Scott

Stone Container Corporation
Containerboard and Paper Division
Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707

Missoula Mill

406.626.4451
406.626.5986 Fax

October 13, 1995

1267998

Mr. Warren Norton
DEQ - Air Quality Division
P.O. Box 200901
Helena, MT 59620

Dear Mr. Norton:

As agreed to during our telephone conversation on September 19, 1995, this letter serves to inform the Air Quality Division what Stone Container believes is required in terms of monitor requirements under the new opacity rule effective August 11, 1995 for the No. 3 and No. 4 Recovery Boiler opacity monitors.

These requirements come as a result of the rule which became effective on August 11, 1995 that changed opacity limits on the mill's Recovery Boilers and made these monitors subject to NSPS requirements.

Monitor Configuration & Operation

The monitors have a span (full-scale range) of 0% - 70% opacity. Daily automatic CD assessments (auto-spans) are performed utilizing filters that come as close as possible to 35% opacity. The exact CD assessment opacity levels are as follows:

No. 3 Recovery	No. 4 Recovery	No. 5 Recovery
32.9%	34.1%	30.6%

These daily CD Assessments are used to indicate when the monitor is in need of maintenance and calibrations. This work is performed as those assessments indicate it is needed.

Monitor Certification

Monitor certification consists of complying with Part 60, Appendix B, Specification 1. We plan to submit a Specification 1 Compliance Report around the end of this calendar year. This report will include all of the information that is outlined below as being required for these monitors to document compliance with the Specification.

The following is a breakdown of Specification 1 and how, if at all, each requirement will be addressed.

Specification 1

Section 1 Applicability and Principle

before.

This section requires no action. It does clarify that for monitors installed after March 30, 1983 compliance with sections 4, 5.1.4, 5.1.6, 5.1.7, 5.1.8, & 6.4 is not required.

Section 2 Definitions

This section requires no action.

Section 3 Apparatus

3.1 Requires that the recorders used on the opacity monitors must have a signal input range compatible with the analyzer output. Currently, both the strip chart (graphical documentation) and the Honeywell system (monitors and calculates 6 minute averages) are capable of measuring the full range of the monitors which is 0 - 70% opacity. No action required.

3.2 - 3.4 These sections deal with equipment to be used in other sections. No action required.

Section 4 Installation Specifications

These monitors are not subject to this section since they were all installed after March 30, 1983. No action required.

Sections 5 & 6 Design and performance specifications & Design specification verification procedure.

before

Although some of these sections are not required since the monitors were installed after March 30, 1983, section 6.5 allows a certificate of conformance from the manufacturer to be used to certify conformance with all of Sections 5 & 6. This certificate has recently been received from the manufacturer and will be submitted with the Specification 1 Compliance Report.

Section 7 Performance specification verification procedure.

7.1 Preliminary adjustments and tests.

7.1.1 Equipment preparation. Since these monitors are already in place and have been operating for years, preparation of the equipment as outlined in this section, or an equivalent method used to ensure proper installation, was conducted when the unit was installed. As a result, this section need not be addressed. No action required.

7.1.2 & 7.1.3 Selection and calibration of calibration attenuators. These sections are preparation for 7.1.4 (Calibration error test) and are completed by Monitor Labs prior to them performing the Calibration Error Test. No action required.

7.1.4 Calibration Error Test. This was completed by Monitor Labs when they were on mill site in August. 1995. The results will be included with the Specification 1 Compliance Report.

7.2 Preliminary field adjustments.

7.2.1 Optical and Zero Alignment. Since these monitors are already in place and have been operating for years, preparation of the equipment as outlined in this section, or an equivalent method used to ensure proper installation, was conducted when the unit was installed. As a result, this section need not be addressed. No action required.

7.2.2 Alternative Procedure - No action required.

7.3 Monitor Conditioning period. The monitor has been operating on their respective sources for years. As a result, this section is irrelevant when preparing for section 7.4. No action required.

7.4 Operational Test Period. This section addressed the zero and upscale drift tests (Section 7.4.1 & 7.4.2). Both of these tests will be performed and the results included in the Specification 1 Compliance Report.

Section 8 Equations

These equations will be used for calculations which are needed for each relevant section.

Section 9 Reporting

Reporting of the final Specification 1 Compliance Report will follow this format for each of the relevant sections.

This concludes the requirements for compliance of the opacity monitors and our plan to address them. Please review our plan and call me at (406) 626-4451 if you have any questions or comments. If we do not hear from you, we will assume that this plan is acceptable and will implement it.

Sincerely,

Laura Kosmalski

Laura Kosmalski
Environmental Engineer

cc: Stuart
Scott
Willhite
Kohl->Loomis->Palmer

STONE CONTAINER CORPORATION
MISSOULA, MONTANA MILL

FOURTH QUARTER 1996
NSPS CONTINUOUS EMISSIONS MONITORING SYSTEMS AND CONTINUOUS OPACITY MONITORING SYSTEMS AUDIT REPORT

January 14, 1997

Submitted by:

DONALD C. MCGEE
ENVIRONMENTAL ENGINEERING DIRECTOR
BIGHORN ENVIRONMENTAL QUALITY CONTROL
305 WEST MERCURY • BUTTE, MONTANA 59701• (406)723-4061
858 RIVER HILLS DRIVE • SPRINGFIELD, OREGON 97477• (541)726-2689

CONTINUOUS OPACITY MONITORING SYSTEMS AUDIT RESULTS

CLIENT:	Stone Container Corporation			LOCATION	Missoula, MT		DATE:	6-Dec-96	
Source:	#3 Recovery Boiler			COMS:	Lear Siegler RM41		Span:	0-70%	
OPLR:	1			OPLR:	1		OPLR:	1	
Filter #:	950200685			Filter #:	951200776		Filter #:	950200686	
Opt. Dens:	0.111			Opt. Dens:	0.2522		Opt. Dens:	0.4175	
	Calculated	COMS DAS	Arithmetic	Calculated	COMS DAS	Arithmetic	Calculated	COMS DAS	Arithmetic
Replicate #	Opacity (%)	Response (%)	Difference (%)	Opacity (%)	Response (%)	Difference (%)	Opacity (%)	Response (%)	Difference (%)
1	22.55	21.9	-0.65	44.05	45.7	1.65	61.76	64.5	2.74
2	22.55	21.8	-0.75	44.05	45.8	1.75	61.76	64.6	2.84
3	22.55	21.7	-0.85	44.05	45.8	1.75	61.76	64.5	2.74
4	22.55	21.7	-0.85	44.05	45.8	1.75	61.76	64.5	2.74
5	22.55	21.9	-0.65	44.05	45.7	1.65	61.76	64.5	2.74
Average	22.55	21.8	-0.75	44.05	45.76	1.71	61.76	64.52	2.76
Std. Dev			0.1000			0.0548			0.0447
t0.975			2.776			2.776			2.776
Conf. Coeff.			0.1241			0.0680			0.0555
Error			**0.8780**			**1.7780**			**2.8139**
Specification:			<=3% opacity			<=3% opacity			<=3% opacity
Source:	#4 Recovery Boiler			COMS:	Lear Siegler RM41		Span:	0-70%	
OPLR:	1			OPLR:	1		OPLR:	1	
Filter #:	950200685			Filter #:	951200776		Filter #:	950200686	
Opt. Dens:	0.111			Opt. Dens:	0.2522		Opt. Dens:	0.4175	
	Calculated	COMS DAS	Arithmetic	Calculated	COMS DAS	Arithmetic	Calculated	COMS DAS	Arithmetic
Replicate #	Opacity (%)	Response (%)	Difference (%)	Opacity (%)	Response (%)	Difference (%)	Opacity (%)	Response (%)	Difference (%)
1	22.55	21.2	-1.35	44.05	43.5	-0.55	61.76	59.1	-2.66
2	22.55	21.2	-1.35	44.05	43.6	-0.45	61.76	59.2	-2.56
3	22.55	21.5	-1.05	44.05	43.6	-0.45	61.76	59.1	-2.66
4	22.55	21.4	-1.15	44.05	43.6	-0.45	61.76	59.1	-2.66
5	22.55	21.4	-1.15	44.05	43.7	-0.35	61.76	59.2	-2.56
Average	22.55	21.34	-1.21	44.05	43.6	-0.45	61.76	59.14	-2.62
Std. Dev			0.1342			0.0707			0.0548
t0.975			2.776			2.776			2.776
Conf. Coeff.			0.1666			0.0878			0.0680
Error			**1.3804**			**0.5378**			**2.6896**
Specification:			<=3% opacity			<=3% opacity			<=3% opacity
Source:	#5 Recovery Boiler			COMS:	Lear Siegler RM41		Span:	0-70%	
OPLR:	0.8766			OPLR:	0.8766		OPLR:	0.8766	
Filter #:	950200685			Filter #:	951200776		Filter #:	950200686	
Opt. Dens:	0.111			Opt. Dens:	0.2522		Opt. Dens:	0.4175	
	Calculated	COMS DAS	Arithmetic	Calculated	COMS DAS	Arithmetic	Calculated	COMS DAS	Arithmetic
Replicate #	Opacity (%)	Response (%)	Difference (%)	Opacity (%)	Response (%)	Difference (%)	Opacity (%)	Response (%)	Difference (%)
1	20.07	19.70	-0.37	39.89	41.20	1.31	56.95	57.30	0.35
2	20.07	19.70	-0.37	39.89	41.20	1.31	56.95	57.30	0.35
3	20.07	19.70	-0.37	39.89	41.20	1.31	56.95	57.30	0.35
4	20.07	19.80	-0.27	39.89	41.20	1.31	56.95	57.30	0.35
5	20.07	19.80	-0.27	39.89	41.20	1.31	56.95	57.30	0.35
Average	20.07	19.74	-0.33	39.89	41.2	1.31	56.95	57.3	0.35
Std. Dev			0.0548			0.0000			0.0000
t0.975			2.776			2.776			2.776
Conf. Coeff.			0.0680			0.0000			0.0000
Error			**0.4003**			**1.3065**			**0.3546**
Specification:			<=3% opacity			<=3% opacity			<=3% opacity

8/1/97

DISCUSSIONS WITH TOM EVANS CONCERNING OPACITY RANGES ON COMS

1. ENGINEER LIMITS FOR OPACITY MONITORS ARE SET @ 70%.

2. COMS HAVE A "CLAMP" OR UPPER LIMIT ON SYSTEM TO ALLOW ~106% AMPERAGE FOR ADJUSTMENT PURPOSES.

3. DURING 7/27/97 POWER OUTAGE/MALFUNCTION - MONITORS WERE LIKELY STILL OPERATING AND DID NOT "FAIL OPEN" - IE GIVE HIGH OPACITY READINGS THAT WERE INCORRECT.

CC: SCOTT
FILE 2.1.8

Quarterly
Reports

E00010675

Cheers
Spending

Aug n Sept
fencing
allen fencing
$4-6,000
14459 ~~$50~~ 190
13611 6300
6510
27360 -

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

May-03

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	2001 SPENDING	2,002 YTD SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,003 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	3,550	7,952	4,807	389	5,196	45,000		COMPLETE
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000						90,000		COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000					30,000		COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000	14,000	13,999				70,000		COMPLETE
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000	10,000	10,000				50,000		COMPLETE
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000						10,000		COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000	20,000				55,000		COMPLETE
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000					50,000		COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000					150,000		COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022	19,000	4,978		4,978	50,000		COMPLETE
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**115,572**	**70,951**	**9,785**	**389**	**10,174**	**600,000**	**-**	
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**	**18,450**					**65,766**		

DATE PREPARED 06/05/03
PREPARED BY: LUANNE FELSTET

E00010677

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Feb-03

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	2001 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,002 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	3,550	7,952		7,952	39,804	**5,196**	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000					90,000		COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000				30,000		COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000	14,000	13,999		13,999	70,000		COMPLETE
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000	10,000	10,000		10,000	50,000		COMPLETE
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000					10,000		COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000	20,000		20,000	55,000		IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000				50,000		COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000				150,000		COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022	19,000	4,978	23,978	50,000		IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**115,572**	**70,951**	**4,978**	**75,929**	**594,804**	**5,196**	
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**	**18,450**				**65,766**		

DATE PREPARED 03/04/03
PREPARED BY: LUANNE FELSTET

E00010678

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Dec-02

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	2001 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,002 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	3,550	7,952		7,952	39,804	**5,196**	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000					90,000		COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000				30,000		COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000	14,000	13,999		13,999	70,000		COMPLETE
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000	10,000	10,000		10,000	50,000		COMPLETE
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000					10,000		COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000	10,000	10,000	20,000	55,000		IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000				50,000		COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000				150,000		COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022	19,000		19,000	45,022	**4,978**	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**115,572**	**60,951**	**10,000**	**70,951**	**589,826**	**10,174**	
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**	**18,450**				**65,766**		

DATE PREPARED 01/08/03
PREPARED BY: LUANNE FELSTET

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Nov-02

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	2001 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,002 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	3,550	7,675	277	7,952	39,804	**5,196**	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000					90,000		COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000				30,000		COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000	14,000	13,999		13,999	70,000		COMPLETE
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000	10,000	10,000		10,000	50,000		COMPLETE
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000					10,000		COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000	10,000		10,000	45,000	**10,000**	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000				50,000		COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000				150,000		COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022	19,000		19,000	45,022	**4,978**	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**115,572**	**60,674**	**277**	**60,951**	**579,826**	**20,174**	
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**	**18,450**				**65,766**		

DATE PREPARED 12/06/02
PREPARED BY: LUANNE FELSTET

E00010680

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Oct-02

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	2001 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,002 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	3,550	311	7,364	7,675	39,527	**5,473**	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000					90,000		COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000				30,000		COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000	14,000	13,999		13,999	70,000		COMPLETE
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000	10,000	10,000		10,000	50,000		COMPLETE
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000					10,000		COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000	10,000		10,000	45,000	**10,000**	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000				50,000		COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000				150,000		COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022	19,000		19,000	45,022	**4,978**	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**115,572**	**53,310**	**7,364**	**60,674**	**579,549**	**20,451**	
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**	**18,450**				**65,766**		

DATE PREPARED 11/06/02
PREPARED BY: LUANNE FELSTET

E00010681

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Sep-02

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	2001 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,002 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	3,550	176	135	311	32,163	6327 **12,837**	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000					90,000		COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000				30,000		COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000	14,000	13,999		13,999	70,000		COMPLETE
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000	10,000	10,000		10,000	50,000		COMPLETE
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000					10,000		COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000	10,000		10,000	45,000	**10,000**	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000				50,000		COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000				150,000		COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022	19,000		19,000	45,022	**4,978**	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**115,572**	**53,175**	**135**	**53,310**	**572,185**	**27,815**	
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**	**18,450**				**65,766**		

DATE PREPARED 10/04/02
PREPARED BY: LUANNE FELSTET

Current Balance	27,815
HC Allen bills	6,510
Remaining	21,305

6510 - Oct
10,000 - Dec
4,978 - Dec
6,327 - May, 03

E00010682

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Sep-02

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	2001 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,002 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	3,550	176	135	311	32,163	**12,837**	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000					90,000		COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000				30,000		COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000	14,000	13,999		13,999	70,000		COMPLETE
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000	10,000	10,000		10,000	50,000		COMPLETE
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000					10,000		COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000	10,000		10,000	45,000	**10,000**	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000				50,000		COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000				150,000		COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022	19,000		19,000	45,022	**4,978**	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**115,572**	**53,175**	**135**	**53,310**	**572,185**	**27,815**	
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**	**18,450**				**65,766**	**27,815**	

DATE PREPARED 10/04/02
PREPARED BY: LUANNE FELSTET

E00010683

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Aug-02

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	2001 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,002 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	3,550	176	135	311	32,163	**12,837**	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000					90,000		COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000				30,000		COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000	14,000	13,999		13,999	70,000		COMPLETE
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000	10,000	10,000		10,000	50,000		COMPLETE
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000					10,000		COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000	10,000		10,000	45,000	**10,000**	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000				50,000		COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000				150,000		COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022	19,000		19,000	45,022	**4,978**	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**115,572**	**53,175**	**135**	**53,310**	**572,185**	**27,815**	
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**	**18,450**				**65,766**	**27,815**	

DATE PREPARED 09/26/02
PREPARED BY: LUANNE FELSTET

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Jul-02

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	2001 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,002 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	3,550	176		176	32,028	**12,972**	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000					90,000		COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000				30,000		COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000	14,000		13,999	13,999	70,000		COMPLETE
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000	10,000		10,000	10,000	50,000		COMPLETE
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000					10,000		COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000	10,000		10,000	45,000	**10,000**	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000				50,000		COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000				150,000		COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022	19,000		19,000	45,022	**4,978**	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**115,572**	**29,176**	**23,999**	**53,175**	**572,050**	**27,950**	
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**	**18,450**				**65,766**		

DATE PREPARED 08/05/02
PREPARED BY: LUANNE FELSTET

E00010685

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Jun-02

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	2001 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,002 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	3,550	176		176	32,028	**12,972**	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000					90,000		COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000				30,000		COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000	14,000				56,001	**13,999**	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000	10,000				40,000	**10,000**	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000					10,000		COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000	10,000		10,000	45,000	**10,000**	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000				50,000		COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000				150,000		COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022	19,000		19,000	45,022	**4,978**	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**115,572**	**29,176**	**-**	**29,176**	**548,051**	**51,949**	
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**	**18,450**				**65,766**		

DATE PREPARED 07/12/02
PREPARED BY: LUANNE FELSTET

E00010686

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

May-02

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	2001 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,002 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	3,550		176	176	32,028	**12,972**	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000					90,000		COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000				30,000		COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000	14,000				56,001	**13,999**	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000	10,000				40,000	**10,000**	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000					10,000		COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000	10,000		10,000	45,000	**10,000**	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000				50,000		COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000				150,000		COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022	19,000		19,000	45,022	**4,978**	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**115,572**	**29,000**	**176**	**29,176**	**548,051**	**51,949**	
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**	**18,450**				**65,766**		

DATE PREPARED 06/17/02
PREPARED BY: LUANNE FELSTET

E00010687

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Apr-02

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	2001 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,002 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	3,550				31,852	**13,148**	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000					90,000		COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000				30,000		COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000	14,000				56,001	**13,999**	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000	10,000				40,000	**10,000**	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000					10,000		COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000	10,000		10,000	45,000	**10,000**	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000				50,000		COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000				150,000		COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022		19,000	19,000	45,022	**4,978**	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**115,572**	**10,000**	**19,000**	**29,000**	**547,875**	**52,125**	
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**	**18,450**				**65,766**		

DATE PREPARED **04/30/02**
PREPARED BY: LUANNE FELSTET

Felstet, Luanne M.

From: Marxer, Neal
Sent: Thursday, April 11, 2002 9:19 AM
To: Colyer, Ken
Cc: Boschee, Bob; Felstet, Luanne M.

