

HBP - 21

**MONITORING
REPORTS**

YEAR(S):

2009-2012



HESS CORPORATION
500 Dallas Street
Houston, TX 77002

RECEIVED OGD

September 2, 2009

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. Brad Jones
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: WATER PERMIT HBP-021
ANNUAL TEMP. DISCHARGE PERMIT
PIPELINE HYDROSTATIC TESTS
CO2 GATHERING SYSTEM LINES
WEST BRAVO DOME

Dear Mr. Jones:

Per Condition #9 of the above referenced permit, this is to provide the annual report which summarizes all hydrostatic test water discharges from Hess Corporation's West Bravo Dome Carbon Dioxide (CO2) Gathering System Lines for the time period starting on 8/19/08 and ending on 8/18/09. Two hydrostatic test water discharges were conducted during this time period. The test data follows:

Test #1

Location – Section 5, Township-18-North, Range-30-East

Date – 9/26/08

Volume Discharged – 20,000 Gallons

Source & Quality of Test Water – The source of the water used for the hydrostatic test came from the Mitchell Pond, which was approved for use during the permit review. A sample of the post hydrostatic test water was analyzed by Hall Environmental Labs and was determined to be acceptable for discharge. The analyses were received prior to the discharge. A copy of the post hydrostatic test water analyses dated 9/17/08 is attached for your review and records.

Test #2

Location – Section 5, Township-18-North, Range-30-East

Date – 10/2/08

Volume Discharged – 4,500 Gallons

Source & Quality of Test Water – The source of the water used for the hydrostatic test came from the Mitchell Pond, which was approved for use during the permit review. A sample of the post hydrostatic test water was analyzed by Hall Environmental Labs and was determined to be acceptable for discharge. The analyses were received prior to the discharge. A copy of the post hydrostatic test water analyses dated 9/17/08 is attached for your review and records.

Mr. Brad Jones
New Mexico Oil Conservation Division
September 2, 2009

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If you should have any questions or require additional information, please feel free to contact me at (713) 609-4204.

Sincerely,

A handwritten signature in black ink that reads "Michael D. Ford". The signature is written in a cursive style with a large, stylized "F" and "D".

Michael D. Ford
Environmental Advisor

MDF:WBDANNUALDISCHARGEREREPORT.DOC

Attachment



COVER LETTER

Wednesday, September 17, 2008

Michael Ford
Hess Corporation
HCR 72 Box 30
Mosquero, NM 87733
TEL: (575) 650-0316
FAX

RE: Hess West Bravo Dome

Order No.: 0808329

Dear Michael Ford:

Hall Environmental Analysis Laboratory, Inc. received 2 sample(s) on 8/20/2008 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

NM Lab # NM9425
AZ license # AZ0682
ORELAP Lab # NM100001
Texas Lab# T104704424-08-TX



Hall Environmental Analysis Laboratory, Inc.

Date: 17-Sep-08

CLIENT: Hess Corporation
Lab Order: 0808329
Project: Hess West Bravo Dome
Lab ID: 0808329-01

Client Sample ID: Coll Sys Test Water
Collection Date: 8/20/2008 9:08:00 AM
Date Received: 8/20/2008
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 504.1: EDB						Analyst: JAT
1,2-Dibromoethane	ND	0.010		µg/L	1	8/28/2008 12:43:36 PM
Surr: 1,2,3-Trichloropropane	109	54.9-135		%REC	1	8/28/2008 12:43:36 PM
EPA METHOD 8082: PCB'S						Analyst: JMP
Aroclor 1016	ND	1.0		µg/L	1	8/28/2008 1:38:33 AM
Aroclor 1221	ND	5.0		µg/L	1	8/28/2008 1:38:33 AM
Aroclor 1232	ND	1.0		µg/L	1	8/28/2008 1:38:33 AM
Aroclor 1242	ND	1.0		µg/L	1	8/28/2008 1:38:33 AM
Aroclor 1248	ND	1.0		µg/L	1	8/28/2008 1:38:33 AM
Aroclor 1254	ND	1.0		µg/L	1	8/28/2008 1:38:33 AM
Aroclor 1260	ND	1.0		µg/L	1	8/28/2008 1:38:33 AM
Surr: Decachlorobiphenyl	62.4	23.9-124		%REC	1	8/28/2008 1:38:33 AM
Surr: Tetrachloro-m-xylene	56.4	28.1-139		%REC	1	8/28/2008 1:38:33 AM
EPA METHOD 8310: PAHS						Analyst: DMF
Naphthalene	ND	2.0		µg/L	1	8/26/2008 5:52:37 PM
1-Methylnaphthalene	ND	2.0		µg/L	1	8/26/2008 5:52:37 PM
2-Methylnaphthalene	ND	2.0		µg/L	1	8/26/2008 5:52:37 PM
Acenaphthylene	ND	2.5		µg/L	1	8/26/2008 5:52:37 PM
Acenaphthene	ND	5.0		µg/L	1	8/26/2008 5:52:37 PM
Fluorene	ND	0.80		µg/L	1	8/26/2008 5:52:37 PM
Phenanthrene	ND	0.60		µg/L	1	8/26/2008 5:52:37 PM
Anthracene	ND	0.60		µg/L	1	8/26/2008 5:52:37 PM
Fluoranthene	ND	0.30		µg/L	1	8/26/2008 5:52:37 PM
Pyrene	ND	0.30		µg/L	1	8/26/2008 5:52:37 PM
Benz(a)anthracene	ND	0.070		µg/L	1	8/26/2008 5:52:37 PM
Chrysene	ND	0.20		µg/L	1	8/26/2008 5:52:37 PM
Benzo(b)fluoranthene	ND	0.10		µg/L	1	8/26/2008 5:52:37 PM
Benzo(k)fluoranthene	ND	0.070		µg/L	1	8/26/2008 5:52:37 PM
Benzo(a)pyrene	ND	0.070		µg/L	1	8/26/2008 5:52:37 PM
Dibenz(a,h)anthracene	ND	0.070		µg/L	1	8/26/2008 5:52:37 PM
Benzo(g,h,i)perylene	ND	0.080		µg/L	1	8/26/2008 5:52:37 PM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	8/26/2008 5:52:37 PM
Surr: Benzo(e)pyrene	46.4	44.8-104		%REC	1	8/26/2008 5:52:37 PM
EPA METHOD 300.0: ANIONS						Analyst: IC
Fluoride	3.6	0.10		mg/L	1	8/21/2008 8:55:07 AM
Chloride	46	1.0		mg/L	10	8/21/2008 9:12:31 AM
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	8/21/2008 8:55:07 AM
Sulfate	220	5.0		mg/L	10	8/21/2008 9:12:31 AM
EPA METHOD 7470: MERCURY						Analyst: SNV

