QAPP Standard 2105-S-02 Review Checklist

Project Title:	
QATS #:	
Date of QAPP:	
Site Manager:	
QAPP Author:	

General considerations:

1) **The central point of the review is on content over format.**
2) **Focus is to ensure QAPP components are addressed and not on an opinion on the adequacy of the project.**
3) **If a QAPP element does not apply, it still needs to be included with a statement explaining why it does not apply.**
4) **If information is adequately addressed in a separate document, a complete reference to that document can be included in the QAPP.**
5) **Referenced documents need to be available or made available at the time of the review of the QAPP.**
6) **The period of applicability of a QAPP is for the project period or five years, whichever is LESS.**

Element	Information to Address	Okay	Not Okay	N/A	If element or corresponding information is not included or is not okay explain why: Additional comments:
A1 Title Page					
	"Quality Assurance Project Plan" and Title	☐	☐	☐	
	Name of organization	☐	☐	☐	
	QAPP preparing organization if different	☐	☐	☐	
	Grant, Contract/Task Order, or Interagency Agreement Number	☐	☐	☐	
	Date of QAPP Preparation	☐	☐	☐	
	Period of Applicability	☐	☐	☐	
	Revision #	☐	☐	☐	

Element	Information to Address	Okay	Not Okay	N/A	If element or corresponding information is not included or is not okay explain why: Additional comments:
	Document control (title; version #, date, page # of total pages)	☐	☐	☐	
A2 Approval Page					
	Submitting organization project manager	☐	☐	☐	
	Submitting organization QA personnel	☐	☐	☐	
	Other submitting organization personnel	☐	☐	☐	
	EPA project manager	☐	☐	☐	
	EPA RQAM ***Note:*** *the RQAM signature is the last signature obtained on all QAPPs in R7*	☐	☐	☐	
	Other EPA signatures as applicable	☐	☐	☐	
A3 Table of Contents					
	Sections and page #s listed	☐	☐	☐	
	List of figures	☐	☐	☐	
	List of appendices/attachments	☐	☐	☐	
A4 Project Purpose and Problem Definition					
	Other QA planning documents prepared for the project (e.g., R7 QMP, SAP, FSP, Work Plan, etc.)	☐	☐	☐	
	Problem, issue, concern, question, etc. What problem is the project designed to address.	☐	☐	☐	
	Why project is needed and how results will be used	☐	☐	☐	
	Existing information sources and how used	☐	☐	☐	
	Applicable programs and/or standards (e.g., action levels, cleanup levels, MCLs, RSLs, etc.)	☐	☐	☐	
A4 Project Background					
	Information is provided that helps support the reason for the project and what led to the project (e.g., historical info, scientific info, previous studies or investigations, info/data from other sources, etc.)	☐	☐	☐	

Element	Information to Address	Okay	Not Okay	N/A	If element or corresponding information is not included or is not okay explain why: Additional comments:
A5 Project Task Description					
	Lists tasks to be performed	☐	☐	☐	
	Lists measurements to be made	☐	☐	☐	
	Gives a description of work to be performed	☐	☐	☐	
	Identifies products to be produced	☐	☐	☐	
	Includes a schedule for completing tasks and products; includes specific dates if known	☐	☐	☐	
	Annual review of QAPP if project >1 year	☐	☐	☐	
	If a long-term or generic QAPP, the five-year anniversary date, periodic review, and resubmittal at the five-year mark is recognized	☐	☐	☐	
A6 Information/Data Quality Objectives and Performance and or Acceptance Criteria					
	Describes quality of data needed to meet project goals, to make any decisions, and to use the info/data as intended	☐	☐	☐	
	Precision: *(A quantitative measure of the difference between values from repeated analyses; usually expressed as RPD or RSD.)* - how precision will be evaluated or measured - how acceptable precision is defined - possible actions if not acceptable - frequency for any planned QC samples (e.g., field duplicates or replicates, lab duplicates, etc.) - precision addressed for both field and laboratory where applicable	☐	☐	☐	
	Accuracy *(a.k.a., bias: A quantitative measure of the difference between the reported value and the theoretical "True Value"; usually expressed as %Recovery.)* - how accuracy will be evaluated or measured	☐	☐	☐	

