

**Confirmatory VOC and Mine Ventilation Rate Monitoring Annual Report  
DOE/WIPP 04-3309**

**Table 2. Summary of VOC Monitoring Results**

Compound	No. of Samples	Maximum Detected Value (ppbv)*	Method Reporting Limits (ppbv)	Samples > MRL	No. of Exceedences of COC
1,1-Dichloroethene	210	0	5	0	0
Methylene Chloride	210	2.44	5	0	0
Chloroform	210	0	2	0	0
1,1,1-Trichloroethane	210	0.84	5	0	0
Carbon Tetrachloride	210	0.77	2	0	0
1,2-Dichloroethane	210	0	2	0	0
Toluene	210	4.64	5	0	0
Chlorobenzene	210	0	2	0	0
1,1,2,2-Tetrachloroethane	210	0	2	0	0

\* Values reported by the analytical lab less than 0.2 ppbv are shown as 0 in this table

Running averages are calculated for each target compound in the VOC monitoring database. The average concentration for each target compound was less than the MRL. Therefore, since no annual averages for target compounds are discussed in this report. Similarly, the quantity of VOCs being released from the waste would be calculated by subtracting the concentrations found at VOC-B from VOC-A. These calculated values for the reporting period were not significant because of the frequency of sample values that were below the MRL.

### 3.2 Discussion of Results

For the reporting period, there were 210 samples analyzed for each of the 9 target compounds, representing a total of 1,890 data points. Each of these data points are below the individual MRLs. Values given in Attachment 4 include all values reported by the analytical laboratories. Only values over the MRL would have been used in comparing the concentration differences between the two sampling stations.

Reported VOC results are evaluated in two areas. The first was an evaluation of each individual sample to determine if the reported concentrations exceed the concentrations of concern listed in Table 1. The second was an evaluation of the running annual average for each compound compared to the concentrations of concern. For this reporting period, the sample results were below the MRLs for each of the target compounds. Therefore, since the MRLs are less than the concentrations of concern, it was determined that the waste is not contributing significant concentrations of VOCs to site workers or the environment.

### 3.3 Correlation of VOC Monitoring Results with WWIS Headspace Data

Headspace data were collected for waste disposed in Panel 2 during the reporting period. These data are stored in the WWIS database. The WWIS data include results for the nine target compounds associated with the VOC Monitoring Program. Although the WWIS data show measurable quantities of the nine compounds in the container

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Attachment 4 - VOC Sample Results for VOC-A and VOC-B

**Detection Summary**

Number of Samples: 105

Compound	Detection Average	Detection Count
1,1,1-Trichloroethane	0.68	35
1,1,2,2-Tetrachloroethane	0.00	0
1,1-Dichloroethene	0.03	20
1,2-Dichloroethane	0	0
Carbon Tetrachloride	0.41	22
Chlorobenzene	0.00	0
Chloroform	0.02	20
Methylene Chloride	0.41	28
Toluene	0.85	82

**Legend**

111TA = 1,1,1-Trichloroethane  
 1122T = 1,1,2,2-Tetrachloroethane  
 11DCE = 1,1-Dichloroethene  
 12DCA = 1,2-Dichloroethane  
 CCL4 = Carbon tetrachloride  
 CHBNZ = Chlorobenzene  
 CHFRM = Chloroform  
 DCM = Methylene chloride  
 C7H8 = Toluene

**Flags**

B = Compound present in the laboratory blank, background subtraction not performed.  
 NJ, J = Estimated value: Below Method Reporting Limits (MRL), but above Practical Quantitation Limits (PQL).  
 ND, U = Compound analyzed for, but not detected above the detection limits.  
 Normalized target VOC concentration.  
 Values preceded by "!!!" denote a concentration greater than the COC concentration.

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Attachment 4 - VOC Sample Results for VOC-A and VOC-B

**Detection Summary**

Number of Samples: 105

Compound	Detection Average	Detection Count
1,1,1-Trichloroethane	0.18	21
1,1,2,2-Tetrachloroethane	0.01	20
1,1-Dichloroethene	0.01	20
1,2-Dichloroethane	0	0
Carbon Tetrachloride	0.12	20
Chlorobenzene	0.02	20
Chloroform	0.00	0
Methylene Chloride	0.26	25
Toluene	0.73	34

**Legend**

111TA = 1,1,1-Trichloroethane  
 1122T = 1,1,2,2-Tetrachloroethane  
 11DCE = 1,1-Dichloroethene  
 12DCA = 1,2-Dichloroethane  
 CCL4 = Carbon tetrachloride  
 CHBNZ = Chlorobenzene  
 CHFRM = Chloroform  
 DCM = Methylene chloride  
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