Ken Please print a check for $19,000.00 to Missoula County Office of Emergency Services, 200 West Broadway, Missoula Mt. 59802-4292 next week. This is part of the settlement of the consent decree. Thanks

Neal Marxer
Technical Services Manager
Smurfit-Stone Container Corp.
P.O. Box 4707
Missoula, MT 59806-4707
Phone 406-626-4848
Cell Phone 406-360-8145
Fax 406-626-4806
e-mail nmarxer@smurfit.com

9333 - 19,000
9324 - next may
9326 aug
27 aug
30 Jan, 03

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Mar-02

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	2001 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,002 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	3,550				31,852	**13,148**	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000					90,000		COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000				30,000		COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000	14,000				56,001	**13,999**	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000	10,000				40,000	**10,000**	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000					10,000		COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000	10,000		10,000	45,000	**10,000**	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000				50,000		COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000				150,000		COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022				26,022	**23,978**	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**115,572**	**10,000**	**-**	**10,000**	**528,875**	**71,125**	
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**	**18,450**				**65,766**		

DATE PREPARED 04/05/02
PREPARED BY: LUANNE FELSTET

E00010690

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Feb-02

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	2001 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,002 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	3,550				31,852	**13,148**	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000					90,000		COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000				30,000		COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000	14,000				56,001	**13,999**	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000	10,000				40,000	**10,000**	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000					10,000		COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000	10,000		10,000	45,000	**10,000**	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000				50,000		COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000				150,000		COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022				26,022	**23,978**	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**115,572**	**10,000**	**-**	**10,000**	**528,875**	**71,125**	
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**	**18,450**				**65,766**		

DATE PREPARED **03/06/02**
PREPARED BY: LUANNE FELSTET

E00010691

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Jan-02

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	2001 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,002 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	3,550				31,852	13,148	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000					90,000		COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000				30,000		COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000	14,000				56,001	13,999	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000	10,000				40,000	10,000	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000					10,000		COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000		10,000	10,000	45,000	10,000	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000				50,000		COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000				150,000		COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022				26,022	23,978	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**115,572**	**-**	**10,000**	**10,000**	**528,875**	**71,125**	
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**	**18,450**				**65,766**		

DATE PREPARED 02/12/02
PREPARED BY: UANNE FELSTET

E00010692

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Dec-01

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,001 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	3,550		3,550	31,852	13,148	NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000				90,000		NM	COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000		24,000	30,000		NM	COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000	14,000		14,000	56,001	13,999	NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000	10,000		10,000	40,000	10,000	NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000				10,000		NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000		10,000	35,000	20,000	NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000		27,000	50,000		NM	COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000		10,000	150,000		NM	COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022		17,022	26,022	23,978	NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**115,572**	**-**	**115,572**	**518,875**	**81,125**		
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**				**65,766**			

DATE PREPARED 01/08/02
PREPARED BY: LUANNE FELSTET

E00010693

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Nov-01

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,001 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	3,300	250	3,550	31,852	13,148	NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000				90,000		NM	COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000		24,000	30,000		NM	COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000	14,000		14,000	56,001	13,999	NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000	10,000		10,000	40,000	10,000	NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000				10,000		NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000		10,000	35,000	20,000	NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000		27,000	50,000		NM	COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000		10,000	150,000		NM	COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022		17,022	26,022	23,978	NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**115,322**	**250**	**115,572**	**518,875**	**81,125**		
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**				**65,766**			

DATE PREPARED 12/05/01
PREPARED BY: LUANNE FELSTET

E00010694

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Oct-01

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,001 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	205	3,095	3,300	31,602	13,398	NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000				90,000		NM	COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000		24,000	30,000		NM	COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000	14,000		14,000	56,001	13,999	NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000	10,000		10,000	40,000	10,000	NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000				10,000		NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000		10,000	35,000	20,000	NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000		27,000	50,000		NM	COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000		10,000	150,000		NM	COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022		17,022	26,022	23,978	NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**112,227**	**3,095**	**115,322**	**518,625**	**81,375**		
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**				**65,766**			

DATE PREPARED 11/01/01
PREPARED BY: LUANNE FELSTET

E00010695

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Sep-01

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,001 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	205		205	28,507	16,493	NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000				90,000		NM	COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000		24,000	30,000		NM	COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000	14,000		14,000	56,001	13,999	NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000	10,000		10,000	40,000	10,000	NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000				10,000		NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000		10,000	35,000	20,000	NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000		27,000	50,000		NM	COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000		10,000	150,000		NM	COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022		17,022	26,022	23,978	NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**112,227**	**-**	**112,227**	**515,530**	**84,470**		
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**				**65,766**			

DATE PREPARED 10/04/01
PREPARED BY: LUANNE FELSTET

E00010696

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Aug-01 REVISED - 9-7-01

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,001 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	205		205	28,507	16,493	NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000				90,000		NM	COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000		24,000	30,000		NM	COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000		14,000	14,000	56,001	13,999	NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000		10,000	10,000	40,000	10,000	NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000				10,000		NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000		10,000	35,000	20,000	NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000		27,000	50,000		NM	COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000		10,000	150,000		NM	COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022		17,022	26,022	23,978	NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**88,227**	**24,000**	**112,227**	**515,530**	**84,470**		
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**				**65,766**			

DATE PREPARED 09/07/01
PREPARED BY: LUANNE FELSTET

E00010697

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Aug-01

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,001 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	205		205	28,507	16,493	NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000				90,000		NM	COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000		24,000	30,000		NM	COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000	17,022	14,000	31,022	73,023	(3,023)	NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000		10,000	10,000	40,000	10,000	NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000				10,000		NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000		10,000	35,000	20,000	NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000		27,000	50,000		NM	COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000		10,000	150,000		NM	COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000				9,000	41,000	NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**88,227**	**24,000**	**112,227**	**515,530**	**84,470**		
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**				**65,766**			

DATE PREPARED 09/06/01
PREPARED BY: LUANNE FELSTET

E00010698

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Jul-01

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,001 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	39	166	205	28,507	16,493	NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000				90,000		NM	COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000	24,000		24,000	30,000		NM	COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000				42,001	27,999	NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000				30,000	20,000	NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000				10,000		NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000		10,000	35,000	20,000	NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000		27,000	50,000		NM	COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000		10,000	150,000		NM	COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022		17,022	26,022	23,978	NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**88,061**	**166**	**88,227**	**491,530**	**108,470**		
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**				**65,766**			

DATE PREPARED 08/24/01
PREPARED BY: LUANNE FELSTET

E00010699

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Jun-01

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,001 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	39		39	28,341	16,659	NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000				90,000		NM	COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000		24,000	24,000	30,000		NM	COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000				42,001	27,999	NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000				30,000	20,000	NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000				10,000		NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000		10,000	35,000	20,000	NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000	27,000		27,000	50,000		NM	COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000		10,000	150,000		NM	COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022		17,022	26,022	23,978	NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**64,061**	**24,000**	**88,061**	**491,364**	**108,636**		
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**				**65,766**			

DATE PREPARED 08/24/01
PREPARED BY: LUANNE FELSTET

E00010700

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

May-01

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,001 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	15	24	39	28,341	16,659	NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000				90,000		NM	COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000				6,000	24,000	NM	IN PROGRESS
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000				42,001	27,999	NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000				30,000	20,000	NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000				10,000		NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000		10,000	35,000	20,000	NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000		27,000	27,000	50,000		NM	COMPLETE
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000		10,000	150,000		NM	COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022		17,022	26,022	23,978	NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**37,037**	**27,024**	**64,061**	**467,364**	**132,636**		
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**				**65,766**			

DATE PREPARED 06/06/01
PREPARED BY: LUANNE FELSTET

E00010701

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Apr-01

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,001 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043	15		15	28,317	16,683	NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000				90,000		NM	COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000				6,000	24,000	NM	IN PROGRESS
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000				42,001	27,999	NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000				30,000	20,000	NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000				10,000		NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000		10,000	35,000	20,000	NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000				23,000	27,000	NM	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000		10,000	150,000		NM	COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022		17,022	26,022	23,978	NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**37,037**	**-**	**37,037**	**440,340**	**159,660**		
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**				**65,766**			

DATE PREPARED 08/24/01
PREPARED BY: LUANNE FELSTET

E00010702

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Mar-01

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,001 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043		15	15	28,317	16,683	NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000				90,000		NM	COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000				6,000	24,000	NM	IN PROGRESS
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000				42,001	27,999	NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000				30,000	20,000	NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000				10,000		NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000		10,000	35,000	20,000	NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000				23,000	27,000	NM	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000		10,000	150,000		NM	COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000	17,022		17,022	26,022	23,978	NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**37,022**	**15**	**37,037**	**440,340**	**159,660**		
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**				**65,766**			

DATE PREPARED 08/24/01
PREPARED BY: LUANNE FELSTET

E00010703

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Feb-01

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,001 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	16,043				28,303	16,697	NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000				90,000		NM	COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000				6,000	24,000	NM	IN PROGRESS
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000		17,022	17,022	59,023	10,977	NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000				30,000	20,000	NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000				10,000		NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000	10,000		10,000	35,000	20,000	NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000				23,000	27,000	NM	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248	10,000		10,000	150,000		NM	COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000				9,000	41,000	NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**200,292**	**20,000**	**17,022**	**37,022**	**440,326**	**159,674**		
	POJASEK SPENDING		**29,424**	**17,892**	**18,450**				**65,766**			

DATE PREPARED 03/05/01

PREPARED BY: LUANNE FELSTET

E00010704

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Jan-01

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	2000 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,00 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	17,131				29,391	15,609	NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000				90,000		NM	COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000				6,000	24,000	NM	COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000				42,001	27,999	NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000				30,000	20,000	NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000				10,000		NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000		10,000	10,000	35,000	20,000	NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000				23,000	27,000	NM	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,248		10,000	10,000	150,000		NM	COMPLETE
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000				9,000	41,000	NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**201,380**	**-**	**20,000**	**20,000**	**424,392**	**175,608**		
	POJASEK SPENDING		**29,424**	**17,892**		**11,667**		**11,667**	**58,983**			

DATE PREPARED 02/06/01
PREPARED BY: LUANNE FELSTET

E00010705

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Dec-00

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,000 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	17,131		17,131	29,391	15,609		NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000		34,000	90,000			NM	COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000		6,000	6,000	24,000		NM	COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000		14,000	42,001	27,999		NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000		10,000	30,000	20,000		NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000		10,000	10,000			NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000		10,000	25,000	30,000		NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000		3,000	23,000	27,000		NM	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,360	(112)	95,248	140,000	10,000		NM	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000		2,000	9,000	41,000		NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**201,491**	**(112)**	**201,380**	**404,391**	**195,609**			
	POJASEK SPENDING		**29,424**	**17,892**	**11,667**		**11,667**	**58,983**				

DATE PREPARED 01/15/01
PREPARED BY: LUANNE FELSTET

E00010706

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Nov-00

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,000 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	17,131		17,131	29,391	15,609		NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000		34,000	90,000			NM	COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000		6,000	6,000	24,000		NM	COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000		14,000	42,001	27,999		NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000		10,000	30,000	20,000		NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000		10,000	10,000			NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000		10,000	25,000	30,000		NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000		3,000	23,000	27,000		NM	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,200	160	95,360	140,112	9,888		NM	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000		2,000	9,000	41,000		NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**201,331**	**160**	**201,491**	**404,503**	**195,497**			
	POJASEK SPENDING		**29,424**	**17,892**	**11,667**		**11,667**	**58,983**				

DATE PREPARED 01/15/01
PREPARED BY: LUANNE FELSTET

E00010707

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Oct-00

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,000 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	14,804	2,328	17,131	29,391	15,609		NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000		34,000	90,000			NM	COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000		6,000	6,000	24,000		NM	COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000		14,000	42,001	27,999		NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000		10,000	30,000	20,000		NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000		10,000	10,000			NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000		10,000	25,000	30,000		NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000		3,000	23,000	27,000		NM	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,200		95,200	139,952	10,048		NM	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000		2,000	9,000	41,000		NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**199,004**	**2,328**	**201,331**	**404,343**	**195,657**			
	POJASEK SPENDING		**29,424**	**17,892**	**11,667**		**11,667**	**58,983**				

DATE PREPARED 11/03/00
PREPARED BY: LUANNE FELSTET

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Sep-00

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,000 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	13,798	1,006	14,804	27,063	17,937		NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000		34,000	90,000			NM	COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000		6,000	6,000	24,000		NM	COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000		14,000	42,001	27,999		NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000		10,000	30,000	20,000		NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000		10,000	10,000			NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000		10,000	25,000	30,000		NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000		3,000	23,000	27,000		NM	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,100	100	95,200	139,952	10,048		NM	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000		2,000	9,000	41,000		NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**197,898**	**1,106**	**199,004**	**402,016**	**197,984**			
	POJASEK SPENDING		**29,424**	**17,892**	**11,667**		**11,667**	**58,983**				

DATE PREPARED 10/09/00
PREPARED BY: LUANNE FELSTET

E00010709

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Aug-00

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,000 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	12,710	1,088	13,798	26,057	18,943		NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000		34,000	90,000			NM	COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000		6,000	6,000	24,000		NM	COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000	14,000		14,000	42,001	27,999		NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000	10,000		10,000	30,000	20,000		NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000		10,000	10,000			NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000		10,000	25,000	30,000		NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000		3,000	23,000	27,000		NM	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,100		95,100	139,852	10,148		NM	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000		2,000	9,000	41,000		NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**196,810**	**1,088**	**197,898**	**400,909**	**199,091**			
	POJASEK SPENDING		**29,424**	**17,892**	**11,667**		**11,667**	**58,983**				

DATE PREPARED 09/08/00
PREPARED BY: LUANNE FELSTET

E00010710

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Jul-00

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,000 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	11,572	1,138	12,710	24,969	20,031		NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000	34,000		34,000	90,000			NM	COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000			6,000		6,000	6,000	24,000		NM	COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000		14,000	14,000	42,001	27,999		NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000		10,000	10,000	30,000	20,000		NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000		10,000	10,000			NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000		10,000	25,000	30,000		NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000		3,000	23,000	27,000		NM	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	95,100		95,100	139,852	10,148		NM	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000		2,000	9,000	41,000		NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**171,672**	**25,138**	**196,810**	**399,821**	**200,179**			
	POJASEK SPENDING		**29,424**	**17,892**	**11,667**		**11,667**	**58,983**				

DATE PREPARED 08/07/00
PREPARED BY: LUANNE FELSTET

Revised

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Jun-00

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,000 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	10,610	961	11,572	23,831	21,169		NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000		34,000	34,000	90,000			NM	COMPLETE
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000				6,000	6,000	6,000	24,000		NM	COMPLETE
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000				28,001	41,999		NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000				20,000	30,000		NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000		10,000	10,000			NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000		10,000	25,000	30,000		NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000		3,000	23,000	27,000		NM	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	23,974	20,778	65,100	30,000	95,100	139,852	10,148		NM	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000		2,000	9,000	41,000		NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**47,975**	**155,037**	**100,710**	**70,961**	**171,672**	**374,683**	**225,317**			
	POJASEK SPENDING		**29,424**	**17,892**	**11,667**		**11,667**	**58,983**				

DATE PREPARED 07/25/00
PREPARED BY: LUANNE FELSTET

E00010712

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Jun-00

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,000 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	10,610	961	11,572	23,831	21,169		NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000				56,000	34,000		NM	IN PROGRESS
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000							30,000		NM	IN PROGRESS
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000				28,001	41,999		NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000				20,000	30,000		NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000		10,000	10,000			NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000		10,000	25,000	30,000		NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000		3,000	23,000	27,000		NM	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	19,730	25,021	5,100	70,000	75,100	119,852	30,148		NM	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000		2,000	9,000	41,000		NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**43,731**	**159,281**	**40,710**	**70,961**	**111,672**	**314,683**	**285,317**			
	NO SPECIFIC PROJECT			**8,118**				**8,118**				

TOTAL SPENDING AUTHORIZED OVER 5 YRS	**818,844**
1998 YEAR-TO-DATE PROJECT SPENDING	**(43,731)**
1999 YEAR-TO-DATE PROJECT SPENDING	**(159,281)**
SPENDING ON NO SPECIFIC PROJECT-1999	**(8,118)**
2000 YEAR-TO-DATE PROJECT SPENDING	**(111,672)**
REMAINDER TO SPEND	**496,043**

DATE PREPARED 07/07/00
PREPARED BY: LUANNE FELSTET

E00010713

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

May-00

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,000 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	3,148	7,462	10,610	22,870	22,130		NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000				56,000	34,000		NM	IN PROGRESS
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000							30,000		NM	IN PROGRESS
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000				28,001	41,999		NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000				20,000	30,000		NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000		10,000	10,000			NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000		10,000	25,000	30,000		NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000		3,000	23,000	27,000		NM	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	19,730	25,021	5,000	100	5,100	49,852	100,148		NM	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000		2,000	9,000	41,000		NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	600,000	43,731	159,281	33,148	7,562	40,710	243,722	356,278			
	NO SPECIFIC PROJECT			8,118				8,118				

TOTAL SPENDING AUTHORIZED OVER 5 YRS	818,844
1998 YEAR-TO-DATE PROJECT SPENDING	(43,731)
1999 YEAR-TO-DATE PROJECT SPENDING	(159,281)
SPENDING ON NO SPECIFIC PROJECT-1999	(8,118)
2000 YEAR-TO-DATE PROJECT SPENDING	(40,710)
REMAINDER TO SPEND	567,004

DATE PREPARED 06/07/00

PREPARED BY: LUANNE FELSTET

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

Apr-00
~~Mar-00~~

N Marxer

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,000 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259	1,086	2,062	3,148	15,407	29,593		NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000				56,000	34,000		NM	IN PROGRESS
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000							30,000		NM	IN PROGRESS
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000				28,001	41,999		NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000				20,000	30,000		NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000		10,000	10,000			NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000		10,000	25,000	30,000		NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000	3,000		3,000	23,000	27,000		NM	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	19,730	25,021	5,000		5,000	49,752	100,248		NM	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000		2,000	9,000	41,000		NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**43,731**	**159,281**	**31,086**	**2,062**	**33,148**	**236,160**	**363,840**			
	NO SPECIFIC PROJECT			**8,118**				**8,118**				

TOTAL SPENDING AUTHORIZED OVER 5 YRS	**818,844**
1998 YEAR-TO-DATE PROJECT SPENDING	**(43,731)**
1999 YEAR-TO-DATE PROJECT SPENDING	**(159,281)**
SPENDING ON NO SPECIFIC PROJECT-1999	**(8,118)**
2000 YEAR-TO-DATE PROJECT SPENDING	**(33,148)**
REMAINDER TO SPEND	**574,566**

DATE PREPARED 05/05/00
PREPARED BY: LUANNE FELSTET

E00010715

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Mar-00

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	2,000 YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259		1,086	1,086	13,346	31,654		NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000				56,000	34,000		NM	IN PROGRESS
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000							30,000		NM	IN PROGRESS
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	14,000				28,001	41,999		NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000	10,000				20,000	30,000		NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000			10,000		10,000	10,000			NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000		10,000	25,000	30,000		NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000		3,000	3,000	23,000	27,000		NM	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	19,730	25,021		5,000	5,000	49,752	100,248		NM	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000	2,000		2,000	9,000	41,000		NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**43,731**	**159,281**	**22,000**	**9,086**	**31,086**	**234,098**	**365,902**			
	NO SPECIFIC PROJECT			**8,118**				**8,118**				

TOTAL SPENDING AUTHORIZED OVER 5 YRS	**818,844**
1998 YEAR-TO-DATE PROJECT SPENDING	**(43,731)**
1999 YEAR-TO-DATE PROJECT SPENDING	**(159,281)**
SPENDING ON NO SPECIFIC PROJECT-1999	**(8,118)**
2000 YEAR-TO-DATE PROJECT SPENDING	**(31,086)**
REMAINDER TO SPEND	**576,628**

DATE PREPARED 04/11/00
PREPARED BY: LUANNE FELSTET

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Feb-00

ARA#	DESCRIPTION	APPROVED AMOUNT	1998 SPENDING	1999 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259				12,259	32,741		NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000				56,000	34,000		NM	IN PROGRESS
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000							30,000		NM	IN PROGRESS
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	24,000				38,001	31,999		NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000					10,000	40,000		NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000				10,000	10,000	10,000			NM	COMPLETE
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000	10,000		10,000	25,000	30,000		NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000				20,000	30,000		NM	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	19,730	25,021				44,752	105,248		NM	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000		2,000	2,000	9,000	41,000		NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**43,731**	**159,281**	**10,000**	**12,000**	**22,000**	**225,012**	**374,988**			
	NO SPECIFIC PROJECT			**8,118**				**8,118**				

TOTAL SPENDING AUTHORIZED OVER 5 YRS	**818,844**
1998 YEAR-TO-DATE PROJECT SPENDING	**(43,731)**
1999 YEAR-TO-DATE PROJECT SPENDING	**(159,281)**
SPENDING ON NO SPECIFIC PROJECT-1999	**(8,118)**
2000 YEAR-TO-DATE PROJECT SPENDING	**(22,000)**
REMAINDER TO SPEND	**585,714**

