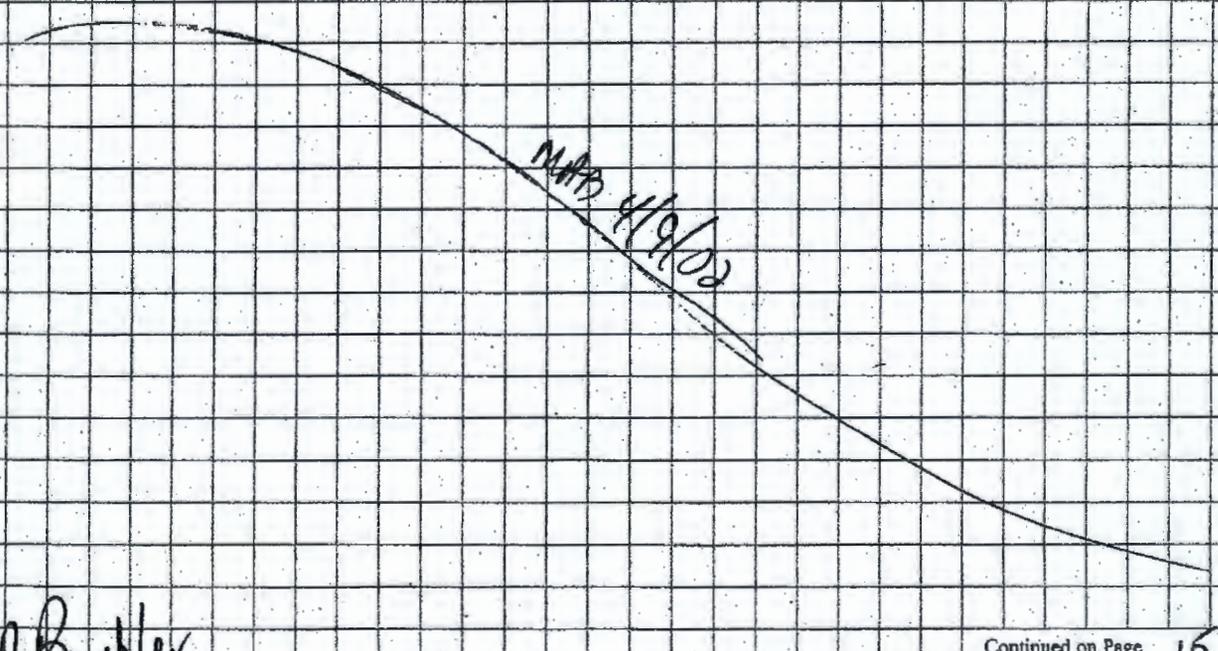


M.A. Baehler, CH-ARS, M.A. Baehler

4/9/02

- 0630 Arrived at 3728 building to collect GC calibration gases
- 0710 Arrived at mobile lab HO-LOIN-6292 to prepare GC for sample analysis
- 0758 left 200W for Sulf
- 0817 Arrived at Sulf sample point Sulf-06-A
- 0832 Conducted Plant the Day with D.L. Bevers
- 0843 started sampling
- 1053 completed sampling
- 1104 left Sulf for 200W
- 1118 Arrived at mobile laboratory
- 1120 started GC calibration
- 1146 completed GC calibration
- 1202 started analyzing samples
- 1422 completed sample analysis
- 1443 shut down instrument and left site



Continued on Page 15

M.A. Baehler
 M.A. Baehler
 Signed

4/9/02
 Date

Read and Understood By
 [Signature]
 Signed

6/13/02
 Date
 0000006

PRELIMINARY RESULT DATA DELIVERABLE COVER SHEET

Date: Monday, April 15, 2002

Sample Authorization Form Number: B99-032

Attachments (check all that apply or N/A): Test Results
 Chains of Custody
 Logbook Pages
 Anomaly Report

Total number of pages (Including cover sheet): 7

Comments: Solid Waste Landfill Methane and VOC Monitoring - 3/28/02 & 4/9/02

M.A. Beckler
Analyst signature

4/15/02
Date



Distribution: Sample Management - H9-03
Project (specify)

Requires distribution to listed project personnel by Sample Management (Check if applicable)

0000002

M.A. Baehler, CHI-AFS, M.A. Baehler

EL-1332

SFF B99-032 3/26/02

- 1155 Arrived at mobile laboratory, located @ 200 EP-2 / 200A
with replacement PID. Set up to Calibrate lamp & perform
MPLD Study.
- 1156 Installed 11.7 eV lamp #1818. Started detector. Detector
started OK and user target intensity to 1313 mV.
- 1158 Noted detector sparking shortly. Intensity dropping off rapidly
to 700 mV, and falling. Software attempting to adjust tuning
voltage to compensate.
- 1200 Set carrier gas regulator to 40 psi.
- 1207 Detector voltage steady at 683 mV. Software still increasing
tuning voltage.
- 1210 Balanced detector out, and backflush out at 5.0 ml/min.
- 1244 Returned to lab. Detector voltage 607 mV. Turned detector
off and restarted. Detector started OK, then started to
slowly drop voltage. Software attempting to compensate.
- 1250 Lamp failed. Allowing software to bring lamp back into
operating spec. Tuning voltage approached 2500 mV to reach
target of 1313 mV versus 1200 mV on first attempt to start.
- 1325 Lamp intensity at 1091 mV and falling slowly. Tuning voltage
at 2274 and holding since 1305. Turned detector off and
restarted.
- 1328 Target intensity reset to 823 mV.
- 1350 Lamp intensity steady at 823 mV.
- 1400 Removed 11.7 eV lamp and replaced with 10.6 eV lamp
#BVDK26. Set gas to low flow. Left SFF

MAB 3/26/02

M.A. Baehler, M.A. Baehler 3/26/02

0000008

M.A. Baehler, CH-AF's, M.G. Baehler

3/27/02

1050 M.A. Baehler arrived at SULL

1120 V. Powers arrived at SULL

1125 Conducted Plan of the day

1127 Set Landtec GFT-90 calibration to cal. gases
(Methane = 2.5%, Carbon Dioxide = 5.0%, Oxygen = 10.0%)

1135 Started sampling at SULL-01-A

1257 Completed Sampling

1300 Checked Calibration. GFT-90 responses!

Methane	2.3%
Carbon Dioxide	4.8%
Oxygen	9.9%

Responses acceptable.