Qualifiers: * Value exceeds Maximum Contaminant Level
E Value above quantitation range
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Date: 17-Sep-08

CLIENT: Hess Corporation
Lab Order: 0808329
Project: Hess West Bravo Dome
Lab ID: 0808329-01

Client Sample ID: Coll Sys Test Water
Collection Date: 8/20/2008 9:08:00 AM
Date Received: 8/20/2008
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 7470: MERCURY						Analyst: SNV
Mercury	ND	0.00020		mg/L	1	9/2/2008 2:29:34 PM
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: TES
Aluminum	ND	0.020		mg/L	1	9/7/2008 3:17:46 PM
Barium	0.057	0.010		mg/L	1	9/7/2008 3:17:46 PM
Boron	0.30	0.040		mg/L	1	9/7/2008 3:17:46 PM
Cadmium	ND	0.0020		mg/L	1	9/7/2008 3:17:46 PM
Chromium	ND	0.0060		mg/L	1	9/7/2008 3:17:46 PM
Cobalt	ND	0.0060		mg/L	1	9/7/2008 3:17:46 PM
Copper	0.0074	0.0060		mg/L	1	9/7/2008 3:17:46 PM
Iron	0.22	0.050		mg/L	1	9/7/2008 3:17:46 PM
Lead	0.010	0.0050		mg/L	1	9/7/2008 3:17:46 PM
Manganese	0.023	0.0020		mg/L	1	9/12/2008 6:04:24 PM
Molybdenum	0.0094	0.0080		mg/L	1	9/7/2008 3:17:46 PM
Nickel	ND	0.010		mg/L	1	9/7/2008 3:17:46 PM
Silver	ND	0.0050		mg/L	1	9/7/2008 3:17:46 PM
Zinc	ND	0.020		mg/L	1	9/7/2008 3:17:46 PM
EPA METHOD 8260B: VOLATILES						Analyst: HL
Benzene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
Toluene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
Ethylbenzene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
Naphthalene	ND	2.0		µg/L	1	8/21/2008 6:15:29 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/21/2008 6:15:29 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/21/2008 6:15:29 PM
Acetone	ND	10		µg/L	1	8/21/2008 6:15:29 PM
Bromobenzene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
Bromodichloromethane	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
Bromoform	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
Bromomethane	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
2-Butanone	ND	10		µg/L	1	8/21/2008 6:15:29 PM
Carbon disulfide	ND	10		µg/L	1	8/21/2008 6:15:29 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
Chlorobenzene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
Chloroethane	ND	2.0		µg/L	1	8/21/2008 6:15:29 PM
Chloroform	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
Chloromethane	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Value above quantitation range
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Date: 17-Sep-08

CLIENT: Hess Corporation
Lab Order: 0808329
Project: Hess West Bravo Dome
Lab ID: 0808329-01

Client Sample ID: Coll Sys Test Water
Collection Date: 8/20/2008 9:08:00 AM
Date Received: 8/20/2008
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
2-Chlorotoluene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
4-Chlorotoluene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
cis-1,2-DCE	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/21/2008 6:15:29 PM
Dibromochloromethane	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
Dibromomethane	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/21/2008 6:15:29 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
2-Hexanone	ND	10		µg/L	1	8/21/2008 6:15:29 PM
Isopropylbenzene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/21/2008 6:15:29 PM
Methylene Chloride	ND	3.0		µg/L	1	8/21/2008 6:15:29 PM
n-Butylbenzene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
n-Propylbenzene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
sec-Butylbenzene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
Styrene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
tert-Butylbenzene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/21/2008 6:15:29 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
trans-1,2-DCE	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/21/2008 6:15:29 PM
Vinyl chloride	ND	1.0		µg/L	1	8/21/2008 6:15:29 PM
Xylenes, Total	ND	1.5		µg/L	1	8/21/2008 6:15:29 PM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Value above quantitation range
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
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RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Date: 17-Sep-08

CLIENT: Hess Corporation
Lab Order: 0808329
Project: Hess West Bravo Dome
Lab ID: 0808329-01

Client Sample ID: Coll Sys Test Water
Collection Date: 8/20/2008 9:08:00 AM
Date Received: 8/20/2008
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Surr: 1,2-Dichloroethane-d4	94.1	68.1-123		%REC	1	8/21/2008 6:15:29 PM
Surr: 4-Bromofluorobenzene	103	53.2-145		%REC	1	8/21/2008 6:15:29 PM
Surr: Dibromofluoromethane	92.0	68.5-119		%REC	1	8/21/2008 6:15:29 PM
Surr: Toluene-d8	96.7	64-131		%REC	1	8/21/2008 6:15:29 PM
EPA METHOD 9067: TOTAL PHENOLICS						Analyst: JAT
Phenolics, Total Recoverable	ND	2.5		µg/L	1	8/25/2008
SM4500-H+B: PH						Analyst: KMS
pH	9.37	0.1		pH units	1	8/21/2008
SM 2540C TOTAL DISSOLVED SOLIDS						Analyst: KMS
Total Dissolved Solids	790	20		mg/L	1	8/21/2008