DATE PREPARED 03/07/00
PREPARED BY: LUANNE FELSTET

E00010717

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Jan-00

ARA#	DESCRIPTION	APPROVED AMOUNT	1,998 SPENDING	1,999 SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	YTD SPENDING	PROJECT TO DATE AMT SPENT	REMAINDER TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000		12,259				12,259	32,741		NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000		56,000				56,000	34,000		NM	IN PROGRESS
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000							30,000		NM	IN PROGRESS
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	14,001	24,000				38,001	31,999		NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZRDS WASTE COL	50,000	10,000					10,000	40,000		NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMENTING PROGRAMS	10,000							10,000		NM	IN PROGRESS
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000		15,000		10,000	10,000	25,000	30,000		NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000		20,000				20,000	30,000		NM	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	19,730	25,021				44,752	105,248		NM	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000		7,000				7,000	43,000		NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**43,731**	**159,281**	**-**	**10,000**	**10,000**	**213,012**	**386,988**			
	NO SPECIFIC PROJECT			**8,118**				**8,118**				

TOTAL SPENDING AUTHORIZED OVER 5 YRS	**818,844**
1998 YEAR-TO-DATE PROJECT SPENDING	**(43,731)**
1999 YEAR-TO-DATE PROJECT SPENDING	**(159,281)**
SPENDING ON NO SPECIFIC PROJECT-1999	**(8,118)**
2000 YEAR-TO-DATE PROJECT SPENDING	**(10,000)**
REMAINDER TO SPEND	**597,714**

DATE PREPARED 02/09/00
PREPARED BY: LUANNE FELSTET

E00010718

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Dec-99

ARA#	DESCRIPTION	APPROVED AMOUNT	ENGINEERS' EXPECTED FINAL COST	OVER(UNDER) APPROVED AMOUNT	PRIOR YEARS SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	YTD SPENDING	PROJECT TO DATE AMT SPENT	COMM. BUT NOT SPENT	EST. FUTURE COMM.	DATE AUTHOR TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000	45,000			12,259		12,259	12,259	1,213	31,527			NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000	90,000			10,000	46,000	56,000	56,000		34,000			NM	IN PROGRESS
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000	30,000								30,000			NM	IN PROGRESS
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	70,000		14,001		24,000	24,000	38,001		31,999			NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZARDOUS WASTE COL	50,000	50,000		10,000				10,000		40,000			NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMETING PROGRAMS	10,000	10,000								10,000			NM	IN PROGRESS
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000	55,000			15,000		15,000	15,000		40,000			NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000	50,000				20,000	20,000	20,000	3,000	27,000			NM	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	150,000		23,974	20,778		20,778	44,752	12,022	93,226			NM	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000	50,000			7,000		7,000	7,000		43,000			NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**600,000**	**-**	**47,975**	**65,037**	**90,000**	**155,037**	**203,012**	**16,235**	**380,753**				
	NO SPECIFIC PROJECT					**5,930**		**5,930**	**5,930**						

1999 ESTIMATED SPENDING - *ACCRUED*	**151,035**
1999 YEAR-TO-DATE PROJECT SPENDING	**(203,012)**
SPENDING ON NO SPECIFIC PROJECT	**(5,930)**
REMAINDER TO SPEND IN 1999	**(57,907)**

DATE PREPARED 01/10/00
PREPARED BY: LUANNE FELSTET

E00010719

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Nov-99

ARA#	DESCRIPTION	APPROVED AMOUNT	ENGINEERS' EXPECTED FINAL COST	OVER(UNDER) APPROVED AMOUNT	PRIOR YEARS SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	YTD SPENDING	PROJECT TO DATE AMT SPENT	COMM. BUT NOT SPENT	EST. FUTURE COMM.	DATE AUTHOR TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000	45,000			12,259		12,259	12,259	1,213	31,527			NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000	90,000			10,000		10,000	10,000		80,000			NM	IN PROGRESS
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000	30,000								30,000			NM	IN PROGRESS
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	70,000		14,001				14,001		55,999			NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZARDOUS WASTE COL	50,000	50,000		10,000				10,000		40,000			NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMETING PROGRAMS	10,000	10,000								10,000			NM	IN PROGRESS
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000	55,000			15,000		15,000	15,000		40,000			NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000	50,000							3,000	47,000			NM	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	150,000		23,974	20,778		20,778	44,752	12,022	93,226			NM	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000	50,000			7,000		7,000	7,000		43,000			NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**600,000**	**-**	**47,975**	**65,037**	**-**	**65,037**	**113,012**	**16,235**	**470,753**				
	NO SPECIFIC PROJECT					**5,930**		**5,930**	**5,930**						

1999 ESTIMATED SPENDING - *ACCRUED*	**151,035**
1999 YEAR-TO-DATE PROJECT SPENDING	**(113,012)**
SPENDING ON NO SPECIFIC PROJECT	**(5,930)**
REMAINDER TO SPEND IN 1999	**32,093**

DATE PREPARED **12/08/99**
PREPARED BY: **LUANNE FELSTET**

E00010720

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

N Marxer

Oct-99

ARA#	DESCRIPTION	APPROVED AMOUNT	ENGINEERS' EXPECTED FINAL COST	OVER(UNDER) APPROVED AMOUNT	PRIOR YEARS SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	YTD SPENDING	PROJECT TO DATE AMT SPENT	COMM. BUT NOT SPENT	EST. FUTURE COMM.	DATE AUTHOR TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000	45,000			12,259		12,259	12,259		32,741			NM	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000	90,000				10,000	10,000	10,000		80,000			NM	IN PROGRESS
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000	30,000								30,000			NM	IN PROGRESS
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	70,000		14,001				14,001		55,999			NM	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZARDOUS WASTE COL	50,000	50,000		10,000				10,000		40,000			NM	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMETING PROGRAMS	10,000	10,000								10,000			NM	IN PROGRESS
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000	55,000			15,000		15,000	15,000		40,000			NM	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000	50,000								50,000			NM	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	150,000		12,893	20,778		20,778	33,671		116,329			NM	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000	50,000			7,000		7,000	7,000		43,000			NM	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**600,000**	**-**	**36,894**	**55,037**	**10,000**	**65,037**	**101,931**	**-**	**498,069**				
	NO SPECIFIC PROJECT					**5,930**		**5,930**	**5,930**						

1999 ESTIMATED SPENDING - *ACCRUED*	**151,035**
1999 YEAR-TO-DATE PROJECT SPENDING	**(101,931)**
SPENDING ON NO SPECIFIC PROJECT	**(5,930)**
REMAINDER TO SPEND IN 1999	**43,173**

DATE PREPARED 11/04/99
PREPARED BY: LUANNE FELSTET

E00010721

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

E SCOTT

Sep-99

ARA#	DESCRIPTION	APPROVED AMOUNT	ENGINEERS' EXPECTED FINAL COST	OVER(UNDER) APPROVED AMOUNT	PRIOR YEARS SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	YTD SPENDING	PROJECT TO DATE AMT SPENT	COMM. BUT NOT SPENT	EST. FUTURE COMM.	DATE AUTHOR TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000	45,000			12,259		12,259	12,259	1,213	31,527			ES	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000	90,000								90,000			ES	IN PROGRESS
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000	30,000								30,000			ES	IN PROGRESS
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	70,000		14,001				14,001		55,999			ES	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZARDOUS WASTE COL	50,000	50,000		10,000				10,000		40,000			ES	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMETING PROGRAMS	10,000	10,000								10,000			ES	IN PROGRESS
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000	55,000			15,000		15,000	15,000		40,000			ES	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000	50,000							3,000	47,000			ES	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	150,000		12,893	12,350	8,428	20,778	33,671	12,022	104,307			ES	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000	50,000			7,000		7,000	7,000		43,000			ES	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**600,000**	**-**	**36,894**	**46,609**	**8,428**	**55,037**	**91,931**	**16,235**	**491,833**				
	NO SPECIFIC PROJECT					**5,930**		**5,930**	**5,930**						

1999 ESTIMATED SPENDING - *ACCRUED*	**151,035**
1999 YEAR-TO-DATE PROJECT SPENDING	**(91,931)**
SPENDING ON NO SPECIFIC PROJECT	**(5,930)**
REMAINDER TO SPEND IN 1999	**53,173**

DATE PREPARED **10/06/99**
PREPARED BY: **LUANNE FELSTET**

E00010722

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

E SCOTT

Aug-99

ARA#	DESCRIPTION	APPROVED AMOUNT	ENGINEERS' EXPECTED FINAL COST	OVER(UNDER) APPROVED AMOUNT	PRIOR YEARS SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	YTD SPENDING	PROJECT TO DATE AMT SPENT	COMM. BUT NOT SPENT	EST. FUTURE COMM.	DATE AUTHOR TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000	45,000			12,219	40	12,259	12,259	1,163	31,577			ES	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000	90,000								90,000			ES	IN PROGRESS
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000	30,000								30,000			ES	IN PROGRESS
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	70,000		14,001				14,001		55,999			ES	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZARDOUS WASTE COL	50,000	50,000		10,000				10,000		40,000			ES	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMETING PROGRAMS	10,000	10,000								10,000			ES	IN PROGRESS
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000	55,000			15,000		15,000	15,000		40,000			ES	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000	50,000								50,000			ES	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	150,000		12,893	12,350		12,350	25,243	11,850	112,907			ES	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000	50,000			7,000		7,000	7,000		43,000			ES	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**600,000**	**-**	**36,894**	**46,569**	**40**	**46,609**	**83,503**	**13,013**	**503,483**				
	NO SPECIFIC PROJECT					**5,930**		**5,930**	**5,930**						

1999 ESTIMATED SPENDING - *ACCRUED*	**151,035**
1999 YEAR-TO-DATE PROJECT SPENDING	**(83,503)**
SPENDING ON NO SPECIFIC PROJECT	**(5,930)**
REMAINDER TO SPEND IN 1999	**61,601**

DATE PREPARED **09/07/99**
PREPARED BY: **LUANNE FELSTET**

E00010723

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

E SCOTT

Jul-99

ARA#	DESCRIPTION	APPROVED AMOUNT	ENGINEERS' EXPECTED FINAL COST	OVER(UNDER) APPROVED AMOUNT	PRIOR YEARS SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	YTD SPENDING	PROJECT TO DATE AMT SPENT	COMM. BUT NOT SPENT	EST. FUTURE COMM.	DATE AUTHOR TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000	45,000			12,193	27	12,219	12,219	1,163	31,617			ES	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000	90,000								90,000			ES	IN PROGRESS
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000	30,000								30,000			ES	IN PROGRESS
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	70,000		14,001				14,001		55,999			ES	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZARDOUS WASTE COL	50,000	50,000		10,000				10,000		40,000			ES	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMETING PROGRAMS	10,000	10,000								10,000			ES	IN PROGRESS
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000	55,000			15,000		15,000	15,000		40,000			ES	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000	50,000								50,000			ES	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	150,000		12,893	12,350		12,350	25,243	11,850	112,907			ES	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000	50,000			7,000		7,000	7,000		43,000			ES	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**600,000**	**-**	**36,894**	**46,543**	**27**	**46,569**	**83,463**	**13,013**	**503,523**				
	NO SPECIFIC PROJECT					5,930		5,930	5,930						

1999 ESTIMATED SPENDING - *ACCRUED*	**151,035**
1999 YEAR-TO-DATE PROJECT SPENDING	**(83,463)**
SPENDING ON NO SPECIFIC PROJECT	**(5,930)**
REMAINDER TO SPEND IN 1999	**61,642**

DATE PREPARED 08/06/99
PREPARED BY: LUANNE FELSTET

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS **PRELIM** **E SCOTT**

Jun-99

ARA#	DESCRIPTION	APPROVED AMOUNT	ENGINEERS' EXPECTED FINAL COST	OVER(UNDER) APPROVED AMOUNT	PRIOR YEARS SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	YTD SPENDING	PROJECT TO DATE AMT SPENT	COMM. BUT NOT SPENT	EST. FUTURE COMM.	DATE AUTHOR TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000	45,000			11,318	875	12,193	12,193	1,163	31,644			ES	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000	90,000								90,000			ES	IN PROGRESS
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000	30,000								30,000			ES	IN PROGRESS
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	70,000		14,001				14,001		55,999			ES	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZARDOUS WASTE COL	50,000	50,000		10,000				10,000		40,000			ES	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMETING PROGRAMS	10,000	10,000								10,000			ES	IN PROGRESS
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000	55,000			15,000		15,000	15,000		40,000			ES	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000	50,000								50,000			ES	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	150,000		12,893	12,350		12,350	25,243	11,850	112,907			ES	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000	50,000			7,000		7,000	7,000		43,000			ES	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**600,000**	**-**	**36,894**	**45,668**	**875**	**46,543**	**83,437**	**13,013**	**503,550**				
	NO SPECIFIC PROJECT					**5,930**		**5,930**	**5,930**						

1999 ESTIMATED SPENDING - *ACCRUED*	**151,035**
1999 YEAR-TO-DATE PROJECT SPENDING	**(83,437)**
SPENDING ON NO SPECIFIC PROJECT	**(5,930)**
REMAINDER TO SPEND IN 1999	**61,668**

DATE PREPARED **07/07/99**
PREPARED BY: **LUANNE FELSTET**

E00010725

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

PRELIM
May-99

E SCOTT

ARA#	DESCRIPTION	APPROVED AMOUNT	ENGINEERS' EXPECTED FINAL COST	OVER(UNDER) APPROVED AMOUNT	PRIOR YEARS SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	YTD SPENDING	PROJECT TO DATE AMT SPENT	COMM. BUT NOT SPENT	EST. FUTURE COMM.	DATE AUTHOR TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000	45,000			10,978	340	11,318	11,318	1,972	31,710			ES	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000	90,000								90,000			ES	IN PROGRESS
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000	30,000								30,000			ES	IN PROGRESS
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	70,000		14,001				14,001		55,999			ES	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZARDOUS WASTE COL	50,000	50,000		10,000				10,000		40,000			ES	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMETING PROGRAMS	10,000	10,000								10,000			ES	IN PROGRESS
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000	55,000			15,000		15,000	15,000		40,000			ES	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000	50,000								50,000			ES	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	150,000		12,893	12,350		12,350	25,243	9,350	115,407			ES	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000	50,000				7,000	7,000	7,000		43,000			ES	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**600,000**	**-**	**36,894**	**38,328**	**7,340**	**45,668**	**82,562**	**11,322**	**506,116**				
	NO SPECIFIC PROJECT					**5,930**		**5,930**	**5,930**						

1999 ESTIMATED SPENDING - *ACCRUED*	**151,035**
1999 YEAR-TO-DATE PROJECT SPENDING	**(82,562)**
SPENDING ON NO SPECIFIC PROJECT	**(5,930)**
REMAINDER TO SPEND IN 1999	**62,543**

DATE PREPARED 07/07/99
PREPARED BY: LUANNE FELSTET

E00010726

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

REVISED 4/19/99

PRELIM
Apr-99

E SCOTT

ARA#	DESCRIPTION	APPROVED AMOUNT	ENGINEERS' EXPECTED FINAL COST	OVER(UNDER) APPROVED AMOUNT	PRIOR YEARS SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	YTD SPENDING	PROJECT TO DATE AMT SPENT	COMM. BUT NOT SPENT	EST. FUTURE COMM.	DATE AUTHOR TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000	45,000				10,978	10,978	10,978	769	33,253			ES	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000	90,000								90,000			ES	IN PROGRESS
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000	30,000								30,000			ES	IN PROGRESS
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	70,000		14,001				14,001		55,999			ES	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZARDOUS WASTE COL	50,000	50,000		10,000				10,000		40,000			ES	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMETING PROGRAMS	10,000	10,000								10,000			ES	IN PROGRESS
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000	55,000			15,000		15,000	15,000		40,000			ES	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000	50,000								50,000			ES	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	150,000		12,893	3,000	9,350	12,350	25,243	9,350	115,407			ES	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000	50,000								50,000			ES	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**600,000**	**-**	**36,894**	**18,000**	**20,328**	**38,328**	**75,222**	**10,119**	**514,659**				
	NO SPECIFIC PROJECT					**4,672**	**1,258**	**5,930**	**5,930**						

1999 ESTIMATED SPENDING - *ACCRUED*	**151,035**
1999 YEAR-TO-DATE PROJECT SPENDING	**(75,222)**
SPENDING ON NO SPECIFIC PROJECT	**(5,930)**
REMAINDER TO SPEND IN 1999	**69,883**

DATE PREPARED 05/13/99
PREPARED BY: LUANNE FELSTET

E00010727

99-9324 thru 99-9333 ENVIRONMENTAL PROJECTS

FINAL
Mar-99

B BOSCHEE N. MARXER K. COLYER Ed Scott
B. KOHL T. LOVRIEN R. ANDERSON

ARA#	DESCRIPTION	APPROVED AMOUNT	ENGINEERS' EXPECTED FINAL COST	OVER(UNDER) APPROVED AMOUNT	PRIOR YEARS SPENDING	PRIOR MONTHS SPENDING	CURRENT MONTH SPENDING	YTD SPENDING	PROJECT TO DATE AMT SPENT	COMM. BUT NOT SPENT	EST. FUTURE COMM.	DATE AUTHOR TO SPEND	DATE CLOSED	ENG	STATUS
99-9324	ON SITE HABITAT RESTORATION	45,000	45,000							11,046	33,954			ES	IN PROGRESS
99-9325	AMBIENT LEVEL STUDIES OF PM-2.3 & PM 10	90,000	90,000		2,010				2,010		87,990			ES	IN PROGRESS
99-9326	AMBIENT LEVEL STUDIES OF VOLATILE ORGANIC COMP	30,000	30,000								30,000			ES	IN PROGRESS
99-9327	ID OF NOPOINT SOURCE CONTRIB OF NITRO & PHOSPH	70,000	70,000		14,001				14,001		55,999			ES	IN PROGRESS
99-9328	EXPAND ANNUAL HOUSEHOLD HAZARDOUS WASTE COL	50,000	50,000		10,000				10,000		40,000			ES	IN PROGRESS
99-9329	ASSIST LOCAL EPC IN IMPLEMETING PROGRAMS	10,000	10,000								10,000			ES	IN PROGRESS
99-9330	OFF-SITE HABITAT RESTORATION & CREATION PROJ	55,000	55,000			15,000		15,000	15,000		40,000			ES	IN PROGRESS
99-9331	BULL TROUT HABITAT RESTOR & CREATE	50,000	50,000								50,000			ES	IN PROGRESS
99-9332	OCC REJECTS STUDY OF ALTERNATIVE BENEFIT USE	150,000	150,000		12,893		3,000	3,000	15,893	18,700	115,407			ES	IN PROGRESS
99-9333	ASSIST LOCAL EPC W/TRAIN & PURCH OF EQUIP	50,000	50,000								50,000			ES	IN PROGRESS
	TOTAL 1999 ENVIRONMENTAL PROJECTS	**600,000**	**600,000**	**-**	**38,904**	**15,000**	**3,000**	**18,000**	**56,904**	**29,746**	**513,350**				

1999 ESTIMATED SPENDING	**151,035**
1999 YEAR-TO-DATE SPENDING	**18,000**
REMAINDER TO SPEND IN 1999	**133,035**

DATE PREPARED 04/16/99
PREPARED BY: LUANNE FELSTET

E00010728

2000-2299007 ACCRUED ENVIRONMENTAL CHARGES

	Jan-01	Feb-01	Mar-01	Apr-01	May-01	Jun-01	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01	Dec-01	TOTAL
BEGINNING BALANCE	(191,965.55)	(171,965.55)	(154,943.55)	(154,929.03)	(127,905.04)	(127,905.04)	(103,905.04)	(103,739.04)	(79,739.04)	(79,739.04)	(76,644.04)	(72,794.04)	(191,965.55)
ALL PAPER RECYCLING													-
DIVERSIFIED PLASTICS	10,000.00												10,000.00
FIVE VALLEYS LAND TRUST	10,000.00												10,000.00
GRIZZLY FENCE													-
H C ALLEN FENCING										3,095.00			3,095.00
LOCAL EMERGENCY PLAN													-
DENNIS DRISCOL													-
DICK LUCIER													-
MSLA CITY/CTY HEALTH DEPT		17,022.00				24,000.00		24,000.00					65,022.00
MSLA READY MIX CONCRETE													-
NIELSON LANDSCAPING											250.00		250.00
POJASEK & ASSOC											3,600.00		3,600.00
ROSCOE STEEL & CULVERT													-
TROUT UNLIMITED				27,000.00									27,000.00
TUCKER ARENSBERG PC													-
UNIVERSITY OF MONTANA													-
LARRY WEEKS			14.52	23.99			71.00						109.51
WEEDS R US							95.00						95.00
END BALANCE	(171,965.55)	(154,943.55)	(154,929.03)	(127,905.04)	(127,905.04)	(103,905.04)	(103,739.04)	(79,739.04)	(79,739.04)	(76,644.04)	(72,794.04)	(72,794.04)	(72,794.04)

