BFI Waste Systems™
BROWNING-FERRIS INDUSTRIES

Laubscher Meadows Landfill

January 08, 1997

John Guerrettaz
Indiana Department of Environmental Management
100 North Senate
Indianapolis, Indiana 46204

Re: Laubscher Meadows Landfill Semiannual Surface Water Analytical Report

Dear Mr. Guerrettaz,

In accordance with FP 82 - 2 Part 20, submitted herewith is the Laubscher Meadows Landfill semiannual surface water analytical report. Items considered for appropriate sampling included non-storm events, average weather conditions, weather conditions whithin seven days of the sampling event, and a stream flow profile (see attached profile). The profile is an estimate from sampling point SW-3. The samples were collected from locust creek and its unnamed tributary (see attached site map), in accordance with the facility's Surface Water Sampling and Analysis Plan.

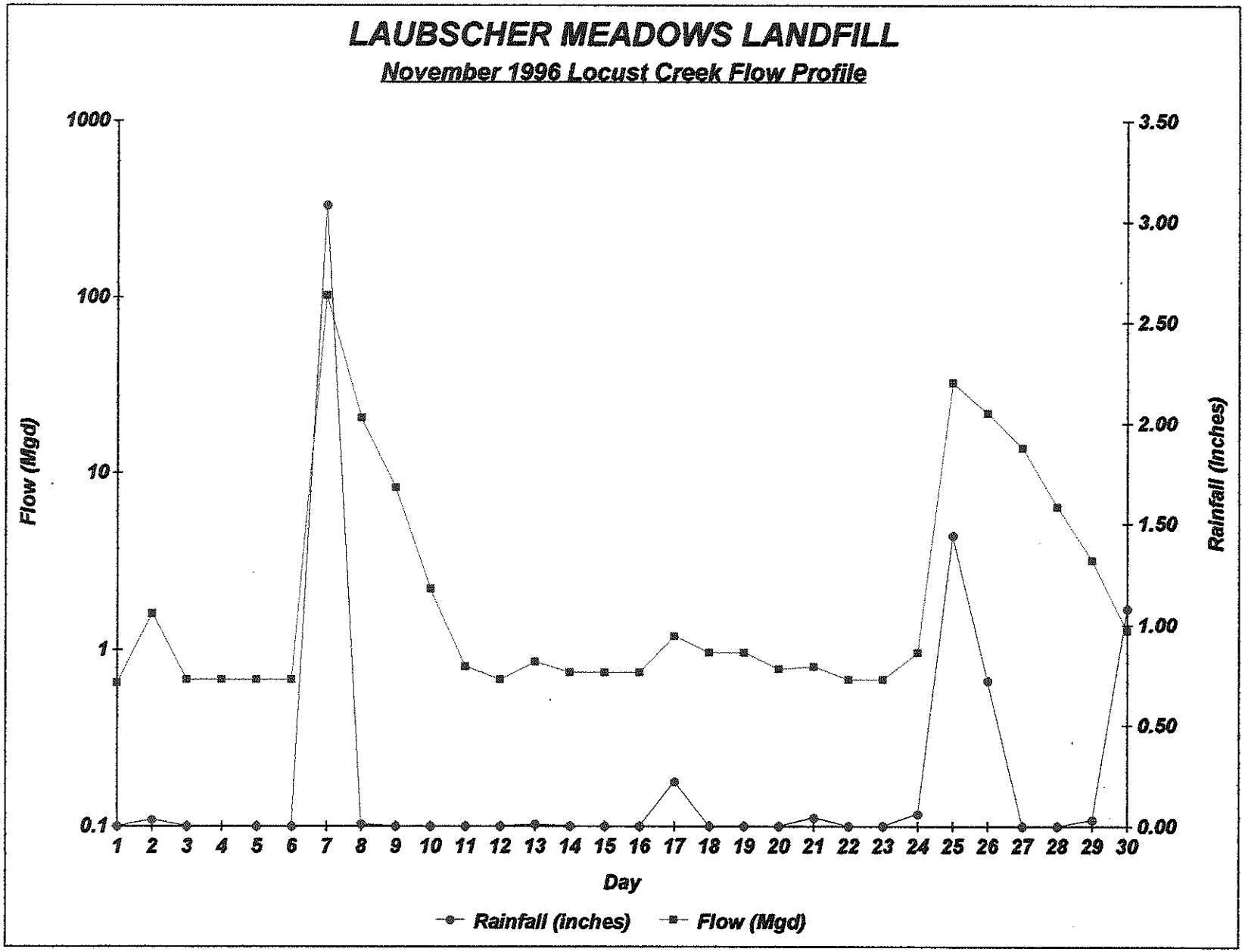
Should you have any questions regarding the foregoing, or require additional information, please feel free to contact me at (812) 424 - 0235 ext.17.