Qualifiers: * Value exceeds Maximum Contaminant Level
E Value above quantitation range
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Date: 17-Sep-08

CLIENT: Hess Corporation
Lab Order: 0808329
Project: Hess West Bravo Dome
Lab ID: 0808329-02

Client Sample ID: Trip Blank
Collection Date:
Date Received: 8/20/2008
Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Benzene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
Toluene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
Ethylbenzene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
Naphthalene	ND	2.0		µg/L	1	8/21/2008 7:41:29 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/21/2008 7:41:29 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/21/2008 7:41:29 PM
Acetone	ND	10		µg/L	1	8/21/2008 7:41:29 PM
Bromobenzene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
Bromodichloromethane	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
Bromoform	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
Bromomethane	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
2-Butanone	ND	10		µg/L	1	8/21/2008 7:41:29 PM
Carbon disulfide	ND	10		µg/L	1	8/21/2008 7:41:29 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
Chlorobenzene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
Chloroethane	ND	2.0		µg/L	1	8/21/2008 7:41:29 PM
Chloroform	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
Chloromethane	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
2-Chlorotoluene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
4-Chlorotoluene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
cis-1,2-DCE	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/21/2008 7:41:29 PM
Dibromochloromethane	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
Dibromomethane	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/21/2008 7:41:29 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
2-Hexanone	ND	10		µg/L	1	8/21/2008 7:41:29 PM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Value above quantitation range
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Date: 17-Sep-08

CLIENT: Hess Corporation
Lab Order: 0808329
Project: Hess West Bravo Dome
Lab ID: 0808329-02

Client Sample ID: Trip Blank
Collection Date:
Date Received: 8/20/2008
Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Isopropylbenzene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/21/2008 7:41:29 PM
Methylene Chloride	ND	3.0		µg/L	1	8/21/2008 7:41:29 PM
n-Butylbenzene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
n-Propylbenzene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
sec-Butylbenzene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
Styrene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
tert-Butylbenzene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/21/2008 7:41:29 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
trans-1,2-DCE	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/21/2008 7:41:29 PM
Vinyl chloride	ND	1.0		µg/L	1	8/21/2008 7:41:29 PM
Xylenes, Total	ND	1.5		µg/L	1	8/21/2008 7:41:29 PM
Surr: 1,2-Dichloroethane-d4	93.3	68.1-123		%REC	1	8/21/2008 7:41:29 PM
Surr: 4-Bromofluorobenzene	104	53.2-145		%REC	1	8/21/2008 7:41:29 PM
Surr: Dibromofluoromethane	97.3	68.5-119		%REC	1	8/21/2008 7:41:29 PM
Surr: Toluene-d8	97.3	64-131		%REC	1	8/21/2008 7:41:29 PM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Value above quantitation range
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

Benchmark Analytics, Inc.4777 Saucon Creek Road
Center Valley, PA 18034Phone: (610) 974-8100
Fax: (610) 974-8104

Work Order: 08083542

SEND DATA TO:

NAME: Ann Thorne
COMPANY: Hall Environmental Analysis Lab, Inc.
ADDRESS: 4901 Hawkins NE, Suite D
Albuquerque, NM 87109-4372

WO#: 08083542

PAGE: 1 of 1

PO#:

PWS ID#

PHONE: (505) 345-3975
FAX: (505) 345-4107**TEST REPORT**

0808329

RECEIVED FOR LAB BY: MAH

DATE: 08/22/2008 9:45

Page 1 of 1

SAMPLE: 0808329-01G, Coll Sys Test Water

Lab ID: 08083542-001A

Grab

SAMPLED BY: Client

Sample Time: 08/20/2008 9:08

Test	Result	Method	RL	Analysis Start	Analysis End	Analyst *
Arsenic	< 0.0050 mg/L	EPA 200.8		08/27/08 9:40	08/27/08	JRA-CV
Selenium	0.0087 mg/L	EPA 200.8		08/27/08 9:40	08/27/08	JRA-CV
Uranium	7.85 µg/L	EPA 200.8	30	08/27/08 9:40	08/27/08	JRA-CV
Uranium	5.26 pCi/L	EPA 200.8		08/27/08 9:40	08/27/08	JRA-CV

SAMPLE: 0808329-01I, Coll Sys Test Water

Lab ID: 08083542-002A

Grab

SAMPLED BY: Client

Sample Time: 08/20/2008 9:08

Test	Result	Method	RL	Analysis Start	Analysis End	Analyst *
Cyanide, Total	< 0.004 mg/L	SM21 4500 CN C,E		08/30/08 10:00	08/30/08	LNP-CV

REMARKS:

The above test procedures meet all the requirements of NELAC and relate only to these samples.

* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER

Chimeli

7

DATE: 9/2/2008

CLIENT: Hall Environmental Analysis Lab, Inc.

Work Order: 08083542

Project: 0808329

ANALYTICAL QC SUMMARY REPORT

TestCode: CN TT 4500CN

Sample ID: MB-R27272	Sample Type: MBLK	TestCode: CN TT 4500	Units: mg/L	Prep Date:	RunNo: 27272
Client ID: PSW	Batch ID: R27272	TestNo: E335.2		Analysis Date: 8/30/2008	SeqNo: 518684
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Cyanide, Total	< 0.004	0.004			

Sample ID: 08083676-001AMIS	Sample Type: MS	TestCode: CN TT 4500	Units: mg/L	Prep Date:	RunNo: 27272
Client ID: ZZZZZZ	Batch ID: R27272	TestNo: E335.2		Analysis Date: 8/30/2008	SeqNo: 518688
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Cyanide, Total	0.042	0.004	0.04000	0	104 80 120

