TMDL AUDIT Executive Summary

Data Submitting Agency:
McGlynn Laboratories (Includes Sample Collection and Laboratory Analysis)
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DEP Auditors
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Audit Date
March 18-19, 2003

This audit was conducted to determine if:

(1) current sampling procedures used by McGlynn Laboratories conform with DEP SOP requirements; and,
(2) past data are usable for 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 measures.

The audit consisted of two different activities:

- An on-site performance audit of current field activities (conducted March 18, 2003)
- A project audit of data retrieved from STORET that was identified as having been produced by McGlynn Laboratories

The auditors observed very few problems during the performance audit.

The current field documentation procedures (with minor changes) will produce records that can be used to verify present and future field activities.

The EAS determined that for the selected STORET data set, McGlynn Laboratories does not have adequate documentation to allow verification of the quality of some of the audited results. Inspection of the submitted documentation also indicated that some of the data quality did not meet the usability criteria established for TMDL purposes.

Additional audits of recent laboratory data are recommended to establish whether corrective actions have been implemented to ensure that the laboratory's data meets the department's quality criteria for TMDL use. These audits will also determine whether the laboratory is maintaining sufficient documentation for the analyses that are currently performed.

The attached table summarizes the findings of the audit of historical data. Other supporting documentation is available upon request.

Summary of Documentation Audit of McGlynn Laboratories
Evaluation of Data for TMDL Usability
Samples Collected 9/28/00

Analytes	Chlorophyll	Ammonia	Total Kjeldahl Nitrogen	NO3	NO2	Total Phosphorous	Ortho-phosphate	Turbidity	Total Suspended Solids	Temperature	Specific Conductance	pH	Dissolved Oxygen
Sample Preservation and Holding Time													
Maximum holding times not exceeded	?	Y	N	N	N	N	N	N	N	Y	Y	Y	Y
Sample preservation acceptable	?	?	N	N	N	N	?	?	Y	Y	Y	Y	Y
Laboratory Practical Quantitation Limit													
Reported PQL ≤ TMDL usability level	?	?	?	?	?	?	?	?	?				
Precision of Laboratory Duplicate Analysis													
Lab duplicate ≤ 20% (RPD ,%RSD)	?	?	?	?	?	?	?	?	?				
Laboratory Spike Recovery													
Lab spikes within TMDL recovery limits		?	?	?	?	?	?						
Spike concentrations per TMDL criteria		?	?	?	?	?	?						
SRM or QC check sample used	N												
Field and Laboratory QC Blanks													
Blank detects <10% of sample values	?	?	?	?	?	?	?	?	?				
Calibration													
Correlation coefficient ≥.995		Y	Y	Y	Y	N	Y						
Min. # of calibration standards used		Y	Y	Y	Y	Y	Y	Y			?	?	
Second-source standard for verification		?	?	?	?	?	?						
Calibrations verified per TMDL criteria		N	N	N	N	N	N	?		?	?	?	?
Samples/spikes time bracketed		N	N	N	N	N	N	?		?	?	?	?
Samples/spikes in conc. bracket		Y	Y	N	Y	N	N	?		?	?	?	?
Turbidity secondary standards verified								?					
TSS analytical wt. calibration bracket									N				
Method-Specific Requirements													
Correct data reduction calculations	Y	Y	Y	Y	Y	Y	Y		Y				
Method-specific requirements met	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Data Reporting													
Data qualifiers used appropriately	?	?	?	?	?	?	?	?	?	?	?	?	?
Non-detects reported as MDL ("U")	Y	Y	Y	Y	Y	Y	Y	Y	Y				

Legend: Y=Data quality met TMDL criteria; N=Data quality did not meet TMDL criteria; ?=Data quality could not be verified from the audited documentation; NA=Not audited; SHADED=not applicable