Memorandum **Florida Department of Environmental Protection**

To: Laura Morse, Springs Grant Coordinator
Groundwater Protection Section

From: Amy Wheeler, Environmental Specialist
Environmental Assessment Section

Date: May 11, 2004

Subject: Response to Springs Initiative Final Performance Audit (5/7/2004)

Response to Corrective Actions Report

Organization Name:	Northwest Florida Water Management District
Samplers:	Diana Thurman-Nowak and Kristi Caligiure
Location:	Jackson Blue Spring, Jackson County, Florida
FDEP/EAS Auditor:	Amy Wheeler
Audit Date:	January 5, 2004

The corrective actions and explanations given in the "Response to Springs Initiative Final Performance Audit" memorandum sufficiently address all concerns that were raised in the January 5, 2004, field performance audit. The "Springs Field Audit Report" (5/6/2004), "Response to Springs Initiative Final Performance Audit" (5/7/2004), and this memorandum will comprise the final audit report.

Copy to: Andy Tintle

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT

M E M O R A N D U M

TO: Laura Morse, Springs Grant Coordinator
Groundwater Protection Section, Florida Department of Environmental Protection

FROM: Kristopher Barrios

DATE: May 7, 2004

SUBJECT: Response to Springs Initiative Final Performance Audit 1/05/04

Please see my response following auditor comments for each item. If you have any questions or require further information, please let me know.

Springs Field Audit Report

Organization Name:	Northwest Florida Water Management District
Samplers:	Diana Thurman-Nowak and Kristi Caligiure
Location:	Jackson Blue Spring, Jackson County, Florida
FDEP/EAS Auditor:	Amy Wheeler
Audit Date:	January 5, 2004

The FDEP auditor observed the above field sampling event on-site and requested copies of documentation related to the observed event. The auditor evaluated the sampling event based on field observations and documentation provided. The following audit criteria were NOT met in whole or in part. A citation to the DEP SOP source of each criterion is listed following the criterion statement. The sampling organization is requested to respond to each of the following deficiencies with documentation, clarification, and/or statements of corrective action.

~~2.~~1. Gloves were worn and changed as needed to avoid sample contamination and personal exposure. *FS 1003, sections 5 & 6* **N, gloves were not changed during the sampling event. Samplers wore the same gloves throughout the sampling event, including when writing.**

Gloves are exchanged for a new clean pair after contact with a possible contaminant. Samplers follow clean-hands, dirty-hands procedure. The sampler assigned to collect the water quality samples does not contact materials not cleaned for sample collection. KFB(5/07/2004)

~~3.~~2. For depth sampling, the water column depth was measured or determined from reference sources. *FS 2110, section 1.2.3.2* **N**

Water column height was determined with the YSI 600XL Datasonde pressure transducer. The datasonde was then lifted 0.5 meters from the bottom of the spring vent for sample collection. KFB(5/07/2004)

~~4.~~3. All sample measurements were chronologically bracketed between acceptable calibration verifications. *FT 1000, section 2.2.1* **N, no continuing calibration time after the sampling event is documented in the records provided**

Calibration verification bracketing around sample values will now bracket the sample measurement chronologically instead of previously. KFB(5/07/2004)

~~5.~~4. The temperature sensor calibration was verified according to FT 1400. *FT 1400, section 2.2.2.1* **N, no temperature calibration or verification documentation was provided**

Temperature verification was previously recorded in the meter calibration log dated 1/2/2004, three days before the audit. YSI meter #3203 passed the verification, reading within 0.1°C of NIST Thermometer #15041A for three temperature ranges. KFB(5/07/2004)

~~7.~~5. All conductivity measurements were chronologically bracketed with acceptable calibration verifications. *FT 1200, section 2.3.2* **N, the continuing calibration date was recorded, but not the time**

Calibration verification time as well as date is now recorded in the meter calibration log book. KFB(5/07/2004)

~~8.~~6. All calibration verifications met the acceptance criteria of ± 0.2 mg/L dissolved oxygen when compared to the table of theoretical values for water-saturated air. *FT 1500, sections 1.1, 2.2.2.2, 2.3.1, 2.4.1, 2.4.2 and 2.4.3* **N, there is no indication in the documentation that this was checked**