Sample ID: 08084276-001BMS	Sample Type: MS	TestCode: CN TT 4500	Units: mg/L	Prep Date:	RunNo: 27272
Client ID: ZZZZZZ	Batch ID: R27272	TestNo: E335.2		Analysis Date: 8/30/2008	SeqNo: 518699
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Cyanide, Total	0.034	0.004	0.04000	0	86.0 80 120

Sample ID: 08084276-001BMSD	Sample Type: MSD	TestCode: CN TT 4500	Units: mg/L	Prep Date:	RunNo: 27272
Client ID: ZZZZZZ	Batch ID: R27272	TestNo: E335.2		Analysis Date: 8/30/2008	SeqNo: 518700
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Cyanide, Total	0.036	0.004	0.04000	0	89.0 80 120 0.03440 4.00 20

Qualifiers: B Analyte detected in the associated Method Blank D Limit of detection increased due to matrix interference an E Value above quantitation range Page 1 of 3
J Analyte reported below quantitation limits L Value above calibration range but within annually verified LBP Lead based paint is defined as a paint with greater than
PHQC Sample pH was >2. Due to matrix effects, not all quality Q Due to matrix effects, not all quality control parameters R RPD outside accepted recovery limits

CLIENT: Hall Environmental Analysis Lab, Inc.
 Work Order: 08083542
 Project: 0808329

ANALYTICAL QC SUMMARY REPORT

TestCode: ME_ICPMS_W

Sample ID: MBLK EW 082708 A	Sample Type: MBLK	TestCode: ME_ICPMS_	Units: mg/L	Prep Date:	RunNo: 27122
Client ID: PBW	Batch ID: EW 082708	TestNo: E200.8		Analysis Date: 8/27/2008	SeqNo: 515635
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Arsenic < 0.0050 0.0050
 Selenium < 0.0038 0.0038

Sample ID: LFB EW 082708 A	Sample Type: LFB	TestCode: ME_ICPMS_	Units: mg/L	Prep Date:	RunNo: 27122
Client ID: ZZZZZ	Batch ID: EW 082708	TestNo: E200.8		Analysis Date: 8/27/2008	SeqNo: 515636
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Arsenic 0.0237 0.0050 0.02500 0 95.0 85 115
 Selenium 0.0250 0.0038 0.02500 0 100 85 115

Sample ID: 08083310-001C DUP	Sample Type: DUP	TestCode: ME_ICPMS_	Units: mg/L	Prep Date:	RunNo: 27122
Client ID: ZZZZZ	Batch ID: EW 082708	TestNo: E200.8		Analysis Date: 8/27/2008	SeqNo: 515638
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Arsenic < 0.0050 0.0050 0 0 0 20
 Selenium < 0.0038 0.0038 0 0 0 20

Sample ID: 08083310-001C MS	Sample Type: MS	TestCode: ME_ICPMS_	Units: mg/L	Prep Date:	RunNo: 27122
Client ID: ZZZZZ	Batch ID: EW 082708	TestNo: E200.8		Analysis Date: 8/27/2008	SeqNo: 515639
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Arsenic 0.0242 0.0050 0.02500 0 97.0 70 130
 Selenium < 0.0038 0.0038 0.02500 0 0 70 130 S

Qualifiers: B Analyte detected in the associated Method Blank D Limit of detection increased due to matrix interference an E Value above quantitation range Page 2 of 3
 J Analyte reported below quantitation limits L Value above calibration range but within annually verified LBP Lead based paint is defined as a paint with greater than
 PHQC Sample pH was >2. Due to matrix effects, not all quality control parameters R RPD outside accepted recovery limits

CLIENT: Hall Environmental Analysis Lab, Inc.

Work Order: 08083542

Project: 0808329

ANALYTICAL QC SUMMARY REPORT

TestCode: U_200.8

Sample ID: MBLK EW 082708 U	Samp Type: MBLK	Test Code: U_200.8	Units: µg/L	Prep Date:	RunNo: 27122						
Client ID: PBW	Batch ID: EW 082708	TestNo: E200.8		Analysis Date: 8/27/2008	SeqNo: 516394						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	< 0.63	0.63									

Sample ID: LFB EW 082708 U	SampType: LFB	TestCode: U_200.8	Units: µg/L	Prep Date:	RunNo: 27122						
Client ID: ZZZZZZ	Batch ID: EW 082708	TestNo: E200.8		Analysis Date: 8/27/2008	SeqNo: 516396						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	< 0.63	0.63	2.500	0	0	85	115				S

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte reported below quantitation limits
PHQC Sample pH was >2. Due to matrix effects, not all quality
D Limit of detection increased due to matrix interference an
L Value above calibration range but within annually verifie
Q Due to matrix effects, not all quality control parameters
E Value above quantitation range
LBP Lead based paint is defined as a paint with greater than
R RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Hess Corporation
Project: Hess West Bravo Dome