Element	Information to Address	Okay	Not Okay	N/A	If element or corresponding information is not included or is not okay explain why: Additional comments:
	- how acceptable accuracy is defined - possible actions if not acceptable - frequency for any QC samples (e.g., laboratory spiked samples, etc.) - accuracy addressed for both field and laboratory where applicable	☐	☐	☐	
	Representativeness *(A qualitative indicator of how well the reported value represents the conditions at the sampling site; usually addressed thru the design of the sampling or information gathering activities.)* - notes what it means for the project and how it will be ensured	☐	☐	☐	
	Comparability *(A qualitative measure of how well the reporting value compares to other similar values; usually addressed thru the use of equivalent methods or procedures and how results are reported.)* - what it means for the project and how it will be ensured	☐	☐	☐	
	Completeness *(A quantitative measure of the amount of valid data obtained from a measurement system compared to the amount that was expected to be obtained under correct normal conditions; usually expressed as %Completeness goal. What % of the analysis/data is needed to make a decision.)* - completeness goal defined - both field and laboratory addressed - possible actions if not acceptable	☐	☐	☐	
	Sensitivity *(A quantitative indicator of 1. the smallest concentration of a given compound that can be reliably detected in the sample or 2. the smallest difference between reported values that can be reliably detected; usually involves comparing the achievable laboratory limits to the project's action levels.)* - are these limits low enough to meet the standard defined in A4 Project Purpose and Problem Definition	☐	☐	☐	

Element	Information to Address	Okay	Not Okay	N/A	If element or corresponding information is not included or is not okay explain why: Additional comments:
	(e.g. if the MCL is 5 and the lab limit is 2, that is sensitive enough but if the lab limit is 10, that is not sensitive enough) - if the lab limit is not low enough, describes how this will be managed *(e.g., look for an alternate method, look for an alternate lab, use the lab limit as the action level, have data reported down to the detection limit, etc.)* If no action levels (e.g., MCLs, RSLs, cleanup levels, etc.) are specified, is presence/absence or establishing a baseline indicated	☐	☐	☐	
	Existing information/data (Data or information to be used for the project but are not being newly generated by the project and are being obtained from some other source.) - info/data to be obtained are noted - identifies the source(s) - acceptance criteria defined - procedures to apply acceptance criteria described - how existing info/data to be used explained	☐	☐	☐	
A7 Distribution List					
	Submitting organization project manager	☐	☐	☐	
	Submitting organization QA personnel	☐	☐	☐	
	Others	☐	☐	☐	
	EPA project manager	☐	☐	☐	
	EPA RQAM	☐	☐	☐	
	Others	☐	☐	☐	
A8 Project Organization and A9 Project QAM Independence*					
*can be combined into one section as shown on this checklist or can be separate sections	All key personnel and organizations identified	☐	☐	☐	
	QAPP approval authority	☐	☐	☐	
	Executive leadership authority	☐	☐	☐	
	Who will conduct the project	☐	☐	☐	

Element	Information to Address	Okay	Not Okay	N/A	If element or corresponding information is not included or is not okay explain why: Additional comments:
	Principal info/data user	☐	☐	☐	
	Who maintains QAPP	☐	☐	☐	
	Project responsibilities	☐	☐	☐	
	QA personnel - oversight authority for evaluating effectiveness of the QAPP - their access to senior leadership for quality-related issues - their independence from those responsible for conducting the environmental info/data activities	☐	☐	☐	
A10 Project Organization Chart and Communications					
	Org chart with lines of reporting (solid lines) and lines of communication (dashed lines)	☐	☐	☐	
	Organization senior leader, submitting organization project manager, and submitting organization QA personnel	☐	☐	☐	
	EPA project manager and EPA RQAM	☐	☐	☐	
	Any contractors, subgrantees, laboratories, etc.	☐	☐	☐	
	How differences and changes to QAPP will be communicated *(e.g., discrepancies and non-conformances between project personnel and subgrantees or contractors; discrepancies between project personnel & EPA; process improvements; QAPP revisions, etc.)* - who responsible - how the communication should happen - in what timeframe the communication should occur - what approvals may be needed	☐	☐	☐	
A11 Personnel Trainings/ Certifications					
	Any needed training to perform project tasks	☐	☐	☐	