2000-2299007 ACCRUED ENVIRONMENTAL CHARGES

	Jan-00	Feb-00	Mar-00	Apr-00	May-00	Jun-00	Jul-00	Aug-00	Sep-00	Oct-00	Nov-00	Dec-00	TOTAL
BEGINNING BALANCE	(410,706.80)	(400,706.80)	(382,850.64)	(373,764.35)	(311,702.83)	(298,329.56)	(227,368.16)	(202,230.15)	(202,230.15)	(201,124.07)	(194,114.04)	(191,854.04)	(410,706.80)
ALL PAPER RECYCLING					7,562.30								7,562.30
ATLON CORP													-
DIVERSIFIED PLASTICS				60,000.00		30,000.00							90,000.00
FIVE VALLEYS LAND TRUST	10,000.00												10,000.00
GRIZZLY FENCE						348.40							348.40
H C ALLEN FENCING							1,088.01	-					1,088.01
LOCAL EMERGENCY PLAN		12,000.00											12,000.00
DENNIS DRISCOL				100.00			50.00						150.00
DICK LUCIER				1,880.00		400.00			420.00	2,327.50	160.00	(111.51)	5,075.99
MSLA CITY/CTY HEALTH DEPT						40,000.00	24,000.00						64,000.00
MSLA READY MIX CONCRETE						113.00							113.00
MONTANA DEPT FISH WILD													-
NIELSON LANDSCAPING													-
POJASEK & ASSOC		5,856.16			5,810.97					4,682.53	2,100.00		18,449.66
ROSCOE STEEL & CULVERT			1,086.29						686.08				1,772.37
TUCKER ARENSBERG PC			5,000.00										5,000.00
UNIVERSITY OF MONTANA			3,000.00										3,000.00
WEEDS R US													-
LARRY WEEKS				81.52		100.00							181.52
END BALANCE	(400,706.80)	(382,850.64)	(373,764.35)	(311,702.83)	(298,329.56)	(227,368.16)	(202,230.15)	(202,230.15)	(201,124.07)	(194,114.04)	(191,854.04)	(191,965.55)	(191,965.55)

2000-2299007 ACCRUED ENVIRONMENTAL CHARGES

	Jan-99	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99	TOTAL
BEGINNING BALANCE	(583,636.00)	(568,636.00)	(568,636.00)	(560,963.57)	(539,377.86)	(532,037.87)	(529,513.37)	(529,261.54)	(529,221.49)	(520,793.49)	(510,793.49)	(502,894.73)	(583,636.00)
ALL PAPER RECYCLING			3,000.00										3,000.00
ATLON CORP				9,350.00									9,350.00
DIVERSIFIED PLASTICS									8,428.00				8,428.00
FIVE VALLEYS LAND TRUST	15,000.00												15,000.00
H C ALLEN FENCING				10,577.50	297.00								10,874.50
LOCAL EMERGENCY PLAN					7,000.00								7,000.00
DICK LUCIER				200.00									200.00
MSLA CITY/CTY HEALTH DEPT										10,000.00		70,000.00	80,000.00
MONTANA DEPT FISH WILD												20,000.00	20,000.00
NIELSON LANDSCAPING				120.00									120.00
POJASEK & ASSOC			4,672.43	1,257.67		1,650.00	225.00				7,898.76	2,187.93	17,891.79
WEEDS R US						808.25							808.25
LARRY WEEKS				80.54	42.99	66.25	26.83	40.05					256.66
END BALANCE	(568,636.00)	(568,636.00)	(560,963.57)	(539,377.86)	(532,037.87)	(529,513.37)	(529,261.54)	(529,221.49)	(520,793.49)	(510,793.49)	(502,894.73)	(410,706.80)	(410,706.80)

2000-2299004

ACCRUED LANDFILL EXPENSE

	BEGINNING BAL	ACCRUAL	BFI PMTS	END BALANCE
Jan-98	($42,092.93)	($32,200.00)	$42,092.93	($32,200.00)
Feb-98	($32,200.00)	($32,200.00)	$32,200.00	($32,200.00)
Mar-98	($32,200.00)	($32,200.00)	$32,200.00	($32,200.00)
Apr-98	($32,200.00)	($32,200.00)	$32,000.00	($32,400.00)
May-98	($32,400.00)	($32,200.00)	$32,200.00	($32,400.00)
Jun-98	($32,400.00)	($32,200.00)	$32,200.00	($32,400.00)
Jul-98	($32,400.00)	($32,200.00)	$32,200.00	($32,400.00)
Aug-98	($32,400.00)	($32,200.00)	$32,200.00	($32,400.00)
Sep-98	($32,400.00)	($32,200.00)	$32,200.00	($32,400.00)
Oct-98	($32,400.00)	($32,200.00)		($64,600.00)
Nov-98	($64,600.00)	($19,320.00)	$64,400.00	($19,520.00)
Dec-98	($19,520.00)	($45,080.00)	$15,806.86	($48,793.14)
Jan-99				
	($42,092.93)	($386,400.00)	$379,699.79	($48,793.14)

2000-2299005

YEAR END ACCRUALS

SCAPA ROLLS	($39,693.00)
ENVIRONMENTAL CONTRACTORS	($14,500.00)
ENERQUIN	($1,500.00)
ENERQUIN	($13,746.00)
BJ'S METALWORKS	($1,296.00)
UNIVERSAL ENVIRONMENTAL	($21,200.00)
UNIVERSAL ENVIRONMENTAL	($20,000.00)
UNIVERSAL ENVIRONMENTAL	$7,580.00
WESTVACO	($16,082.80)
WEST MT ENGINEERING	($572.40)
BELOIT	($36,127.00)
BELOIT	($44,035.00)
PARAGON	($12,195.00)
PHILIP SERVICES	($28,271.41)
TRISTAR INDUSTRIES	($11,000.00)
THERMO BLACK CLAWSON	($39,148.00)
INDUSTRA	($49,700.00)
FISTER ELECTRIC	($3,500.00)
BEAUDETTE CONSULTING	($3,268.50)
BEAUDETTE CONSULTING	($782.50)
DESIGN MTCE SYSTEMS	($3,520.00)
DESIGN MTCE SYSTEMS	($3,960.00)
IROQOIS	($12,389.16)
WEAVEXX	($44,658.00)
UM	($4,125.09)
	($417,689.86)

2000-2299006

MPC STRANDED COST ACCRUAL

	BEGINNING BAL	ACCRUAL	PMTS	END BALANCE
Jan-98	$0.00			$0.00
Feb-98	$0.00			$0.00
Mar-98	$0.00			$0.00
Apr-98	$0.00			$0.00
May-98	$0.00			$0.00
Jun-98	$0.00			$0.00
Jul-98	$0.00			$0.00
Aug-98	$0.00			$0.00
Sep-98	$0.00			$0.00
Oct-98	$0.00	($276,000.00)		($276,000.00)
Nov-98	($276,000.00)			($276,000.00)
Dec-98	($276,000.00)	($102,280.00)		($378,280.00)
Jan-99				
	$0.00	($378,280.00)	$0.00	($378,280.00)

2000-2299007

ACCRUED ENVIRONMENTAL CHARGES

	BEGINNING BAL	ACCRUAL	PMTS	END BALANCE
Jan-98	$0.00			$0.00
Feb-98	$0.00			$0.00
Mar-98	$0.00			$0.00
Apr-98	$0.00			$0.00
May-98	$0.00			$0.00
Jun-98	$0.00			$0.00
Jul-98	$0.00			$0.00
Aug-98	$0.00			$0.00
Sep-98	$0.00			$0.00
Oct-98	$0.00			$0.00
Nov-98	$0.00	($592,470.00)		($592,470.00)
Dec-98	($592,470.00)	$8,834.00		($583,636.00)
Jan-99				
	$0.00	($583,636.00)	$0.00	($583,636.00)

DATE: 2/12/02 GENERAL LEDGER ACCOUNT DISPLAY TIME: 14:01:34

DEPT. NO. 2000 GLR060

ACCOUNT NO. 2299007 ACCRUED ENVIRONMENTAL CHARGES

JANUARY	OPENING	TOTAL TRANSACTIONS	Y-T-D
2002	72,794.04-	10,000.00	62,794.04-

SOURCE	J/E	AMOUNT	EXPLANATION
FELSTET	01 131	10,000.00	

DATE: 1/23/02 GENERAL LEDGER ACCOUNT DISPLAY TIME: 10:52:23

DEPT. NO. 2000 GLR060

ACCOUNT NO. 2299007 ACCRUED ENVIRONMENTAL CHARGES

JANUARY	OPENING	TOTAL TRANSACTIONS	Y-T-D
2001	191,965.55-	119,171.51	72,794.04-

SOURCE	J/E	AMOUNT	EXPLANATION
FELSTET	01 131	20,000.00	
FELSTET	02 131	17,022.00	
FELSTET	03 131	14.52	
FELSTET	05 131	27,023.99	
FELSTET	06 131	24,000.00	
FELSTET	07 131	166.00	
FELSTET	08 131	24,000.00	
FELSTET	10 131	3,095.00	
FELSTET	11 131	250.00	
A/P	11 850	3,600.00	

DATE: 1/23/02 GENERAL LEDGER ACCOUNT DISPLAY TIME: 10:52:32

DEPT. NO. 2000 GLR060

ACCOUNT NO. 2299007 ACCRUED ENVIRONMENTAL CHARGES

JANUARY	OPENING	TOTAL TRANSACTIONS	Y-T-D
2000	410,706.80-	218,741.25	191,965.55-

SOURCE	J/E	AMOUNT	EXPLANATION
FELSTET	01 148	10,000.00	
FELSTET	02 131	12,000.00	
A/P	02 850	5,856.16	
FELSTET	03 131	9,086.29	
FELSTET	04 131	62,061.52	
FELSTET	05 131	7,562.30	
A/P	05 850	5,810.97	
FELSTET	06 131	70,961.40	
FELSTET	07 131	35,136.02	
FELSTET	07 132	9,998.01-	
FELSTET	08 131	1,088.01	
FELSTET	08 132	1,088.01-	
FELSTET	09 131	1,106.08	
FELSTET	10 131	2,327.50	
A/P	10 850	4,682.53	+

DATE: 1/23/02 GENERAL LEDGER ACCOUNT DISPLAY TIME: 10:52:32

DEPT. NO. 2000 GLR060

ACCOUNT NO. 2299007 ACCRUED ENVIRONMENTAL CHARGES

JANUARY	OPENING	TOTAL TRANSACTIONS	Y-T-D
	410,706.80-	218,741.25	191,965.55-

SOURCE	J/E	AMOUNT	EXPLANATION
FELSTET	11 131	160.00	
A/P	11 850	2,100.00	
FELSTET	12 131	111.51-	

DATE: 1/23/02 GENERAL LEDGER ACCOUNT DISPLAY TIME: 10:52:39

DEPT. NO. 2000 GLR060

ACCOUNT NO. 2299007 ACCRUED ENVIRONMENTAL CHARGES

JANUARY	OPENING	TOTAL TRANSACTIONS	Y-T-D
1999	583,636.00-	172,929.20	410,706.80-

SOURCE	J/E	AMOUNT	EXPLANATION
A/P	01 850	15,000.00	
FELSTET	03 144	3,000.00	
A/P	03 850	4,672.43	
FELSTET	04 144	20,328.04	
A/P	04 850	1,257.67	
FELSTET	05 144	339.99	
FELSTET	05 144	7,000.00	
FELSTET	06 152	874.50	
A/P	06 850	1,650.00	
FELSTET	07 144	26.83	
A/P	07 850	225.00	
FELSTET	08 144	40.05	
FELSTET	09 144	8,428.00	
FELSTET	10 144	10,000.00	
A/P	11 850	7,898.76	+

DATE: 1/23/02 GENERAL LEDGER ACCOUNT DISPLAY TIME: 10:52:39

DEPT. NO. 2000 GLR060

ACCOUNT NO. 2299007 ACCRUED ENVIRONMENTAL CHARGES

JANUARY	OPENING	TOTAL TRANSACTIONS	Y-T-D
1999	583,636.00-	172,929.20	410,706.80-

SOURCE	J/E	AMOUNT	EXPLANATION
FELSTET	12 152	90,000.00	
A/P	12 850	2,187.93	

DATE: 1/23/02 GENERAL LEDGER ACCOUNT DISPLAY TIME: 10:52:45

DEPT. NO. 2000 GLR060

ACCOUNT NO. 2299007 ACCRUED ENVIRONMENTAL CHARGES

JANUARY	OPENING	TOTAL TRANSACTIONS	Y-T-D
1998	.00	583,636.00-	583,636.00-

SOURCE	J/E	AMOUNT	EXPLANATION
COLYER	11 160	592,470.00-	
A/P	12 850	8,834.00	

ONE CONTAINER
SSOULA MILL
HEER" LAWSUIT EXPENSES (OVER 5 YRS)

98 PAYMENTS

JNE 1998	CHEER LEGAL FEES	$129,373
JNE 1998	PENALTY	$50,000
JLY–OCT 1998	OCC REJECT STUDY	$17,364
JNE–SEPT 1998	COMMUNITY PROJECTS–WATER	$15,167
JNE–OCT 1998	DR. POJASEK, POLLUTION PREVENTION PLAN	$14,470
	TOTAL 1998 PAYMENTS	$226,374

FUTURE PAYMENTS

1999	COMMUNITY PROJECTS	$71,208
	HABITAT RESTORATION	$25,000
	BULL TROUT RESTORATION	$16,667
	POJASEK, POLLUTION PREVENTION PLAN	$5,000
	OCC REJECT STUDY	$33,160
	1999 PAYMENTS	$151,035
2000	COMMUNITY PROJECTS	$71,208
	HABITAT RESTORATION	$25,000
	BULL TROUT RESTORATION	$16,667
	POJASEK, POLLUTION PREVENTION PLAN	$5,000
	OCC REJECT STUDY	$33,159
	2000 PAYMENTS	$151,034
2001	COMMUNITY PROJECTS	$71,208
	HABITAT RESTORATION	$25,000
	BULL TROUT RESTORATION	$16,667
	POJASEK, POLLUTION PREVENTION PLAN	$5,000
	OCC REJECT STUDY	$33,159
	2001 PAYMENTS	$151,034
2002	COMMUNITY PROJECTS	$71,208
	HABITAT RESTORATION	$25,000
	POJASEK, POLLUTION PREVENTION PLAN	$5,000
	OCC REJECT STUDY	$33,159
	2002 PAYMENTS	$134,367
2003	POJASEK, POLLUTION PREVENTION PLAN	$5,000
TOTAL FUTURE YEAR PAYMENTS		$592,470

226,374
592,470
818,844

PROJECTS																					
GENERAL TRIAL RUN EXPENSE*	7583000	LRG	LG288	$ 20,112	$ 67,847		$ ~~[illegible]~~	~~$2,000~~	~~$2,000~~	~~$2,000~~	~~$2,000~~	~~$2,000~~	~~$2,000~~	~~$2,000~~	~~$2,000~~	~~$2,000~~	~~$2,000~~	~~$2,000~~	~~$2,000~~	$24,000
ON SITE HABITAT RESTORATION (CHEER CD)	~~99-9324~~	NM					$ ~~[illegible]~~			$100	$100	$100	$100	$100	$7,000	$6,500				$14,000
AMBIENT LEVEL STUDIES OF PM-10 (CHEER CD)	~~99-9325~~	NM					$ -													$0
AMBIENT LEVEL STUDIES OF VOCS (CHEER CD)	~~99-9326~~	NM					$ -													$0
ID OF NONPOINT SOURCES OF N & P (CHEER CD)	~~99-9327~~	NM					$ ~~[illegible]~~								$14,000					$14,000
EXPAND HOUSEHOLD HAZ WASTE COLLECT (CHEER CD)	~~99-9328~~	NM					$ ~~[illegible]~~								$10,000					$10,000
ASSIST LEPC W/ LOCAL PROG. (CHEER CD)	~~99-9329~~	NM					$ -													$0
OFF-SITE HABITAT RESTORATION (CHEER CD)	~~99-9330~~	NM					$ ~~[illegible]~~	$10,000												$10,000
BULL TROUT (CHEER CD)	~~99-9331~~	NM					$ -													$0
OCC REJECTS STUDY (CHEER CD)	~~99-9332~~	NM					$ -													$0
ASSIST LEPC W/ TRAIN & PURCH EQUIP (CHEER CD)	~~99-9333~~	NM					$ ~~[illegible]~~		$12,000											$12,000
P2 PLAN CERTIFICATION (CHEER CONSENT DECREE)*	7574649	NM					$ ~~[illegible]~~													$0
DEVELOP ENVIRONMENTAL MGMT. SYSTEM		LG		$ 48,000	$		$ ~~[illegible]~~	~~$4,000~~	~~$4,000~~	~~$4,000~~										$12,000
MACT I (PHASE II)		LG																		$0
MACT II		LP		$ 300,000	$ -	$ -	$ 60,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$60,000

Luanne, keep this sheet as a reminder for what months we'll be paying consent decree items.

You should get a request from Neal for each one of them.

Ken

Smurfit-Stone
Containerboard and Paper Division

July 23, 1999

Karen Wilson
Air and Waste Management Bureau
Permitting and Compliance Division
Department of Environmental Quality
301 West Alder
Missoula, MT 59802

Dear Karen:

Please review the attached table provided by Stone Container Corporation. The purpose of the table is to provide the Montana Department of Environmental Quality with opacity values equal to 20.0% opacity on the No. 4 Recovery Boiler. The data are provided for the second quarter of 1998 through the first quarter of 1999.

As you are aware, Stone has been electronically providing all of the opacity data for the No. 4 Recovery Boiler since the second quarter of 1998 in accordance with Civil Action No. CV 96-017-M. In addition, Stone provides a table each quarter that lists and explains all opacity values greater than 20% opacity. In reviewing our records we determined that in the past these reports included values greater than 20.0% opacity (i.e. 20.1% and greater), but not those equal to 20.0% opacity. This table provides those values equal to 20.0% opacity. Stone has provided values equal to 20.0% opacity in the second quarter 1999 quarterly report and will continue to do so for the duration of the consent decree (Civil Action No. CV 96-017-M) reporting requirements.

If you have any questions, please feel free to call me (406/626-4451).

