QAPP Amendment Form

PROGRAM:	Delta Regional Monitoring Program (DRMP)
PROJECT:	Constituents of Emerging Concern (CEC)
QAPP VERSION:	Version 2.0
PREPARED BY:	MLJ Environmental
DATE SUBMITTED:	July 7, 2022

Title: Amendment to Update Reporting Limit for Perfluorooctanesulfonate and Perfluorooctanoate in Sediment.

Section of QAPP affected:

- Table 7-3. Method detection limits for chemical analytes.

Reason for Changes:

An error was discovered during the contract finalization process with SGS-AXYS for two reporting limits (RLs) defined in the final CEC Quality Assurance Project Plan (QAPP). The QAPP inadvertently contained the incorrect RL for Perfluorooctanesulfonate (PFOS) and Perfluorooctanoate (PFOA) in sediment of 0.016 ng/g dw, while the contract and all other project information specified an RL of 0.16 ng/g dw for these analytes and matrix. The additional zero in the final QAPP was a transcription error that occurred during document development and was not caught during the verification of these numbers.

There are no monitoring trigger limits or associated target RL values for these constituents, and therefore the increasing of the RL to the value originally provided by the laboratory does not affect the useability of the results according to the project design. The RL of 0.16 ng/g is still orders of magnitude below the detection limits listed in the original study plan as the estimated resolution associated with the analysis (2.5 ng/g). The updated RL is also similar to those associated with the final Year 1 sediment data, ensuring comparability of results across project datasets. As of the drafting of this amendment, no Year 2 results have been received for PFOS and PFOA in sediment, and no project data have been verified against the incorrect RL in the QAPP. The Delta RMP is updating the CEC QAPP to reflect the correct RL that will be achieved by the laboratory for samples analyzed during the implementation of Year 2 of the study design.

Detail of Changes:

Changes have been made to the following table of the CEC QAPP to reflect the correct RL.

Table 7-3. Method detection limits for chemical analytes.

Matrix / Analyte Type	Analyte	CEDEN Matrix Code	Mon Trigger Level (MTL)	Target RL (1/2 MTL)	MDL	RL	Units	Lab	Method
Sediment									
Required	PBDE 047[3]	sediment	-	-	NA[2]	0.005	ng/g dw	Axys	SGS Axys MLA-033 Rev 6
Required	PBDE 099[3]	sediment	-	-	NA[2]	0.005	ng/g dw	Axys	SGS Axys MLA-033 Rev 6
Required	Perfluorooctanesulfonate[5]	sediment	-	-	NA[4]	~~0.016~~ 0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Required	Perfluorooctanoate[5]	sediment	-	-	NA[4]	~~0.016~~ 0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	PBDE 028/33	sediment	-	-	NA[2]	0.005	ng/g dw	Axys	SGS Axys MLA-033 Rev 6
Additional	PBDE 100	sediment	-	-	NA[2]	0.005	ng/g dw	Axys	SGS Axys MLA-033 Rev 6
Additional	PBDE 153	sediment	-	-	NA[2]	0.005	ng/g dw	Axys	SGS Axys MLA-033 Rev 6
Additional	PBDE 154	sediment	-	-	NA[2]	0.005	ng/g dw	Axys	SGS Axys MLA-033 Rev 6
Additional	PBDE 183	sediment	-	-	NA[2]	0.005	ng/g dw	Axys	SGS Axys MLA-033 Rev 6
Additional	PBDE 209	sediment	-	-	NA[2]	0.05	ng/g dw	Axys	SGS Axys MLA-033 Rev 6
Ancillary	Moisture	sediment	-	-	NA	NA	% ww	Axys	SGS Axys MLA-033 Rev 6
Additional	Perfluorobutanoate	sediment	-	-	NA[4]	0.64	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Perfluoropentanoate	sediment	-	-	NA[4]	0.32	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Perfluorohexanoate	sediment	-	-	NA[4]	0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Perfluoroheptanoate	sediment	-	-	NA[4]	0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Perfluorononanoate	sediment	-	-	NA[4]	0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Perfluorodecanoate	sediment	-	-	NA[4]	0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Perfluoroundecanoate	sediment	-	-	NA[4]	0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Perfluorododecanoate	sediment	-	-	NA[4]	0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Perfluorotridecanoate	sediment	-	-	NA[4]	0.04 0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Perfluorotetradecanoate	sediment	-	-	NA[4]	0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2

