department of Environmental Protection, Sampling and Use of the Lake Vegetation Index (LVI) for Assessing Lake Plant Communities in Florida: A Primer, DEP-SAS-002/11, dated 10/24/11 (DEP-SOP-003/11) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04342).

(g) United States Geological Survey, National Field Manual for the Collection of Water-Quality Data, Book 9, Chapter A6, Field Measurements, Section 6.1, Temperature, Techniques of Water-Resources Investigations, Version 2, 3/2006 (DEP-SOP-001/01) (https://www.flrules.org/gateway/reference.asp?NO=Ref-04343).

(h) Merritt, R.W., Cummins, K.W. and Berg, M.B., An Introduction to the Aquatic Insects of North America, Fourth Edition, 2008 (DEP-SOP-002/01 and DEP-SOP-003/11). A copy of this document is available for review during normal business hours at the Department of Environmental Protection, Water Quality Standards Program, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 or from the publisher at Kendal Hunt Publishing Company, 4050 Westmark Drive, Dubuque, IA 52004-1840.

(i) DEP Forms cited:

1. Form FD 9000-1, BioRecon Field Sheet, dated 3/1/14 (DEP-SOP-001/01, DEP-SOP-003/11) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04344);

2. Form FD 9000-3, Physical/Chemical Characterization Field Sheet, dated 3/1/14 (DEP-SOP-001/01, DEP-SOP-003/11) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04345);

3. Form FD 9000-4, Stream/River Habitat Sketch Sheet, dated 3/1/14 (DEP-SOP-001/01, DEP-SOP-003/11) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04346);

4. Form FD 9000-5, Stream/River Habitat Assessment Field Sheet, dated 3/1/14 (DEP-SOP-001/01, DEP-SOP-003/11) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04347);

5. Form FD 9000-6, Lake Habitat Assessment Field Sheet, dated 3/1/14 (DEP-SOP-001/01) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04348);

6. Form FD 9000-24, Groundwater Sampling Log, dated 3/1/14 (DEP-SOP-001/01) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04349);

7. Form FD 9000-25, Rapid Periphyton Survey Field Sheet, dated 3/1/14 (DEP-SOP-001/01) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04350);

8. Form FD 9000-27, Lake Vegetation Index Field Sheet, dated 3/1/14 (DEP-SOP-001/01, DEP-SOP-003/11) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04351);

9. Form FD 9000-31, Lake Observation Field Sheet, dated 3/1/14 (DEP-SOP-001/01, DEP-SOP-003/11) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04352);

10. Form FD 9000-32, Linear Stream Vegetation Survey Field Sheet, dated 3/1/14 (DEP-SOP-001/01) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04353);

11. Form FD 9000-33, Vegetation Wetland Condition Index Field Sheet, dated 3/1/14 (DEP-SOP-001/01) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04354);

12. Form FD 9000-34, Stream Habitat Assessment Training Checklist and Event Log, dated 3/1/14 (DEP-SOP-001/01) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04355); and,

13. Form FD 9000-35, Stream Condition Index Training Checklist and Event Log, dated 3/1/14 (DEP-SOP-003/11) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04356).

(3) NELAC and TNI Standards, as listed below. Copies of these documents are available for review during normal business hours at the Department of Environmental Protection, Water Quality Standards Program, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, or from the publisher at The NELAC Institute, PO Box 2439, Weatherford, TX, 76086 or the publisher's website at http://www.nelac-institute.org/index.php.

(a) Glossary, Appendix A to Chapter 1, Program Policy and Structure, 2003 NELAC Standards, Approved June 5th, 2003, EPA/600/R-04/003 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04357); and,

(b) The NELAC Institute (TNI), EL-V1-2009-ISO, Environmental Laboratory Sector, Vol. 1, Management and Technical Requirements for Laboratories Performing Environmental Analyses (2009).

(4) EPA Requirements for Quality Assurance Project Plans, EPA QA/R-5 (EPA/240/B-01/003), March 2001 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04358).