1310 Left site.

NOTE: At the request of the project (V. Rohay) only landfill gases (methane, carbon dioxide, and oxygen) were collected at this time. Gases for VOC analysis will be collected when the GC has been repaired.

MRS 4/3/02

M.A. Baehler

M.G. Baehler

Signed

4/3/02

Date

Read and Understood By

Benedicta R. Nielson

Signed

4/3/02

Date

Continued on Page 13

0000004

M.A. Baehler, CH1-AFS, M.A. Baehler

EL-1332

SAF 309-032 3/28/02

- 0800 Arrived at mobile lab HO-68N-6282 located at 200-ZR 2/220W to troubleshoot GC problems, perform calibration, and perform STD study.
- 0815 Installed 11.7 eV lamp #1818. Detector started and reset target intensity to 1200 mV.
- 0817 Set carrier gas regulator to 40 psi, & balanced detector out of back flush port, flow at 15.0 mL/min.
- 0826 Following detector intensity to stabilize.
- 0835 Detector intensity appears stable. Attempting calibration with 1 ppm 6 VOC mix.
- 0846 Cal. run bad, responses too low. Checked flow rates. Detector out of v 4.0 mL/min, 1 mL/min too high. Rebalanced flows.
- 0849 Attempting a cal. of 1 ppm - 6 VOC mix.
- 0856 Cal. responses too low. Turned detector off and disconnected power. Replaced lamp holder, reinstalled detector.
- 0904 Lamp failed. Turned detector off and restarted. Waiting for detector intensity to stabilize.
- 0920 Attempting re cal. of 1 ppm - 6 VOC mix.
- 0926 Responses still low. Set run to calibrate in library. Reanalyzing 1 ppm 6 VOC. Will check 10 ppm 6 VOC to see if calibration is linear.
- 1030 Calibration linear but response too low. Determined lamp to be bad. Replaced 11.7 eV lamp. Installed 10.6 eV lamp & set carrier gas to low flow.
- 1245 Off site

MAB 3/28/02

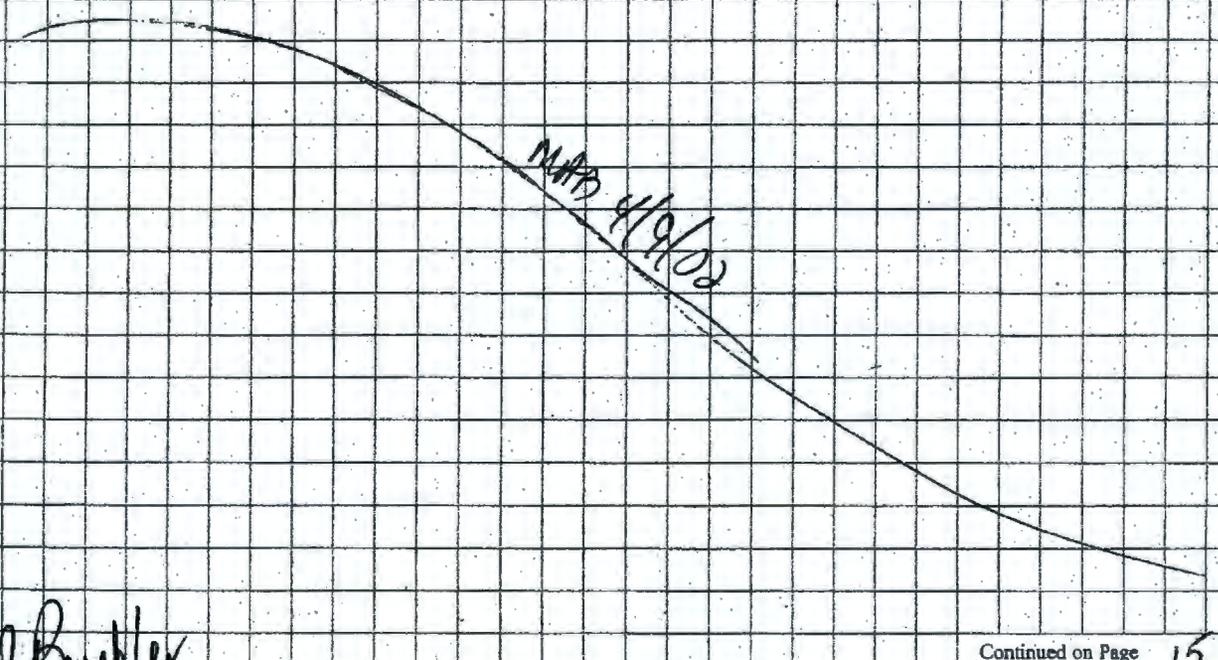
M.A. Baehler (M.A. Baehler 3/28/02

0000010

M.A. Baehler, CH-ARS, M.A. Baehler

4/9/02

- 0630 Arrived at 3728 building to collect GC calibration gases
- 0710 Arrived at mobile lab HO-ARS-6292 to prepare GC for sample analysis
- 0758 left 200W for Sulf
- 0817 Arrived at Sulf sample point Sulf-01-A
- 0832 Conducted plant thru Lab with D.L. Beavers
- 0843 started sampling
- 1053 completed sampling
- 1104 left Sulf for 200W
- 1118 Arrived at mobile laboratory
- 1120 started GC calibration
- 1146 completed GC calibration
- 1202 started analyzing samples
- 1422 completed sample analysis
- 1445 shut down instrument and left site