Element	Information to Address	Okay	Not Okay	N/A	If element or corresponding information is not included or is not okay explain why: Additional comments:
	identified	☐	☐	☐	
	Who ensures training is in place	☐	☐	☐	
	Who documents the training	☐	☐	☐	
	How the training will be provided	☐	☐	☐	
	How will the needed skills be ensured	☐	☐	☐	
	The system or procedures that will document the training and skills	☐	☐	☐	
A12 Documents and Records					
	Lists all project documents, records, and reports to be produced	☐	☐	☐	
	How all project documents, records, and reports will be managed	☐	☐	☐	
	Final disposition including retention time & location	☐	☐	☐	
B1 Identification of Project Environmental Information Operations					
	Any guidance, tools, templates, etc. used to develop the QAPP *(e.g., QAPP Standard, R7 QAPP Template, R7 QAPP Review checklist, etc.)*	☐	☐	☐	
	Environmental info/data activities to be performed: - how they will meet the project's purpose - how they will meet the quality objectives - how they will meet the performance/acceptance criteria in A4 & A6	☐	☐	☐	
	Sample types *(e.g., grabs, composites, etc.)* and numbers	☐	☐	☐	
	Sampling approach *(e.g., random, systematic grid, judgmental, etc.)* and rationale *(e.g., why they chose that design, why they chose those locations, etc.)*	☐	☐	☐	
	Sample locations and frequencies (can be shown on a site map or described in the text)	☐	☐	☐	
	If sample locations will be determined in the	☐	☐	☐	

Element	Information to Address	Okay	Not Okay	N/A	If element or corresponding information is not included or is not okay explain why: Additional comments:
	field, how this will be done is described	☐	☐	☐	
	If field screening instruments will be used *(e.g. PID, XRF, etc.)*, how the data will be used	☐	☐	☐	
	If lab confirmation of field screening is planned, define the frequency, how lab confirmation samples chosen, and how field screening and lab data will be evaluated for acceptance	☐	☐	☐	
	Sample matrices identified	☐	☐	☐	
	Existing info/data sources – i.e., from where are they getting the existing data	☐	☐	☐	
B2 Methods for Environmental Information Acquisition and B3 Integrity of Environmental Information					
*can be combined into one section as shown on this checklist or can be separate sections	**Field Operations**	☐	☐	☐	
	Methods or procedures for collecting samples identified	☐	☐	☐	
	Methods or procedures available to personnel performing the environmental info/data work	☐	☐	☐	
	SOP/Procedure # ***Note:*** *if R7 field SOPs are being followed, these SOPs simply need to be referenced; they DO NOT have to be attached to the QAPP itself. If samples are not being submitted to the R7 Laboratory, their SOPs do not apply and CANNOT be referenced.*	☐	☐	☐	
	Title, revision, date, regulatory citation (if applies)	☐	☐	☐	
	Modifications for the project if applicable	☐	☐	☐	
	Selected option if options are provided in the method or procedure	☐	☐	☐	
	If an EPA QAPP (i.e., a contractor is NOT doing the work), is conformance with QAFAP including SOPs recognized. E.g., Is the EPA staffer from a Branch/Section that is subject to the R7 QAFAP Protocols? Check with	☐	☐	☐	

Element	Information to Address	Okay	Not Okay	N/A	If element or corresponding information is not included or is not okay explain why: Additional comments:
	Bob Nichols.	☐	☐	☐	
	Responsibility for maintaining methods or procedures	☐	☐	☐	
	Chain-of custody procedures described or referenced	☐	☐	☐	
	Sample handling *(e.g., storage, packaging, shipment, labeling, etc.)*	☐	☐	☐	
	Examples of chain-of-custody form/logs and sample labels	☐	☐	☐	
	Storage of samples at the laboratory	☐	☐	☐	
	Sample containers, volumes, preservation (both physical and chemical), and holding times (incl. to extraction and to analysis where applicable) *Note: unless promulgated in a regulation or a specific program requirement, sample containers, volumes, preservation, and holding times are recommendations and variations may be allowed (e.g., VOC samples may be left unpreserved if a holding time of 7 days is observed or samples collected from a karst environment, a lab may need more sample volume for lab QC, etc.); confirm any variations before commenting*	☐	☐	☐	
	Laboratory Operations	☐	☐	☐	
	Laboratory/laboratories to perform analyses identified	☐	☐	☐	
	How it is ensured required lab certification/accreditation is in place and maintained	☐	☐	☐	
	Methods or procedures for analyzing samples identified	☐	☐	☐	
	Base method references are correct and check to ensure that the methods cited include the contaminants of concern for the project SW-846 CWA Methods	☐	☐	☐	

