Florida Department of

Memorandum **Environmental Protection**

To: Nicanor Madrid
Hazardous Waste Permitting Section

From: Andrew Tintle
Environmental Assessment Section

Date: August 4, 2006

Subject: Field Sampling Performance Audit Report
Universal Studios
Orlando, FL

Please see the attached report and checklist for the field sampling performance audit conducted at Universal Studios in Orlando, Florida on August 26, 2005. The audit was conducted by the Environmental Assessment Section (EAS) and included a subsequent review of sampling logs and other documentation for the audit day that were submitted by the permittee's consultant.

Sampling activities were audited using the DEP SOP ("Standard Operating Procedures for Field Activities", DEP-SOP-001/01), revision February 1, 2004. The consultant indicated the intention to follow this document for the audited sampling event.

Summary of audit deficiencies

Field Measurements

1. All field measurements need to be bracketed by calibration verifications. If an initial calibration is conducted prior to sample measurement, a verification must be performed following the initial cal prior to sample measurement. The verification must consist of a standard analyzed as a sample to confirm that the instrument is calibrated or continues to remain in calibration. Audit observations and project documentation did not support that this was always being done. Calibration documentation must be complete to include dates, times and type of calibration (initial or continuing) to allow clear reconstruction of calibrations and verifications.

Groundwater Sampling

2. Demonstration of purge water stability requires 3 consecutive field measurements that meet stabilization criteria. Well LF-42S did not have three consecutive turbidity measurements of ≤ 20 NTUs. If a pattern is demonstrated indicating that values of ≤ 20 NTUs may be achievable, then purging should continue. In situations where twenty cannot be achieved after all avenues of corrective action (lowering purge rate, etc.) have been taken then an adequate purge can be demonstrated by obtaining three consecutive turbidity readings within ± 10% or 5 NTUs whichever is greater. If neither of

these stabilization requirements for turbidity can be met then a decision on whether or not the sample should be taken needs to take place. This last decision should only take place after 5 volumes of the screen interval have been purged.

3. Calculation of equipment volumes must include the volume of the submersible pump when applicable.

Documentation

4. Document the screen interval length and the position of the intake tubing or pump in the well. Both of these were documented for the final project records.

Other Comments

5. See other comments on the attached checklist.

Response requirements

The permittee or the permittee's consultant should be asked to respond to the audit report by addressing each deficiency noted in the attached checklist, as explained by the checklist legend. The response should include the specific corrective actions to be taken. Additional information may be provided in order to determine whether the audit criterion is applicable or was satisfied. The response may include discussion of any items in the report for the purposes of clarification or rebuttal.

Issuance of final audit report

When the response has been received from the permittee (or its consultant), the EAS will review it to determine if appropriate corrective actions have been taken. When all responses have been reviewed, the EAS will issue the final audit report package consisting of the preliminary audit report and the EAS evaluation of the responses.

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