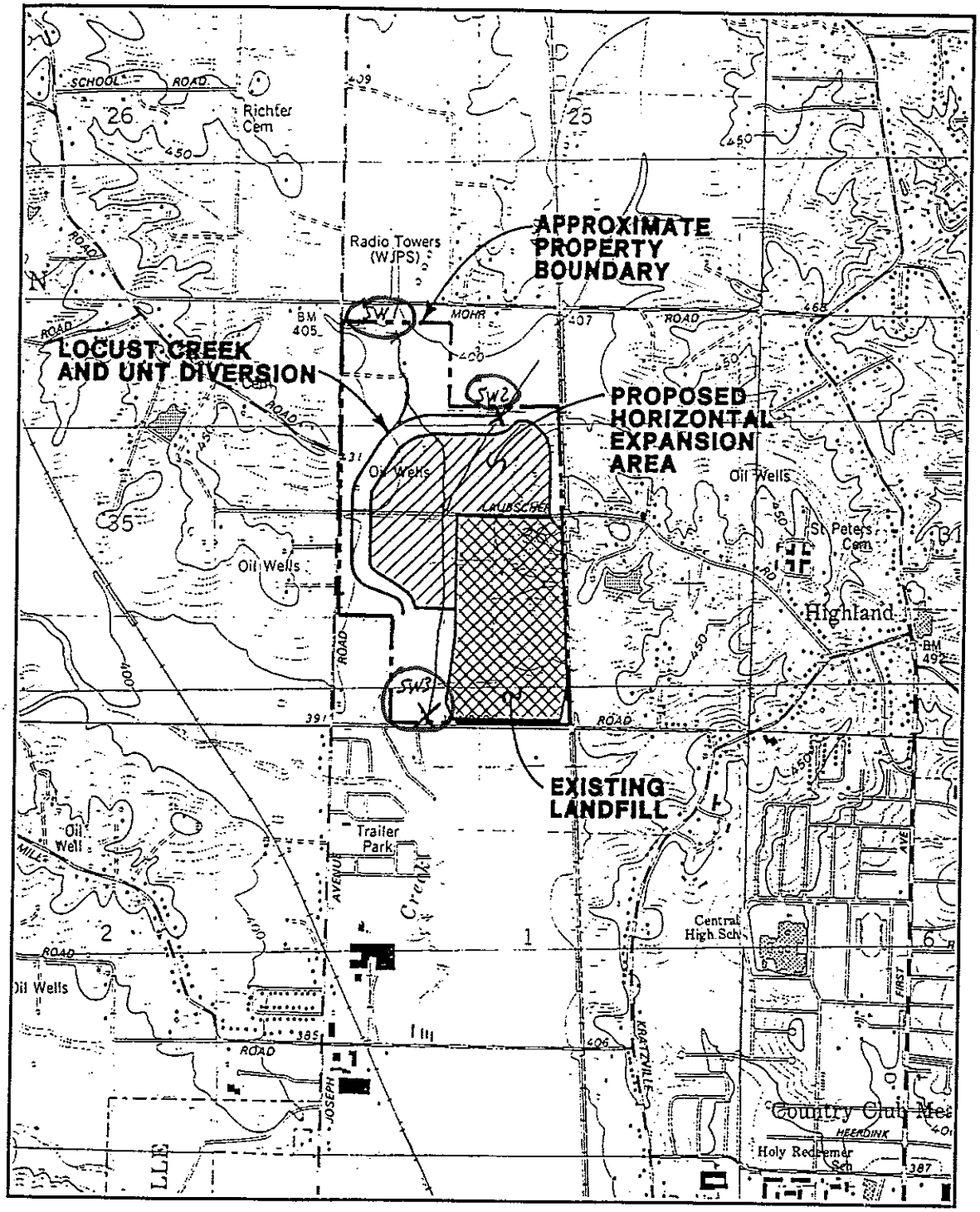
Respectfully Submitted,

Jeffrey W. Jenkins

Jeffrey W. Jenkins
Environmental Manager

cc: Erv Leidolf


LAUBSCHER MEADOWS LANDFILL
November 1996 Locust Creek Flow Profile
Flow (Mgd)
1000
100
10
1
0.1
Rainfall (inches)
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Day
Rainfall (inches)
Flow (Mgd)



VICINITY MAP
PROPOSED HORIZONTAL EXPANSION
LAUBSCHER MEADOWS SANITARY LANDFILL
VANDERBURGH COUNTY, INDIANA

PROJECT NO.	21-13127
SCALE	1" = 2000'
FIGURE NO.	1-1

ATEC V01

All data entered

in Access DATABase.

SG 2/12/98 Flow not entered.

JC for 2/9/98

CSA *Central States Analytical*

2406 Lynch Road
Evansville, Indiana 47711

Browning Ferris Industries
2211 Glenview Drive
Evansville, IN 47720

Attn: Jeff Jenkins

Your Reference: SW-1
Project Comments:

Date Received: 11/22/96
Date Reported: 12/27/96
Date Sampled: 11/22/96
Sample ID#: NM02258