Continued on Page 15

M.A. Baehler
M.A. Baehler

Signed

4/9/02

Date

Read and Understood By

Donald R. Ralston

Signed

4/13/02

Date

0000000

M.A. Baechler, CH-AFS, M.G. Baechler

EL-1332

SAF B99-032 4/5/02

- 0725 Arrived at mobile laboratory Hg-68N-6292 located at 200-80-2
200N to condition and calibrate replacement detector lamp.
- 0729 Installed 11.7 eV lamp #1724. Set carrier gas regulator to
40 psi. Started detector.
- 0735 Detector started OK then failed. Software adjusting tuning voltage
to achieve necessary target intensity. Balanced detector out and
back flush out flow rates at 5.0 ml/min.
- 0803 Software unable to bring lamp to target intensity. Turned
detector lamp off, waited 30 sec, and restarted.
- 0811 Detector started OK. Flushing lamp to condition for 2 hours.
- 0824 Detector lamp slowly failing. Target intensity 1209 mV, tuning
voltage 238 mV and steady. Software not increasing tuning
voltage to compensate for lamp failure.
- 0833 Turned detector lamp off, waited 30 sec, and restarted.
- 0836 Detector target intensity reset by software to 827 mV.
- 0846 Tuning voltage 1898 mV. Set GC to auto run to warm up.
- 0828 Detector shut down unexpectedly. Restarted detector.
- 0937 Set GC to auto run to warm up. Detector shut down again.
Restarted.
- 0954 Checked flow rates. Rebalanced flows at 5.0 ml/min.
- 0958 Started calibration with 1 ppm - 6 VOC mix.
- 1006 Reset retention times in compound calibration library.
- 1008 No calibrating 1 ppm - 6 VOC mix.
- 1014 Calibrating 10 ppm - 6 VOC mix.
- 1021 Calibrating 23 ppm - 6 VOC mix.
- 1028 Calibration curves acceptable. Prepared MDL standard of
0.5 ppm using 1/2 1L federal bag of 1 ppm - 6 VOC mix, balance
zero air.
- 1029 Checked flow rates.
- 1033 Started MDL study.
- 1215 Completed MDL study.
- 1220 Replaced 11.7 eV lamp & installed 10.6 eV lamp #13VOK268
Set carrier gas to low flow.
- 1230 Off site

M.A. Baechler / M.G. Baechler 4/5/02

0000012

M.A. Baechler, CH-AFS, M.A. Baechler

EL-1332

AF 809-032 4/9/02

- 0710 Arrived at mobile laboratory Ho-60N-692 at 200 2P-2/20PW
to set up for analysis of solid waste landfill VOC samples.
- 0715 Installed 11.7 eV lamp # 1729. Set carrier gas regulator to
40 psi. Started detector.
- 0718 Balanced detector out and backflush out flow rates at
5.0 ml/min.
- 0726 Detector started and software reset target intensity. Detector
failed. Shut detector down & restarted. New target intensity.
- 0734 Detector restarted OK. Set bit to autorun to warm up. 1198 mV.
- 0737 Turned autorun off as detector automatically shut down.
Kept detector.
- 0740 Detector started OK. Monitoring for failure.
- 0747 Attempted to start auto run when software turned detector off.
Restarted detector. Will not load autorun for warmup.
- 0752 Detector appears stable. Let tab for SW.
- 1118 Returned to lab. Rebalanced flow rates at 5.0 ml/min
- 1120 Started calibration with 1 ppm VOC mix.
- 1138 Adding DCM & 1,1,2-TCA to calibration.
- 1149 Analyzed 1 ppm VOC mix cal. check. 1,1-DCA = 0.97 ppm, TCM = 1.01 ppm,
1,1,1-TCA = 0.98 ppm, CCl₄ = 0.97 ppm, TCE = 0.96 ppm, PCE = 1.01 ppm
Acceptable recoveries.
- 1156 Analyzed zero air. No detects.
- 1202 Started analyzing samples.
- 1306 Analyzed 1 ppm VOC mix cal. check. 1,1-DCA = 0.92 ppm, TCM = 0.94 ppm,
1,1,1-TCA = 0.92 ppm, CCl₄ = 0.89 ppm, TCE = 0.97 ppm, PCE = 0.98 ppm
- 1422 Completed sample analysis. Analyzed 1 ppm VOC LC3 standard.
1,1-DCA = 0.89 ppm, TCM = 0.80 ppm, 1,1,1-TCA = 0.92 ppm, CCl₄ = 0.77 ppm,
TCE = 0.85 ppm, PCE = 0.88 ppm. Acceptable rec.
- 1430 Removed 11.7 eV lamp & installed 12.6 eV lamp # BVDK268 Set carrier
gas to new flow.
- 1445 Off shift.

M.A. Baechler 4/9/02

M.A. Baechler / M.A. Baechler 4/9/02

0000013

M. A. Baehler, CH-AAS, M. G. Baehler

EL-1332

SF 899-032 3/27/02

0655 Arrived at mobile laboratory located at 200-EP-2/200W to calibrate instrument and perform MDL study

0658 Installed 11.7 V lamp # 188. Started detector. Set carrier gas regulator to 40 psi.

0703 Balanced detector out and backflush out flow rates at 5.0 ml/min.

0708 Allowng instrument to warm up. Left to perform other project work.

1225 Returned to lab. Detector looks good. Rebalanced detector out and backflush out, at 5.0 ml/min

1231 Started calibration with 1 ppm - 6 vol% mix

1240 Calibration gas bad. Left for 15 min to get replacement cal. gas.

As instrument to auto log / auto run to warm up

1506 Returned to lab with new cal. gases. Checked flows

Rebalanced flows at 5.0 ml/min.