Element	Information to Address	Okay	Not Okay	N/A	If element or corresponding information is not included or is not okay explain why: Additional comments:
	DW Methods Standard Methods ASTM *Note: unless promulgated in a regulation or a specific program requirement, use of a certain method or version of a method is not necessarily required and there may be modifications allowed to the procedure; check with the R7 analyst on method modifications and request confirmation on method revision if different from current version before commenting.*	☐	☐	☐	
	SOP/Procedure # ***Note:*** *if R7 laboratory SOPs are being followed, these SOPs simply need to be referenced; they DO NOT have to be attached to the QAPP itself.*	☐	☐	☐	
	Title, revision, date, regulatory citation (if applies)	☐	☐	☐	
	Selected option if options are provided in the method or procedure	☐	☐	☐	
	How lab corrective actions will be managed (described in text or reference provided)	☐	☐	☐	
	Who responsible for lab corrective action	☐	☐	☐	
	How effectiveness of corrective action determined and documented	☐	☐	☐	
	Lab data package turnaround time if important to the project schedule	☐	☐	☐	
	Method performance study information for non-standard circumstances *(e.g., unusual matrices, unusual situations, etc.)*	☐	☐	☐	
	Existing Information	☐	☐	☐	
	Information to be obtained	☐	☐	☐	
	The collection process	☐	☐	☐	
	Intended use of the information	☐	☐	☐	
	How it is determined the information is acceptable for use in the project *(e.g., acceptance criteria, review and evaluation, compatibility if it will be combined*	☐	☐	☐	

Element	Information to Address	Okay	Not Okay	N/A	If element or corresponding information is not included or is not okay explain why: Additional comments:
	with new information)	☐	☐	☐	
B4 Quality Control					
	Type of QC samples defined *(e.g., blanks, duplicates, spikes, etc. for field samples and keep in mind there are no QA office requirements for the type, frequency, or acceptance criteria for field QC samples; laboratory QC samples are defined by the base method and the laboratory's analytical documentation)*	☐	☐	☐	
	Frequency of each type of QC sample	☐	☐	☐	
	Acceptance criteria or how results of QC samples will be reviewed for acceptability	☐	☐	☐	
	Corrective action if QC results are not acceptable	☐	☐	☐	
	How corrective actions documented, and their effectiveness determined	☐	☐	☐	
	Procedures for calculating statistics *(e.g., RPD, %R, completeness, etc.)*	☐	☐	☐	
	Existing information QC *(e.g., systematic review, an independent review of studies in open literature, QC of databases & spreadsheets, etc.)*	☐	☐	☐	
B5 Instruments/ Equipment Calibration, Testing, Inspection, and Maintenance					
	Lists instrument or equipment needing calibration, testing, inspection or maintenance	☐	☐	☐	
	SOP reference or procedure	☐	☐	☐	
	Who responsible	☐	☐	☐	
	How the instrument or equipment will be calibrated, how often, and how calibration is documented so that it can be traced back to that specific instrument or equipment	☐	☐	☐	
	How the instrument or equipment will be tested, inspected, and maintained and how often	☐	☐	☐	
	Availability of spare parts as applicable	☐	☐	☐	
B6 Inspection/ Acceptance of Supplies and Services					