Sincerely,

Lisa Philips

Lisa Philips
Environmental Engineer

cc: ~~Boughee~~ → Scott
Willhite
Mills → Stengel
Carlson, EPA – Denver (via certified mail)
Norton, DEQ – Helena
Wahl, EPA – Helena
Geist, MT CHEER (via certified mail)
Frye, Collier, Shannon, Rill & Scott, PLLC
Katherine Schmidt (Chief), DOJ-Denver (via certified mail)
Tebbutt, Western Environmental Law Center (via certified mail)

Smurfit-Stone Container Corporation
Missoula Mill
14377 Pulp Mill Road P.O. Box 4707 Missoula, Montana 59806-4707 phone 406-626-4451 fax 406-626-5986

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Ed Scott
Director of Environmental Affairs

Six Minute Opacity Values Greater Than 20% on No. 4 Recovery Boiler

Date	End Time*	Opacity (%)	Boiler Up?	Monitor Malf?	Cause	Efforts to Minimize Opacity (Or Corrective Action for Monitor Malfs)	Actions to Prevent Future High Opacity (1)
4/3/98	9:06	20.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
4/24/98	20:48	20.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
4/26/98	23:06	20.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
4/29/98	5:36	20.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
5/28/98	22:06	20.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
6/7/98	15:36	20.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
6/11/98	18:06	20.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/9/98	16:18	20.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/10/98	5:54	20.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

Malf = Malfunction

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010744

Date	E[illegible] Time*	Opacity (%)	Boiler Up?	Monitor Malf?	Cause	[illegible]	Efforts to Minimize Opacity (Or Corrective Action for Monitor Malfs)	Actions to Prev[illegible]t Future High [illegible]ity (1)
7/23/98	5:24	20.0	☑	☐	Normal operations - specific cause not known		Continue to monitor opacity, boiler operations, and performance of control equipment	
7/23/98	14:06	20.0	☑	☐	Normal operations - specific cause not known		Continue to monitor opacity, boiler operations, and performance of control equipment	
7/24/98	4:30	20.0	☑	☐	Normal operations - specific cause not known		Continue to monitor opacity, boiler operations, and performance of control equipment	
9/25/98	7:06	20.0	☑	☐	Maintenance was performed on the South D Field of the ESP			
9/25/98	17:12	20.0	☑	☐	Normal operations - specific cause not known		Continue to monitor opacity, boiler operations, and performance of control equipment	
9/25/98	18:24	20.0	☑	☐	Normal operations - specific cause not known		Continue to monitor opacity, boiler operations, and performance of control equipment	
9/25/98	18:48	20.0	☑	☐	Normal operations - specific cause not known		Continue to monitor opacity, boiler operations, and performance of control equipment	
9/28/98	11:36	20.0	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D Field of the ESP to malfunction.		After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
9/28/98	12:18	20.0	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D Field of the ESP to malfunction.		After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	0:36	20.0	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D Field of the ESP to malfunction.		After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

Malf = Malfunction

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010745

Date	E[illegible] Tim[illegible]	Opacity (%)	Boiler Up?	Monitor Malf?	Cause	Efforts to Minimize Opacity (Or Corrective Action for Monitor Malfs)	Actions to Prevent Future High [illegible]ity (1)
10/1/98	22:06	20.0	☐	☐	It is believed that a broken wire in the high tension cabinet caused the D Field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	23:18	20.0	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D Field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	5:12	20.0	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/27/98	16:18	20.0	☐	☐	The source was down for a mill curtailment. The high opacity occurred while water washing the ESP.		
2/24/99	12:30	20.0	☑	☐	The Instrument Department was performing calibrations to troubleshoot problems associated with the new data acquisition system (DAS).		

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

Malf = Malfunction

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010746

P 168 580 329

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Chief c/o Katherine Schmidt	
Street and No. U.S. Dept of Justice Environ. & Natural Resources	
P.O., State and ZIP Code P.O. Box	
Postage Washington, DC 20044	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

PS Form 3800, Feb. 1982 ★ U.S.G.P.O. 1984-446-014

E00010747

P 168 580 129

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Charles M. Tebbutt Western Environmental Law Center	
Street and No. 1216 Lincoln Street Eugene, OR 97401	
P.O., State and ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

★ U.S.G.P.O. 1984-446-014

PS Form 3800, Feb. 1982

E00010748

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- ☐ Complete items 1 and/or 2 for additional services. Complete items 3, 4a, and 4b.
- ☐ Print your name and address on the reverse of this form so that we can return this card to you.
- ☐ Attach this form to the front of the mailpiece, or on the back if space does not permit.
- ☐ Write *"Return Receipt Requested"* on the mailpiece below the article number.
- ☐ The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

3. Article Addressed to:

Charles M. Tebbutt
Western Environmental Law Center
1216 Lincoln Street
Eugene, OR 97401

4a. Article Number
P 168 580 129

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
7-26-99

5. Received By: *(Print Name)*
Rebecca Livermore

6. Signature *(Addressee or Agent)*
Rebecca Livermore

8. Addressee's Address *(Only if requested and fee is paid)*

PS Form **3811**, December 1994 102595-99-B-0223 Domestic Return Receipt

Thank you for using Return Receipt Service.

E00010749

UNITED STATES POSTAL SERVICE

First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

• Print your name, address, and ZIP Code in this box •

Smurfit-Stone Container
Attn. Lisa Philips
P.O. Box 4704
Missoula, MT 59806

4707

Quart. Excess Emissions Report

E00010750

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- ☐ Complete items 1 and/or 2 for additional services. Complete items 3, 4a, and 4b.
- ☐ Print your name and address on the reverse of this form so that we can return this card to you.
- ☐ Attach this form to the front of the mailpiece, or on the back if space does not permit.
- ☐ Write *"Return Receipt Requested"* on the mailpiece below the article number.
- ☐ The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

3. Article Addressed to:
Chief via certified mail (Addend.)
c/o Katherine Schmidt (DOJ-Denver)
Environmental & Natual Resources
U.S. Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, D.C. 20044
Re: DOJ # 90-5-2-1-1975

4a. Article Number
P 168 580 329

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
7-27-99

5. Received By: *(Print Name)*
C. Kenwick

6. Signature *(Addressee or Agent)*

8. Addressee's Address *(Only if requested and fee is paid)*

PS Form **3811**, December 1994 102595-99-B-0223 Domestic Return Receipt

Thank you for using Return Receipt Service.

E00010751

UNITED STATES POSTAL SERVICE

WASHINGTON DC
PM
27 JUL
1999

First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

ALWAYS
USE ZIP CODE

• Print your name, address, and ZIP Code in this box •

Smurfit-Stone Container
Attn. Lisa Philips
P.O. Box 4704
Missoula, MT 59806

RE: Quarterly Excess Emissions Report

E00010752

Smurfit-Stone
Containerboard and Paper Division

July 23, 1999

Chief
c/o Katherine Schmidt (DOJ-Denver)
Environmental & Natural Resources
U.S. Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, D.C. 20044
Re: DOJ #90-5-2-1-1975

Dear Chief:

Enclosed is an addendum, providing data from the second quarter of 1999, for Stone Container's Missoula Mill. This report provides the data required by Civil Action No. CV 96-017-M.

A new data acquisition system (DAS) was installed for the recovery boilers in February of this year. In June, Stone completed the second phase of this project: reconfiguration of the relationship between the new DAS and the Honeywell system (process control system for the No. 4 Recovery Boiler). During this phase of the project, it was necessary to reprogram the new DAS and the Honeywell system. As a result of this project, Stone experienced some monitor downtime (details can be found in Section 1.2 of this addendum).

If you have any questions or comments concerning this report, please call me at 406/626-4451.

Sincerely,

Lisa Philips

Lisa Philips
Environmental Engineer

cc: Tebbutt, Western Environmental Law Center
Scott

Smurfit-Stone Container Corporation
Missoula Mill
14377 Pulp Mill Road P.O. Box 4707 Missoula, Montana 59806-4707 phone 406-626-4451 fax 406-626-5986

ADDENDUM

Re: United States of America,
Plaintiff,
and Montana Coalition for Health,
Environmental and Economic Rights, Inc.,
Intervenors,
v.
Stone Container Corporation,
Defendant
Civil No. CV 96-017-M
DOJ # 90-5-2-1-1975

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Ed Scott
Director of Environmental Affairs

The following data are reported for the Second Quarter of 1999 in accordance with Civil Action No. CV 96-017-M:

Section 1: No. 4 Recovery Boiler Emissions

- 1.1: Opacity Values Greater than or Equal to 20%
- 1.2: Monitor Malfunctions
- 1.3: Opacity Data Files

Section 2: TRS and NCG Emissions

- 2.1: Releases of NCGs
- 2.2: Lime Kiln TRS Exceedances

Section 3: Particulate Emissions

- 3.1: Recovery Boilers
- 3.2: Waste Fuel Boiler
- 3.3: Mass Emissions Data

Attachment 1: No. 4 Recovery Boiler Opacity Emissions Greater than or Equal to 20%
Attachment 2: Recovery Boiler Mass Emissions/Opacity Data Diskette

Section 1: No. 4 Recovery Boiler Emissions

Section 1.1: Opacity Values Greater than or Equal to 20%

Please see data reported in Attachment 1. The data are reported in accordance with Civil Action No. CV 96-017-M Section V: 9 (a). During the second quarter of 1999, 99.99% of the six-minute periods were less than 20% opacity (excluding periods of monitor malfunction).

Section 1.2: Monitor Malfunctions

The following data represent periods when the Continuous Opacity Monitor (COM) on the No. 4 Recovery Boiler was not operational. The data represent periods when the boiler was in operation. The data are reported in accordance with Civil Action No. CV 96-017-M Section V: 9 (b).

Beginning Date and Time	Ending Date and Time	Duration
4/4/99 2:36 am	4/4/99 3:00 am	0.4 Hours

Cause and Corrective Action:
The monitor was logged off for monitor maintenance.

Beginning Date and Time	Ending Date and Time	Duration
4/12/99 9:54 am	4/12/99 10:00 am	0.1 Hours

Cause and Corrective Action:
The monitor was logged off for monitor maintenance.

Beginning Date and Time	Ending Date and Time	Duration
4/14/99 2:54 pm	4/14/99 3:00 pm	0.1 Hours

Cause and Corrective Action:
The monitor was logged off for monitor maintenance.

Beginning Date and Time	Ending Date and Time	Duration
4/23/99 9:30 am	4/23/99 9:36 am	0.1 Hours

Cause and Corrective Action:
The monitor was logged off for monitor maintenance.

Beginning Date and Time	Ending Date and Time	Duration
4/23/99 9:54 am	4/23/99 10:06 am	0.2 Hours

Cause and Corrective Action:
The monitor was logged off for monitor maintenance.

Beginning Date and Time	Ending Date and Time	Duration
4/23/99 10:30 am	4/23/99 10:36 am	0.1 Hours

Cause and Corrective Action:
The monitor was logged off for monitor maintenance.

Beginning Date and Time	Ending Date and Time	Duration
4/23/99 10:42 am	4/23/99 10:48 am	0.1 Hours

Cause and Corrective Action:

The monitor was logged off for monitor maintenance.

Beginning Date and Time	Ending Date and Time	Duration
4/23/99 10:56 am	4/23/99 11:06 am	0.2 Hours

Cause and Corrective Action:
The monitor was logged off for monitor maintenance.

Beginning Date and Time	Ending Date and Time	Duration
4/23/99 6:18 pm	4/23/99 6:48 pm	0.5 Hours

Cause and Corrective Action:
The monitor was logged off for monitor maintenance.

Beginning Date and Time	Ending Date and Time	Duration
4/25/99 1:54 pm	4/25/99 2:00 pm	0.1 Hours

Cause and Corrective Action:
The monitor was logged off for monitor maintenance.

Beginning Date and Time	Ending Date and Time	Duration
4/25/99 2:30 pm	4/25/99 2:36 pm	0.1 Hours

Cause and Corrective Action:
The monitor was logged off for monitor maintenance.

Beginning Date and Time	Ending Date and Time	Duration
4/25/99 2:48 pm	4/25/99 3:00 pm	0.2 Hours

Cause and Corrective Action:
The monitor was logged off for monitor maintenance.

Beginning Date and Time	Ending Date and Time	Duration
4/25/99 3:54 pm	4/25/99 4:00 pm	0.1 Hours

Cause and Corrective Action:
The monitor was logged off for monitor maintenance.

Beginning Date and Time	Ending Date and Time	Duration
5/12/99 1:30 pm	5/12/99 2:06 pm	0.6 Hours

Cause and Corrective Action:
An outside contractor was performing the quarterly continuous opacity monitor (COM) audits. Data collected during this time frame are invalid. This test was not used as an official test due to problems with the data acquisition system (DAS).

Beginning Date and Time	Ending Date and Time	Duration
5/13/99 2:36 pm	5/13/99 3:00 pm	0.4 Hours

Cause and Corrective Action:
An outside contractor was performing the quarterly continuous opacity monitor (COM) audits. Data collected during this time frame are invalid. This test was not used as an official test due to problems with the data acquisition system (DAS).

Beginning Date and Time	Ending Date and Time	Duration
5/14/99 7:48 am	5/14/99 8:00 am	0.2 Hours

Cause and Corrective Action:
The monitor was logged off for monitor maintenance.

Beginning Date and Time	Ending Date and Time	Duration
5/14/99 8:12 am	5/14/99 8:30 am	0.3 Hours

Cause and Corrective Action:
The monitor was logged off for monitor maintenance.

Beginning Date and Time	Ending Date and Time	Duration
5/14/99 1:42 pm	5/14/99 2:48 pm	1.1 Hours

Cause and Corrective Action:
An outside contractor was performing the quarterly continuous opacity monitor (COM) audits. Data collected during this time frame are invalid.

Beginning Date and Time	Ending Date and Time	Duration
5/15/99 10:36 am	5/15/99 10:42 am	0.1 Hours

Cause and Corrective Action:
The Instrument Department was calibrating the monitor.

Beginning Date and Time	Ending Date and Time	Duration
5/18/99 12:30 pm	5/18/99 2:30 pm	2.0 Hours

Cause and Corrective Action:
The Instrument Department was performing monitor maintenance.

Beginning Date and Time	Ending Date and Time	Duration
5/21/99 9:54 am	5/21/99 10:00 am	0.1 Hours

Cause and Corrective Action:
The monitor was logged off for monitor maintenance.

Beginning Date and Time	Ending Date and Time	Duration
5/25/99 5:00 am	5/26/99 5:00 am	24.0 Hours

Cause and Corrective Action:
The monitor drifted outside of the control limits during the daily automatic zero/span causing the monitor malfunction. The monitor was calibrated and returned to normal operation.

Beginning Date and Time	Ending Date and Time	Duration
6/7/99 9:00 am	6/7/99 9:06 am	0.1 Hours

Cause and Corrective Action:
The monitor was set in manual span mode to check new alarm programming.

Beginning Date and Time	Ending Date and Time	Duration
6/7/99 10:00 am	6/7/99 10:06 am	0.1 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/7/99 10:12 am	6/7/99 10:30 am	0.3 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/7/99 10:48 am	6/7/99 11:00 am	0.2 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/7/99 12:54 pm	6/7/99 1:00 pm	0.1 Hours

Cause and Corrective Action:
The monitor was set in manual span mode to check new alarm programming.

Beginning Date and Time	Ending Date and Time	Duration
6/7/99 1:00 pm	6/7/99 1:06 pm	0.1 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/7/99 1:06 pm	6/7/99 1:24 pm	0.3 Hours

Cause and Corrective Action:
The monitor was set in manual span mode to check new alarm programming.

Beginning Date and Time	Ending Date and Time	Duration
6/7/99 1:30 pm	6/7/99 1:36 pm	0.1 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/7/99 1:54 pm	6/7/99 2:00 pm	0.1 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/7/99 2:12 pm	6/7/99 2:24 pm	0.2 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/7/99 2:30 pm	6/7/99 2:36 pm	0.1 Hours

Cause and Corrective Action:
The monitor was set in manual span mode to check new alarm programming.

Beginning Date and Time	Ending Date and Time	Duration
6/7/99 2:48 pm	6/7/99 3:00 pm	0.2 Hours

Cause and Corrective Action:
The monitor was set in manual span mode to check new alarm programming.

Beginning Date and Time	Ending Date and Time	Duration
6/7/99 3:06 pm	6/7/99 3:12 pm	0.1 Hours

Cause and Corrective Action:
The monitor was set in manual span mode to check new alarm programming.

Beginning Date and Time	Ending Date and Time	Duration
6/7/99 3:42 pm	6/7/99 4:06 pm	0.4 Hours

Cause and Corrective Action:
The monitor was set in manual span mode to check new alarm programming.

Beginning Date and Time	Ending Date and Time	Duration
6/7/99 4:18 pm	6/7/99 4:24 pm	0.1 Hours

Cause and Corrective Action:
The monitor was set in manual span mode to check new alarm programming.

Beginning Date and Time	Ending Date and Time	Duration
6/7/99 4:48 pm	6/7/99 5:00 pm	0.2 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/7/99 5:00 pm	6/7/99 5:06 pm	0.1 Hours

Cause and Corrective Action:
The monitor was set in manual span mode to check new alarm programming.

Beginning Date and Time	Ending Date and Time	Duration
6/7/99 5:18 pm	6/7/99 5:24 pm	0.1 Hours

Cause and Corrective Action:
The monitor was set in manual span mode to check new alarm programming.

Beginning Date and Time	Ending Date and Time	Duration
6/8/99 9:24 am	6/8/99 9:42 am	0.3 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/8/99 9:54 am	6/8/99 10:42 am	0.8 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/8/99 10:48 am	6/8/99 11:00 am	0.2 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/8/99 11:06 am	6/8/99 11:24 am	0.3 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/8/99 11:30 am	6/8/99 11:42 am	0.2 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/8/99 11:54 am	6/8/99 12:00 pm	0.1 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/8/99 12:06 pm	6/8/99 12:12 pm	0.1 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/8/99 12:18 pm	6/8/99 12:24 pm	0.1 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/8/99 1:42 pm	6/8/99 1:48 pm	0.1 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/8/99 1:54 pm	6/8/99 2:00 pm	0.1 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/8/99 2:12 pm	6/8/99 2:36 pm	0.4 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/8/99 2:42 pm	6/8/99 3:12 pm	0.5 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/8/99 4:12 pm	6/8/99 4:36 pm	0.4 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/8/99 4:42 pm	6/8/99 4:48 pm	0.1 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/8/99 4:54 pm	6/8/99 5:06 pm	0.2 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/8/99 5:18 pm	6/8/99 5:42 pm	0.4 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/8/99 5:48 pm	6/8/99 6:06 pm	0.3 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/8/99 6:12 pm	6/8/99 6:24 pm	0.2 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/8/99 7:06 pm	6/8/99 7:24 pm	0.3 Hours

Cause and Corrective Action:
An outside contractor was programming the new data acquisition system (DAS). Data could not be collected while the programming was in progress.

Beginning Date and Time	Ending Date and Time	Duration
6/9/99 5:00 am	6/9/99 4:00 pm	11.0 Hours

Cause and Corrective Action:
An outside contractor, working on the DAS, inadvertently set the time incorrectly. The time was off by 12 hours and some data were overwritten. The time was changed back to the correct time once the problem was identified.

Beginning Date and Time	Ending Date and Time	Duration
6/22/99 9:24 am	6/22/99 9:54 am	0.5 Hours

Cause and Corrective Action:
The monitor was logged off for monitor maintenance.

Beginning Date and Time	Ending Date and Time	Duration
6/27/99 5:54 am	6/27/99 11:54 pm	18.0 Hours

Cause and Corrective Action:
The monitor was inadvertently left in zero mode after a manual calibration.

Total Monitor Downtime 68.6 Hours

Section 1.3: Opacity Data Files

Please use the diskette in Attachment 2 to view all opacity data recorded during the quarter. The file is saved as a text file and may be viewed in most word processing, spreadsheet and database applications. The data are reported in accordance with Civil Action No. CV 96-017-M Section V: 9 (a).

Section 2: TRS and NCG Emissions

Section 2.1: Releases of Non-Condensible Gases (Duration > 15 minutes)

The following data are reported in accordance with Civil Action No. CV 96-017-M Section VII: 19 (a).

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
4/6/99	103 minutes	18:14 – 19:57	9.0	0.8	4.4	Down
Source: Air Stripper		**Circumstances:** Production of foul condensate was low due to several outages in the mill (No. 5 Recovery Boiler, No. 2 and No. 3 Evaporators, No. 2 Concentrator, Batch Digesters, M&D Digester and No. 2 Paper Machine). The stripper off gas flow to the Lime Kilns was lower than normal due to low foul condensate production. A safety mechanism has been installed to automatically discontinue flow from the stripper to the Lime Kilns during periods of low flow, as such conditions can create a potentially hazardous (explosive) environment.				

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
4/20/99	75 minutes	09:45 – 11:00	1.5	MALF	0.5	1.1
Source: No. 2 Concentrator and No. 5 Evaporators		**Circumstances:** The hotwell was bypassed to make essential repairs. The systems had to be isolated to make the necessary repairs. Non-condensible gases were vented to the atmosphere from the No. 2 Concentrator while the repairs were made. At the time of the venting, the air stripper NCGs and the batch NCGs were burned in the No. 4 and No. 3 Lime Kilns, respectively. MALF = Monitor Malfunction				

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
5/11/99	18 minutes	03:10 – 03:28	3.2	0.8	3.4	1.1
Source: Batch		**Circumstances:** NCGs were being processed in the No. 3 Lime Kiln when the fire was inadvertently lost. NCGs were vented to the atmosphere until the fire was reestablished in the No. 3 Lime Kiln.				