Parameters	Results	Units	MDL	Analysis Date	Analyst	Method
Flow Millions of Gallons per Day	0.216	mgd		11/22/96	HMS	
Temperature(deg C)	5.6	deg C		11/22/96	HMS	EPA 170.1
pH (on site)	6.38			11/22/96	HMS	EPA 150.1
Conductivity, field	460	umho/cm	10	11/22/96	HMS	
Turbidity	22.00	NTU	0.05	11/22/96	HMS	EPA 180.1
pH	6.35			11/22/96	MJL	EPA 150.1
Specific Conductivity	480	umho/cm	1.0	11/22/96	MJL	EPA 120.1
Biochemical Oxygen Demand	BDL	mg/L	2.0	11/27/96	CGM	SM 507
Chemical Oxygen Demand	12	mg/L	11	11/26/96	CAW	EPA 410.4
Oil and Grease (Gravimetric)	BDL	mg/L	1.0	11/27/96	CGM	EPA 413.1
Phenols (4-AAP)	0.02	mg/L	0.01	11/27/96	CAW	EPA 420.1
Total Suspended Solids (TSS)	16	mg/L	1.0	12/03/96	CGM	EPA 160.2
Sulfate	39	mg/L	3.6	12/03/96	CGM	EPA 375.4
Chloride	10	mg/L	3.6	11/24/96	CGM	EPA 325.3
Sodium by ICP	8.2	mg/L	0.01	12/03/96	SLB	EPA 200.7
Total Kjeldahl Nitrogen (TKN)	0.78	mg/L	0.4	11/26/96	CAW	SM 420A,417D
Phosphorus as P	0.06	mg/L	0.02	12/02/96	CGM	EPA 365.2
Arsenic by ICP	BDL	mg/L	0.003	11/29/96	SAS	EPA600-200.7
Barium by ICP	0.05	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Cadmium by ICP	BDL	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Chromium by ICP	0.05	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Copper by ICP	0.003	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Iron by ICP	1.2	mg/L	0.05	11/29/96	SAS	EPA600-200.7
Lead by ICP	BDL	mg/L	0.002	11/29/96	SAS	EPA600-200.7
Manganese by ICP	0.12	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Mercury by Flameless AA	BDL	mg/L	0.0002	11/26/96	SLB	EPA 245.1
Nickel by ICP	0.003	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Silver by ICP	0.001	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Zinc by ICP	0.01	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Nitrate as N	2.1	mg/L	0.01	12/02/96	CAW	EPA 353.2
Nitrite as N	0.03	mg/L	0.01	12/02/96	CAW	EPA 354.1

Phone: (812) 464-9000 *Fax: (812) 424-0667* *hstn@aol.com*

CSA *Central States Analytical*

2406 Lynch Road
Evansville, Indiana 47711

Neal Boughton

Laboratory Manager

Phone: (812) 464-9000 *Fax: (812) 424-0667* *hstn@aol.com*

2258

BFI FIELD SURFACE WATER COLLECTION INFORMATION LOG

Facility: BFI **Sample Point ID:** SW-1

Location: Laubscher Meadows Field Representative: Huey + Bob + Kelly

Sample Matrix: _____ Lab Sample #: _____

SAMPLING INFORMATION:

Method of Sampling: Grab

Water Flow @ Sampling: 10'x1'÷30sec. .333cfs. .216 MGD

Parameters: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( ) _____

SAMPLING DATA:

Date/Time	Temp. (°C)	pH (Std. Units)	Conduct. (µmhos/cm)	Turb. (NTU)	Other ___ ( )
11-22-96 11:42	5.6	6.38	460	22.00	

INSTRUMENT CHECK DATA:

Turbidity Serial #: Lamont 2008 150 NTU std. = 150 NTU 5.0 NTU std. = 5.0 NTU

pH Serial #: Hach 4.0 std. = 4.01 7.0 std. = 7.03 10.0 std. = 10.04

Conductivity Serial #: Hach 1000 umhos/cm = 1000 ___ umhos/cm = ___

GENERAL INFORMATION:

Weather Conditions @ time of sampling (also note previous seven (7) days weather prior to sampling):

Cool + Dry (Trace of Rain two Day's before sampling)

Sample Characterisitics: _____

ANALYTE COLLECTION ORDER, CONTAINERS, PRESERVATIVES AND TESTS PERFORMED:

1l unpres plastic, 1l Glass Amber H_2SO_4, 1l Glass w/m Clear H_2SO_4, ½l Glass Amber H_2SO_4 ½l plastic HNO_3

COMMENTS AND OBSERVATIONS: _____

I certify that sampling procedures were in accordance with all applicable EPA, State and BFI protocols.

Date: 11/22/96 By: Robert M. Simmons Company: Central States Analytical

PAGE 1 OF 1

CSA *Central States Analytical*

2406 Lynch Road
Evansville, Indiana 47711

Browning Ferris Industries
2211 Glenview Drive
Evansville, IN 47720

Attn: Jeff Jenkins

Your Reference: SW-2
Project Comments:

Date Received: 11/22/96
Date Reported: 12/27/96
Date Sampled: 11/22/96
Sample ID#: NM02259