1558 Reattempting calibration at 1 ppm - 6 vol% mix

1603 Response values very low vs. last calibration.

1615 Attempts to troubleshoot low response problem yield no solutions. Removed 11.7 V lamp, installed 12.6 V lamp BVDR68.

Set carrier gas to low flow.

1420 Left site

collected 3/27/02

M. A. Baehler (M. G. Baehler) 3/27/02

M.A. Baehler, CH-APS, M.G. Baehler

EL-1332

SAF 899-032 3/28/02

- 0800 Arrived at mobile lab HO-68N-6282 located at 200-ER-2/220W to troubleshoot GC problems, perform calibration, and perform NDI study.
- 0815 Installed 11.7 eV lamp #1818. Detector started and reset target intensity to 1200 mV.
- 0817 Set carrier gas regulator to 40 psi, & balanced detector out of back flush out, flow at 15.0 mL/min.
- 0826 Allowng detector intensity to stabilize.
- 0835 Detector intensity appears stable. Attempting calibration with 1 ppm G VOC mix.
- 0846 Cal. run bad, responses too low. Checked flow rates. Detector out at 4.0 mL/min, 1 mL/min too high. Rebalanced flows.
- 0849 Attempting a cal. of 1 ppm - G VOC mix.
- 0856 Cal. responses too low. Turned detector off and disconnected power. Replaced lamp holder, reinstalled detector.
- 0904 Lamp faded. Turned detector off and restarted. Waiting for detector intensity to stabilize.
- 0920 Attempting recal of 1 ppm - G VOC mix.
- 0926 Responses still low. Set run to, calibrate in library. Reanalyzing 1 ppm G VOC. Will check 10 ppm G VOC to see if calibration is linear.
- 1030 Calibration linear, but response too low. Determined lamp to be bad. Replaced 11.7 eV lamp. Installed 10.6 eV lamp & set carrier gas to low flow.
- 1245 Off site

MAB 3/28/02

M.A. Baehler (M.G. Baehler) 3/28/02

0000010

M.A. Baehler, CH-AFS, M.G. Baehler

EL-1332

AH BSA-032 4/2/02

- 0740 Arrived at mobile laboratory, HO-68N-6292 located at 200-28-2 / 200W to condition and calibrate replacement GC detector lamp.
- 0744 Installed 11.7ev lamp #1834. Set carrier gas flow regulator to 40 psi.
- 0750 Brought in file from last run to set GC parameters. Started detector. Detector did not start. Removed detector. Noted what appears to be a crack on side of lamp on edge near detector window. Adjusted o-ring, reinstalled lamp.
- 0801 Lamp did not start. Suspect bad lamp.
- 0805 Left mobile lab to perform other project work.
- 0845 Returned to lab. Attempting to start detector. Checked and balanced detector out and back flush out flow rates at 5.0 ml/min.
- 0850 Lamp shows timeout failure. Removed lamp and readjusted o-ring.
- 0900 Installed old lamp #3471. Detector lamp started O.K.
- 0905 Attempting to start #1834 for last time.
- 0910 Detector did not start. Concluded detector lamp is bad. Installed 10.6ev lamp INDK200. Set carrier gas to 40W flow. Left site.

M.A. Baehler 4/2/02

M.A. Baehler / M.G. Baehler 4/2/02

0000011

M.A. Baechler, CH-AFS, M.G. Baechler

EL-1332

SAF B99-032 4/5/02

- 0725 Arrived at mobile laboratory Hg-68N-6292 located at 200-BF-2
200W to condition and calibrate replacement detector lamp.
- 0729 Installed 11.7 eV lamp #1724. Set carrier gas regulator to
40 psi. Started detector.
- 0735 Detector started OK then failed. Software adjusting tuning voltage
to achieve necessary target intensity. Balanced detector out and
back flush out flow rates at 5.0 ml/min.
- 0803 Software unable to bring lamp to target intensity. Turned
detector lamp off, waited 30 sec, and restarted.
- 0811 Detector started OK. Allowing lamp to condition for 2 hours.
- 0824 Detector lamp slowly failing. Target intensity 1209 mV, tuning
voltage 238 mV and steady. Software not increasing tuning
voltage to compensate for lamp failure.
- 0833 Turned detector lamp off, waited 30 sec, and restarted.
- 0836 Detector target intensity reset by software to 827 mV.
- 0844 Tuning voltage 1898 mV. Set GC to autorun to warm up.
- 0828 Detector shut down unexpectedly. Restarted detector.
- 0837 Set GC to autorun to warm up. Detector shut down again.
Restarted.
- 0854 Checked flow rates. Rebalanced flows at 5.0 ml/min.
- 0958 Started calibration with 1 ppm - C₁₀H₈ mix.
- 1006 Best reference times in compound calibration library.
- 1008 No calibrating 1 ppm - C₁₀H₈ mix.
- 1014 Calibrating 10 ppm - C₁₀H₈ mix.
- 1021 Calibrating 25 ppm - C₁₀H₈ mix.
- 1028 Calibration curves acceptable. Prepared MDL standard of
0.5 ppm using 1/2 1L feller bag of 1 ppm - C₁₀H₈ mix, balance
zero g/m.
- 1029 Checked flow rates.
- 1033 Started MDL study.
- 1215 Completed MDL study.
- 1220 Examined 11.7 eV tuning & installed 10.6 eV lamp #3VOK268
Set carrier gas to low flow.
- 1230 Off site