Work Order: 0808329

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 300.0: Anions									
Sample ID: MB		MBLK							
					Batch ID: R29881		Analysis Date:	8/21/2008 8:20:18 AM	
Fluoride	ND	mg/L	0.10						
Chloride	ND	mg/L	0.10						
Nitrogen, Nitrate (As N)	ND	mg/L	0.10						
Sulfate	ND	mg/L	0.50						
Sample ID: LCS		LCS							
					Batch ID: R29881		Analysis Date:	8/21/2008 8:37:42 AM	
Fluoride	0.5111	mg/L	0.10	102	90	110			
Chloride	4.833	mg/L	0.10	96.7	90	110			
Nitrogen, Nitrate (As N)	2.468	mg/L	0.10	98.7	90	110			
Sulfate	9.950	mg/L	0.50	99.5	90	110			
Method: EPA Method 9067: Total Phenolics									
Sample ID: MB-16865		MBLK							
					Batch ID: 16880		Analysis Date:	8/25/2008	
Phenolics, Total Recoverable	ND	µg/L	2.5						
Sample ID: LCS-16865		LCS							
					Batch ID: 16880		Analysis Date:	8/25/2008	
Phenolics, Total Recoverable	14.40	µg/L	2.5	72.0	51.7	133			
Sample ID: LCSD-16865		LCSD							
					Batch ID: 16880		Analysis Date:	8/25/2008	
Phenolics, Total Recoverable	17.93	µg/L	2.5	89.6	51.7	133	21.8	0	
Method: EPA Method 504.1: EDB									
Sample ID: MB-16914		MBLK							
					Batch ID: 16914		Analysis Date:	8/28/2008 12:06:05 PM	
1,2-Dibromoethane	ND	µg/L	0.010						
Sample ID: LCS-16914		LCS							
					Batch ID: 16914		Analysis Date:	8/28/2008 12:18:38 PM	
1,2-Dibromoethane	0.1290	µg/L	0.010	129	70	130			
Sample ID: LCSD-16914		LCSD							
					Batch ID: 16914		Analysis Date:	8/28/2008 12:31:08 PM	
1,2-Dibromoethane	0.1260	µg/L	0.010	126	70	130	2.35	13.5	
Method: EPA Method 8082: PCB's									
Sample ID: MB-16859		MBLK							
					Batch ID: 16859		Analysis Date:	8/27/2008 6:17:14 PM	
Aroclor 1016	ND	µg/L	1.0						
Aroclor 1221	ND	µg/L	5.0						
Aroclor 1232	ND	µg/L	1.0						
Aroclor 1242	ND	µg/L	1.0						
Aroclor 1248	ND	µg/L	1.0						
Aroclor 1254	ND	µg/L	1.0						
Aroclor 1260	ND	µg/L	1.0						
Sample ID: LCS-16859		LCS							
					Batch ID: 16859		Analysis Date:	8/27/2008 7:05:46 PM	
Aroclor 1016	1.816	µg/L	1.0	36.3	27.4	132			
Aroclor 1260	2.112	µg/L	1.0	42.2	33.6	97.7			
Sample ID: LCSD-16859		LCSD							
					Batch ID: 16859		Analysis Date:	8/27/2008 7:56:18 PM	
Aroclor 1016	2.616	µg/L	1.0	52.3	27.4	132	36.1	45.7	
Aroclor 1260	2.970	µg/L	1.0	59.4	33.6	97.7	33.8	30	R

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Hess Corporation
Project: Hess West Bravo Dome

Work Order: 0808329

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: EPA Method 8310: PAHs

Sample ID: MB-16869

MBLK

Batch ID: 16869 Analysis Date: 8/26/2008 2:28:21 PM

Naphthalene	ND	µg/L	2.0
1-Methylnaphthalene	ND	µg/L	2.0
2-Methylnaphthalene	ND	µg/L	2.0
Acenaphthylene	ND	µg/L	2.5
Acenaphthene	ND	µg/L	5.0
Fluorene	ND	µg/L	0.80
Phenanthrene	ND	µg/L	0.60
Anthracene	ND	µg/L	0.60
Fluoranthene	ND	µg/L	0.30
Pyrene	ND	µg/L	0.30
Benz(a)anthracene	ND	µg/L	0.070
Chrysene	ND	µg/L	0.20
Benzo(b)fluoranthene	ND	µg/L	0.10
Benzo(k)fluoranthene	ND	µg/L	0.070
Benzo(a)pyrene	ND	µg/L	0.070
Dibenz(a,h)anthracene	ND	µg/L	0.070
Benzo(g,h,i)perylene	ND	µg/L	0.080
Indeno(1,2,3-cd)pyrene	ND	µg/L	0.080

Sample ID: LCS-16869

LCS

Batch ID: 16869 Analysis Date: 8/27/2008 1:25:40 PM

Naphthalene	53.86	µg/L	2.0	67.3	31.5	90.7
1-Methylnaphthalene	49.90	µg/L	2.0	62.2	32.5	93.3
2-Methylnaphthalene	53.38	µg/L	2.0	66.7	32.8	89.6
Acenaphthylene	50.40	µg/L	2.5	62.8	37.8	92.4
Acenaphthene	55.54	µg/L	5.0	69.4	38.6	93.9
Fluorene	5.590	µg/L	0.80	69.7	38	95.5
Phenanthrene	2.960	µg/L	0.60	73.6	32.9	107
Anthracene	2.930	µg/L	0.60	36.5	35.2	98.3
Fluoranthene	5.830	µg/L	0.30	72.7	36.4	104
Pyrene	5.600	µg/L	0.30	69.8	37.1	102
Benz(a)anthracene	0.5700	µg/L	0.070	71.1	33.7	101
Chrysene	2.790	µg/L	0.20	69.4	35.2	96.1
Benzo(b)fluoranthene	0.6400	µg/L	0.10	63.9	33.6	94.2
Benzo(k)fluoranthene	0.3600	µg/L	0.070	72.0	25.4	110
Benzo(a)pyrene	0.3200	µg/L	0.070	57.8	26.9	102
Dibenz(a,h)anthracene	0.7190	µg/L	0.070	71.8	40.7	92.1
Benzo(g,h,i)perylene	0.6850	µg/L	0.080	68.5	24.3	109
Indeno(1,2,3-cd)pyrene	1.007	µg/L	0.080	50.2	42.6	99.9

Sample ID: LCSD-16869

LCSD

Batch ID: 16869 Analysis Date: 8/26/2008 3:26:44 PM

Naphthalene	52.10	µg/L	2.0	65.1	31.5	90.7	3.31	32.1
1-Methylnaphthalene	49.22	µg/L	2.0	61.4	32.5	93.3	1.37	32.7
2-Methylnaphthalene	51.17	µg/L	2.0	64.0	32.8	89.6	4.23	34
Acenaphthylene	49.54	µg/L	2.5	61.8	37.8	92.4	1.71	38.8
Acenaphthene	55.38	µg/L	5.0	69.2	38.6	93.9	0.288	38.6
Fluorene	5.680	µg/L	0.80	70.8	38	95.5	1.60	29.3

