TMDL AUDIT Executive Summary

Audited Organization:
Analytical Environmental Services, Inc.
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Auditing Agency:
Florida Department of Environmental Protection
Environmental Assessment Section (EAS)
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DEP EAS Auditors:
Michael Blizzard, Andy Tintle, Joyce Ziesenis

Audit Date:
June 24 - 25, 2004

This audit was conducted to determine if past data generated by Analytical Environmental Services (AES) are usable for Total Maximum Daily Load (TMDL) listing purposes as specified in Chapter 62-303, F.A.C.

This evaluation was performed using criteria that were developed to meet specific data quality objectives for the TMDL program. Selected records were reviewed to determine if sufficient information was available to verify the quality of the data, with emphasis on calibration and quality control procedures. This audit was **not** conducted as a regulatory action against the audited party.

The audit consisted of a review of data retrieved from STORET that was identified as having been produced by Analytical Environmental Services, Inc.

The Environmental Assessment Section (EAS) determined that, for the selected STORET data set, the majority of the inspected data was of acceptable quality.

The EAS has recommended that ***chlorophyll A*** data should be further evaluated prior to use for establishing a *verified* status of any affected water body.

The attached table summarizes the analyte records and types of evaluation criteria used for the audit of historical data. Other supporting documentation is available upon request.

TMDL DATA AUDIT SUMMARY

Analytical Environmental Services, Inc.

DATA FROM SAMPLES COLLECTED ON 10/21/02, 12/2/02 AND 3/10/03

Analytes / TMDL Criterion	Chlorophyll A	NH3	NOX	o-P	TKN	TP	Turbidity	Calcium	Magnesium
Sample Preservation and Holding Times									
Holding times met	X	X	X	X	X	X	X	X	X
Sample preservation was acceptable	X	X	X	X	X	X	X	X	X
Laboratory Practical Quantitation Limit									
Reported PQL ≤ TMDL usability level	X	X	X	X	X	X	X	X	X
Laboratory Replicate Precision									
Replicates ≤ 20% RPD or RSD	X	X	X	X	X	X	X	X	X
Laboratory Spike Recoveries									
Spike recoveries were within TMDL limits		X	X	X	X	X		X	X
Spike concentration levels met TMDL criteria		X	X	X	X	X		X	X
SRM or QC check sample within limits	X								
Field and Laboratory Quality Control Blanks									
Blank detects <10% of sample values		X	X	X	X	X		X	X
Laboratory Analytical Instrument Calibration									
At least the minimum number of standards were used		X	X	X	X	X	X	X	X
Correlation coefficient was ≥ 0.995		X	X	X	X	X		X	X
Second source verification for initial calibration		X	X	X	X	X		X	X
Verifications met TMDL recovery limits		X	X	X	X	X	X	X	X
Samples & QC samples within verified time bracket		X	X	X	X	X	X	X	X
Samples & QC samples within verified concentration bracket		X	X	X	X	X	X	X	X
Method Specific Requirements									
All audited sample results were properly calculated	X	X	X	X	X	X	X	X	X
Critical method specific requirements met			X				X	X	X

Legend:
X=Analyte records were audited for the indicated TMDL usability criterion; HATCHED= The indicated TMDL usability criterion is not applicable