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
5/16/99	15 minutes	10:24 – 10:38	0.2	0.4	2.8	0.9
Source: Air Stripper		**Circumstances:** The stripper off gas flow to the Lime Kilns was lower than normal. A safety mechanism has been installed to automatically discontinue flow from the stripper to the Lime Kilns during periods of low flow, as such conditions can create a potentially hazardous (explosive) environment.				

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
5/26/99	31 minutes	13:57 – 14:28	4.4	0.7	1.0	0.9
Source: Batch		**Circumstances:** At the time of the event, No. 2 and No. 3 Lime Kilns were down for repair. Stripper NCGs were being processed in No. 4 Lime Kiln and batch NCGs were being processed in No. 1 Lime Kiln. Batch NCGs were vented to the atmosphere when the flame failed in the No. 1 Lime Kiln as the result of a pan conveyor failure. Batch NCGs were processed in the No. 1 Lime Kiln as soon as the flame was reestablished.				

Note: TRS emissions are reported as an average of the 12 hours preceding the event.

In making this report, Stone is not implying that these events constitute violations.

Section 2.2: Lime Kiln TRS Exceedances

The following information is reported in accordance with Civil Action No. CV 96-017-M Section VII: 19 (b).

There were no TRS exceedances on the Lime Kilns during the quarter.

Section 3: Particulate Emissions

Section 3.1: Recovery Boilers

The following information is reported in accordance with Civil Action No. CV 96-017-M Section VI: 16.

The following tables present mass emissions from No. 4 and No. 5 Recovery Boilers.

No. 4 Recovery Boiler – Mass Emissions

Month	Mass Emissions (Monthly Average) (lbs TSP/day)	Mass Emissions Limit (Monthly Average) (lbs TSP/day)
April 1999	360	928
May 1999	362	
June 1999	276	

TSP=Total Suspended Particulate

No. 5 Recovery Boiler – Mass Emissions

Month	Mass Emissions (Monthly Average) (lbs TSP/day)	Mass Emissions Limit (Monthly Average) (lbs TSP/day)
April 1999	58	384
May 1999	80	
June 1999	82	

TSP=Total Suspended Particulate

Section 3.2: Waste Fuel Boiler

The following information is reported in accordance with Civil Action No. CV 96-017-M Section IX: 23.

There were no exceedances of the PM_{10} mass emissions limit on the Waste Fuel Boiler during the quarter.

Section 3.3: Mass Emissions Data

Please use the attached diskette to view all mass emissions data (24-hour average opacity (%), airflow into the boiler (1000 lbs/hr), mass emissions (lbs/day), and comments) recorded during the quarter for the No. 4 and No. 5 Recovery Boilers. The data are reported in accordance with Civil Action No. CV 96-017-M Section VI: 16.

As a reminder, the equations used to calculate mass emissions are as follows:

Source	Stack Exit Air Flow (DSCFM)	Grain Loading (grains/DSCF)
No. 4 Recovery Boiler	0.2322*(Total Air) + 14637	[-0.1303*ln(1-Opacity)]+0.0008
No. 5 Recovery Boiler	0.2823*(Total Air) – 7330	[-0.237*ln(1-Opacity)]+0.0006

Where: Units of Total Air are pounds of air into the boiler/hour
Units of Opacity are percentages as decimals (example: use 0.10 for 10%)
Total Air = Air Flow into the Boiler

ATTACHMENT 1: No. 4 Recovery Boiler Opacity Emissions ≥ 20%

In making this report, Stone Container is not implying that continuous opacity monitor (COM) values greater than 20% constitute violations.

Six Minute Opacity Values Greater Than 20% on No. 4 Recovery Boiler

Date	End Time*	Opacity (%)	Boiler Up?	Monitor Malf?	Cause	Efforts to Minimize Opacity (Or Corrective Action for Monitor Malfs)	Actions to Prevent Future High Opacity (1)
4/28/99	3:18	24.3	☑	☐	The South C field of the ESP tripped as the result of a blown fuse.	The boiler was taken off liquor immediately and the blown fuse in the South C field was replaced.	
5/12/99	13:36	NA	☑	☑	The COM audit interfered with data collection.		
5/12/99	13:42	NA	☑	☑	The COM audit interfered with data collection.		
5/12/99	13:48	NA	☑	☑	The COM audit interfered with data collection.		
5/12/99	13:54	NA	☑	☑	The COM audit interfered with data collection.		
5/12/99	14:00	NA	☑	☑	The COM audit interfered with data collection.		
5/12/99	14:06	NA	☑	☑	The COM audit interfered with data collection.		
5/12/99	17:06	21.0	☑	☐	A sootblower in the economizer section of the boiler failed causing the sootblower system to shutdown.	The sootblower was restarted and the preciptator returned to normal operation.	
5/13/99	14:42	NA	☑	☑	The COM audit interfered with data collection.		

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

Malf = Malfunction

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010771

Date	Time*	Opacity (%)	Boiler Up?	Monitor Malf?	Cause	Efforts to Minimize Opacity (Or Corrective Action for Monitor Malfs)	Actions to Prevent Future High Opacity (1)
5/13/99	14:48	NA	☑	☑	The COM audit interfered with data collection.		
5/13/99	14:54	NA	☑	☑	The COM audit interfered with data collection.		
5/13/99	15:00	NA	☑	☑	The COM audit interfered with data collection.		
5/14/99	13:54	NA	☑	☑	The COM audit interfered with data collection.		
5/14/99	14:00	NA	☑	☑	The COM audit interfered with data collection.		
5/14/99	14:06	NA	☑	☑	The COM audit interfered with data collection.		
5/14/99	14:12	NA	☑	☑	The COM audit interfered with data collection.		
5/14/99	14:18	NA	☑	☑	The COM audit interfered with data collection.		
5/14/99	14:24	NA	☑	☑	The COM audit interfered with data collection.		
5/14/99	14:30	NA	☑	☑	The COM audit interfered with data collection.		

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

Malf = Malfunction

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010772

Date	E[illegible] Time*	Opacity (%)	Boiler Up?	Monitor Malf?	Cause	[illegible]	Efforts to Minimize Opacity (Or Corrective Action for Monitor Malfs)	Actions to Prevent Future Hig[illegible]acity (1)
5/14/99	14:36	NA	☑	☑	The COM audit interfered with data collection.			
5/14/99	14:42	NA	☑	☑	The COM audit interfered with data collection.			
5/14/99	14:48	NA	☑	☑	The COM audit interfered with data collection.			
5/15/99	10:42	NA	☑	☑	The Instrument Department was performing monitor maintenance.			
5/18/99	12:42	NA	☑	☑	The Instrument Department was performing monitor maintenance.			
6/7/99	9:06	NA	☑	☑	The monitor was set in manual span mode to check new alarm programming.			
6/7/99	13:00	NA	☑	☑	The monitor was set in manual span mode to check new alarm programming.			
6/7/99	13:12	NA	☑	☑	The monitor was set in manual span mode to check new alarm programming.			
6/7/99	13:18	NA	☑	☑	The monitor was set in manual span mode to check new alarm programming.			
6/7/99	13:24	NA	☑	☑	The monitor was set in manual span mode to check new alarm programming.			

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

Malf = Malfunction

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010773

Date	E[illegible] Time*	Opacity (%)	Boiler Up?	Monitor Malf?	Cause	Efforts to Minimize Opacity (Or Corrective Action for Monitor Malfs)	Actions to P[illegible]nt Future Hig[illegible]acity (1)
6/7/99	14:36	NA	☑	☑	The monitor was set in manual span mode to check new alarm programming.		
6/7/99	14:54	NA	☑	☑	The monitor was set in manual span mode to check new alarm programming.		
6/7/99	15:00	NA	☑	☑	The monitor was set in manual span mode to check new alarm programming.		
6/7/99	15:12	NA	☑	☑	The monitor was set in manual span mode to check new alarm programming.		
6/7/99	15:48	NA	☑	☑	The monitor was set in manual span mode to check new alarm programming.		
6/7/99	15:54	NA	☑	☑	The monitor was set in manual span mode to check new alarm programming.		
6/7/99	16:00	NA	☑	☑	The monitor was set in manual span mode to check new alarm programming.		
6/7/99	16:06	NA	☑	☑	The monitor was set in manual span mode to check new alarm programming.		
6/7/99	16:24	NA	☑	☑	The monitor was set in manual span mode to check new alarm programming.		
6/7/99	17:06	NA	☑	☑	The monitor was set in manual span mode to check new alarm programming.		

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

Malf = Malfunction

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010774

Date	E[illegible] Time*	Opacity (%)	Boiler Up?	Monitor Malf?	Cause	[illegible]	Efforts to Minimize Opacity (Or Corrective Action for Monitor Malfs)	Actions to P[illegible]nt Future Hig[illegible]acity (1)
6/7/99	17:24	NA	☑	☑	The monitor was set in manual span mode to check new alarm programming.			

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

Malf = Malfunction

☑ *=Yes*

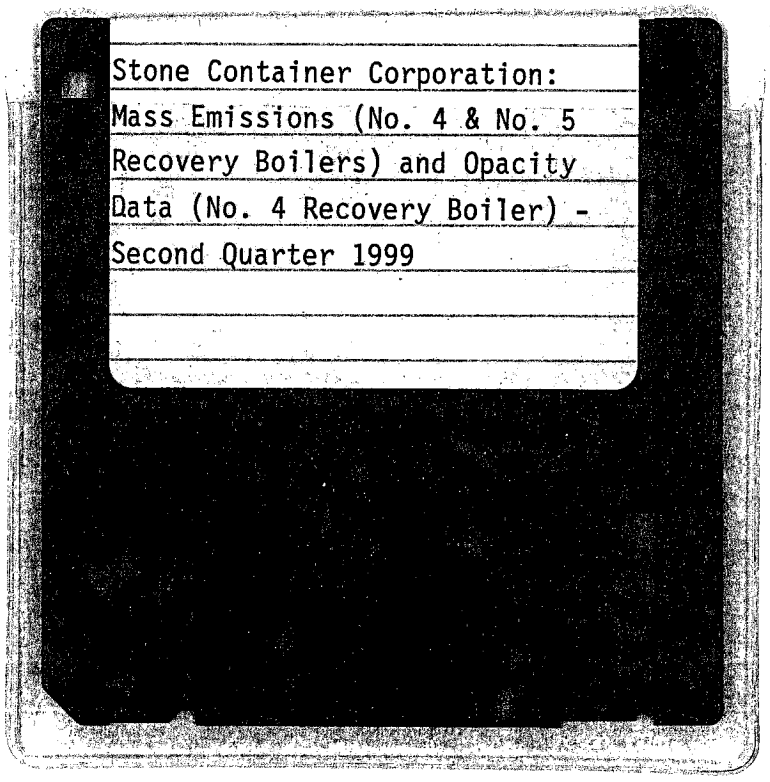
(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010775

ATTACHMENT 2: Recovery Boiler Mass Emissions and No. 4 Recovery Boiler Opacity Data Diskette

The following individuals will receive the data diskette:

Wilson, MT DEQ
Wahl, U.S. EPA, Region VIII
Chief, U.S. DOJ
Geist, MT CHEER
Tebbutt, Western Env. Law Center



The enclosed diskette includes mass emissions data (24-hour average opacity (%), airflow into the boiler (1000 lbs/hr), mass emissions (lbs/day), and comments) from Stone Container's No. 4 and No. 5 Recovery Boilers. This data can be found in the text file RBQTR2.

The enclosed diskette also includes opacity data (6-minute averages) for the No. 4 Recovery Boiler. Please note: values equal to -1 indicate when the data acquisition system (DAS) was logged off due to monitor maintenance or DAS programming. This data can be found in the text file 4RBQTR2.

The text files are tab delimited and can be opened in any word processing, spreadsheet or database application, provided that application can support the amount of data in the file.

EER Correction

P 168 580 339

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Betsy Wahl U.S. EPA	
Street and No. 301 South Park, Drawer 10096	
P.O., State and ZIP Code Helena, MT 59626	
Postage	$
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Special Delivery Fee	
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Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
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★ U.S.G.P.O. 1984-446-014

PS Form 3800, Feb. 1982

E00010777

UNITED STATES POSTAL SERVICE

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USPS
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Attn. Lisa Philips

Stone Container Corporation

Containerboard and Paper Division

Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707

EER Correction

E00010778

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- ☐ Complete items 1 and/or 2 for additional services. Complete items 3, 4a, and 4b.
- ☐ Print your name and address on the reverse of this form so that we can return this card to you.
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- ☐ Write *"Return Receipt Requested"* on the mailpiece below the article number.
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I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

3. Article Addressed to:

Betsy Wahl
U.S. EPA
301 South Park, Drawer 10096
Helena, MT 59626

4a. Article Number
P 168 580 339

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery MAY 24 1999

5. Received By: *(Print Name)*

6. Signature *(Addressee or Agent)*

8. Addressee's Address *(Only if requested and fee is paid)*

PS Form **3811**, December 1994 102595-99-B-0223 Domestic Return Receipt

Thank you for using Return Receipt Service.

E00010779

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- ☐ Complete items 1 and/or 2 for additional services. Complete items 3, 4a, and 4b.
- ☐ Print your name and address on the reverse of this form so that we can return this card to you.
- ☐ Attach this form to the front of the mailpiece, or on the back if space does not permit.
- ☐ Write *"Return Receipt Requested"* on the mailpiece below the article number.
- ☐ The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

3. Article Addressed to:

Charles M. Tebbutt
Western Environmental Law Center
1216 Lincoln Street
Eugene, OR 97401

4a. Article Number
P 168 580 337

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
Feb 21 97

5. Received By: *(Print Name)*

6. Signature *(Addressee or Agent)*

8. Addressee's Address *(Only if requested and fee is paid)*

PS Form 3811, December 1994 102595-99-B-0223 Domestic Return Receipt

Thank you for using Return Receipt Service.

E00010780

UNITED STATES POSTAL SERVICE

First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

• Print your name, address, and ZIP Code in this box •

Stone Container Corporation

Containerboard and Paper Division

Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707

Attn. Lisa Philips
EER Correction

E00010781

P 168 580 337

EER Correction

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Charles M. Tebbutt ~~Western Environmental Law Center~~	
Street and No. 1216 Lincoln Street	
P.O., State and ZIP Code Eugene, OR 97401	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

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PS Form 3800, Feb. 1982

E00010782

UNITED STATES POSTAL SERVICE

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USPS
Permit No. G-10

ALWAYS USE
ZIP CODE

WASHINGTON DC
PM

Attn. Lisa Philips

Stone Container Corporation

Containerboard and Paper Division

Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707

EER Correction

E00010783

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- ☐ Complete items 1 and/or 2 for additional services. Complete items 3, 4a, and 4b.
- ☐ Print your name and address on the reverse of this form so that we can return this card to you.
- ☐ Attach this form to the front of the mailpiece, or on the back if space does not permit.
- ☐ Write *"Return Receipt Requested"* on the mailpiece below the article number.
- ☐ The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

3. Article Addressed to:
Chief via certified mail (Addend.)
c/o Katherine Schmidt (DOJ-Den
Environmental & Natual Resource
U.S. Department of Justice
P.O. Box 7611, Ben Franklin Stat
Washington, D.C. 20044
Re: DOJ # 90-5-2-1-1975

4a. Article Number
P 168 580 337

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
5-24-99

5. Received By: *(Print Name)*
C. Fenwick

6. Signature *(Addressee or Agent)*

8. Addressee's Address *(Only if requested and fee is paid)*

PS Form **3811**, December 1994 102595-99-B-0223 Domestic Return Receipt

Thank you for using Return Receipt Service.

E00010784

P 168 580 338

EER Correction

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to ~~Chief via certified mail (Addend.)~~ c/o Katherine Schmidt (DOJ-Denver)	
Street and No. ~~Environmental & Natual Resources~~ U.S. Department of Justice	
P.O., State and ZIP Code ~~P.O. Box 7611, Ben~~ Franklin Station Washington, D.C. 20044	
Postage Re: DOJ # 90-5-2-1-1975	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

PS Form 3800, Feb. 1982 ★ U.S.G.P.O. 1984-446-014

E00010785

→ ED Scott

Stone Container Corporation

May 21, 1999

Karen Wilson
Air and Waste Management Bureau
Permitting and Compliance Division
Department of Environmental Quality
301 West Alder
Missoula, MT 59802

Dear Karen:

As you are aware, Stone Container Corporation's Missoula Mill performed a project in February 1999 to upgrade its Data Acquisition System (DAS) for the recovery boilers. The new DAS was installed prior to the approval of the new airflow correlation equations (approved by the Environmental Protection Agency and the Montana Department of Environmental Quality, effective February 12, 1999). Stone has just become aware that the new airflow correlation equation for No. 5 Recovery Boiler was improperly programmed into the new DAS.

The following equation:

Stack exit airflow = 0.2823*(Total Air) + 7330

was programmed into the DAS instead of the accurate equation:

Stack exit airflow = 0.2823*(Total Air) - 7330

Stone is submitting a corrected section of the Addendum to the First Quarter Excess Emissions Report: "Section 3: Particulate Emission" and a data diskette containing the underlying mass emissions data.

The corrected Section 3 (attached) reflects corrected mass emissions data to account for problems that occurred in transferring data from the data collection system to the Environmental Department's database that is used for air emission reports. On a daily basis, the data reported by the data collection system for each source is manually entered into a combined database for all sources. From February 12, 1999 through March 3, 1999, the Environmental Department was running a side-by-side comparison between the old data collection system (Honeywell DCS) and the new DAS. The particulate and opacity that were entered into the environmental database between February 12, 1999 and March 3, 1999 were taken from the Honeywell DCS, which had

not been modified to contain the new correlation equations. As a result, while the airflow data in the environmental database reflected the new airflow correlation equations, the mass emissions rate (lbs TSP/hour) from February 12, 1999 through March 3, 1999 was calculated based on the old airflow correlation equations. The attached mass emissions table (Section 3 of the corrected Addendum) and the corresponding electronic files contain recalculated mass emissions based on the new airflow correlation equations.

Corrections to the February, March, and April 1999 Air Emissions Reports will be submitted under separate cover.

If you have any questions, please call me at (406) 626-4451 (ext. 533).

Sincerely,

Lisa Philips

Lisa Philips

Environmental Engineer

cc: ~~Boschee~~ → Scott
Evans → ~~Lewis~~
Willhite
Wahl, EPA Helena (via Certified Mail)
Geist, MT CHEER (via Certified Mail)
Frye, Collier, Shannon, Rill & Scott, PLLC
Tebbutt, Western Environmental Law Center (via Certified Mail)
Chief, DOJ (via Certified Mail)

ADDENDUM

Re: United States of America,
Plaintiff,
and Montana Coalition for Health,
Environmental and Economic Rights, Inc.,
Intervenors,
v.
Stone Container Corporation,
Defendant
Civil No. CV 96-017-M
DOJ # 90-5-2-1-1975

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Ed Scott
Director of Environmental Affairs

Section 3: Particulate Emissions

Section 3.1: Recovery Boilers

The following information is reported in accordance with Civil Action No. CV 96-017-M Section VI: 16.

The consent decree requires that Stone Container report the mass emissions rate for the No. 4 and No. 5 Recovery Boilers once new airflow correlation equations have been developed pursuant to the consent decree. On February 11, 1999, the mill received letters from the United States Environmental Protection Agency and the Montana Department of Environmental Quality approving the new airflow correlation equations for the No. 4 and No. 5 Recovery Boiler. As of February 12, 1999 the flow rates were calculated using these new correlation equations. The following tables present mass emissions from No. 4 and No. 5 Recovery Boilers.

No. 4 Recovery Boiler – Mass Emissions

Month	Original Report Mass Emissions (Monthly Average) (lbs TSP/day)	Corrected Values Mass Emissions (Monthly Average) (lbs TSP/day)	Mass Emissions Limit (Monthly Average) (lbs TSP/day)
January 1999	NA	NA	928
February 1999*	595	604	
March 1999	397	398	

*Note: Values from February 1-11, 1999 were calculated using old correlation equations for air flow. (TSP=Total Suspended Particulate)

No. 5 Recovery Boiler – Mass Emissions

Month	Original Report Mass Emissions (Monthly Average) (lbs TSP/day)	Corrected Values Mass Emissions (Monthly Average) (lbs TSP/day)	Mass Emissions Limit (Monthly Average) (lbs TSP/day)
January 1999	NA	NA	384
February 1999*	161	202	
March 1999	139	116	

*Note: Values from February 1-11, 1999 were calculated using old correlation equations for air flow. (TSP=Total Suspended Particulate)

Section 3.2: Waste Fuel Boiler

The following information is reported in accordance with Civil Action No. CV 96-017-M Section IX: 23.