The theoretical value for water saturated air is now recorded in the meter calibration log book. KFB(5/07/2004)

7. All instrument calibrations were properly documented. *FD 4100 sections 1-2.7* **N; see comments in numbers 3, 4, 5, and 14**

Addressed separately under comments 3, 4, 5, and 14. KFB(5/07/2004)

8. The type(s) of sampling equipment used to collect all samples was recorded in the field record. *FD 5000, section 2.10* **N**

   The sampling equipment used is now recorded on the sampling field sheet. KFB(5/07/2004)

9. Preservation information and verification was recorded for each sample, as applicable. *FD 5100, sections 1-1.4* **N, preservation verification and volume added were pre-recorded throughout the field log (including pages for future use). No preservation information was actually recorded on-site, as that section of the field sheet had been filled-out already. Documentation was not consistently taken seriously.**

   Preservation information is now recorded on-site after or during sample preservation. KFB(5/07/2004)

10. Information about all calibration standards and reagents used for field testing were linked to the calibration information associated with the field testing measurements for the project. *FD 4000* **N, the samplers indicated on-site that this had not been done; once requested, this information was provided**

    Lot numbers for all calibration standards are now recorded in the meter calibration log, linking the calibration verification to the calibration standard received, open, and expiration date. KFB(5/07/2004)

11. Certificates of assay, grade and other vendor specifications for all standards and reagents were retained and recorded for the standards and reagents linked to the sampling project. *FD 4100, sections 1.1.2-1.1.2.1* **N, no documentation of this was provided; these records must be retained**

    Vendor specifications for all standards and reagents are now retained and recorded and linked to the sampling project by reagent/standard lot number. KFB(5/07/2004)

12. Expiration dates for all calibration standards and reagents used on the sampling project were recorded. *FD 4100, section 1.3* **N, the samplers indicated on-site that this had not been done; this information was provided as requested**

    Expiration dates for all calibration standards and reagents are recorded in the calibration standards and reagents log book. KFB(5/07/2004)

13. All acceptable initial calibrations and calibration verifications were documented and linked to the field measurements for the sampling project. *FD 4100, section 2* **N, there is no direct link between the calibration**

documentation and the field documentation (such as the meter number written on the field sheet)

The meter number used for the sampling project is now recorded on the field sheet. KFB(5/07/2004)

14. For each instrument unit used for the sampling project, the following information was recorded for all calibrations: *FD 4100, sections 2.1-2.7*
    - The acceptance criteria for each calibration and verification used to accept the instrument calibration or verification **N**

      The acceptance criteria used for each calibration and verification refers to DEP SOP FT1000, FT1100, FT1200, FT1400, FT1500 and FT1600. KFB(5/07/2004)

    - Positive indication in the record of acceptable (successful) initial calibration and acceptable initial and continuing calibration verifications **N**

      Successful calibration attempts and calibration verification are now recorded as such in the meter calibration log. KFB(5/07/2004)

    - Positive indication of all failed calibrations or verifications **N**

      Failed calibration attempts and verifications are now recorded as such in the meter calibration log. KFB(5/07/2004)

    - A description or citation of the specific calibration and verification procedures used for the instrument (DEP SOP or internal SOP) **N**

      The specific calibration and verification procedures refer to DEP-SOP-001/01 (January 1, 2002), Florida Department of Environmental Protection, Bureau of Laboratories, Environmental Assessment Section. This is now documented in the meter calibration log. KFB(5/07/2004)

15. Cleaning steps in all procedures used for decontamination were documented either by description or reference to an SOP (DEP SOP or internal SOP). *FD 2000, section 1.1* **N, no documentation of this was provided**

    The specific cleaning and decontamination procedures refer to DEP-SOP-001/01 (January 1, 2002), Florida Department of Environmental Protection, Bureau of Laboratories, Environmental Assessment Section. This is now documented in the equipment cleaning log. Polyethylene sample collection tubing is discarded and therefore not cleaned. Silicon sample collection tubing is cleaned in the lab with lab grade detergent and tap water, reagent

grade HCl acid rinse, then deionized water. Deionized water containers are rinsed with new deionized water before filling. KFB(5/07/2004)