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Hess Corporation
 Project: Hess West Bravo Dome

Work Order: 0808329

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: EPA Method 8310: PAHs

Sample ID: LCSD-16869

LCSD

Batch ID: 16869

Analysis Date: 8/26/2008 3:26:44 PM

Phenanthrene	3.050	µg/L	0.60	75.9	32.9	107	3.00	25	
Anthracene	2.920	µg/L	0.60	36.4	35.2	98.3	0.342	23.9	
Fluoranthene	5.920	µg/L	0.30	73.8	36.4	104	1.53	15.7	
Pyrene	6.040	µg/L	0.30	75.3	37.1	102	7.56	15.3	
Benz(a)anthracene	0.5900	µg/L	0.070	73.6	33.7	101	3.45	19	
Chrysene	2.940	µg/L	0.20	73.1	35.2	96.1	5.24	16.6	
Benzo(b)fluoranthene	0.7300	µg/L	0.10	72.9	33.6	94.2	13.1	21.7	
Benzo(k)fluoranthene	0.3700	µg/L	0.070	74.0	25.4	110	2.74	19.4	
Benzo(a)pyrene	0.3200	µg/L	0.070	57.8	26.9	102	0	16.7	
Dibenz(a,h)anthracene	0.7560	µg/L	0.070	75.4	40.7	92.1	5.02	17.3	
Benzo(g,h,i)perylene	0.7550	µg/L	0.080	75.5	24.3	109	9.72	18	
Indeno(1,2,3-cd)pyrene	0.9220	µg/L	0.080	46.0	42.6	99.9	8.81	17.7	

Method: EPA Method 7470: Mercury

Sample ID: MB-16942

MBLK

Batch ID: 16942

Analysis Date: 9/2/2008 1:57:14 PM

Mercury ND mg/L 0.00020

Sample ID: LCS-16942

LCS

Batch ID: 16942

Analysis Date: 9/2/2008 1:58:59 PM

Mercury 0.004755 mg/L 0.00020 95.1 80 120

Qualifiers:

E Value above quantitation range

H Holding times for preparation or analysis exceeded

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Hess Corporation
Project: Hess West Bravo Dome

Work Order: 0808329

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: EPA 6010B: Total Recoverable Metals

Sample ID: MB-16934

MBLK

Batch ID: 16934 Analysis Date: 9/7/2008 2:51:20 PM

Aluminum	ND	mg/L	0.020
Barium	ND	mg/L	0.010
Boron	ND	mg/L	0.040
Cadmium	ND	mg/L	0.0020
Chromium	ND	mg/L	0.0060
Cobalt	ND	mg/L	0.0060
Copper	ND	mg/L	0.0060
Iron	ND	mg/L	0.050
Lead	ND	mg/L	0.0050
Molybdenum	ND	mg/L	0.0080
Nickel	ND	mg/L	0.010
Zinc	ND	mg/L	0.020

Sample ID: MB-17036

MBLK

Batch ID: 17036 Analysis Date: 9/12/2008 5:40:50 PM

Iron	ND	mg/L	0.050
Lead	ND	mg/L	0.0050
Manganese	ND	mg/L	0.0020
Zinc	ND	mg/L	0.020

Sample ID: , LCS-16934

LCS

Batch ID: 16934 Analysis Date: 9/7/2008 2:54:24 PM

Aluminum	0.4963	mg/L	0.020	97.0	80	120
Barium	0.4868	mg/L	0.010	97.4	80	120
Boron	0.5197	mg/L	0.040	104	80	120
Cadmium	0.4878	mg/L	0.0020	97.6	80	120
Chromium	0.4976	mg/L	0.0060	99.5	80	120
Cobalt	0.4985	mg/L	0.0060	99.7	80	120
Copper	0.4899	mg/L	0.0060	98.0	80	120
Iron	0.5131	mg/L	0.050	103	80	120
Lead	0.4864	mg/L	0.0050	97.3	80	120
Molybdenum	0.5256	mg/L	0.0080	105	80	120
Nickel	0.4724	mg/L	0.010	94.5	80	120
Zinc	0.4841	mg/L	0.020	96.8	80	120

Sample ID: LCS-17036

LCS

Batch ID: 17036 Analysis Date: 9/12/2008 5:43:42 PM

Iron	0.5080	mg/L	0.050	102	80	120
Lead	0.4842	mg/L	0.0050	96.8	80	120
Manganese	0.4788	mg/L	0.0020	95.8	80	120
Zinc	0.4783	mg/L	0.020	95.7	80	120

Method: SM 2540C Total Dissolved Solids

Sample ID: MB-16841

MBLK

Batch ID: 16841 Analysis Date: 8/21/2008

Total Dissolved Solids ND mg/L 20

Sample ID: LCS-16841

LCS

Batch ID: 16841 Analysis Date: 8/21/2008

Total Dissolved Solids 1017 mg/L 20 100 80 120

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Hess Corporation
Project: Hess West Bravo Dome

Work Order: 0808329

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: EPA Method 8260B: VOLATILES

Sample ID: 0808329-01a MSD

MSD

Batch ID: R29874 Analysis Date: 8/21/2008 7:12:49 PM

Benzene	21.22	µg/L	1.0	106	72.4	126	5.55	15	
Toluene	21.02	µg/L	1.0	105	79.2	115	4.24	15	
Chlorobenzene	22.39	µg/L	1.0	112	83.1	111	1.22	15	S
1,1-Dichloroethene	24.41	µg/L	1.0	122	81.4	122	0.533	17.8	S
Trichloroethene (TCE)	19.99	µg/L	1.0	100	64.4	118	1.73	19.8	