There were no exceedances of the PM_{10} mass emissions limit on the Waste Fuel Boiler during the quarter.

Section 3.3 Mass Emissions Data

Please use the attached diskette to view all mass emissions data recorded from February 12, 1999 through March 31, 1999. The file is saved as a text file and may be viewed in most word processing, spreadsheet and database applications. The data are reported in accordance with Civil Action No. CV 96-017-M Section VI: 16.

As a reminder, the equations used to calculate mass emissions are as follows:

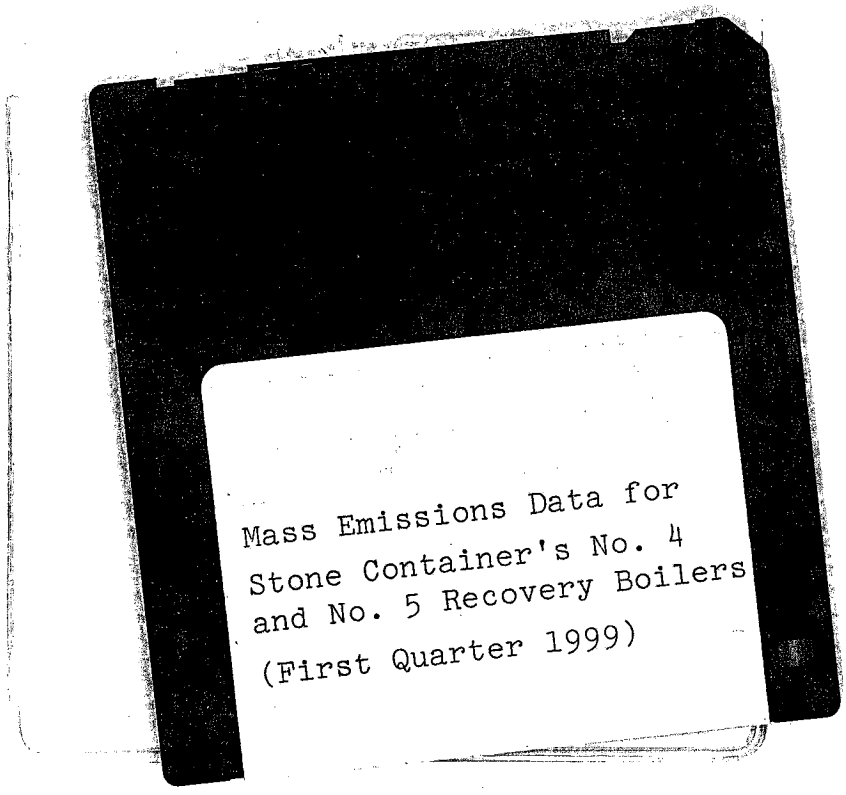
Source	Stack Exit Air Flow (DSCFM)	Grain Loading (grains/DSCF)
No. 4 Recovery Boiler	0.2322*(Total Air) + 14637	[-0.1303*ln(1-Opacity)]+0.0008
No. 5 Recovery Boiler	0.2823*(Total Air) – 7330	[-0.237*ln(1-Opacity)]+0.0006

Where: Units of Total Air are pounds of air into the boiler/hour
Units of Opacity are percentages as decimals (example: use 0.10 for 10%)
Total Air = Air Flow into the Boiler

Mass Emissions Data Diskette

The following individuals will receive the data diskette:

Wilson, MT DEQ
Wahl, U.S. EPA, Region VIII
Chief, U.S. DOJ
Geist, MT CHEER
Tebbutt, Western Env. Law Center



The enclosed diskette includes mass emissions data (24-hour average opacity (%), airflow into the boiler (1000 lbs/hr), mass emissions (lbs/day), and comments) from Stone Container's No. 4 and No. 5 Recovery Boiler for the first quarter of 1999. The data can be found in a text file named RBQTR1. The text file is tab delimited and can be opened in any word processing, spreadsheet or database application, provided that application can support the amount of data in the file.

PS Form 3811, July 1983

DOMESTIC RETURN RECEIPT

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. ☐ Show to whom, date and address of delivery.

2. ☐ Restricted Delivery.

3. Article Addressed to:

Charles M. Tebbutt
Western Environmental Law Center
1216 Lincoln Street
Eugene, OR 97401

4. Type of Service:

☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number

P168580221

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee

X Marilyn Kemp

6. Signature – Agent

X

7. Date of Delivery

10-5-99

8. Addressee's Address *(ONLY if requested and fee paid)*

1st Qtr. '99 Excess Air Emissions Rept

E00010792

P 168 580 221

RECEIPT FOR CERTIFIED MAIL

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Sent to Charles M. Tebbutt	
Street and No.	
P.O., State and ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

1st Qtr. '99 Excess Air Emissions Report

★ U.S.G.P.O. 1984-446-014

PS Form 3800, Feb. 1982

E00010793

PS Form 3811, July 1983

DOMESTIC RETURN RECEIPT

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Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. ☐ Show to whom, date and address of delivery.

2. ☐ Restricted Delivery.

3. Article Addressed to:

Chief via certified mail (Addend.)
c/o Katherine Schmidt (DOJ-Denver)
Environmental & Natual Resources
U.S. Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, D.C. 20044
Re: DOJ # 90-5-2-1-1975

5-4-99

4. Type of Service:

☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number: P168580219

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee

X

6. Signature – Agent

X

7. Date of Delivery

8. Addressee's Address *(ONLY if requested and fee paid)*

1st Qtr. '99 Excess Air Emissions Report

E00010794

P 168 580 219

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Katherine Schmidt	
Street and No.	
P.O., State and ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

1st Qtr. '99 Excess Air Emissions Report

★ U.S.G.P.O. 1984-446-014

PS Form 3800, Feb. 1982

E00010795

Stone Container Corporation
Containerboard and Paper Division
Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707

Missoula Mill
406.626.4451
406.626.5986 Fax

April 29, 1999

Chief
c/o Katherine Schmidt (DOJ-Denver)
Environmental & Natural Resources
U.S. Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, D.C. 20044
Re: DOJ #90-5-2-1-1975

Dear Chief:

Enclosed is an addendum, providing data from the first quarter of 1999, for Stone Container's Missoula Mill. This report provides the data required by Civil Action No. CV 96-017-M.

If you have any questions or comments concerning this report, please call me at 406/626-4451.

Sincerely,

Lisa Philips

Lisa Philips
Environmental Engineer

cc: Tebbutt, Western Environmental Law Center
Scott

ADDENDUM

Re: United States of America,
Plaintiff,
and Montana Coalition for Health,
Environmental and Economic Rights, Inc.,
Intervenors,
v.
Stone Container Corporation,
Defendant
Civil No. CV 96-017-M
DOJ # 90-5-2-1-1975

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Ed Scott
Director of Environmental Affairs

The following data are reported for the First Quarter of 1999 in accordance with Civil Action No. CV 96-017-M:

Section 1: No. 4 Recovery Boiler Emissions

- 1.1: Opacity Values Greater Than 20%
- 1.2: Monitor Malfunctions
- 1.3: Opacity Data Files

Section 2: TRS and NCG Emissions

- 2.1: Releases of NCGs
- 2.2: Lime Kiln TRS Exceedances

Section 3: Particulate Emissions

- 3.1: Recovery Boilers
- 3.2: Waste Fuel Boiler

Attachment 1: No. 4 Recovery Boiler Opacity Emissions Greater Than 20%
Attachment 2: No. 4 Recovery Boiler Opacity Data Diskette

Section 1: No. 4 Recovery Boiler Emissions

Section 1.1: Opacity Values Greater Than 20%

Please see data reported in Attachment 1. The data are reported in accordance with Civil Action No. CV 96-017-M Section V: 9 (a). During the first quarter of 1999, 99.99% of the six-minute periods were less than 20% opacity (excluding periods of monitor malfunction).

Section 1.2: Monitor Malfunctions

The following data represent periods when the Continuous Opacity Monitor (COM) on the No. 4 Recovery Boiler was not operational. The data represent periods when the boiler was in operation. The data are reported in accordance with Civil Action No. CV 96-017-M Section V: 9 (b).

Beginning Date and Time	Ending Date and Time	Duration
1/13/99 4:30 pm	1/15/99 10:36 am	42.1 Hours

Cause and Corrective Action:
During a boiler outage on January 13th, maintenance was performed on the analyzer. At this time Instrument Department personnel cleaned the internal lens of the monitor. The zero was set with a clear stack; this is standard procedure during a boiler outage because a clear stack can only be performed when the boiler is down.

The monitor passed the daily automatic zero/spans on January 14th and 15th; however, the opacity values were reading low as compared to historical readings. The analyzer was removed from the stack to perform a zero setting. When the analyzer was placed back into the stack, the alignment was adjusted and the opacity readings appeared to be within range of historical values.

Beginning Date and Time	Ending Date and Time	Duration
1/23/99 5:00 am	1/25/99 5:00 am	48.0 Hours

Cause and Corrective Action:
The monitor drifted outside of the control limits during the daily automatic zero/span causing the monitor malfunction. This was corrected by cleaning the external lens on the transmitter. Condensate had built up on the lens because the ambient air heater was not functioning properly. The heater was repaired.

Beginning Date and Time	Ending Date and Time	Duration
1/28/99 1:00 am	1/29/99 2:24 pm	37.4 Hours

Cause and Corrective Action:
During a maintenance outage on the boiler, a clear stack procedure was performed. This is standard procedure during a boiler outage because a clear stack can only be

performed when the boiler is down. When the boiler resumed operation, the monitor was reading low as compared to historical values. Therefore, No. 3 Recovery Boiler opacity monitor was transferred to the No. 4 Recovery Boiler stack, following applicable regulatory and manufacturer guidelines. The No. 3 Recovery Boiler was not in operation at the time of the switch; therefore, it was appropriate to remove that monitor from its stack. The Montana Department of Environmental Quality was informed of these events. The monitor manufacturer was called for technical support in repairing the monitor.

Beginning Date and Time	Ending Date and Time	Duration
2/4/99 11:24 am	2/4/99 11:36 am	0.2 Hours

Cause and Corrective Action:
The monitor manufacturer was inspecting the monitor.

Beginning Date and Time	Ending Date and Time	Duration
2/8/99 1:36 pm	2/8/99 1:48 pm	0.2 Hours

Cause and Corrective Action:
The monitor manufacturer was inspecting the monitor.

Beginning Date and Time	Ending Date and Time	Duration
2/8/99 3:06 pm	2/8/99 3:18 pm	0.2 Hours

Cause and Corrective Action:
The monitor manufacturer was inspecting the monitor. The manufacturer took the No. 4 Recovery Boiler opacity monitor offsite for repairs.

Beginning Date and Time	Ending Date and Time	Duration
2/15/99 6:00 am	2/15/99 6:06 am	0.1 Hours

Cause and Corrective Action:
The automatic daily zero/span lasted longer than normal.

Beginning Date and Time	Ending Date and Time	Duration
2/17/99 10:36 am	2/17/99 10:48 am	0.2 Hours

Cause and Corrective Action:
The instrument department was performing monitor maintenance.

Beginning Date and Time	Ending Date and Time	Duration
2/19/99 6:00 am	2/19/99 6:06 am	0.1 Hours

Cause and Corrective Action:
The automatic daily zero/span lasted longer than normal.

Beginning Date and Time	Ending Date and Time	Duration
2/19/99 10:06 am	2/19/99 10:12 am	0.1 Hours

Cause and Corrective Action:
The Instrument Department was performing calibrations to troubleshoot problems associated with the new Data Acquisition System (DAS).

Beginning Date and Time	Ending Date and Time	Duration
2/22/99 5:00 am	2/24/99 5:00 am	48.0 Hours

Cause and Corrective Action:
The monitor drifted outside of the control limits during the daily automatic zero/span causing the monitor malfunction. The monitor was calibrated on February 23rd, but failed the daily automatic zero/span again on February 24th. Instrument Department personnel performed additional monitor maintenance and the monitor returned to normal operation.

Beginning Date and Time	Ending Date and Time	Duration
2/24/99 6:00 am	2/24/99 6:06 am	0.1 Hours

Cause and Corrective Action:
The automatic daily zero/span lasted longer than normal causing a high opacity value.

Beginning Date and Time	Ending Date and Time	Duration
3/1/99 5:00 am	3/2/99 5:00 pm	36.0 Hours

Cause and Corrective Action:
On March 1, 1999 the No. 4 Recovery Boiler opacity monitor was received from the manufacturer after repair. Instrument department personnel removed the No. 3 Recovery Boiler opacity monitor from the No. 4 Recovery Boiler stack and placed the original monitor back in the No. 4 Recovery Boiler stack. However, the monitor still appeared to be reading lower than historical values. After unsuccessful trouble-shooting, the No. 4 opacity monitor was taken out of the stack and the No. 3 opacity monitor was placed back in the No. 4 Recovery Boiler stack. On March 2, 1999 the installed monitor failed the auto zero/span invalidating all of the data for the mill date March 1, 1999.

Beginning Date and Time	Ending Date and Time	Duration
3/2/99 5:54 am	3/2/99 6:00 am	0.1 Hours

Cause and Corrective Action:
The automatic daily zero/span lasted longer than normal.

Beginning Date and Time	Ending Date and Time	Duration
3/2/99 1:30 pm	3/2/99 1:36 pm	0.1 Hours

Cause and Corrective Action:
Instrument department was performing monitor maintenance and monitor was left in span mode for troubleshooting purposes.

Beginning Date and Time	Ending Date and Time	Duration
3/9/99 7:48 am	3/9/99 4:00 pm	8.2 Hours

Cause and Corrective Action:
The No. 3 Recovery Boiler opacity monitor was taken out of the stack (No. 4 Recovery Boiler stack) to perform a side-by-side simulated clear stack analysis with the No. 4 Recovery Boiler opacity monitor. This test verified that the repaired No. 4 Recovery Boiler was in proper working order and it was replaced on the No. 4 Recovery Boiler stack. The No. 3 Recovery Boiler opacity monitor was replaced on the No. 3 Recovery Boiler stack (source not in operation) at a later date.

Beginning Date and Time	Ending Date and Time	Duration
3/10/99 1:36 pm	3/10/99 1:42 pm	0.1 Hours

Cause and Corrective Action:
The instrument department was performing maintenance on the monitor.

Beginning Date and Time	Ending Date and Time	Duration
3/11/99 11:42 am	3/11/99 5:24 pm	5.7 Hours

Cause and Corrective Action:
The Data Acquisition System (DAS) was inadvertently logged off. Once the error was discovered, the problem was corrected and the system returned to normal operation.

Beginning Date and Time	Ending Date and Time	Duration
3/16/99 9:40 am	3/16/99 1:45 pm	4.1 Hours

Cause and Corrective Action:
An outside contractor was performing the quarterly continuous opacity monitor (COM) audits. Data collected during this time frame are invalid.

Beginning Date and Time	Ending Date and Time	Duration
3/16/99 5:24 pm	3/16/99 5:45 pm	0.4 Hours

Cause and Corrective Action:
An outside contractor was performing the quarterly continuous opacity monitor (COM) audits. Data collected during this time frame are invalid. Additional data points were collected during this time period, because there were not enough data points collected during the first set of data points.

Total Monitor Downtime 231.3 Hours

Section 1.3: Opacity Data Files

Please use the diskette in Attachment 2 to view all opacity data recorded during the quarter. The file is saved as a text file and may be viewed in most word processing, spreadsheet and database applications. The data are reported in accordance with Civil Action No. CV 96-017-M Section V: 9 (a).

Section 2: TRS and NCG Emissions

Section 2.1: Releases of Non-Condensible Gases (Duration > 15 minutes)

The following data are reported in accordance with Civil Action No. CV 96-017-M Section VII: 19 (a).

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
1/12/99	30 minutes	7:05 pm – 7:35 pm	Down	2.4	10.5	1.2
Source: Air Stripper		**Circumstances:** The No. 3 Lime Kiln was shutdown due to a scrubber failure. The NCGs, from the air stripper, that were being processed in that kiln were vented to the atmosphere until they could be processed in another kiln. At the time of the scrubber failure batch NCGs were being processed in the No. 4 Kiln, the No. 1 Kiln was down and the No. 2 Kiln was slaking. Therefore, it took some time before the stripper NCGs could be processed in the No. 2 Kiln.				

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
1/19/99	36 minutes	9:07 pm – 9:42 pm	Down	0.0	0.8	0.4
Source: Air Stripper		**Circumstances:** As part of a safety training exercise, the fire was taken out of the No. 3 Kiln and NCGs were inadvertently vented to the atmosphere.				

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
1/20/99	45 minutes	10:32 am – 10:56 am	Down	0.3	0.7	0.6
Source: Batch		**Circumstances:** A safety training exercise took place on No. 3 Lime Kiln where NCGs were being processed. During the exercise the fuel on the kiln was changed from natural gas to oil. As part of the training exercise, the fire was taken out of the kiln. At the time of the venting, No. 1 and No. 2 Lime Kilns were down for maintenance and batch NCGs were being processed in the No. 4 Lime Kiln. The air stripper NCGs were vented to the atmosphere, because it is not possible to process both air stripper and batch NCGs in one kiln.				

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
1/26/99	16 minutes	7:56 pm – 8:12 pm	Down	15.0	3.2	2.4
Source: Air Stripper		**Circumstances:** NCGs from the air stripper were being processed in the No. 4 Lime Kiln when the fire was lost in the kiln. NCGs were vented to the atmosphere until they could be processed in another kiln.				

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
1/27/99	138 minutes	6:02 pm – 8:20 pm	Down	1.8	0.7	0.0
Source: Air Stripper		**Circumstances:** During a major mill outage the off gas from the air stripper was at very low flow rate. This occurred because most of the foul condensate sources to the stripper were down. A safety mechanism has been installed to automatically discontinue flow from the stripper to the kilns during periods of low flow, as such conditions can create a potentially hazardous (explosive) environment.				

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
1/27/99 through 1/28/99	898 minutes	5:24 pm (1/27/99) through 8:21 am (1/28/99)	Down	2.2	1.0	0.0
Source: Batch		**Circumstances:** During a major mill outage a blow back occurred in the natural gas burner assembly of the No. 3 Kiln. NCGs were vented to the atmosphere because No. 1 Kiln was down, stripper NCGs were being processed in the No. 2 Kiln, the No. 4 Kiln was down, and the No. 3 Kiln had to be taken down for a safety inspection. At the time of the venting, the No. 4 Evaporators were the only source contributing to the batch NCG system.				

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
1/28/99	41 minutes	2:44 pm – 3:25 pm	Down	4.1	0.3	3.5
Source: Air Stripper		**Circumstances:** During a major mill outage the off gas from the air stripper was at very low flow rate. This occurred because most of the foul condensate sources to the stripper were down. A safety mechanism has been installed to automatically discontinue flow from the stripper to the kilns during periods of low flow, as such conditions can create a potentially hazardous (explosive) environment.				

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
1/28/99	27 minutes	3:31 pm – 3:58 pm	Down	4.0	0.3	3.7
Source: Air Stripper		**Circumstances:** During a major mill outage the off gas from the air stripper was at very low flow rate. This occurred because most of the foul condensate sources to the stripper were down. A safety mechanism has been installed to automatically discontinue flow from the stripper to the kilns during periods of low flow, as such conditions can create a potentially hazardous (explosive) environment.				

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
1/28/99	58 minutes	4:06 pm – 5:04 pm	Down	4.0	0.3	3.8
Source: Air Stripper		**Circumstances:** During a major mill outage the off gas from the air stripper was at very low flow rate. This occurred because most of the foul condensate sources to the stripper were down. A safety mechanism has been installed to automatically discontinue flow from the stripper to the kilns during periods of low flow, as such conditions can create a potentially hazardous (explosive) environment.				