Parameters	Results	Units	MDL	Analysis Date	Analyst	Method
Flow Millions of Gallons per Day	0.324	mgd		11/22/96	HMS	
Temperature(deg C)	6.0	deg C		11/22/96	HMS	EPA 170.1
pH (on site)	6.59			11/22/96	HMS	EPA 150.1
Conductivity, field	377	umho/cm	10	11/22/96	HMS	
Turbidity	27.80	NTU	0.05	11/22/96	HMS	EPA 180.1
pH	6.42			11/22/96	MJL	EPA 150.1
Specific Conductivity	400	umho/cm	1.0	11/22/96	MJL	EPA 120.1
Biochemical Oxygen Demand	BDL	mg/L	2.0	11/27/96	CGM	SM 507
Chemical Oxygen Demand	11	mg/L	11	11/26/96	CAW	EPA 410.4
Oil and Grease (Gravimetric)	1.4	mg/L	1.0	11/27/96	CGM	EPA 413.1
Phenols (4-AAP)	0.02	mg/L	0.01	11/27/96	CAW	EPA 420.1
Total Suspended Solids (TSS)	35	mg/L	1.0	12/03/96	CGM	EPA 160.2
Sulfate	43	mg/L	3.6	12/03/96	CGM	EPA 375.4
Chloride	17	mg/L	3.6	11/24/96	CGM	EPA 325.3
Sodium by ICP	10	mg/L	0.01	12/03/96	SLB	EPA 200.7
Total Kjeldahl Nitrogen (TKN)	0.78	mg/L	0.4	11/26/96	CAW	SM 420A,417D
Phosphorus as P	0.10	mg/L	0.02	12/02/96	CGM	EPA 365.2
Arsenic by ICP	BDL	mg/L	0.003	11/29/96	SAS	EPA600-200.7
Barium by ICP	0.04	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Cadmium by ICP	BDL	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Chromium by ICP	0.04	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Copper by ICP	0.004	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Iron by ICP	1.5	mg/L	0.05	11/29/96	SAS	EPA600-200.7
Lead by ICP	BDL	mg/L	0.002	11/29/96	SAS	EPA600-200.7
Manganese by ICP	0.16	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Mercury by Flameless AA	BDL	mg/L	0.0002	11/26/96	SLB	EPA 245.1
Nickel by ICP	0.004	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Silver by ICP	BDL	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Zinc by ICP	0.01	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Nitrate as N	0.72	mg/L	0.01	12/02/96	CAW	EPA 353.2
Nitrite as N	0.02	mg/L	0.01	12/02/96	CAW	EPA 354.1

Phone: (812) 464-9000 *Fax: (812) 424-0667* *hstn@aol.com*

CSA *Central States Analytical*

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Neal Boughton

Laboratory Manager

Phone: (812) 464-9000 *Fax: (812) 424-0667* *hstn@aol.com*

2259

BFI FIELD SURFACE WATER COLLECTION INFORMATION LOG

Facility: BFI **Sample Point ID:** SW-2

Location: Laubscher Meadows Field Representative: Huey + Bob + Kelly

Sample Matrix: _____ Lab Sample #: _____

SAMPLING INFORMATION:

Method of Sampling: Grab

Water Flow @ Sampling: 10' x 5' ÷ 20 sec. .500 cfs. .324 MGD

Parameters: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( ) _____

SAMPLING DATA:

Date/Time	Temp. (°C)	pH (Std. Units)	Conduct. (µmhos/cm)	Turb. (NTU)	Other ___ ( )
11-22-96 12:04	6.0	6.59	377	27.80	

INSTRUMENT CHECK DATA:

Turbidity Serial #: Lamont 2008 .50 NTU std. = .50 NTU 5.0 NTU std. = 5.0 NTU

pH Serial #: Hach 4.0 std. = 4.01 7.0 std. = 7.03 10.0 std. = 10.04

Conductivity Serial #: Hach 1000 umhos/cm = 1000 ___ umhos/cm = ___

GENERAL INFORMATION:

Weather Conditions @ time of sampling (also note previous seven (7) days weather prior to sampling):

Cool + Dry (Trace of Rain two Days before sampling)

Sample Characterisitics: _____

ANALYTE COLLECTION ORDER, CONTAINERS, PRESERVATIVES AND TESTS PERFORMED:

1l unpres plastic, 1l Glass Amber H_2SO_4, 1l Glass w/m Clear H_2SO_4, ½l Glass Amber H_2SO_4 ½l plastic HNO_3

COMMENTS AND OBSERVATIONS: _____

I certify that sampling procedures were in accordance with all applicable EPA, State and BFI protocols.

Date: 11/22/96 By: Robert M. Simmons Company: Central States Analytical

PAGE 1 OF 1

CSA *Central States Analytical*

2406 Lynch Road
Evansville, Indiana 47711

Browning Ferris Industries
2211 Glenview Drive
Evansville, IN 47720

Attn: Jeff Jenkins

Your Reference: SW-3
Project Comments:

Date Received: 11/22/96
Date Reported: 12/27/96
Date Sampled: 11/22/96
Sample ID#: NM02260