(5) New and Alternative Analytical Laboratory Methods, DEP-QA-001/01 (February 1, 2004) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04359) and the following documents cited therein:

(a) Section 1080, Reagent-Grade Water (1993), Standard Methods for the Examination of Water and Wastewater, available from the publisher at http://standardmethods.org/store/ or available for review during normal business hours at the Department of Environmental Protection, Water Quality Standards Program, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400;

(b) Definition and Procedure for the Determination of the Method Detection Limit - Revision 1.11, 40 CFR Part 136, Appendix B, 7-1-13 Edition (http://www.flrules.org/Gateway/reference.asp?No=Ref-04360);

(c) IUPAC - Nomenclature in Evaluation of Analytical Methods including Detection and Quantification Capabilities, Pure & Appl. Chem., Vol. 67, No. 10, pp. 1699-1723, ©1995 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04361); available for download at http://www.iupac.org/publications/pac/index/ or available for review during normal business hours at the Department of Environmental Protection, Water Quality Standards Program, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and,

(d) Hubaux, A., G. Vos, Decision and Detection Limits for Linear Calibration Curves, Analytical Chemistry, Vol. 42. No. 8, pp. 849-855, July 1970; available for download at http://pubs.acs.org/journal/ancham or available for review during normal business hours at the Department of Environmental Protection, Water Quality Standards Program, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

(6) Federal Register, Vol. 77, No. 97, Friday, May 18, 2012, Rules and Regulations, pp. 29758–29846, Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act; Analysis and Sampling Procedures, Final Rule (http://www.flrules.org/Gateway/reference.asp?No=Ref-04362).

(7) 40 CFR, Part 136.3, Identification of Test Procedures, 7-1-2013 edition (http://www.flrules.org/Gateway/reference.asp?No=Ref-04363).

(8) 40 CFR, Part 136.4, Application for and approval of alternate test procedures for nationwide use, 7-1-2013 edition (http://www.flrules.org/Gateway/reference.asp?No=Ref-04364).

(9) 40 CFR, Part 136.5, Approval of alternate test procedures for limited use, 7-1-2013 edition (http://www.flrules.org/Gateway/reference.asp?No=Ref-04365).

(10) 40 CFR, Part 136.6, Method Modifications and Analytical Requirements, 7-1-2013 edition (http://www.flrules.org/Gateway/reference.asp?No=Ref-04366).

(11) 40 CFR Part 141, National Primary Drinking Water Regulations, Subpart C, Monitoring and Analytical Requirements, section 141.27, Alternate analytical techniques, 7-1-2013 edition (http://www.flrules.org/Gateway/reference.asp?No=Ref-04367).

(12) Chapter Two, Choosing the Correct Procedure, Section 2.1, Guidance Regarding Flexibility Inherent to SW-846 Methods and the Precedence of SW-846 Quality Control Criteria (February 2007), in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846) (http://www.flrules.org/Gateway/reference.asp?No=Ref-04368). This publication may be viewed at http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm, where it may also be downloaded. A printed copy may be obtained from the National Technical Information Service, U.S. Department of Commerce, 5301 Shawnee Road, Alexandria, VA. 22312.

(13) Guidelines for Collaborative Study Procedures to Validate Characteristics of a Method of Analysis, Appendix D, Official Methods of Analysis of AOAC INTERNATIONAL, 19th edition (2012). A copy of this document is available for review during normal business hours at the Department of Environmental Protection, Water Quality Standards Program, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 or from the publisher at AOAC INTERNATIONAL, 481 N. Frederick Ave., Suite 500, Gaithersburg, MD 20877, or from the publisher's website at http://www.aoac.org.

(14) Process for Assessing Data Usability (DEP-EA-001/07), dated March 31, 2008 (http://www.flrules.org/Gateway/reference.asp?No=Ref-04369).

Rulemaking Authority 403.061, 403.0623 FS. Law Implemented 373.026, 373.309, 373.409, 373.413, 373.414, 373.416, 373.4592, 376.303, 376.305, 376.3071, 403.0623, 403.0625, 403.087, 403.088, 403.0881, 403.504, 403.704, 403.707, 403.722, 403.853 FS. History–New 4-9-02, Amended 6-8-04, 12-3-08, 7-30-14.

62-160.900 Forms.

Rulemaking Authority 403.061, 403.0623 FS. Law Implemented 373.026, 373.309, 373.409, 373.413, 373.414, 373.416, 373.4592, 376.303, 376.305, 376.3071, 403.0623, 403.0625, 403.087, 403.088, 403.0881, 403.504, 403.704, 403.707, 403.722, 403.853 FS. History–New 1-1-91, Amended 2-4-93, Formerly 17-160.900, Amended 3-24-96, 10-15-96, 4-9-02, Repealed 2-23-12.