M.A. Baechler / M.G. Baechler 4/5/02

0000012

M.A. Baechler, CH-AFS, M.G. Baechler

EL-1332

SAF B99-032 4/9/02

- 0710 Arrived at mobility laboratory Ho-60N-6292 at 2:00 PM 2/20/02
to set up for analysis of Solid Waste Lunnell VOC samples.
- 0715 Installed 11.7EV lamp # 1729. Set carrier gas regulator to
40 psi. Started detector.
- 0718 Balanced detector out and backflush out flow rates at
5.0 ml/min.
- 0725 Detector started and software reset target intensity. Detector
failed. Shut detector down & restarted. New target intensity.
- 0734 Detector restarted OK. Set bit to autorun to warm up. 1198 mV.
- 0737 Turned autorun off as detector automatically shut down.
Restarted detector.
- 0740 Detector started OK. Monitoring for failure.
- 0747 Attempted to start auto run when software turned detector off.
Restarted detector. Will not load autorun for warmup.
- 0758 Detector appears stable. Left tab for SWC.
- 1118 Returned to lab. Rebalanced flow rates at 5.0 ml/min
- 1120 Started calibration with 1 ppm - 6 VOC mix.
- 1138 Holding TCM & 1,1,2-TCA to calibration.
- 1149 Analyzed 1 ppm 6 VOC mix cal. check. 1,1-DCA = 0.97 ppm, TCM = 1.01 ppm,
1,1,1-TCA = 0.98 ppm, CCl₄ = 0.97 ppm, TCE = 0.96 ppm, PCE = 1.01 ppm
Acceptable recoveries.
- 1156 Analyzed zero air. No detects.
- 1202 Started analyzing samples.
- 1306 Analyzed 1 ppm 6 VOC mix cal. check. 1,1-DCA = 0.92 ppm, TCM = 0.94 ppm,
1,1,1-TCA = 0.92 ppm, CCl₄ = 0.89 ppm, TCE = 0.97 ppm, PCE = 0.98 ppm
- 1422 Completed sample analysis. Analyzed 1 ppm 6 VOC LC9 standard.
1,1-DCA = 0.89 ppm, TCM = 0.80 ppm, 1,1,1-TCA = 0.82 ppm, CCl₄ = 0.77 ppm,
TCE = 0.85 ppm, PCE = 0.88 ppm. Acceptable rec.
- 1430 Removed 11.7EV lamp & installed 12.6EV lamp # BDK268. Set carrier
gas to new flow.
- 1445 Off shift.

MGS 4/9/02

M.A. Baechler / M.G. Baechler 4/9/02

0000013

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B99-032-14		Page 1 of 2				
Collector M. Baechler/R. Nielson		Company Contact Virginia Rohay		Telephone No. 372-9351		Project Coordinator TRENT, SJ		Price Code				
Project Designation Solid Waste Landfill Soil Gas and Methane Monitoring - Rou		Sampling Location 600 Area		SAF No. B99-032		Air Quality <input type="checkbox"/>		Data Turnaround Field				
Ice Chest No.		Field Logbook No. EFL-1105-1		COA XE2012PHMC		Method of Shipment Hand deliver - Govt vehicle						
Shipped To Field Analysis Activities		Offsite Property No.				Bill of Lading/Air Bill No.						
POSSIBLE SAMPLE HAZARDS/REMARKS Special Handling and/or Storage					Preservation		None					
					Type of Container		Tedlar Bag					
					No. of Container(s)		1					
					Volume		1L					
SAMPLE ANALYSIS					See item (1) in Special Instructions.							
Sample No.	Matrix *	Sample Date	Sample Time									
B14779	GASEOUS	4/9/02	0840	X					SWL-01H			
B14780	GASEOUS	4/9/02	0846	X					SWL-01B			
B14781	GASEOUS	4/9/02	0845	X					SWL-02H			
B14782	GASEOUS	4/9/02	0919	X					SWL-02B			
B14783	GASEOUS	4/9/02	0926	X					SWL-03H			
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS				Matrix *				
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time	(1) VOLATILE ORGANICS BY FIELD GC (1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, Carbon tetrachloride, Chloroform, Methylenechloride, Tetrachloroethene, Trichloroethene)				S=Soil SS=Soil SO=Soil SL=Sludge W=Water O=Oil A=Air DS=Dry Solids DL=Dry Liquids T=Tap WI=Water L=Liquid V=Vegetation X=Odor				
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time									
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time									
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time									
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time									
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time									
LABORATORY SECTION	Received By	Title		Date/Time								
FINAL SAMPLE DISPOSITION	Disposal Method	Vented to lab hood		Disposed By	M.A. Baechler		4/9/02		1425			

0000014

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B99-032-14		Page 2 of 3		
Collector M. Baechler/R. Nielson		Company Contact Virginia Rohay		Telephone No. 372-9351		Project Coordinator TRENT, SJ		Price Code		
Project Designation Solid Waste Landfill Soil Gas and Methane Monitoring - Rou		Sampling Location 600 Area		SAF No. B99-032		Air Quality <input type="checkbox"/>		Data Turnaround Field		
Ice Chest No.		Field Logbook No. EFL-1105-1		COA XB2012PHMC		Method of Shipment Hand deliver - Govt vehicle				
Shipped To Field Analysis Activities		Offsite Property No.				Bill of Lading/Air Bill No.				
POSSIBLE SAMPLE HAZARDS/REMARKS					Preservation	None				
Special Handling and/or Storage					Type of Container	Tedlar Bag				
					No. of Container(s)	1				
					Volume	1L				
SAMPLE ANALYSIS					See Item (1) in Special Instructions.					
Sample No.	Matrix *	Sample Date	Sample Time							
B14784	GASEOUS	4/9/02	0931	X					SWL - 03B	
B14785	GASEOUS	4/9/02	0940	X					SWL - 04H	
B14786	GASEOUS	4/9/02	0946	X					SWL - 04B	
B14787	GASEOUS	4/9/02	0951	X					SWL - 04X	
B14788	GASEOUS	4/9/02	0903	X					SWL - DW2	
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS					
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		(1) VOLATILE ORGANICS BY FIELD GC (1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, Carbon tetrachloride, Chloroform, Methylenechloride, Tetrachloroethene, Trichloroethene)		Matrix * S-Soil SB-Sediment SO-Solid SL-Sludge W-Water O-Oil A-Air DS-Drum Solids DL-Drum Liquid T-Tissue WI-Wipe L-Liquid V-Vegetation X-Other
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
LABORATORY SECTION	Received By	Title	Date/Time							
FINAL SAMPLE DISPOSITION	Disposal Method	Vented to lab hood	Disposed By	M. Baechler	Date/Time	4/9/02	1125			

