WP 12-VC3210

Revision 2

VOC Database Operation

Technical Procedure

EFFECTIVE DATE: 10/07/09

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APPROVED FOR USE

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INTRODUCTION [1]

The Waste Isolation Pilot Plant (WIPP) maintains a database of volatile organic compound (VOC) air sampling data. This procedure describes the use and population of the VOC Monitoring Database used in support of VOC monitoring and data reporting. Internal reports are generated to ensure program compliance with the Hazardous Waste Facility Permit (HWFP) and applicable quality assurance/quality control (QA/QC) limits.

The following activities will not necessarily be performed at one time, or in the order listed. This procedure details the use of the data after review and validation, and the notification process when values exceed the concentrations of concern (COC).

The performance of this procedure generates no records.

REFERENCES

BASELINE DOCUMENTS

- Hazardous Waste Facility Permit, issued to Waste Isolation Pilot Plant, Permit No. NM4890139088, issued by the New Mexico Environment Department
- WP 12-VC.01, Confirmatory Volatile Organic Compound Monitoring Plan
- WP 12-VC.02, Quality Assurance Project Plan for Volatile Organic Compound Monitoring

REFERENCED DOCUMENTS

None

EQUIPMENT

- Current VOC Database

PERFORMANCE

1.0 IMPORTING DATA

1.1 Open current VOC database.

1.2 Left click on the button "Import data" (found at the bottom of both the Report and Enter Data screens).

1.3 Highlight laboratory identification number (e.g., 9909157) of file to import.

1.4 Left click on Open.

2.0 VENTILATION RATES

NOTE

Air flow, temperature, pressure, density, and relative humidity readings are collected at a weather station in E-300 and at the exhaust shaft each sampling day and averaged over the length of the sampling event. WP 12-VC1684 contains steps for handling the data loggers and methods of downloading the data. Density calculations are based on "Subsurface Ventilation and Environmental Engineering," Malcolm J. McPherson, pg. 512, equations numbered 14.43, 14.53, and 14.51.

2.1 Select the Tables option in the database.

2.2 Select the Sample option under Tables.

2.3 Use the sample data sheets, Electronic Data Deliverables (EDD)s, and Air Conversion spreadsheet to enter the data for each sample, to include the following:

- Sample type R= Regular FD= Field Duplicate
- Parent sample if field duplicate
- Dilution factor
- Standardized airflow for VOC-A and exhaust shaft locations

2.4 Enter the standardized airflow measurements into the VOC database using the Air Conversion spreadsheet for the sample set.

3.0 REPORT GENERATION

NOTE

The following steps describe database report functions.

3.1 Viewing or Printing Reports

3.1.1 Highlight the Report tab on the drop-down default screen.

3.1.2 Select the desired report.

NOTE

The screen should show "For locations sampled from."

3.1.3 Enter start and end dates.

NOTE

Dates will remain the same, unless manually changed, for all reports printed.

3.1.4 Left click on "Preview Report."

3.1.5 Print report using printer icon, "cntrl p," **OR** select "File," "Print," "OK."

3.2 Reports Generated by "Comparison of A & B" Report

3.2.1 Generate report for the desired time frame.

NOTE

This report shows the month-to-date running average of sample differences between VOC Station A and VOC Station B and the individual differences between each sampling set. When individual or running averages exceed the COC, they are flagged with a "!!!" by the software.

3.3 "Field Precision" Report

3.3.1 Generate report for the desired time frame.

NOTE

Relative percent differences (RPDs) on values above the method detection limit, but below the reporting limit, are considered to be inaccurate and may generate an RPD outside the limits.

3.4 "Lab Precision" Report

NOTE

This report records the analysis of the laboratory's sample duplicates.

The laboratory duplicates are analyzed at a frequency of 10 percent, or one per analytical lot, whichever is more frequent.

3.4.1 Generate report for the applicable time frame.

NOTE

The database organizes laboratory QC samples by the date that they were generated by the laboratory. The dates will not directly correspond with the sample date of submitted samples. The user will need to pay close attention to the dates that will bound the beginning and end of the desired reporting period.

NOTE

RPDs on values above the method detection limit, but below the reporting limit, are considered to be inaccurate and may generate an RPD outside the limits.

3.5 "Lab Spikes" Report

NOTE

The laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) are analyzed at a frequency of 10 percent, or one per analytical lot, whichever is more frequent. The laboratory provides this data to WIPP.

WIPP uses the LCS/LCSD to evaluate laboratory precision and accuracy in the steps below.

3.5.1 Generate report for the desired time frame.

3.6 "Method Blanks" Report

NOTE

The method blanks report is used to monitor for the existence and magnitude of contamination resulting from laboratory activities.

3.6.1 Generate report for the desired time frame.

3.7 "VOC Monitoring-Station Data" Report

NOTE

The individual station report is used to summarize the detections by compound and sample number for both VOC-A and VOC-B.

3.7.1 Generate report for samples taken at desired sample location by sample date.

3.8 "Tentatively Identified Compound" Report

3.8.1 List all tentatively identified compounds as reported by the lab.