Florida Department of

Memorandum Environmental Protection

To: Nicanor Madrid
Hazardous Waste Regulation Section

Through: Russ Frydenborg
Environmental Assessment Section

Through: Andrew Tintle
Environmental Assessment Section

From: Michael Blizzard
Environmental Assessment Section

Date: July 14, 2005

Subject: Field Sampling Performance Audit
Eglin Air Force Base
Range C-62 OB/OD Unit
Final Report

Reference: Permit No. 0006176-003-HO
EPA ID. FL8570024366

Please see the attached final report for the field sampling performance audit at Eglin AFB on November 5, 2003. The audit was conducted by the Environmental Assessment Section (EAS) and included a subsequent review of groundwater sampling logs for samples collected on November 5 & 6, 2003. The attached EAS comments (numbered according to the audit report findings) are based on the permittee's responses to the draft audit report (letter from Mr. Thomas Paris, Eglin AFB, received 2/10/05).

The responses and corrective actions for some of the reported findings were satisfactory. Most of our final comments pertain to the lack of substantiating documentation. We made three requests over time to obtain the complete archive for the sampling event from Bhate Environmental Engineers and Scientists, the consultant, without success. Consequently, we were unable to verify the permittee's responses to the majority of audit items in the report without the original field records to examine.

Please let me know if you have any questions or need further assistance.

Attachments: Final audit report
EAS final comments

Copy to: Andy Tintle
Russ Frydenborg
Audit file

EAS Final Comments

Note: Original comment numbers are used per the draft audit report of 6/15/04.

25. The response to this audit finding is contrary to the DEP SOP requirement to minimize agitation and aeration of VOC samples (FS 2004, section 4).

28. No corrective action is proposed by the consultant in response to the audit finding.

33. No corrective action is proposed by the consultant in response to the audit finding.

56. No documentation of equipment blank collection has been provided.

57. No field logs or lab transmittal records have been provided that might indicate submittal of trip blanks to the lab.

58. As noted throughout the audit report, the rental testing equipment did not appear to be functioning properly, and the auditor could not verify the reliability of the DO or turbidity sensors.

61. It was apparent from conversations with the samplers and from observations made during the audit that dissolved oxygen probes were not calibrated or verified by the samplers but by the equipment rental vendor. No subsequent documentation has been provided to demonstrate that the DO probe calibrations were verified for this sampling event.

62. No documentation has been provided to the auditor to indicate that the apparent malfunction of the DO meter(s) was noted in the field record. It is not clear from the observations made during the audit that the field turbidimeter(s) were functioning properly. Backup meters exhibited similar problems and it was unclear to the auditor whether calibration or malfunction issues had been resolved with use of the alternate meters.

63. No field logs or other documents have been exhibited that would indicate that stabilization measurements or any other use of the field meter readings were recorded as estimated values.

65. No documentation for calibrations has been provided and the verification intervals could not be determined by the auditor.

68. Documentation for temperature sensor verification has not been provided.

69. Documentation for pH calibration has not been provided.

70. Documentation for pH verifications has not been provided.

71. Documentation for pH calibration and verification for the sampling event was not provided to the auditor.

72. Documentation for pH verifications has not been provided.

73. No documentation of meter functionality checks has been provided.

77. Documentation for specific conductance calibration and verification for the sampling event was not provided to the auditor.

78. Documentation for specific conductance verifications for the sampling event was not provided to the auditor.

79. Documentation for specific conductance verifications for the sampling event was not provided to the auditor.

87. Documentation for the temperature sensor verifications has not been provided.

92. No documentation for dissolved oxygen sensor verifications has been provided. The auditor noted that the DO meter calibrations were not verified by the samplers on the day of the audit, despite obvious problems with the DO measurements.

95. No documentation for conductivity (salinity) calibrations or verifications has been provided.

99. No information about the performance check of the Horiba turbidity sensor as an alternative turbidimeter has been provided.

101. No documentation of turbidity calibrations or verifications has been provided.

102. The type of calibration standard used for the turbidity sensor was not documented.

103. Although the auditor observed one recalibration of the turbidity sensor after a verification failure, no documentation has been provided for the observed recalibration and verification or any subsequent verifications.

104. The type of calibration standard used for the turbidity sensor was not documented and has been previously stated by the consultant to be unknown.

108. No documentation for instrument calibration has been provided.

109. No sampler names appear on the groundwater sampling logs provided to the auditor.

112. ***The audit finding is retracted.***

113. No documentation about ambient field conditions was provided to the auditor.

116. Collection of a duplicate sample was noted on the groundwater sampling log for MW94-62-05, but no documentation for field-QC blank collection has been provided.

117. No documentation of field verification of pH preservation was provided.

120. Although the monitoring well number and site name is recorded on the groundwater sampling log, no associated documentation, such as the chain-of-custody (lab transmittal) log was provided to the auditor.

121. Well casing composition was not documented. The total well or equipment volumes were not recorded but could be back-calculated from the other information recorded on the groundwater sampling log. The end times for purging were also logged on the groundwater sampling form as the end time for sampling, which is contradictory. The purge flow rate calculations were not recorded, and back-calculation using the volume and time data does not verify some of the values entered on the groundwater sampling logs. The calculated elapsed time for one well volume or equipment volume was not calculated. This quantity could be calculated from the available data on the groundwater sampling log, but there would still be the question of the flow rate verification.

123. No information about calibration standards was provided to the auditor.

124. No information about calibration standards was provided to the auditor.

131. No information about instrument calibrations or verifications was provided to the auditor.

132. The consultant did not respond to this audit item.

133. Linkage with any calibration data was not apparent.

135. No records for transmittal and shipping were provided to the auditor.

136. No records for transmittal and shipping were provided to the auditor.

138. Sample container cleaning documentation was not provided to the auditor.

142. No information about equipment maintenance was provided to the auditor.

143. No information about equipment maintenance or service was provided to the auditor.

144. No equipment rental information was provided to the auditor.