DW

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B99-032-14		Page 3 of 5	
Collector M. Baechler/R. Nielson		Company Contact Virginia Rohay		Telephone No. 372-9351		Project Coordinator TRENT, SJ		Price Code	
Project Designation Solid Waste Landfill Soil Gas and Methane Monitoring - Rou		Sampling Location 600 Area		SAF No. B99-032		Air Quality <input type="checkbox"/>		Data Turnaround Field	
Ice Chest No.		Field Logbook No. EFL-1105-1		COA XE2012PHMC		Method of Shipment Hand deliver - Govt vehicle			
Shipped To Field Analysis Activities		Offsite Property No.				Bill of Lading/Air Bill No.			
POSSIBLE SAMPLE HAZARDS/REMARKS									
Special Handling and/or Storage					Preservation	None			
					Type of Container	Tedlar Bag			
					No. of Container(s)	1			
					Volume	1L			
SAMPLE ANALYSIS					See item (1) in Special Instructions.				
Sample No.	Matrix *	Sample Date	Sample Time						
B14789	GASEOUS	4/9/02	0852	X					SWL-DE1
B14790	GASEOUS	4/9/02	1004	X					SWL-05H
B14791	GASEOUS	4/9/02	1009	X					SWL-05B
B14792	GASEOUS	4/9/02	1017	X					SWL-06H
B14793	GASEOUS	4/9/02	1022	X					SWL-06B
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		(1) VOLATILE ORGANICS BY FIELD GC (1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, Carbon tetrachloride, Chloroform, Methylenechloride, Tetrachloroethene, Trichloroethene) Matrix * S-Soil SS-Sediment SO-Solid SL-Sludge W-Water O-Oil A-Air DS-Dry Solid DL-Dry Liquid T-Tissue W-Wipe L-Liquid V-Vegetation X-Other	
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
LABORATORY SECTION		Received By		Title		Date/Time			
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time			
		Vented to lab hood		M.A. Baechler		4/9/02		1420	

DE

0000016

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			B99-032-14	Page 4 of 5	
Collector M. Baechler/R. Nielson		Company Contact Virginia Rohay		Telephone No. 372-9351	Project Coordinator TRENT, SJ	Price Code	Data Turnaround
Project Designation Solid Waste Landfill Soil Gas and Methane Monitoring - Rou		Sampling Location 600 Area		SAF No. B99-032	Air Quality <input type="checkbox"/>		Field
Ice Chest No.		Field Logbook No. EFL-1105-1	COA XE2012PHMC		Method of Shipment Hand deliver - Govt vehicle		
Shipped To Field Analysis Activities		Offsite Property No.			Bill of Lading/Air Bill No.		

POSSIBLE SAMPLE HAZARDS/REMARKS Special Handling and/or Storage	Preservation	None																		
	Type of Container	Tedlar Bag																		
	No. of Container(s)	1																		
	Volume	1L																		
SAMPLE ANALYSIS				See Item (1) in Special Instructions.																

Sample No.	Matrix *	Sample Date	Sample Time																			
B14794	GASEOUS	4/9/02	1030	X																	SWL-07A	
B14795	GASEOUS	4/9/02	1035	X																		SWL-07B
B14796	GASEOUS	4/9/02	1035	X																		SWL-07B Dup
B14797	GASEOUS	4/9/02	1046	X																		SWL-07A
B14798	GASEOUS	4/9/02	1046	X																		SWL-07A Dup

CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS										Matrix *	
Relinquished By/Removed From	Date/Time	Sign/Print Names		(1) VOLATILE ORGANICS BY FIELD GC (1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, Carbon tetrachloride, Chloroform, Methylenechloride, Tetrachloroethene, Trichloroethene)										S-Soil SS-Sediment S-Solid B-Budge W-Water O-Oil A-Air DB-Drum Bolts DL-Drum Liquids T-Tissue WL-Wipe L-Liquid V-Vegetation X-Other	
Received By/Stored In	Date/Time														
Relinquished By/Removed From	Date/Time														
Received By/Stored In	Date/Time														
Relinquished By/Removed From	Date/Time														
Received By/Stored In	Date/Time														

LABORATORY SECTION	Received By	Title		Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time
	Ventled to lab hood	M.G. Baechler		4/9/02 1425

00000017

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B99-032-14		Page 2 of 2		
Collector M. Baechler/R. Nielson		Company Contact Virginia Rohay		Telephone No. 372-9351		Project Coordinator TRENT, SJ		Price Code		
Project Designation Solid Waste Landfill Soil Gas and Methane Monitoring - Rou		Sampling Location 600 Area		SAF No. B99-032		Air Quality <input type="checkbox"/>		Data Turnaround Field		
Ice Chest No.		Field Logbook No. EFL-1105-1		COA XE2012PHMC		Method of Shipment Hand deliver - Govt vehicle				
Shipped To Field Analysis Activities		Offsite Property No.				Bill of Lading/Air Bill No.				
POSSIBLE SAMPLE HAZARDS/REMARKS					Preservation	None				
Special Handling and/or Storage					Type of Container	Tedlar Bag				
					No. of Container(s)	1				
					Volume	1L				
SAMPLE ANALYSIS					See item (1) in Special Instructions.					
Sample No.	Matrix *	Sample Date	Sample Time							
B14799	GASEOUS	4/9/02	1053	X					SWL-08B	
B147B0	GASEOUS	4/9/02	0715	X					Zero Hg	
B147B1	GASEOUS	4/9/02	0630	X					Cal. Std	
B147B2	GASEOUS	4/9/02	0630	X					Cal. ChC	
B147B3	GASEOUS	4/9/02	0630	X					ICS	
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS				Matrix *
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		(1) VOLATILE ORGANICS BY FIELD GC (1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, Carbon tetrachloride, Chloroform, Methylenechloride, Tetrachloroethene, Trichloroethene)		S-Soil SD-Sediment SO-Solid SI-Sludge W-Water O-Oil A-Air DS-Drum Solids DL-Drum Liquids T-Tissue WI-Wipe L-Liquid V-Vegetation X-Other
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
LABORATORY SECTION	Received By	Title	Date/Time							
FINAL SAMPLE DISPOSITION	Disposal Method	Vented to lab hood	Disposed By	M.A. Baechler	Date/Time	4/9/02	1425			