Parameters	Results	Units	MDL	Analysis Date	Analyst	Method
Flow Millions of Gallons per Day	0.647	mgd		11/22/96	HMS	
Temperature(deg C)	6.2	deg C		11/22/96	HMS	EPA 170.1
pH (on site)	7.22			11/22/96	HMS	EPA 150.1
Conductivity, field	389	umho/cm	10	11/22/96	HMS	
Turbidity	21.8	NTU	0.05	11/22/96	HMS	EPA 180.1
pH	7.10			11/22/96	MJL	EPA 150.1
Specific Conductivity	410	umho/cm	1.0	11/22/96	MJL	EPA 120.1
Biochemical Oxygen Demand	BDL	mg/L	2.0	11/27/96	CGM	SM 507
Chemical Oxygen Demand	12	mg/L	11	11/26/96	CAW	EPA 410.4
Oil and Grease (Gravimetric)	2.5	mg/L	1.0	11/27/96	CGM	EPA 413.1
Phenols (4-AAP)	0.02	mg/L	0.01	11/27/96	CAW	EPA 420.1
Total Suspended Solids (TSS)	13	mg/L	1.0	12/03/96	CGM	EPA 160.2
Sulfate	47	mg/L	3.6	12/03/96	CGM	EPA 375.4
Chloride	25	mg/L	3.6	11/24/96	CGM	EPA 325.3
Sodium by ICP	18	mg/L	0.01	12/03/96	SLB	EPA 200.7
Total Kjeldahl Nitrogen (TKN)	BDL	mg/L	0.4	11/26/96	CAW	SM 420A,417D
Phosphorus as P	0.06	mg/L	0.02	12/02/96	CGM	EPA 365.2
Arsenic by ICP	BDL	mg/L	0.003	11/29/96	SAS	EPA600-200.7
Barium by ICP	0.04	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Cadmium by ICP	BDL	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Chromium by ICP	0.04	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Copper by ICP	0.003	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Iron by ICP	0.99	mg/L	0.05	11/29/96	SAS	EPA600-200.7
Lead by ICP	BDL	mg/L	0.002	11/29/96	SAS	EPA600-200.7
Manganese by ICP	0.07	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Mercury by Flameless AA	BDL	mg/L	0.0002	11/26/96	SLB	EPA 245.1
Nickel by ICP	0.002	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Silver by ICP	BDL	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Zinc by ICP	0.01	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Nitrate as N	1.3	mg/L	0.01	12/02/96	CAW	EPA 353.2
Nitrite as N	0.02	mg/L	0.01	12/02/96	CAW	EPA 354.1

CSA *Central States Analytical*

2406 Lynch Road
Evansville, Indiana 47711

Neal Boughton

Laboratory Manager

Phone: (812) 464-9000 *Fax: (812) 424-0667* *hstn@aol.com*

2260

BFI FIELD SURFACE WATER COLLECTION INFORMATION LOG

Facility: BFI **Sample Point ID:** SW-3

Location: Laubscher Meadows Field Representative: Huey + Bob + Kelly

Sample Matrix: _____ Lab Sample #: _____

SAMPLING INFORMATION:

Method of Sampling: Grab

Water Flow @ Sampling: 4'x1'÷4sec. 1.0 cfs. .647 MGD

Parameters: Annual ( ) Semi-Annual ( ) Quarterly ( ) Monthly ( ) Other ( ) _____

SAMPLING DATA:

Date/Time	Temp. (°C)	pH (Std. Units)	Conduct. (µmhos/cm)	Turb. (NTU)	Other ___ ( )
11-22-96 12:30	6.2	7.22	389	21.8	

INSTRUMENT CHECK DATA:

Turbidity Serial #: Lamont 2008 1.50 NTU std. = 1.50 NTU 5.0 NTU std. = 5.0 NTU

pH Serial #: Hach 4.0 std. = 4.01 7.0 std. = 7.03 10.0 std.= 10.04

Conductivity Serial #: Hach 1000 umhos/cm = 1000 ___ umhos/cm = ___

GENERAL INFORMATION:

Weather Conditions @ time of sampling (also note previous seven (7) days weather prior to sampling):

Cool + Dry (Trace of Rain two Day's before sampling)

Sample Characterisitics: _____

ANALYTE COLLECTION ORDER, CONTAINERS, PRESERVATIVES AND TESTS PERFORMED:

1l unpres plastic, 1l Glass Amber H_2SO_4, 1l Glass w/m Clear H_2SO_4, ½l Glass Amber H_2SO_4 ½l plastic HNO_3

COMMENTS AND OBSERVATIONS: _____

I certify that sampling procedures were in accordance with all applicable EPA, State and BFI protocols.

Date: 11/22/96 By: Robert M. Simmons Company: Central States Analytical

PAGE 1 OF 1

CSA *Central States Analytical*

2406 Lynch Road
Evansville, Indiana 47711

Browning Ferris Industries
2211 Glenview Drive
Evansville, IN 47720

Attn: Jeff Jenkins

Your Reference: SW-3 Duplicate
Project Comments:

Date Received: 11/22/96
Date Reported: 12/27/96
Date Sampled: 11/22/96
Sample ID#: NM02261

