

Chemical Analysis Report

NW-DIST-2017-09-19-01

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **Bayou Chico BMAP**
Request ID: **RQ-2017-08-21-21**
Customer: **NW-DIST**
Project ID: **BMAP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 308
Pensacola, FL 32502-5794
Attn: Cheryl Bunch

For additional information please contact
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 06-OCT-2017 09:47

A handwritten signature in black ink, appearing to read "Liang Lin", on a light-colored background.

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical group are included in this report: Nutrients.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Pensacola Bay at Sanders Beach

Collection Date/Time: 09/18/2017 10:35

Field ID: A

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1929430	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P331858	
1929435	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P331946	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.22		mg N/L	P331934	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.012		mg N/L	P332147	
	EPA 365.1 Rev. 2.0	Total-P	0.027		mg P/L	P331955	MS

Sample Location: Bayou Chico at Mandalay Park

Collection Date/Time: 09/18/2017 11:20

Field ID: B

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1929440	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P331858	
1929442	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P331946	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.29		mg N/L	P331934	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P332147	
	EPA 365.1 Rev. 2.0	Total-P	0.030		mg P/L	P331955	MS

Sample Location: Jones Creek at Old Corry Road

Collection Date/Time: 09/18/2017 12:00

Field ID: C

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1929441	EPA 180.1 Rev. 2.0	Turbidity	3.9		NTU	P331858	
1929443	EPA 350.1 Rev. 2.0	Ammonia-N	0.033		mg N/L	P332192	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.49		mg N/L	P331937	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P331900	
	EPA 365.1 Rev. 2.0	Total-P	0.023		mg P/L	P331920	

Sample Location: Jackson Creek at Old Corry Road

Collection Date/Time: 09/18/2017 12:20

Field ID: D

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1929431	EPA 180.1 Rev. 2.0	Turbidity	2.9	A	NTU	P331858	
1929436	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P332192	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.30		mg N/L	P331937	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.4		mg N/L	P331900	
	EPA 365.1 Rev. 2.0	Total-P	0.025		mg P/L	P331920	

Sample Location: Jackson Creek at New Warrington Road

Collection Date/Time: 09/18/2017 12:45

Field ID: E

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1929432	EPA 180.1 Rev. 2.0	Turbidity	3.5		NTU	P331858	
1929437	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P332192	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.29		mg N/L	P331937	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.3		mg N/L	P331900	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P331920	

Sample Location: Bayou Chico at Navy Blvd Bridge

Collection Date/Time: 09/18/2017 14:25

Field ID: F

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1929433	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P331858	
1929438	EPA 350.1 Rev. 2.0	Ammonia-N	0.037		mg N/L	P331946	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.22		mg N/L	P331934	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.71		mg N/L	P332147	
	EPA 365.1 Rev. 2.0	Total-P	0.026		mg P/L	P331955	MS

Sample Location: Bayou Chico at W Street

Collection Date/Time: 09/18/2017 14:45

Field ID: G

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1929434	EPA 180.1 Rev. 2.0	Turbidity	8.5		NTU	P331858	
1929439	EPA 350.1 Rev. 2.0	Ammonia-N	0.061		mg N/L	P332192	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.66		mg N/L	P331937	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.90		mg N/L	P331900	
	EPA 365.1 Rev. 2.0	Total-P	0.057		mg P/L	P331920	

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P331858

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P331946

Component	Result	Code	Units
Ammonia-N	0.002	U	mg N/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P332192

Component	Result	Code	Units
Ammonia-N	0.002	U	mg N/L

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331934

Component	Result	Code	Units
Kjeldahl Nitrogen	0.080	U	mg N/L

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P331937

Component	Result	Code	Units
Kjeldahl Nitrogen	0.080	U	mg N/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P331900

Component	Result	Code	Units
NO2NO3-N	0.004	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P332147

Component	Result	Code	Units
NO2NO3-N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P331920

Component	Result	Code	Units
Total-P	0.002	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P331955

Component	Result	Code	Units
Total-P	0.002	U	mg P/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P331946

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	106		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P332192

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	105		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P331934

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P331937

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	107		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P331900

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P331900

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	104		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P332147

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	102		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P331920

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	97.4		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P331955

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	95.8		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P331946

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1928834	Ammonia-N	100	99.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P332192

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1929378	Ammonia-N	104	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P331934