Element	Information to Address	Okay	Not Okay	N/A	If element or corresponding information is not included or is not okay explain why: Additional comments:
	Supplies *(e.g., spare parts, reagents, sample bottles, calibration standards, reagents, hoses, deionized water, potable water, and electronic data storage media, etc.)* will be inspected to ensure they are acceptable and can be used	☐	☐	☐	
	Services to be provided by others *(e.g., contractors, sub-contractors, sub-grantees, etc.) are identified (e.g., laboratory analyses, well drilling, etc.)*	☐	☐	☐	
	Conformance with the QAPP will be verified for those providing services	☐	☐	☐	
	Acceptability of supplies and services is documented	☐	☐	☐	
B7 Environmental Information Management					
	Describes or references standard record-keeping procedures	☐	☐	☐	
	Describes or references the document control system	☐	☐	☐	
	Defines information storage including electronic media and other data repositories *(e.g., STORET, AirQX, WQX, Scribe, etc.)* ***Note:*** *Make sure the QAPP cites where the data set will be stored - Evidence Act requirement. If missing,* ***CITE AS CRITICAL COMMENT TO COMPEL COMPLIANCE.***	☐	☐	☐	
	Information retrieval on electronic media	☐	☐	☐	
	Process for detecting and correcting error	☐	☐	☐	
	Prevention of information loss during the information management process *(e.g., data entry, data reduction, data reporting, etc.)*	☐	☐	☐	
	Examples or reference provided for any standard forms or checklists to be used ***Note****: if R7 checklists or forms found in R7 SOP are being used, they can simply be referenced; these checklists and forms DO NOT need to be attached to the QAPP itself.*	☐	☐	☐	
	The procedures for processing, compiling, and analyzing both new and existing information	☐	☐	☐	

Element	Information to Address	Okay	Not Okay	N/A	If element or corresponding information is not included or is not okay explain why: Additional comments:
	Computer hardware/software to be used along with any specific performance requirements	☐	☐	☐	
	Describes or references the procedures to make sure the hardware/software configuration are acceptable	☐	☐	☐	
	Describes or references the procedures to ensure information management requirements are satisfied	☐	☐	☐	
C1 Assessments and Response Actions					
	Assessments	☐	☐	☐	
	Type(s) of assessments listed *(e.g., audits, performance evaluations, management reviews, peer reviews, inspections, surveillances, readiness reviews, etc.)*	☐	☐	☐	
	Number or frequency for each assessment listed	☐	☐	☐	
	Who responsible for performing each assessment	☐	☐	☐	
	Who responsible for responding to assessment findings	☐	☐	☐	
	Who responsible for corrective actions	☐	☐	☐	
	Response Actions	☐	☐	☐	
	The process for developing response actions described or referenced	☐	☐	☐	
	How response activities will be documented, tracked, and reported	☐	☐	☐	
	Who has responsibility for response activities	☐	☐	☐	
C2 Oversight and Reports to Management					
	Lists the type(s) of report(s) to be prepared	☐	☐	☐	
	Describes the content for the report(s)	☐	☐	☐	
	Who is responsible for transmitting the report(s)	☐	☐	☐	
	Defines how the report(s) will be transmitted	☐	☐	☐	
	Who will receive the report(s) [includes project manager, project QA manager, EPA organization]	☐	☐	☐	

Element	Information to Address	Okay	Not Okay	N/A	If element or corresponding information is not included or is not okay explain why: Additional comments:
	Who has responsibilities to make sure oversight activities, response actions, and reporting mechanisms are in place	☐	☐	☐	
D1 Environmental Information Review					
	(Verification – reviewing the completeness and correctness of an info/data set as well as compliance with method, procedure, or contract requirements; can include but not be limited to: • *verifying values of individual data points meet criteria specified in QAPP and data collection adheres to SOPs, method, and contracts* • *evaluating whether data collection plans, protocols, and instructions were followed;* • *determining if basic operations and calculations performed correctly* • *adding qualifiers to info/data points where applicable* • *obtaining all required data and reporting all deficiencies)* Describes or references the information/data verification procedures	☐	☐	☐	
	(Validation – the process of reviewing a verified information/data set before it is used to determine if it meets the project objectives and how any deviations or nonconformances may impact usability; can include: • *comparing project documentation and results to what was planned for in the QAPP* • *determine if acceptance or performance criteria in A6 of the QAPP were met* • *document any deviations or deficiencies* • *look for any qualified info/data points* • *evaluate the impact of any deviations, deficiencies* Describes or references the information/data validation procedures	☐	☐	☐	
D2 Useability Determination					
	Describes or references the process to determine if the project info/data are usable	☐	☐	☐	
	How the data usability assessment will be documented	☐	☐	☐	
	Identifies who is responsible	☐	☐	☐	

Element	Information to Address	Okay	Not Okay	N/A	If element or corresponding information is not included or is not okay explain why: Additional comments:
	How any known or anticipated limitations will be documented and to whom	☐	☐	☐	
	Describes or references any planned statistical analysis	☐	☐	☐	

Reviewer Signature

Additional Comments: