QA PROJECT PLAN REVIEW CHECKLIST

This checklist is based on the elements in *EPA Requirements for QA Project Plans (QA/R-5)* (EPA, 2001a). This checklist can be used to either write or review a QA Project Plan, especially those involving field sampling and laboratory analyses.

PROJECT TITLE City of Columbia Supplemental Env Projects (SEP)

Preparer: Tracy Mitchell/Michael Jaspers **Date Submitted for Review: 1/13/2015, 9/11/15, 11/11/15** **QAPP ID FY1509 and FY**

Reviewer: NFB **Date of Review: 1/23/2015, 9/18/15, 11/20/15**

Element	Acceptable (Yes/No)	Page/ Section	Comments
A1. Title and Approval Sheet			
Contains project title	Yes		
Indicates revision number, if applicable	Yes		
Indicates organization's name	Yes		
Date signature of organization's project manager	Yes		
Dated signature of organization's QA manager present	Yes		
Other signatures, as needed	Yes		
A2. Table of Contents			
Lists QA Project Plan information sections	Yes		

Element	Acceptable (Yes/No)	Page/ Section	Comments
Document control information indicated			
A3. Distribution List			
Includes all individuals who are to receive a copy of the QA Project Plan and identifies their organization	Yes		
A4. Project/Task Organization			
Identifies key individuals involved in all major aspects of the project, including contractors	Yes		
Discusses their responsibilities	Yes		
Project QA Manager position indicates independence from unit generating data	Yes		
Identifies individual responsible for maintaining the official, approved QA Project Plan	Yes		
Organizational chart shows lines of authority and reporting responsibilities	Yes		Comment—If this is not going to EPA, there's probably no reason to have them on the organizational chart.
A5. Problem Definition/Background			
States decision(s) to be made, actions to be taken, or outcomes expected from the information to be obtained	NA		

Element	Acceptable (Yes/No)	Page/ Section	Comments
Clearly explains the reason (site background or historical context) for initiating this project	Yes		
Identifies regulatory information, applicable criteria, action limits, etc. necessary to the project	Yes		Required by DHEC and EPA
A6. Project/Task Description			
Summarizes work to be performed, for example, measurements to be made, data files to be obtained, etc., that support the project's goals	Yes		
Provides work schedule indicating critical project points, e.g., start and completion dates for activities such as sampling, analysis, data or file reviews, and assessments	Yes		
Details geographical locations to be studied, including maps where possible	Yes		
Discusses resource and time constraints, if applicable	Yes		
A7. Quality Objectives and Criteria			
Identifies performance/measurement criteria for all information to be collected and acceptance criteria for information obtained from previous studies, including project action limits and laboratory detection limits and	Yes		

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range of anticipated concentrations of each parameter of interest			
Discusses precision	Yes		
Addresses bias	Yes		
Discusses representativeness	Yes		
Identifies the need for completeness	Yes		
Describes the need for comparability	Yes		
Discusses desired method sensitivity	Yes		
A8. Special Training/Certifications			
Identifies any project personnel specialized training or certifications	Yes		
Discusses how this training will be provided	Yes		
Indicates personnel responsible for assuring these are satisfied	Yes		
Identifies where this information is documented	Yes		
A9 Reports and Documentation			
	Partial		How will DHEC receive the data= Hardcopies?

Element		Acceptable (Yes/No)	Page/ Section	Comments
	Identifies report format and summarizes all data report package information			Electronic?
	Lists all other project documents, records, and electronic files that will be produced	Yes		
	Identifies where project information should be kept and for how long	Yes		
	Discusses back up plans for records stored electronically	Yes		
	States how individuals identified in A3 will receive the most current copy of the approved QA Project Plan, identifying the individual responsible for this	Yes		
B1.	**Sampling Process Design (Experimental Design)**			
	Describes and justifies design strategy, indicating size of the area, volume, or time period to be represented by a sample	Yes		DHEC selected
	Details the type and total number of sample types/matrix or test runs/trials expected and needed	Yes		
	Indicates where samples should be taken, how sites will be identified/located	Yes		

Element		Acceptable (Yes/No)	Page/ Section	Comments
	Discusses what to do if sampling sites become inaccessible	Yes		
	Identifies project activity schedules such as each sampling event, times samples should be sent to the laboratory, etc.	Yes		
	Specifies what information is critical and what is for informational purposes only	Yes		Any samples lost will be recollected.
	Identifies sources of variability and how this variability should be reconciled with project information	Yes		
B2.	Sampling Methods			
	Identifies all sampling SOPs by number, date, and regulatory citation, indicating sampling options or modifications to be taken	Yes		In Section B2
	Indicates how each sample/matrix type should be collected	Yes		
	If in situ monitoring, indicates how instruments should be deployed and operated to avoid contamination and ensure maintenance of proper data	Yes		
	If continuous monitoring, indicates averaging time and	NA		

Element	Acceptable (Yes/No)	Page/ Section	Comments
how instruments should store and maintain raw data, or data averages			
Indicates how samples are to be homogenized, composited, split, or filtered, if needed	NA		
Indicates what sample containers and sample volumes should be used	Yes		
Identifies whether samples should be preserved and indicates methods that should be followed	Yes		
Indicates whether sampling equipment and samplers should be cleaned and/or decontaminated, identifying how this should be done and by-products disposed of	Yes		
Identifies any equipment and support facilities needed	Yes		
Addresses actions to be taken when problems occur, identifying individual(s) responsible for corrective action and how this should be documented	Yes		
B3. Sample Handling and Custody			
States maximum holding times allowed from sample collection to extraction and/or analysis for each sample type and, for in-situ or continuous monitoring, the	Yes		

Element	Acceptable (Yes/No)	Page/ Section	Comments
maximum time before retrieval of information			
Identifies how samples or information should be physically handled, transported, and then received and held in the laboratory or office (including temperature upon receipt)	Yes		
Indicates how sample or information handling and custody information should be documented, such as in field notebooks and forms, identifying individual responsible	Yes		
Discusses system for identifying samples, for example, numbering system, sample tags and labels, and attaches forms to the plan	Yes		
Identifies chain-of-custody procedures and includes form to track custody	Yes		
B4. Analytical Methods			
Identifies all analytical SOPs (field, laboratory and/or office) that should be followed by number, date, and regulatory citation, indicating options or modifications to be taken, such as sub-sampling and extraction procedures	Yes		

Element		Acceptable (Yes/No)	Page/ Section	Comments
	Identifies equipment or instrumentation needed	Yes		
	Specifies any specific method performance criteria	Yes		
	Identifies procedures to follow when failures occur, identifying individual responsible for corrective action and appropriate documentation	Yes		
	Identifies sample disposal procedures	Yes		
	Specifies laboratory turnaround times needed	Yes		
	Provides method validation information and SOPs for nonstandard methods	NA		
B5.	**Quality Control**			
	For each type of sampling, analysis, or measurement technique, identifies QC activities which should be used, for example, blanks, spikes, duplicates, etc., and at what frequency	Yes		
	Details what should be done when control limits are exceeded, and how effectiveness of control actions will be determined and documented	Yes		
	Identifies procedures and formulas for calculating	Partial		Initial Demonstration of Capability for the YSI

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applicable QC statistics, for example, for precision, bias, outliers and missing data			meter requirements (Table) are incorrect except for DO. DO is fine. You stated 75-125% for the rest but that does not work for pH and Conductivity. For pH the acceptance is ±0.1 SU, for Conductivity ±10%. Please identify all parameters for this meter so that I can make sure that the requirements are correct.
B6. Instrument/Equipment Testing, Inspection, and Maintenance			
Identifies field and laboratory equipment needing periodic maintenance, and the schedule for this	Yes		
Identifies testing criteria	Yes		
Notes availability and location of spare parts	Yes		
Indicates procedures in place for inspecting equipment before usage	Yes		
Identifies individual(s) responsible for testing, inspection and maintenance	Yes		
Indicates how deficiencies found should be resolved, re-inspections performed, and effectiveness of corrective action determined and documented	Yes		

