To: Satish Kastury, Program Administrator
Hazardous Waste Regulation

Through: Russel Frydenborg, Administrator
Environmental Assessment Section

From: Andrew Tintle, Environmental Specialist III
Thomas Deck, Environmental Specialist II
Environmental Assessment Section

Subject: Field Audit; Arizona Chemical-POC; Azizona Chemical Plant, 2 Everitt St., Panama City, FL 32401; Sampling Consultant – Arcadis Geraghty & Miller, Inc.

Dear Ms. Ferriss

The following is the preliminary report for the field audit conducted at Arizona Chemical Plant on October 29, 2002. The DEP Hazardous Waste Regulation Section in fulfillment of cooperative agreements with EPA Region IV requested this audit for the management of RCRA permitting activities.

The findings of the DEP auditors Thomas Deck and Andrew Tintle are listed below and in the attachments.

REPORT FORMAT

The audit summary in this correspondence and in the attached checklist, photographs and copy of the sampler's field notes comprise the audit report. The checklist findings are coded with the following notations, as follows:

Y The activity is in compliance with the audit statement and no deficiency was found.
N The activity was not in compliance with the audit statement and a deficiency is noted.
N/A The activity was not applicable to the sampling event or was not audited.
? There was insufficient information to determine compliance with the audit statement.

NARRATIVE

Introductory Meeting and Orientation

DEP personnel, Mr. Thomas Deck and Mr. Andrew Tintle, arrived at the main office of the Arizona Chemical Plant at 8:45 a.m. to conduct the audit and split sampling event. Mr. Richard Lee, Environmental Manager Arizona Chemical, met DEP personnel at the main office of Arizona Chemical and introduced DEP personnel to Sonny Pellane, Arizona Chemical Safety Officer, for contractor safety training. After safety training Mr. Lee instructed DEP personnel to go to the South Everitt Street gate to check in. Mr. Lee then met DEP personnel and guided them to the sampling site. At the sampling site DEP personnel met Mr. Jim Scotto (lead), and Mr. Melvin Rivèra, Arcadis Geraghty & Miller sampling personnel, where sampling was already under way.

Introductions with Acadis sampling personnel were conducted at the sampling site.

Observations of Sampling Procedures and Documentation for Monitoring Wells

Water levels for each of the wells to be sampled, SM-1, SM-2D, and SM-3, were taken before implementing purging. The depths were taken from the top of the well casing using a Solinist electronic water level measuring device. Field records recorded during the sampling event can be found attached to this report. The depth to water measurements were calculated the day before the sampling event. All of the wells were protected with locked well covers.

The first well sampled was SM-3. Instruments used for field measurements were calibrated in the field by Acadis sampling personnel. A duplicate set of field instruments were used in order to allow both members of the Acadis sampling personnel to collect physical chemical parameters.

Field Test Meter Calibrations and Measurement for All Audited Wells

1. 2 – Horiba U-22 field meters were used to monitor Turbidity, Temperature, Conductivity, pH, Dissolved Oxygen, and ORP
2. Field notebook showed that all physical chemical parameters except conductivity were recorded without units.
3. Used Oakton brand pH 4 standard to calibrate pH, conductivity, and turbidity. *
4. The pH probe calibration was checked with Oakton pH 4 and pH 7 standards.
5. The conductivity cell calibration was checked with a 100 µS/cm ein std
6. Conductivity calibration was verified using only one standard.
7. Turbidity was not calibrated using a primary formazin standard.
8. There was no record of DO calibration.

* Horiba user manual gave the expected conductivity, and turbidity values for the pH four buffer

All Audited Wells

For all of the audited wells, the following was noted:

1. All of the field notes associated with the sampling of the three audited wells are attached to this report.
2. Purging and sampling activities for this project were conducted according to an existing sampling and analysis plan and the Arcadis Geraghty & Miller Quality Assurance Plan (CompQAP), QAPP#900495C.
3. Arcadis Geraghty & Miller personnel collected samples for volatile organic compounds, extractable organics (EOs), and metals. DEP collected split samples for volatile organic compounds, extractable organics (EOs), and metals.

The volatile organics, EOs, and metals containers were alternated between each organization's sample containers filling half of the container at a time.

The auditors presume that no other field documentation was prepared other than that exhibited to the auditors. Auditors were not present at the time of preparation of samples for shipping or transmittal of samples or documentation to the receiving laboratory and no presumption is made about information transmitted to the laboratory.

Purging and Sampling Activities

Purging activities were conducted using peristaltic pumps using HDPE (high density polyethylene) with silicone tubing in the pump head. The pump rate was stated to be 1 gallon per minute (was not

measures) and was pumped continually through out the day. The purge water was directed into a treatment facility.

Calculations for the volume of water within the casing was not included in the field records submitted to DEP auditing staff. Field measurements of pH, conductivity, dissolved oxygen, turbidity, ORP and temperature were measured when water samples were collected. Field measurements were not used to determine purge completion criteria.

The purging equipment was also used for sampling. The pump tubing was used only once per well per day. The HDPE sampling tubing was transported in a cardboard box on a spool. The silastic tubing (Masterflex brand) was stored in a plastic bag. Samples for the metal were taken through the pump head into the sample container. Samples for the extractable organics were collected through an organic trap assembly directly into the sample container. Samples for volatile organic compounds were collected using a HDPE bailer. All samples were collected into unpreserved container (except for volatile organic samples). Metal samples had 15 drops of Nitric Acid added to sample container with no pH change, and was noted in field book, and chain-of-custody record. Samples were placed on ice in a cooler immediately after collection.

Preparation of paper work and coolers for shipment to the laboratory was not observed during the course of the audit.