Memorandum **Florida Department of Environmental Protection**

To: Laura Morse, Springs Grant Coordinator
Groundwater Protection Section

From: Amy Wheeler, Environmental Specialist
Environmental Assessment Section

Date: May 6, 2004

Subject: Field performance audit
Northwest Florida Water Management District
Jackson Blue Spring

Springs Field Audit Report

Organization Name:	Northwest Florida Water Management District
Samplers:	Diana Thurman-Nowak and Kristi Caligiure
Location:	Jackson Blue Spring, Jackson County, Florida
FDEP/EAS Auditor:	Amy Wheeler
Audit Date:	January 5, 2004

The FDEP auditor observed the above field sampling event on-site and requested copies of documentation related to the observed event. The auditor evaluated the sampling event based on field observations and documentation provided. The following audit criteria were NOT met in whole or in part. A citation to the DEP SOP source of each criterion is listed following the criterion statement. The sampling organization is requested to respond to each of the following deficiencies with documentation, clarification, and/or statements of corrective action.

1. Gloves were worn and changed as needed to avoid sample contamination and personal exposure. *FS 1003, sections 5 & 6* **N, gloves were not changed during the sampling event. Samplers wore the same gloves throughout the sampling event, including when writing.**

2. For depth sampling, the water column depth was measured or determined from reference sources. *FS 2110, section 1.2.3.2* **N**

3. All sample measurements were chronologically bracketed between acceptable calibration verifications. *FT 1000, section 2.2.1* **N, no continuing calibration time after the sampling event is documented in the records provided**

4. The temperature sensor calibration was verified according to FT 1400. *FT 1400, section 2.2.2.1* **N, no temperature calibration or verification documentation was provided**

5. All conductivity measurements were chronologically bracketed with acceptable calibration verifications. *FT 1200, section 2.3.2* **N, the continuing calibration date was recorded, but not the time**

6. All calibration verifications met the acceptance criteria of ± 0.2 mg/L dissolved oxygen when compared to the table of theoretical values for water-saturated air. *FT 1500, sections 1.1, 2.2.2.2, 2.3.1, 2.4.1, 2.4.2 and 2.4.3* **N, there is no indication in the documentation that this was checked**

7. All instrument calibrations were properly documented. *FD 4100 sections 1-2.7* **N; see comments in numbers 3, 4, 5, and 14**

8. The type(s) of sampling equipment used to collect all samples was recorded in the field record. *FD 5000, section 2.10* **N**

9. Preservation information and verification was recorded for each sample, as applicable. *FD 5100, sections 1-1.4* **N, preservation verification and volume added were pre-recorded throughout the field log (including pages for future use). No preservation information was actually recorded on-site, as that section of the field sheet had been filled-out already. Documentation was not consistently taken seriously.**

10. Information about all calibration standards and reagents used for field testing were linked to the calibration information associated with the field testing measurements for the project. *FD 4000* **N, the samplers indicated on-site that this had not been done; once requested, this information was provided**

11. Certificates of assay, grade and other vendor specifications for all standards and reagents were retained and recorded for the standards and reagents linked to the sampling project. *FD 4100, sections 1.1.2-1.1.2.1* **N, no documentation of this was provided; these records must be retained**

12. Expiration dates for all calibration standards and reagents used on the sampling project were recorded. *FD 4100, section 1.3* **N, the samplers indicated on-site that this had not been done; this information was provided as requested**

13. All acceptable initial calibrations and calibration verifications were documented and linked to the field measurements for the sampling project. *FD 4100, section 2* **N, there is no direct link between the calibration**

documentation and the field documentation (such as the meter number written on the field sheet)

14. For each instrument unit used for the sampling project, the following information was recorded for all calibrations: *FD 4100, sections 2.1-2.7*
    - The acceptance criteria for each calibration and verification used to accept the instrument calibration or verification **N**
    - Positive indication in the record of acceptable (successful) initial calibration and acceptable initial and continuing calibration verifications **N**
    - Positive indication of all failed calibrations or verifications **N**
    - A description or citation of the specific calibration and verification procedures used for the instrument (DEP SOP or internal SOP) **N**

15. Cleaning steps in all procedures used for decontamination were documented either by description or reference to an SOP (DEP SOP or internal SOP). *FD 2000, section 1.1* **N, no documentation of this was provided**

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