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1929438	Kjeldahl Nitrogen	96.0	96.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P331937

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1929437	Kjeldahl Nitrogen	96.0	96.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P331900

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P331900

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1929443	NO2NO3-N	104	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P332147

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1929313	NO2NO3-N	102	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P331920

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1929504	Total-P	91.7	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P331955

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1929314	Total-P	88.5	86.8	F/F	90 - 110

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P331858

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1929431	Turbidity	4.43	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P331946

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1928834	Ammonia-N	0.636	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P332192

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1929378	Ammonia-N	0.798	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P331934

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1929438	Kjeldahl Nitrogen	0.807	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P331937

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1929437	Kjeldahl Nitrogen	0.187	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P331900

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1929443	NO2NO3-N	0.871	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P332147

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1929313	NO2NO3-N	1.33	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P331920

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1929504	Total-P	5.56	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P331955

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1929314	Total-P	1.70	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
 Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
 Run ID: A79018
 Included Lab Sample IDs: 1929430, 1929431, 1929432, 1929433, 1929434, 1929440, 1929441

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	100	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0
 Run ID: A79032
 Included Lab Sample IDs: 1929436, 1929437, 1929439, 1929443

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110
NO2NO3-N	102	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A79044

Included Lab Sample IDs: 1929435, 1929438, 1929442

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	102	P/P	90 - 110
Ammonia-N	103	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A79094

Included Lab Sample IDs: 1929435, 1929438, 1929442

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A79101

Included Lab Sample IDs: 1929439

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A79103

Included Lab Sample IDs: 1929436, 1929437, 1929443

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	99.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A79110

Included Lab Sample IDs: 1929435, 1929438, 1929442

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A79113

Included Lab Sample IDs: 1929436, 1929437, 1929439, 1929443

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	107	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A79125

Included Lab Sample IDs: 1929435, 1929438, 1929442

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.0	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A79139

Included Lab Sample IDs: 1929436, 1929437, 1929439, 1929443

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	103	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 180.1 Rev. 2.0	Turbidity				4.43	
EPA 350.1 Rev. 2.0	Ammonia-N	106	100	99.2		0.636
	Ammonia-N	105	104	103		0.798
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.8	96.0	96.9		0.807
	Kjeldahl Nitrogen	107	96.0	96.2		0.187
EPA 353.2 Rev. 2.0	NO2NO3-N	104	104	105		0.871
	NO2NO3-N	102	102	101		1.33
EPA 365.1 Rev. 2.0	Total-P	97.4	91.7	97.0		5.56
	Total-P	95.8	88.5	86.8		1.70

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1929430, 1929431, 1929432, 1929433, 1929434, 1929440, 1929441
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1929435, 1929436, 1929437, 1929438, 1929439, 1929442, 1929443
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1929435, 1929436, 1929437, 1929438, 1929439, 1929442, 1929443
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1929435, 1929436, 1929437, 1929438, 1929439, 1929442, 1929443
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1929435, 1929436, 1929437, 1929438, 1929439, 1929442, 1929443

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	09/19/2017			09/19/2017 16:12	DeAsia Armster	1929430, 1929431, 1929432, 1929433, 1929434, 1929440, 1929441
EPA 350.1 Rev. 2.0	09/19/2017			09/20/2017	Sofia Elnemr	1929435, 1929438, 1929442
	09/19/2017			09/22/2017	Sofia Elnemr	1929436, 1929437, 1929439, 1929443
EPA 351.2 Rev. 2.0	09/19/2017	09/21/2017	Adrian Shelby	09/22/2017	Tanya Welborn	1929435, 1929436, 1929437, 1929438, 1929439, 1929442, 1929443
EPA 353.2 Rev. 2.0	09/19/2017			09/20/2017	Beverly Y. Sanders	1929436, 1929437, 1929439, 1929443
	09/19/2017			09/25/2017	Beverly Y. Sanders	1929435, 1929438, 1929442
EPA 365.1 Rev. 2.0	09/19/2017	09/20/2017	Sima Feizi	09/21/2017	Lipi Saha	1929439
	09/19/2017	09/20/2017	Sima Feizi	09/22/2017	Lipi Saha	1929436, 1929437, 1929443
	09/19/2017	09/21/2017	Sima Feizi	09/22/2017	Lipi Saha	1929435, 1929438, 1929442