Matrix / Analyte Type	Analyte	CEDEN Matrix Code	Mon Trigger Level (MTL)	Target RL (1/2 MTL)	MDL	RL	Units	Lab	Method
Additional	Perfluorobutanesulfonate	sediment	-	-	NA[4]	0.04 0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Perfluoropentanesulfonate	sediment	-	-	NA[4]	0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Perfluorohexanesulfonate	sediment	-	-	NA[4]	0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Perfluoroheptanesulfonate	sediment	-	-	NA[4]	0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Perfluorononanesulfonate	sediment	-	-	NA[4]	0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Perfluorodecanesulfonate	sediment	-	-	NA[4]	0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Perfluorododecanesulfonate	sediment	-	-	NA[4]	0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Fluorotelomer Sulfonate, 4:2-	sediment	-	-	NA[4]	0.64	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Fluorotelomer Sulfonate, 6:2-	sediment	-	-	NA[4]	0.64	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Fluorotelomer Sulfonate, 8:2-	sediment	-	-	NA[4]	0.64	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Fluorotelomer Carboxylic Acid, 3:3-	sediment	-	-	NA[4]	0.64	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Fluorotelomer Carboxylic Acid, 5:3-	sediment	-	-	NA[4]	4	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Fluorotelomer Carboxylic Acid, 7:3-	sediment	-	-	NA[4]	4	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Perfluorooctanesulfonamide	sediment	-	-	NA[4]	0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Methyl-perfluorooctanesulfonamide, N-	sediment	-	-	NA[4]	0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Ethyl-perfluorooctanesulfonamide, N-	sediment	-	-	NA[4]	0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Methyl Perfluorooctane Sulfonamido Acetic Acid, N-	sediment	-	-	NA[4]	0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Ethyl Perfluorooctane Sulfonamido Acetic Acid, N-	sediment	-	-	NA[4]	0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Methyl-perfluorooctanesulfonamidoethanol, N-	sediment	-	-	NA[4]	1.6	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Ethyl-perfluorooctanesulfonamidoethanol, N-	sediment	-	-	NA[4]	1.6	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Perfluoro-2-Propoxypropanoic Acid	sediment	-	-	NA[4]	0.64	ng/g dw	Axys	SGS Axys MLA-110 Rev 2

Matrix / Analyte Type	Analyte	CEDEN Matrix Code	Mon Trigger Level (MTL)	Target RL (1/2 MTL)	MDL	RL	Units	Lab	Method
Additional	Perfluoro-3,6-dioxaheptanoate	sediment	-	-	NA[4]	0.32	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Perfluoro-4-methoxybutanoate	sediment	-	-	NA[4]	0.32	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Perfluoro-3-methoxypropanoate	sediment	-	-	NA[4]	0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid, 11-	sediment	-	-	NA[4]	0.64	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid, 9-	sediment	-	-	NA[4]	0.64	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Dioxa-3H-Perfluorononanoate Acid, 4,8-	sediment	-	-	NA[4]	0.64	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Additional	Perfluoro(2-ethoxyethane)sulfonic acid	sediment	-	-	NA[4]	0.16	ng/g dw	Axys	SGS Axys MLA-110 Rev 2
Ancillary	Moisture	sediment	-	-	NA	NA	% ww	Axys	SGS Axys MLA-110 Rev 2
Ancillary	Total Organic Carbon	sediment	-	-	36	200	mg/kg dw	Weck	EPA 9060M

[2]SGS-Axys reports sample specific detection limits (SDLs), which are determined from the data of each individual analysis and vary between analytical batches; the estimated minimum detectable area is determined based on the signal to noise ratio for each individual result, per the method. SDL data will be reported in the MDL field in CEDEN per State Board guidance.

[3]While the state guidance only requires/recommends the analysis of 2 forms or congeners of PBDE, the SGS-Axys method includes an additional seven Congeners of Primary Interest, including, importantly PBDE-209.

[4]SGS-Axys reports sample specific detection limits (SDLs), which will vary between analytical batches: detection limit is the concentration equivalent of the lowest calibration level prorated to sample size. SDL data will be reported in the MDL field in CEDEN per State Board guidance.

[5]The state guidance requires/recommends monitoring of 2 perfluorinated compounds, PFOS and PFOA. The SGS-AXYS MLA-110 method for water and sediment includes 40 different compounds including both PFOS and PFOA along with 38 others.

Approval:

The amendment(s) detailed within this document shall be effective upon signature completion of all parties listed below. By signing this amendment, all parties listed below acknowledge and accept these changes. A copy of this document shall be distributed to all parties within the QAPP distribution list and shall be included and/or attached to all distributed copies of the original QAPP.

CEC Program Manager:	DocuSigned by: Melissa Turner 9796DD915C44446... Melissa Turner	Date: 7/11/2022
CEC Quality Assurance Officer:	DocuSigned by: Will Hagan A1D771E8E56040F... Will Hagan	Date: 7/8/2022
Quality Assurance Officer, SGS-AXYS:	DocuSigned by: Sean Campbell 32763EABF72D4B7... Sean Campbell	Date: 7/14/2022
Quality Assurance Representative, CVRWQCB:	DocuSigned by: Selina Cole F3102A0E248746B... Selina Cole	Date: 7/8/2022
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