Decontamination

1) Water level devices were rinsed with analyte free water between wells.
2) Sampling team used dedicated silicone tubing in pump, which was replaced daily.
3) Used disposable HDPE tubing in well, which is changed daily. No decontamination needed.
4) The organic trap assembly was decontaminated using alcohol, soapy water, and distilled water.

Preservation

1) The contract laboratory supplied pre-preserved sample containers for volatile organic analysis.
2) Efficacy of preservation was checked, but not achieved on SM-2 and SM-3 chemically preserved samples. Noted in fieldbook.

Quality Control

1) Field sampling personnel collected duplicates for SM-1, and SM-2.
2) Field sampling personnel collected a equipment blank before sampling began.
3) DEP personnel collected duplicate samples for EOs at SM-3.

Documentation

Documentation observed during the audit included:

1) Site name and well ID.
2) Date and time of sampling
3) Purging time, and rate purged.
4) Temperature, conductivity, DO, turbidity, and pH ORP readings
5) Date and time of sample
6) Sampler signature with associated date
7) Remarks
8) Depth to well measurement with associated date.

Documentation was legible and no instances were observed of occurrences of multiple line cross outs or where corrections were not initialed.

Specific records on water levels, purging, field measurements and sampling are attached to this report.

Sampling procedures were reviewed based on the organizations CompQAP, and Florida DEP 1992 revision SOPs. Comments and differing protocols from the revised SOPs dated January 1, 2002 have been added where deemed appropriate.

Exit Interview

Present at the exit interview were DEP staff and Arcadis Geraghty & Miller as listed above. Acceptable aspects of the observed sampling event and noted deficiencies were discussed. The audit reporting process was briefly explained by which Arcadis Geraghty & Miller would have the opportunity to clarify audit points and deficiencies noted in the report and respond to any requests for corrective actions.

Summary of Deficiencies Requiring Corrective Actions

1. Field meter calibration for pH, Conductivity, and Turbidity was performed using only one standard (Oakton pH 4 buffer observed during field audit). Information about this standard was not recorded in field notes. The 2002 version of DEP Field SOPs states that field meters are to be calibrated using primary standards that bracket the expected concentration of the sample, and that in-situ probes with turbidity sensors may be used for screening purposes only. Do not report their results for regulatory purposes.

2. The field organization checked initial calibration with primary standards. The pH calibration was checked with a pH 4.01 and pH 7.00 standard, which does not bracket the pH of the samples encountered (greater than pH 7). The 2002 version of DEP Field SOPs states that the buffer must bracket the expected sample pH. The conductivity calibration was check with only one standard. The 2002 version of DEP Field SOPs states that two standard potassium chloride solutions that bracket the range of expected sample conductivities should be used. Calibration would be done with the first standard, and then a check would be performed with the second standard, bracketing the range of expected sample values.

3. The expiration date, and lot number for primary and secondary standards were not recorded in field documentation.

4. The field organization did not use plastic around the wellhead, and allowed ends of the tubing to hit the ground.

5. The field organization had no documentation for the calibration of the dissolved oxygen probe.

6. All meter readings, except for Conductivity, had no units associated with them.

7. Field organization did not have an understanding of the calibration acceptance criteria in the 2002 version of DEP Field SOPs

8. The field organization did not slow the flow of the pump in order to collect the sample without causing splashing.

9. The field organization removed the cap of the volatile samples when a bubble was present, and attempted to add sufficient sample to remove the bubble. The 2002 version of DEP Field SOPs states that if bubbles are present, and the total volume of the bubbles is less than 5mm in diameter, the sample may be submitted. If the total volume of the bubbles is greater than 5mm in diameter, discard the vial and fill a new one. Do not open a vial to add additional sample.

RESPONSE REQUIREMENTS

1) Arcadis Geraghty & Miller must respond to each specific deficiency outlined in the "Summary of Deficiencies Requiring Corrective Actions" section of this correspondence as well as all of the "**N**" designations in the attached checklist. The response must include the specific measures to be taken in correcting the deficiency, the timetable for implementation and any other information pertinent to the evaluation of generated data.
2) The response may include clarifications, corrections, or explanations for any of the specifically noted deficiencies.
3) The corrective action plan specified in item #1 above must be received by the Department on or before (45 days from report date).

CONSEQUENCES OF NON-RESPONSE

Failure to respond with a corrective Action Plan by the specified date may result in a recommendation to reject all or selective portions of the data for use by the Department. See item #3 under "Department Actions" below

DEPARTMENT ACTIONS

1) When the Corrective Action Plan has been received, the Environmental Assessment Section will review the proposal to determine if appropriate corrective actions have been taken. If the Plan is acceptable, the Department will issue a final audit report based on the preliminary report and the proposed corrective actions.
2) If modifications to your proposed corrective actions are required, you will be provided another opportunity to propose acceptable corrective actions before the final report is issued.
3) Where circumstances warrant, the Department may recommend to its project managers that any or all data produced from this sampling event should be qualified or rejected, based on audit findings, and regardless of corrective actions initiated by the respondent or his agent. Any such recommendation will be formally communicated to the project manager and or other users of the affected data in accordance with the DEP Quality Assurance rule, 62-160, F.A.C., and all other applicable rules in effect at the time of this audit.

Please call me at (850) 245-8075 or e-mail me at Andrew.Tintle @dep.stae.fl.us if you have any questions concerning the audit report, response requirements, or appropriate corrective actions.

Sincerely,

Andrew R. Tintle

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Attachments (2): Completed audit Checklist
Field Records

Cc: Camille Stein; DEP hazardous Waste Regulation w/attachments
Thomas Deck, DEP EAS w/attachments
Russ Frydenborg, DEP EAS w/attachments