0000018

FIELD SCREENING FINAL RESULT DATA DELIVERABLE COVER SHEET

Date: Monday, July 08, 2002

Sample Authorization Form (SAF) Number: B99-032

SDG Number (assigned by Sample Management): FS0508

Attachments (check all that apply or N/A):

- Test Results
- Narrative Summary
- Chain of Custody(s)
- Logbook Pages
- Anomaly Report

Total number of pages (including cover sheet): 18

Comments:

RECEIVED
JAN 29 2003
EDMC



M.C. Baehler
Analyst Signature

Jan Hochberg
Reviewer's Signature

7/29/02
Date

9/19/02
Date

Distribution: CPP Sample Management A0-21
Project (Specify)

Requires distribution to listed project personnel by Sample Management (check if applicable)

PRELIMINARY RESULT DATA DELIVERABLE COVER SHEET

Date: Monday, April 15, 2002

Sample Authorization Form Number: B99-032

Attachments (check all that apply or N/A): Test Results
 Chains of Custody
 Logbook Pages
 Anomaly Report

Total number of pages (including cover sheet): 7

Comments: Solid Waste Landfill Methane and VOC Monitoring – 3/28/02 & 4/9/02

M.A. Buchler
Analyst signature

4/15/02
Date



Distribution: Sample Management – H9-03
Project (specify)

Requires distribution to listed project personnel by Sample Management (Check if applicable)

0000002

Solid Waste Landfill Quarterly Methane Monitoring
Landfill Gas and VOC Results, April 9, 2002
SAF B99-032

Sample Identifier	HEIS Number	Time Sampled	CH4 (%)	CO2 (%)	O2 (%)	DCM (ppm-v/v)	1,1-DCA (ppm-v/v)	TCM (ppm-v/v)	1,1,1-TCA (ppm-v/v)	CCl4 (ppm-v/v)	TCE (ppm-v/v)	1,1,2-TCA (ppm-v/v)	PCE (ppm-v/v)
Cal Standard	B147B1	6:30	2.2	4.9	9.7	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Cal Check	B147B2	6:30	2.3	4.8	9.9	---	0.97	1.01	0.98	0.97	0.96	---	1.01
Zero Air	B147B0	7:15	0.0	0.0	18.9	<0.10	<0.20	<0.22	<0.20	<0.32	<0.20	<0.10	<0.10
SWL-01A	B14779	8:40	0.0	0.0	18.7	<0.10	<0.20	<0.22	<0.20	<0.32	<0.20	<0.10	<0.10
SWL-01B	B14780	8:46	0.0	0.2	18.5	<0.10	<0.20	<0.22	<0.20	<0.32	<0.20	<0.10	<0.10
SWL-02A	B14781	9:15	0.0	0.0	18.9	<0.10	<0.20	<0.22	<0.20	<0.32	<0.20	<0.10	<0.10
SWL-02B	B14782	9:19	0.0	0.4	18.4	<0.10	<0.20	<0.22	<0.20	<0.32	<0.20	<0.10	<0.10
SWL-03A	B14783	9:26	0.0	0.0	18.8	<0.10	<0.20	<0.22	<0.20	<0.32	<0.20	<0.10	<0.10
SWL-03B	B14784	9:31	0.0	0.0	18.7	<0.10	<0.20	<0.22	<0.20	<0.32	<0.20	<0.10	<0.10
SWL-04A	B14785	9:40	0.0	1.8	17.7	<0.10	<0.20	<0.22	<0.20	<0.32	<0.20	<0.10	0.045j
SWL-04B	B14786	9:46	0.0	2.2	17.5	<0.10	<0.20	<0.22	<0.20	<0.32	<0.20	<0.10	0.039j
SWL-04X	B14787	9:51	0.0	1.0	18.4	<0.10	<0.20	<0.22	<0.20	<0.32	<0.20	<0.10	0.030j
SWL-DE-1	B14789	8:52	0.0	1.5	17.8	<0.10	<0.20	<0.22	<0.20	<0.32	<0.20	<0.10	<0.10
Cal Check	B147B2	6:30	---	---	---	---	0.92	0.94	0.92	0.89	0.97	---	0.98
SWL-DW-2	B14788	9:03	0.0	0.1	18.7	<0.10	<0.20	<0.22	<0.20	<0.32	<0.20	<0.10	0.027j
SWL-05A	B14790	10:04	0.0	0.0	19.0	<0.10	<0.20	<0.22	<0.20	<0.32	<0.20	<0.10	<0.10
SWL-05B	B14791	10:09	0.0	0.1	18.6	<0.10	<0.20	<0.22	<0.20	<0.32	<0.20	<0.10	<0.10
SWL-06A	B14792	10:17	0.0	0.1	18.8	<0.10	<0.20	<0.22	<0.20	<0.32	<0.20	<0.10	<0.10
SWL-06B	B14793	10:22	0.0	0.2	18.7	<0.10	<0.20	<0.22	<0.20	<0.32	<0.20	<0.10	<0.10
SWL-07A	B14794	10:30	0.0	0.0	18.9	<0.10	<0.20	<0.22	<0.20	<0.32	<0.20	<0.10	<0.10
SWL-07B	B14795	10:35	0.0	0.0	18.7	<0.10	<0.20	<0.22	<0.20	<0.32	<0.20	<0.10	<0.10
SWL-07B Dup	B14796	10:35	0.0	0.0	18.7	<0.10	<0.20	<0.22	<0.20	<0.32	<0.20	<0.10	<0.10
SWL-08A	B14797	10:46	0.0	0.1	18.6	<0.10	<0.20	<0.22	<0.20	<0.32	<0.20	<0.10	<0.10
SWL-08A Dup	B14798	10:46	0.0	0.1	18.6	<0.10	<0.20	<0.22	<0.20	<0.32	<0.20	<0.10	<0.10
SWL-08B	B14799	10:53	0.1	0.9	17.9	<0.10	<0.20	<0.22	0.027j	<0.32	<0.20	<0.10	<0.10
LCS	B147B3	---	---	---	---	---	0.84	0.80	0.82	0.77	0.85	---	0.88