Element		Acceptable (Yes/No)	Page/ Section	Comments
B7.	**Instrument/Equipment Calibration and Frequency**			
	Identifies equipment, tools, and instruments that should be calibrated and the frequency for this calibration	Yes		
	Describes how calibrations should be performed and documented, indicating test criteria and standards or certified equipment	Yes		
	Identifies how deficiencies should be resolved and documented	Yes		
B8.	**Inspection/Acceptance for Supplies and Consumables**			
	Identifies critical supplies and consumables for field and laboratory, noting supply source, acceptance criteria, and procedures for tracking, storing and retrieving these materials	Yes		
	Identifies the individual(s) responsible for this	Yes		
B9.	**Non-direct Measurements**			
	Identifies data sources, for example, computer databases or literature files, or models that should be accessed and used	Yes		
		Yes		

Element	Acceptable (Yes/No)	Page/ Section	Comments
Describes the intended use of this information and the rationale for their selection, i.e., its relevance to project			
Indicates the acceptance criteria for these data sources and/or models	Yes		
Identifies key resources/support facilities needed	Yes		
Describes how limits to validity and operating conditions should be determined, for example, internal checks of the program and Beta testing	NA		
B10. Data Management			
Describes data management scheme from field to final use and storage	Yes		
Discusses standard record-keeping and tracking practices, and the document control system or cites other written documentation such as SOPs	Yes		In A 9
Identifies data handling equipment/procedures that should be used to process, compile, analyze, and transmit data reliably and accurately	Yes		In A 9
Identifies individual(s) responsible for this	Yes		In A 9
	Yes		

Element		Acceptable (Yes/No)	Page/ Section	Comments
	Describes the process for data archival and retrieval			In A 9
	Describes procedures to demonstrate acceptability of hardware and software configurations			
	Attaches checklists and forms that should be used	NA?		
C1.	**Assessments and Response Actions**			
	Lists the number, frequency, and type of assessment activities that should be conducted, with the approximate dates	Yes		
	Identifies individual(s) responsible for conducting assessments, indicating their authority to issue stop work orders, and any other possible participants in the assessment process	Yes		
	Describes how and to whom assessment information should be reported	Yes		
	Identifies how corrective actions should be addressed and by whom, and how they should be verified and documented	Yes		
C2.	**Reports to Management**			
		Yes		

Element		Acceptable (Yes/No)	Page/ Section	Comments
	Identifies what project QA status reports are needed and how frequently			
	Identifies who should write these reports and who should receive this information	Yes		
D1.	**Data Review, Verification, and Validation**			
	Describes criteria that should be used for accepting, rejecting, or qualifying project data	Yes		
D2.	**Verification and Validation Methods**			
	Describes process for data verification and validation, providing SOPs and indicating what data validation software should be used, if any	Yes		
	Identifies who is responsible for verifying and validating different components of the project data/information, for example, chain-of-custody forms, receipt logs, calibration information, etc.	Yes		
	Identifies issue resolution process, and method and individual responsible for conveying these results to data users	Yes		
	Attaches checklists, forms, and calculations	NA		

Element	Acceptable (Yes/No)	Page/ Section	Comments
D3. Reconciliation with User Requirements			
Describes procedures to evaluate the uncertainty of the validated data	Yes		
Describes how limitations on data use should be reported to the data users	No		I originally had this comment in D2, but it belongs here. So when there's a problem with data, and the issue has been examined, so you write a report to DHEC or EPA and let them know what you found out? This can be an email, you just need to include a method of contact and that you will contact DHEC if there's a usability issue.