Sample ID: 5ml rb

MBLK

Batch ID: R29874 Analysis Date: 8/21/2008 8:52:57 AM

Benzene	ND	µg/L	1.0
Toluene	ND	µg/L	1.0
Ethylbenzene	ND	µg/L	1.0
Methyl tert-butyl ether (MTBE)	ND	µg/L	1.0
1,2,4-Trimethylbenzene	ND	µg/L	1.0
1,3,5-Trimethylbenzene	ND	µg/L	1.0
1,2-Dichloroethane (EDC)	ND	µg/L	1.0
1,2-Dibromoethane (EDB)	ND	µg/L	1.0
Naphthalene	ND	µg/L	2.0
1-Methylnaphthalene	ND	µg/L	4.0
2-Methylnaphthalene	ND	µg/L	4.0
Acetone	ND	µg/L	10
Bromobenzene	ND	µg/L	1.0
Bromodichloromethane	ND	µg/L	1.0
Bromoform	ND	µg/L	1.0
Bromomethane	ND	µg/L	1.0
2-Butanone	ND	µg/L	10
Carbon disulfide	ND	µg/L	10
Carbon Tetrachloride	ND	µg/L	1.0
Chlorobenzene	ND	µg/L	1.0
Chloroethane	ND	µg/L	2.0
Chloroform	ND	µg/L	1.0
Chloromethane	ND	µg/L	1.0
2-Chlorotoluene	ND	µg/L	1.0
4-Chlorotoluene	ND	µg/L	1.0
cis-1,2-DCE	ND	µg/L	1.0
cis-1,3-Dichloropropene	ND	µg/L	1.0
1,2-Dibromo-3-chloropropane	ND	µg/L	2.0
Dibromochloromethane	ND	µg/L	1.0
Dibromomethane	ND	µg/L	1.0
1,2-Dichlorobenzene	ND	µg/L	1.0
1,3-Dichlorobenzene	ND	µg/L	1.0
1,4-Dichlorobenzene	ND	µg/L	1.0
Dichlorodifluoromethane	ND	µg/L	1.0
1,1-Dichloroethane	ND	µg/L	1.0
1,1-Dichloroethene	ND	µg/L	1.0
1,2-Dichloropropane	ND	µg/L	1.0
1,3-Dichloropropane	ND	µg/L	1.0

Qualifiers:

E Value above quantitation range
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Hess Corporation
Project: Hess West Bravo Dome

Work Order: 0808329

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: EPA Method 8260B: VOLATILES

Sample ID: 5ml rb

MBLK

Batch ID: R29874 Analysis Date: 8/21/2008 8:52:57 AM

2,2-Dichloropropane	ND	µg/L	2.0
1,1-Dichloropropene	ND	µg/L	1.0
Hexachlorobutadiene	ND	µg/L	1.0
2-Hexanone	ND	µg/L	10
Isopropylbenzene	ND	µg/L	1.0
4-Isopropyltoluene	ND	µg/L	1.0
4-Methyl-2-pentanone	ND	µg/L	10
Methylene Chloride	ND	µg/L	3.0
n-Butylbenzene	ND	µg/L	1.0
n-Propylbenzene	ND	µg/L	1.0
sec-Butylbenzene	ND	µg/L	1.0
Styrene	ND	µg/L	1.0
tert-Butylbenzene	ND	µg/L	1.0
1,1,1,2-Tetrachloroethane	ND	µg/L	1.0
1,1,2,2-Tetrachloroethane	ND	µg/L	2.0
Tetrachloroethene (PCE)	ND	µg/L	1.0
trans-1,2-DCE	ND	µg/L	1.0
trans-1,3-Dichloropropene	ND	µg/L	1.0
1,2,3-Trichlorobenzene	ND	µg/L	1.0
1,2,4-Trichlorobenzene	ND	µg/L	1.0
1,1,1-Trichloroethane	ND	µg/L	1.0
1,1,2-Trichloroethane	ND	µg/L	1.0
Trichloroethene (TCE)	ND	µg/L	1.0
Trichlorofluoromethane	ND	µg/L	1.0
1,2,3-Trichloropropane	ND	µg/L	2.0
Vinyl chloride	ND	µg/L	1.0
Xylenes, Total	ND	µg/L	1.5

Sample ID: b3

MBLK

Batch ID: R29874 Analysis Date: 8/21/2008 9:10:14 PM

Benzene	ND	µg/L	1.0
Toluene	ND	µg/L	1.0
Ethylbenzene	ND	µg/L	1.0
Methyl tert-butyl ether (MTBE)	ND	µg/L	1.0
1,2,4-Trimethylbenzene	ND	µg/L	1.0
1,3,5-Trimethylbenzene	ND	µg/L	1.0
1,2-Dichloroethane (EDC)	ND	µg/L	1.0
1,2-Dibromoethane (EDB)	ND	µg/L	1.0
Naphthalene	ND	µg/L	2.0
1-Methylnaphthalene	ND	µg/L	4.0
2-Methylnaphthalene	ND	µg/L	4.0
Acetone	ND	µg/L	10
Bromobenzene	ND	µg/L	1.0
Bromodichloromethane	ND	µg/L	1.0
Bromoform	ND	µg/L	1.0
Bromomethane	ND	µg/L	1.0

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Hess Corporation
Project: Hess West Bravo Dome

Work Order: 0808329

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: EPA Method 8260B: VOLATILES