* - Sample probe contained moisture and was difficult to sample

j - Value less than reporting limit

e - Value exceeds calibration range

Note: Landfill gas sampling occurred on 3/28/02. VOC sampling and analysis occurred on 4/9/02. Time sampled corresponds to VOC sampling.

Analyst: M.A. Baechler 4/15/02
 M. A. Baechler

Instrument: Landtec GA-90 Gas Analyzer, Serial # 529
 Method: In Situ Infrared Detector, 500 mL/min sample flow
 Logbook: SWL Soil Gas/Methane Monitoring Log, EFL-1105-1, pg 13

Analyst: M.A. Baechler 4/15/02
 M. A. Baechler

Instrument: Photovac 10S Plus GC, Serial # TA920107
 Method: 5 mL/min HP Air, 11.7 eV lamp, 500 uL loop
 Logbook: Photovac Instrument Log, EL-1332, pg 65

0000003

M.A. Baehler, CH-ATS, M.G. Baehler

- 3/28/02
- 1050 M.A. Baehler arrived at SWL
- 1120 V. Powers arrived at SWL
- 1125 Conducted Plan of the day
- 1127 Set Candee GA-90 calibration to cal. gases
(Methane = 2.5%, Carbon Dioxide = 5.0%, Oxygen = 10.0%)
- 1133 Started sampling at SWL-01-A
- 1257 Completed sampling
- 1300 Checked calibration. GA-90 responses!

Methane	2.3%
Carbon Dioxide	4.8%
Oxygen	9.9%

Responses acceptable.

1310 Left site.

NOTE: At the request of the project (V. Rohay) only landfill gases (methane, carbon dioxide, and oxygen) were collected at this time. Gases for VOC analysis will be collected when the GC has been repaired.

MAB 4/3/02

M.A. Baehler
M.G. Baehler

Signed

4/3/02

Date

Read and Understood By
Benedict R. Nielson

Signed

4/3/02

Date

Continued on Page 13

M.A. Baechler, CH-AFS, M.G. Baechler

**SOLID WASTE LANDFILL
Methane Monitoring Program**

Instrument Calibration

Instrument Serial Number - GA-90-#529

XXXXXXX	Time	CH ₄	CO ₂	O ₂	Comments
Cal. Gas Data	XXXXXXX	2.5%	5.0%	10.0%	Cal. bottle ID. <u>FF-8759</u>
Before monitoring	1131	2.2%	4.9%	9.7%	CH ₄ =0.0%, CO ₂ =0.0%, O ₂ =18.9%
After monitoring	1300	2.3%	4.8%	9.9%	CH ₄ =0.0%, CO ₂ =0.0%, O ₂ =19.2%

*Monitoring locations have 2 probes. "A" = Green band (9 ft BGS), "B" = Red band (15 ft BGS)

Location	Time	CH ₄	CO ₂	O ₂	Comments
SWL-01-A	1138	0.0%	0.0%	18.7%	B14779
SWL-01-B	1140	0.0%	0.2%	18.5%	B14780
SWL-02-A	1201	0.0%	0.0%	18.9%	B14781
SWL-02-B	1203	0.0%	0.4%	18.4%	B14782
SWL-03-A	1207	0.0%	0.0%	18.8%	B14783
SWL-03-B	1209	0.0%	0.0%	18.7%	B14784
SWL-04-X	1222	0.0%	1.0%	18.4%	B14787
SWL-04-A	1215	0.0%	1.8%	17.7%	B14785
SWL-04-B	1217	0.0%	2.2%	17.5%	B14786
SWL-DE-1	1147	0.0%	1.5%	17.8%	B14789
SWL-DW-2	1151	0.0%	0.1%	18.7%	B14788
SWL-05-A	1232	0.0%	0.0%	18.0%	B14790
SWL-05-B	1234	0.0%	0.1%	18.6%	B14791
SWL-06-A	1239	0.0%	0.1%	18.8%	B14792
SWL-06-B	1243	0.0%	0.2%	18.7%	B14793
SWL-07-A	1247	0.0%	0.0%	18.9%	B14794
SWL-07-B	1249	0.0%	0.0%	18.7%	B14795 / B14796
SWL-08-A	1255	0.0%	0.1%	18.6%	B14797 / B14798
SWL-08-B	1257	0.1%	0.9%	17.9%	B14799

Weather Conditions -- Sky: Clear Partly Cloudy Overcast Wind: from W speed 12 mph G19
 (FNL Weather Station - 373-2716)

Temperature 60 F Humidity 48 % Pressure 29.7 in. Hg. Steady
 Sampler M.A. Baechler M.G. Baechler Date 3/28/02
 (print name) (signature)

M.A. Baechler 4/3/02
MAR 4/3/02

Continued on Page N/A

M.A. Baechler 4/3/02 Read and Understood By Renee N. Nielsen 6/13/02
 Signed Date Signed Date