Parameters	Results	Units	MDL	Analysis Date	Analyst	Method
Flow Millions of Gallons per Day	0.647	mgd		11/22/96	HMS	
Temperature(deg C)	6.3	deg C		11/22/96	HMS	EPA 170.1
pH (on site)	7.22			11/22/96	HMS	EPA 150.1
Conductivity, field	390	umho/cm	10	11/22/96	HMS	
Turbidity	22.1	NTU	0.05	11/22/96	HMS	EPA 180.1
pH	7.13			11/22/96	MJL	EPA 150.1
Specific Conductivity	400	umho/cm	1.0	11/22/96	MJL	EPA 120.1
Biochemical Oxygen Demand	BDL	mg/L	2.0	11/27/96	CGM	SM 507
Chemical Oxygen Demand	16	mg/L	11	11/26/96	CAW	EPA 410.4
Oil and Grease (Gravimetric)	BDL	mg/L	1.0	11/27/96	CGM	EPA 413.1
Phenols (4-AAP)	0.01	mg/L	0.01	11/27/96	CAW	EPA 420.1
Total Suspended Solids (TSS)	11	mg/L	1.0	12/03/96	CGM	EPA 160.2
Sulfate	47	mg/L	3.6	12/03/96	CGM	EPA 375.4
Chloride	20	mg/L	3.6	11/24/96	CGM	EPA 325.3
Sodium by ICP	13	mg/L	0.01	12/03/96	SLB	EPA 200.7
Total Kjeldahl Nitrogen (TKN)	0.45	mg/L	0.4	11/26/96	CAW	SM 420A,417D
Phosphorus as P	0.06	mg/L	0.02	12/02/96	CGM	EPA 365.2
Arsenic by ICP	BDL	mg/L	0.003	11/29/96	SAS	EPA600-200.7
Barium by ICP	0.04	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Cadmium by ICP	BDL	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Chromium by ICP	0.05	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Copper by ICP	0.004	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Iron by ICP	1.1	mg/L	0.05	11/29/96	SAS	EPA600-200.7
Lead by ICP	BDL	mg/L	0.002	11/29/96	SAS	EPA600-200.7
Manganese by ICP	0.07	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Mercury by Flameless AA	BDL	mg/L	0.0002	11/26/96	SLB	EPA 245.1
Nickel by ICP	0.004	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Silver by ICP	BDL	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Zinc by ICP	0.01	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Nitrate as N	1.2	mg/L	0.01	12/02/96	CAW	EPA 353.2
Nitrite as N	0.03	mg/L	0.01	12/02/96	CAW	EPA 354.1

Phone: (812) 464-9000 *Fax: (812) 424-0667* *hstn@aol.com*

CSA *Central States Analytical*

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Evansville, Indiana 47711

Neal Boughton

Laboratory Manager

Phone: (812) 464-9000 *Fax: (812) 424-0667* *hstn@aol.com*

2261

BFI FIELD SURFACE WATER COLLECTION INFORMATION LOG

Facility: BFI **Sample Point ID:** SW-3 Dup.

Location: Laubscher Meadows Field Representative: Huey + Bob + Kelly

Sample Matrix: _____ Lab Sample #: _____

SAMPLING INFORMATION:

Method of Sampling: Grab

Water Flow @ Sampling: 4'x1'÷4sec. 1.0cfs. .647MGD

Parameters: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( ) _____

SAMPLING DATA:

Date/Time	Temp. (°C)	pH (Std. Units)	Conduct. (µmhos/cm)	Turb. (NTU)	Other ___ ( )
11-22-96 12:37	6.3	7.22	390	22.1	

INSTRUMENT CHECK DATA:

Turbidity Serial #: 2008 (Lamont) .50 NTU std. = .50 NTU 5.0 NTU std. = 5.0 NTU

pH Serial #: Hach 4.0 std. = 4.01 7.0 std. = 7.03 10.0 std. = 10.04

Conductivity Serial #: Hach 1000 umhos/cm = 1000 ___ umhos/cm = ___

GENERAL INFORMATION:

Weather Conditions @ time of sampling (also note previous seven (7) days weather prior to sampling):

Cool + Dry (Trace of Rain two Day's before sampling)

Sample Characterisitics: _____

ANALYTE COLLECTION ORDER, CONTAINERS, PRESERVATIVES AND TESTS PERFORMED:

1l unpres plastic, 1l Glass Amber H_2SO_4, 1l Glass w/m Clear H_2SO_4, ½l Glass Amber H_2SO_4 ½l plastic HNO_3

COMMENTS AND OBSERVATIONS: _____

I certify that sampling procedures were in accordance with all applicable EPA, State and BFI protocols.

Date: 11/22/96 By: Robert M. Simmons Company: Central States Analytical

PAGE 1 OF 1

CSA Central States Analytical

2406 Lynch Road
Evansville, Indiana 47711

Browning Ferris Industries
2211 Glenview Drive
Evansville, IN 47720

Attn: Jeff Jenkins

Your Reference: Trip Blank
Project Comments:

Date Received: 11/22/96
Date Reported: 12/16/96
Date Sampled: 11/22/96
Sample ID#: NM02257