Sample ID: b3

MBLK

Batch ID: R29874 Analysis Date: 8/21/2008 9:10:14 PM

2-Butanone	ND	µg/L	10
Carbon disulfide	ND	µg/L	10
Carbon Tetrachloride	ND	µg/L	1.0
Chlorobenzene	ND	µg/L	1.0
Chloroethane	ND	µg/L	2.0
Chloroform	ND	µg/L	1.0
Chloromethane	ND	µg/L	1.0
2-Chlorotoluene	ND	µg/L	1.0
4-Chlorotoluene	ND	µg/L	1.0
cis-1,2-DCE	ND	µg/L	1.0
cis-1,3-Dichloropropene	ND	µg/L	1.0
1,2-Dibromo-3-chloropropane	ND	µg/L	2.0
Dibromochloromethane	ND	µg/L	1.0
Dibromomethane	ND	µg/L	1.0
1,2-Dichlorobenzene	ND	µg/L	1.0
1,3-Dichlorobenzene	ND	µg/L	1.0
1,4-Dichlorobenzene	ND	µg/L	1.0
Dichlorodifluoromethane	ND	µg/L	1.0
1,1-Dichloroethane	ND	µg/L	1.0
1,1-Dichloroethene	ND	µg/L	1.0
1,2-Dichloropropane	ND	µg/L	1.0
1,3-Dichloropropane	ND	µg/L	1.0
2,2-Dichloropropane	ND	µg/L	2.0
1,1-Dichloropropene	ND	µg/L	1.0
Hexachlorobutadiene	ND	µg/L	1.0
2-Hexanone	ND	µg/L	10
Isopropylbenzene	ND	µg/L	1.0
4-Isopropyltoluene	ND	µg/L	1.0
4-Methyl-2-pentanone	ND	µg/L	10
Methylene Chloride	ND	µg/L	3.0
n-Butylbenzene	ND	µg/L	1.0
n-Propylbenzene	ND	µg/L	1.0
sec-Butylbenzene	ND	µg/L	1.0
Styrene	ND	µg/L	1.0
tert-Butylbenzene	ND	µg/L	1.0
1,1,1,2-Tetrachloroethane	ND	µg/L	1.0
1,1,2,2-Tetrachloroethane	ND	µg/L	2.0
Tetrachloroethene (PCE)	ND	µg/L	1.0
trans-1,2-DCE	ND	µg/L	1.0
trans-1,3-Dichloropropene	ND	µg/L	1.0
1,2,3-Trichlorobenzene	ND	µg/L	1.0
1,2,4-Trichlorobenzene	ND	µg/L	1.0
1,1,1-Trichloroethane	ND	µg/L	1.0
1,1,2-Trichloroethane	ND	µg/L	1.0

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Hess Corporation
 Project: Hess West Bravo Dome

Work Order: 0808329

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260B: VOLATILES									
Sample ID: b3		MBLK		Batch ID: R29874		Analysis Date: 8/21/2008 9:10:14 PM			
Trichloroethene (TCE)	ND	µg/L	1.0						
Trichlorofluoromethane	ND	µg/L	1.0						
1,2,3-Trichloropropane	ND	µg/L	2.0						
Vinyl chloride	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	1.5						
Sample ID: 100ng lcs		LCS		Batch ID: R29874		Analysis Date: 8/21/2008 10:00:25 AM			
Benzene	21.13	µg/L	1.0	106	86.8	120			
Toluene	20.13	µg/L	1.0	101	64.1	127			
Chlorobenzene	22.22	µg/L	1.0	111	82.4	113			
1,1-Dichloroethene	23.18	µg/L	1.0	116	86.5	132			
Trichloroethene (TCE)	19.86	µg/L	1.0	99.3	77.3	123			
Sample ID: 100ng lcs		LCS		Batch ID: R29874		Analysis Date: 8/21/2008 10:07:51 PM			
Benzene	21.40	µg/L	1.0	107	86.8	120			
Toluene	19.47	µg/L	1.0	97.4	64.1	127			
Chlorobenzene	23.04	µg/L	1.0	115	82.4	113			S
1,1-Dichloroethene	25.59	µg/L	1.0	128	86.5	132			
Trichloroethene (TCE)	21.12	µg/L	1.0	106	77.3	123			
Sample ID: 0808329-01a MS		MS		Batch ID: R29874		Analysis Date: 8/21/2008 6:44:10 PM			
Benzene	22.43	µg/L	1.0	112	72.4	128			
Toluene	20.14	µg/L	1.0	101	79.2	115			
Chlorobenzene	22.66	µg/L	1.0	113	83.1	111			S
1,1-Dichloroethene	24.54	µg/L	1.0	123	81.4	122			S
Trichloroethene (TCE)	19.65	µg/L	1.0	98.2	64.4	118			

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name HESS

Date Received:

8/20/2008

Work Order Number 0808329

Received by: TLS

Checklist completed by:

Signature

Date

Sample ID labels checked by:

Initials

Matrix:

Carrier name Client drop-off

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☐ Not Shipped ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☒	No ☐
Water - Preservation labels on bottle and cap match?	Yes ☒	No ☐	N/A ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐

Container/Temp Blank temperature?

3°

<6° C Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding:

Comments:

Ray Vigil called on 8/21 and asked for Radium 226/228 analysis to be removed. As 8/21

Corrective Action

Turn-Around Time:

Hess Corporation

☐ **Bush**

4255
West Brainerd

Project #: Amel. 11 Creek 11b

Pre-Test	Post-Test
1. The first step in the scientific method is to ask a question.	1. The first step in the scientific method is to ask a question.
2. A hypothesis is a statement that can be tested.	2. A hypothesis is a statement that can be tested.
3. The purpose of an experiment is to test a hypothesis.	3. The purpose of an experiment is to test a hypothesis.
4. Data are the results of an experiment.	4. Data are the results of an experiment.
5. A conclusion is a statement that summarizes the results of an experiment.	5. A conclusion is a statement that summarizes the results of an experiment.

Project Manager:

Michael Ford/Danny Wilson

Sampler: Kay Vignall

Sample Temperature

Q



BE + TMB's (8021)
BE + TPH (Gas only)
d 8015B (Gas/Diesel)
d 418.1)
d 504.1)
d 8260)
or PAH)
,NO₃,NO₂,PO₄,SO₄)
des / 8082 PCB's
a)
VOA)

chd List

Air Bubbles (Y or N)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

[illegible][illegible]

Date	Time	Relinquished by	Received by
20 Aug 08	1355	WAL	1355

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.