Parameters	Results	Units	MDL	Analysis Date	Analyst	Method
Temperature(deg C)	19.1	deg C		11/22/96	HMS	EPA 170.1
pH (on site)	7.10			11/22/96	HMS	EPA 150.1
Conductivity, field	0.00	umho/cm	10	11/22/96	HMS	
Turbidity	0.00	NTU	0.05	11/22/96	HMS	EPA 180.1
pH	7.07			11/22/96	MJL	EPA 150.1
Specific Conductivity	BDL	umho/cm	1.0	11/22/96	MJL	EPA 120.1
Biochemical Oxygen Demand	BDL	mg/L	2.0	11/27/96	CGM	SM 507
Chemical Oxygen Demand	17	mg/L	11	11/26/96	CAW	EPA 410.4
Oil and Grease (Gravimetric)	1.8	mg/L	1.0	11/27/96	CGM	EPA 413.1
Phenols (4-AAP)	0.03	mg/L	0.01	11/27/96	CAW	EPA 420.1
Total Suspended Solids (TSS)	BDL	mg/L	1.0	12/03/96	CGM	EPA 160.2
Sulfate	BDL	mg/L	3.6	12/03/96	CGM	EPA 375.4
Chloride	BDL	mg/L	3.6	11/24/96	CGM	EPA 325.3
Sodium by ICP	BDL	mg/L	0.01	11/27/96	SLB	EPA 200.7
Total Kjeldahl Nitrogen (TKN)	BDL	mg/L	0.4	11/26/96	CAW	SM 420A,417D
Phosphorus as P	BDL	mg/L	0.02	12/02/96	CGM	EPA 365.2
Arsenic by ICP	BDL	mg/L	0.003	11/29/96	SAS	EPA600-200.7
Barium by ICP	0.002	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Cadmium by ICP	BDL	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Chromium by ICP	0.05	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Copper by ICP	0.002	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Iron by ICP	0.03	mg/L	0.05	11/29/96	SAS	EPA600-200.7
Lead by ICP	0.002	mg/L	0.002	11/29/96	SAS	EPA600-200.7
Manganese by ICP	0.002	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Mercury by Flameless AA	BDL	mg/L	0.0002	11/26/96	SLB	EPA 245.1
Nickel by ICP	0.001	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Silver by ICP	BDL	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Zinc by ICP	0.005	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Nitrate as N	BDL	mg/L	0.01	12/02/96	CAW	EPA 353.2
Nitrite as N	BDL	mg/L	0.01	12/02/96	CAW	EPA 354.1

Phone: (812) 464-9000 Fax: (812) 424-0667 hstn@aol.com

2257

BFI FIELD SURFACE WATER COLLECTION INFORMATION LOG

Facility: BFI Sample Point ID: Trip Blank

Location: Laubscher Meadows Field Representative: Huey + Bob

Sample Matrix: _____ Lab Sample #: _____

SAMPLING INFORMATION:

Method of Sampling: Grab

Water Flow @ Sampling: _____

Parameters: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( ) _____

SAMPLING DATA:

Date/Time	Temp. (°C)	pH (Std. Units)	Conduct. (µmhos/cm)	Turb. (NTU)	Other ( )
11-22-96 10:45AM	19.1	7.10	.00	.00	

INSTRUMENT CHECK DATA:

Turbidity Serial #: Lamont 2008 .50 NTU std. = .50 NTU 5.0 NTU std. = 5.0 NTU

pH Serial #: Hach 4.0 std. = 4.01 7.0 std. = 7.03 10.0 std.= 10.04

Conductivity Serial #: Hach 1000umhos/cm = 1000 ___ umhos/cm = ___

GENERAL INFORMATION:

Weather Conditions @ time of sampling (also note previous seven (7) days weather prior to sampling):

Cool + Dry (Trace of Rain two Day's before sampling)

Sample Characterisitics: _____

ANALYTE COLLECTION ORDER, CONTAINERS, PRESERVATIVES AND TESTS PERFORMED:

1L unpres plastic, 1L Glass Amber H_2SO_4, 1L Glass w/m Clear H_2SO_4, ½L Glass Amber H_2SO_4 2L plastic HNO_3

COMMENTS AND OBSERVATIONS: _____

I certify that sampling procedures were in accordance with all applicable EPA, State and BFI protocols.

Date: 11/22/96 By: [signature] Company: Central States Analytical

PAGE 1 OF 1

CSA *Central States Analytical*

2406 Lynch Road
Evansville, Indiana 47711

Browning Ferris Industries
2211 Glenview Drive
Evansville, IN 47720

Attn: Jeff Jenkins

Your Reference: **Field Equipment Blank**
Project Comments:

Date Received: **11/22/96**
Date Reported: **12/27/96**
Date Sampled: **11/22/96**
Sample ID#: **NM02262**

Parameters	Results	Units	MDL	Analysis Date	Analyst	Method
Temperature(deg C)	18.0	deg C		11/22/96	HMS	EPA 170.1
pH (on site)	7.18			11/22/96	HMS	EPA 150.1
Conductivity, field	0.00	umho/cm	10	11/22/96	HMS	
Turbidity	0.00	NTU	0.05	11/22/96	HMS	EPA 180.1
pH	7.15			11/22/96	MJL	EPA 150.1
Specific Conductivity	BDL	umho/cm	1.0	11/22/96	MJL	EPA 120.1
Biochemical Oxygen Demand	BDL	mg/L	2.0	11/27/96	CGM	SM 507
Chemical Oxygen Demand	BDL	mg/L	11	11/26/96	CAW	EPA 410.4
Oil and Grease (Gravimetric)	BDL	mg/L	1.0	11/27/96	CGM	EPA 413.1
Phenols (4-AAP)	0.02	mg/L	0.01	11/27/96	CAW	EPA 420.1
Total Suspended Solids (TSS)	BDL	mg/L	1.0	12/03/96	CGM	EPA 160.2
Sulfate	BDL	mg/L	3.6	12/03/96	CGM	EPA 375.4
Chloride	BDL	mg/L	3.6	11/24/96	CGM	EPA 325.3
Sodium by ICP	0.01	mg/L	0.01	12/03/96	SLB	EPA 200.7
Total Kjeldahl Nitrogen (TKN)	BDL	mg/L	0.4	11/26/96	CAW	SM 420A,417D
Phosphorus as P	BDL	mg/L	0.02	12/02/96	CGM	EPA 365.2
Arsenic by ICP	BDL	mg/L	0.003	11/29/96	SAS	EPA600-200.7
Barium by ICP	0.001	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Cadmium by ICP	BDL	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Chromium by ICP	0.04	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Copper by ICP	0.002	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Iron by ICP	0.03	mg/L	0.05	11/29/96	SAS	EPA600-200.7
Lead by ICP	BDL	mg/L	0.002	11/29/96	SAS	EPA600-200.7
Manganese by ICP	0.001	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Mercury by Flameless AA	BDL	mg/L	0.0002	11/26/96	SLB	EPA 245.1
Nickel by ICP	0.001	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Silver by ICP	0.001	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Zinc by ICP	0.003	mg/L	0.001	11/29/96	SAS	EPA600-200.7
Nitrate as N	0.02	mg/L	0.01	12/02/96	CAW	EPA 353.2
Nitrite as N	BDL	mg/L	0.01	12/02/96	CAW	EPA 354.1

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CSA *Central States Analytical*

2406 Lynch Road
Evansville, Indiana 47711

Neal Boughton

Laboratory Manager

Phone: (812) 464-9000 *Fax: (812) 424-0667* *hstn@aol.com*

2262

BFI FIELD SURFACE WATER COLLECTION INFORMATION LOG

Facility: BFI **Sample Point ID:** Field Blank

Location: Laubscher Meadows Field Representative: Huey + Bob + Kelly

Sample Matrix: _____ Lab Sample #: _____

SAMPLING INFORMATION:

Method of Sampling: Grab

Water Flow @ Sampling: _____

Parameters: Annual ( ) Semi-Annual (✓) Quarterly ( ) Monthly ( ) Other ( ) _____

SAMPLING DATA:

Date/Time	Temp. (°C)	pH (Std. Units)	Conduct. (µmhos/cm)	Turb. (NTU)	Other ___ ( )
11-22-96 12:55	18.0	7.18	.00	.00	

INSTRUMENT CHECK DATA:

Turbidity Serial #: Lamont 2008 .50 NTU std. = .50 NTU 5.0 NTU std. = 5.0 NTU

pH Serial #: Hach 4.0 std. = 4.01 7.0 std. = 7.03 10.0 std. = 10.04

Conductivity Serial #: Hach 1000 umhos/cm = 1000 ___ umhos/cm = ___

GENERAL INFORMATION:

Weather Conditions @ time of sampling (also note previous seven (7) days weather prior to sampling):

Cool + Dry (Trace of Rain two Days before sampling)

Sample Characterisitics: _____

ANALYTE COLLECTION ORDER, CONTAINERS, PRESERVATIVES AND TESTS PERFORMED:

1l unpres plastic, 1l Glass Amber H_2SO_4, 1l Glass w/m Clear H_2SO_4, ½l Glass Amber H_2SO_4 ½l plastic HNO_3

COMMENTS AND OBSERVATIONS: _____

I certify that sampling procedures were in accordance with all applicable EPA, State and BFI protocols.

Date: 11/22/96 By: Robert M. Simmons Company: Central States Analytical

PAGE 1 OF 1

BROWNING-FERRIS INDUSTRIES

FIELD SAMPLE SUMMARY LOG

Page 1 of 1

Facility: BFI Landfill Location: Laubscher Meadows

Laboratory: Central States Analytical Sample Dates: 11-22-96

Monitoring Event: Surface water

Lab #	Sample Point	SAMPLE PARAMETERS/CONTAINER						
		pH, Cond, BOD TSS, SO4, Cl	O+G	Phenol + TKN	COD+Phos. + NO23	metals		
		1ℓ unpres. (P)	1ℓ w/m Clear (G) H_2SO_4	1ℓ Amber (G) H_2SO_4	½ℓ Amber (G) H_2SO_4	½ℓ HNO_3 (P)		
	Trip Blk	11-22-96	11-22-96	11-22-96	11-22-96	11-22-96		
	SW-1	"	"	"	"	"		
	SW-2	"	"	"	"	"		
	SW-3	"	"	"	"	"		
	SW-3Dup.	"	"	"	"	"		

Comments: _____

Legend:

•	• DATE	• N/R	• INS.

•-Required Sample Parameter
Date-Date of Sample Collection (Date/Month/Year)
N/R-Not Requested
INS.-Insufficient Water for Sample
(G)-Glass Container
(P)-Plastic Container