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
1/28/99	59 minutes	8:52 am – 9:51 am	Down	4.2	0.5	0.1
Source: Batch		**Circumstances:** During a major mill outage batch NCGs were vented to the atmosphere because No. 1 was down, No. 2 Kiln was processing stripper NCGs, No. 3 Kiln was down for a safety inspection and No. 4 Kiln was not at a high enough temperature to process NCGs. No. 4 Kiln was brought up to sufficient temperature as soon as possible.				

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
3/4/99	18 minutes	11:19 am – 11:37 am	4.9	5.2	1.9	0.2
Source: Air Stripper		**Circumstances:** The stripper off gas flow to the kilns was lower than normal due to low foul condensate production. A safety mechanism has been installed to automatically discontinue flow from the stripper to the kilns during periods of low flow, as such conditions can create a potentially hazardous (explosive) environment.				

Note: TRS emissions are reported as an average of the 12 hours preceding the event.

In making this report, Stone is not implying that these events constitute violations.

Section 2.2: Lime Kiln TRS Exceedances

The following information is reported in accordance with Civil Action No. CV 96-017-M Section VII: 19 (b).

There were no TRS exceedances on the Lime Kilns during the quarter.

Section 3: Particulate Emissions

Section 3.1: Recovery Boilers

The following information is reported in accordance with Civil Action No. CV 96-017-M Section VI: 16.

The consent decree requires that Stone Container report the mass emissions rate for the No. 4 and No. 5 Recovery Boilers once new correlation equations have been developed pursuant to the consent decree. On February 11, 1999, the mill received letters from the United States Environmental Protection Agency and the Montana Department of Environmental Quality approving the new correlation equations for the No. 4 and No. 5 Recovery Boiler airflow rates (dscfm). As of February 12, 1999 the flow rates were calculated using these new correlation equations. The following tables present mass emissions from No. 4 and No. 5 Recovery Boilers.

No. 4 Recovery Boiler – Mass Emissions

Month	Mass Emissions (Monthly Average) (lbs TSP/day)	Mass Emissions Limit (Monthly Average) (lbs TSP/day)
January 1999	NA	928
February 1999*	595	
March 1999	397	

*Note: Values from February 1-11, 1999 were calculated using old correlation equations for air flow. (TSP=Total Suspended Particulate)

No. 5 Recovery Boiler – Mass Emissions

Month	Mass Emissions (Monthly Average) (lbs TSP/day)	Mass Emissions Limit (Monthly Average) (lbs TSP/day)
January 1999	NA	384
February 1999*	161	
March 1999	139	

*Note: Values from February 1-11, 1999 were calculated using old correlation equations for air flow. (TSP=Total Suspended Particulate)

Section 3.2: Waste Fuel Boiler

The following information is reported in accordance with Civil Action No. CV 96-017-M Section IX: 23.

There were no exceedances of the PM_{10} mass emissions limit on the Waste Fuel Boiler during the quarter.

ATTACHMENT 1: No. 4 Recovery Boiler Opacity Emissions >20%

In making this report, Stone Container is not implying that continuous opacity monitor (COM) values greater than 20% constitute violations.

Six Minute Opacity Values Greater Than 20% on No. 4 Recovery Boiler

Date	End Time*	Opacity (%)	Boiler Up?	Monitor Malf?	Cause	Efforts to Minimize Opacity (Or Corrective Action for Monitor Malfs)	Actions to Prevent Future High Opacity (1)
1/13/99	10:42	NA		✔	Instrument Department personnel interfered with the collection of data while performing routine monitor maintenance during a boiler outage.		
1/13/99	11:48	NA		✔	Instrument Department personnel interfered with the collection of data while performing routine monitor maintenance during a boiler outage.		
1/13/99	12:00	NA		✔	Instrument Department personnel interfered with the collection of data while performing routine monitor maintenance during a boiler outage.		
1/23/99	6:48	NA	✔	✔	The monitor drifted outside of the control limits during the daily automatic zero/span causing the monitor to malfunction.	This was corrected by cleaning the external lens on the transmitter. Condensate had built up on the lens because the ambient air heater was not functioning properly. The heater was repaired.	
1/23/99	10:48	NA	✔	✔	The monitor drifted outside of the control limits during the daily automatic zero/span causing the monitor to malfunction.	This was corrected by cleaning the external lens on the transmitter. Condensate had built up on the lens because the ambient air heater was not functioning properly. The heater was repaired.	
1/23/99	10:54	NA	✔	✔	The monitor drifted outside of the control limits during the daily automatic zero/span causing the monitor to malfunction.	This was corrected by cleaning the external lens on the transmitter. Condensate had built up on the lens because the ambient air heater was not functioning properly. The heater was repaired.	
1/23/99	11:18	NA	✔	✔	The monitor drifted outside of the control limits during the daily automatic zero/span causing the monitor to malfunction.	This was corrected by cleaning the external lens on the transmitter. Condensate had built up on the lens because the ambient air heater was not functioning properly. The heater was repaired.	
1/23/99	11:24	NA	✔	✔	The monitor drifted outside of the control limits during the daily automatic zero/span causing the monitor to malfunction.	This was corrected by cleaning the external lens on the transmitter. Condensate had built up on the lens because the ambient air heater was not functioning properly. The heater was repaired.	
1/23/99	11:48	NA	✔	✔	The monitor drifted outside of the control limits during the daily automatic zero/span causing the monitor to malfunction.	This was corrected by cleaning the external lens on the transmitter. Condensate had built up on the lens because the ambient air heater was not functioning properly. The heater was repaired.	

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

Malf = Malfunction

✔ =Yes

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010810

Date	Time*	Opacity (%)	Boiler Up?	Monitor Malf?	Cause	Efforts to Minimize Opacity (Or Corrective Action for Monitor Malfs)	Actions to Prevent Future High Opacity (1)
1/23/99	11:54	NA	✓	✓	The monitor drifted outside of the control limits during the daily automatic zero/span causing the monitor to malfunction.	This was corrected by cleaning the external lens on the transmitter. Condensate had built up on the lens because the ambient air heater was not functioning properly. The heater was repaired.	
1/23/99	17:06	NA	✓	✓	The monitor drifted outside of the control limits during the daily automatic zero/span causing the monitor to malfunction.	This was corrected by cleaning the external lens on the transmitter. Condensate had built up on the lens because the ambient air heater was not functioning properly. The heater was repaired.	
1/26/99	14:06	20.1	✓		The boiler had to be taken down to repair a tube leak. It is likely that the high opacity value resulted as the result of isolating the ESP during shutdown.		
1/26/99	20:00	NA		✓	Instrument Department personnel performed monitor maintenance during the boiler outage. Data collected during this time period are not valid.		
1/27/99	13:00	NA		✓	Instrument Department personnel performed monitor maintenance during the boiler outage. Data collected during this time period are not valid.		
1/27/99	14:00	NA		✓	Instrument Department personnel performed monitor maintenance during the boiler outage. Data collected during this time period are not valid.		
1/27/99	14:06	NA		✓	Instrument Department personnel performed monitor maintenance during the boiler outage. Data collected during this time period are not valid.		
1/27/99	14:12	NA		✓	Instrument Department personnel performed monitor maintenance during the boiler outage. Data collected during this time period are not valid.		
1/29/99	13:00	NA	✓	✓	The high opacity occurred when the malfunctioning monitor was replaced with a monitor that functioned properly.		
1/29/99	13:06	NA	✓	✓	The high opacity occurred when the malfunctioning monitor was replaced with a monitor that functioned properly.		

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

Malf = Malfunction

✓ = Yes

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010811

Date	Time*	Opacity (%)	Boiler Up?	Monitor Malf?	Cause	Efforts to Minimize Opacity (Or Corrective Action for Monitor Malfs)	Actions to Prevent Future High Opacity (1)
1/29/99	13:24	NA	✓	✓	The high opacity occurred when the malfunctioning monitor was replaced with a monitor that functioned properly.		
1/29/99	13:30	NA	✓	✓	The high opacity occurred when the malfunctioning monitor was replaced with a monitor that functioned properly.		
1/29/99	13:36	NA	✓	✓	The high opacity occurred when the malfunctioning monitor was replaced with a monitor that functioned properly.		
1/29/99	13:42	NA	✓	✓	The high opacity occurred when the malfunctioning monitor was replaced with a monitor that functioned properly.		
1/29/99	13:48	NA	✓	✓	The high opacity occurred when the malfunctioning monitor was replaced with a monitor that functioned properly.		
1/29/99	13:54	NA	✓	✓	The high opacity occurred when the malfunctioning monitor was replaced with a monitor that functioned properly.		
1/29/99	14:00	NA	✓	✓	The high opacity occurred when the malfunctioning monitor was replaced with a monitor that functioned properly.		
1/29/99	14:06	NA	✓	✓	The high opacity occurred when the malfunctioning monitor was replaced with a monitor that functioned properly.		
1/29/99	14:12	NA	✓	✓	The high opacity occurred when the malfunctioning monitor was replaced with a monitor that functioned properly.		
1/29/99	14:18	NA	✓	✓	The high opacity occurred when the malfunctioning monitor was replaced with a monitor that functioned properly.		

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

Malf = Malfunction

✓ =Yes

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010812

Date	Time*	Opacity (%)	Boiler Up?	Monitor Malf?	Cause	Efforts to Minimize Opacity (Or Corrective Action for Monitor Malfs)	Actions to Prevent Future High Opacity (1)
1/29/99	14:24	NA	✓	✓	The high opacity occurred when the malfunctioning monitor was replaced with a monitor that functioned properly.		
2/4/99	11:30	NA	✓	✓	The manufacturer of the monitor was performing an inspection to determine the cause of the malfunction. High opacity values occurred as a result of inspection activities.		
2/4/99	11:36	NA	✓	✓	The manufacturer of the monitor was performing an inspection to determine the cause of the malfunction. High opacity values occurred as a result of inspection activities.		
2/8/99	13:42	NA	✓	✓	The manufacturer of the monitor was performing an inspection to determine the cause of the malfunction. High opacity values occurred as a result of inspection activities.		
2/8/99	13:48	NA	✓	✓	The manufacturer of the monitor was performing an inspection to determine the cause of the malfunction. High opacity values occurred as a result of inspection activities.		
2/8/99	15:12	NA	✓	✓	The manufacturer of the monitor was performing an inspection to determine the cause of the malfunction. High opacity values occurred as a result of inspection activities.		
2/8/99	15:18	NA	✓	✓	The manufacturer of the monitor was performing an inspection to determine the cause of the malfunction. High opacity values occurred as a result of inspection activities.		
2/15/99	6:06	NA	✓	✓	The automatic daily zero/span lasted longer than normal; causing a high opacity value.		
2/17/99	10:42	NA	✓	✓	The Instrument Department was performing monitor maintenance.		
2/17/99	10:48	NA	✓	✓	The Instrument Department was performing monitor maintenance.		

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

Malf = Malfunction

✓ =Yes

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010813

Date	Time*	Opacity (%)	Boiler Up?	Monitor Malf?	Cause	Efforts to Minimize Opacity (Or Corrective Action for Monitor Malfs)	Actions to Prevent Future High Opacity (1)
2/19/99	6:00	NA	✓	✓	The automatic daily zero/span lasted longer than normal causing a high opacity value.		
2/19/99	10:06	NA	✓	✓	The Instrument Department was performing calibrations to troubleshoot problems associated with the new data acquisition system (DAS).		
2/24/99	6:06	NA	✓	✓	The Instrument Department was performing calibrations to troubleshoot problems associated with the new data acquisition system (DAS).		
3/1/99	9:18	NA	✓	✓	Instrument Department personnel installed the repaired monitor; causing the high opacity value.		
3/1/99	9:24	NA	✓	✓	Instrument Department personnel installed the repaired monitor; causing the high opacity value.		
3/1/99	12:48	NA	✓	✓	The Instrument Department was performing monitor maintenance.		
3/1/99	16:24	NA	✓	✓	The Instrument Department removed the repaired monitor because it was not functioning properly. The monitor was replaced with one that functioned properly.		
3/1/99	16:36	NA	✓	✓	The Instrument Department removed the repaired monitor because it was not functioning properly. The monitor was replaced with one that functioned properly.		
3/2/99	6:00	NA	✓	✓	The automatic daily zero/span lasted longer than normal; causing a high opacity value.		
3/2/99	13:36	NA	✓	✓	The Instrument Department was performing monitor maintenance and the monitor was left in span mode for troubleshooting purposes.		

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

Malf = Malfunction

✓ =Yes

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010814

Date	Time*	Opacity (%)	Boiler Up?	Monitor Malf?	Cause	Efforts to Minimize Opacity (Or Corrective Action for Monitor Malfs)	Actions to Prevent Future High Opacity (1)
3/3/99	0:12	20.2	✓		Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
3/10/99	13:42	NA	✓	✓	The Instrument Department was performing maintenance on the monitor.		
3/16/99	9:48	NA	✓	✓	COM audit interfered with data collection		
3/16/99	9:54	NA	✓	✓	COM audit interfered with data collection		
3/16/99	10:00	NA	✓	✓	COM audit interfered with data collection		
3/16/99	10:06	NA	✓	✓	COM audit interfered with data collection		
3/16/99	10:12	NA	✓	✓	COM audit interfered with data collection		
3/16/99	10:18	NA	✓	✓	COM audit interfered with data collection		
3/16/99	10:24	NA	✓	✓	COM audit interfered with data collection		
3/16/99	10:30	NA	✓	✓	COM audit interfered with data collection		

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

Malf = Malfunction

✓ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010815

Date	[redacted]d Time*	Opacity (%)	Boiler Up?	Monitor Malf?	Cause [redacted]	Efforts to Minimize Opacity (Or Corrective Action for Monitor Malfs)	Actions t[redacted]event Future [redacted] Opacity (1)
3/16/99	10:36	NA	✓	✓	COM audit interfered with data collection		
3/16/99	10:42	NA	✓	✓	COM audit interfered with data collection		
3/16/99	10:48	NA	✓	✓	COM audit interfered with data collection		
3/16/99	10:54	NA	✓	✓	COM audit interfered with data collection		
3/16/99	11:00	NA	✓	✓	COM audit interfered with data collection		
3/16/99	11:06	NA	✓	✓	COM audit interfered with data collection		
3/16/99	11:12	NA	✓	✓	COM audit interfered with data collection		
3/16/99	11:18	NA	✓	✓	COM audit interfered with data collection		
3/16/99	11:24	NA	✓	✓	COM audit interfered with data collection		
3/16/99	11:30	NA	✓	✓	COM audit interfered with data collection		

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

Malf = Malfunction

✓ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010816

Date	Time*	Opacity (%)	Boiler Up?	Monitor Malf?	Cause	Efforts to Minimize Opacity (Or Corrective Action for Monitor Malfs)	Actions to Prevent Future Ill Opacity (1)
3/16/99	11:36	NA	✓	✓	COM audit interfered with data collection		
3/16/99	11:42	NA	✓	✓	COM audit interfered with data collection		
3/16/99	11:48	NA	✓	✓	COM audit interfered with data collection		
3/16/99	11:54	NA	✓	✓	COM audit interfered with data collection		
3/16/99	12:00	NA	✓	✓	COM audit interfered with data collection		
3/16/99	13:18	NA	✓	✓	COM audit interfered with data collection		
3/16/99	13:24	NA	✓	✓	COM audit interfered with data collection		
3/16/99	13:30	NA	✓	✓	COM audit interfered with data collection		
3/16/99	13:36	NA	✓	✓	COM audit interfered with data collection		
3/16/99	13:42	NA	✓	✓	COM audit interfered with data collection		

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

Malf = Malfunction

✓ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010817

Date	Time*	Opacity (%)	Boiler Up?	Monitor Malf?	Cause	Efforts to Minimize Opacity (Or Corrective Action for Monitor Malfs)	Actions to Prevent Future Opacity (1)
3/16/99	17:30	NA	✓	✓	COM audit interfered with data collection		
3/16/99	17:36	NA	✓	✓	COM audit interfered with data collection		
3/16/99	17:42	NA	✓	✓	COM audit interfered with data collection		
3/16/99	17:48	NA	✓	✓	COM audit interfered with data collection		
3/19/99	22:42	23.0	✓	[ ]	The transformer protection system shut down the South C field of the ESP (as it is designed to due when under current conditions occur).	The operator restarted the system and the boiler returned to normal operations without further opacity excursions.	
3/25/99	14:54	NA	[ ]	✓	The Instrument Department was performing a clear stack calibration on the monitor. Data collected during this time frame is invalid.		
3/25/99	15:24	NA	[ ]	✓	The Instrument Department was performing a clear stack calibration on the monitor. Data collected during this time frame is invalid.		

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

Malf = Malfunction

✓ =Yes

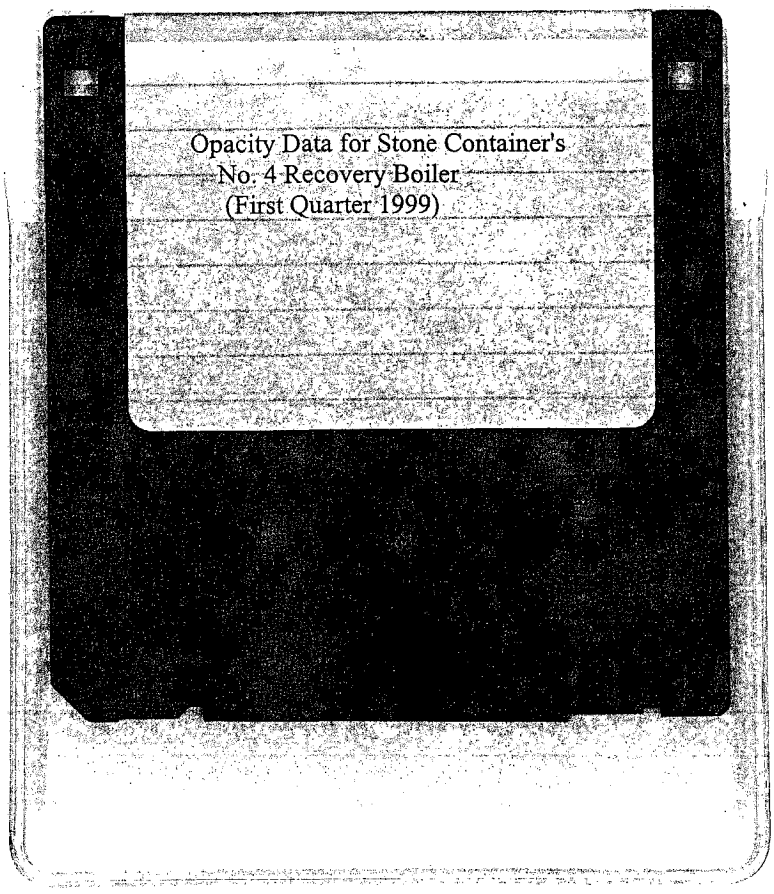
(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010818

ATTACHMENT 2: No. 4 Recovery Boiler Opacity Data Diskette

The following individuals will receive the data diskette:

Wilson, MT DEQ
Wahl, U.S. EPA, Region VIII
Chief, U.S. DOJ
Geist, MT CHEER
Tebbutt, Western Env. Law Center



The enclosed diskette includes opacity data from Stone Container's No. 4 Recovery Boiler for the first quarter of 1999. The data can be found in a text file named 4RBQTR1. The text file is tab delimited and can be opened in any word processing, spreadsheet or database application, provided that application can support the amount of data in the file.

P 168 580 213

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse) EER

Sent to DAJ -Chief	
Street and No.	
P.O., State and ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

★ U.S.G.P.O. 1984-446-014

PS Form 3800, Feb. 1982

E00010820

Form 3811, July 1983

DOMESTIC RETURN RECEIPT

[illegible] TO space on the reverse side. Failure to do this will prevent this card from being returned to you. **The return receipt fee will provide you the name of the person delivered to and the date of delivery.** For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. ☒ Show to whom, date and address of delivery.

2. ☐ Restricted Delivery.

3. Article Addressed to:

Katherine Schmidt
US DOJ
PO Box 7611, Ben Franklin Station
Washington DC 20044

4. Type of Service:

☐ Registered ☐ [illegible]
☒ Certified ☐ COD
☐ Express Mail

Article Number

[illegible]

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature — Addressee

X [illegible]

6. Signature — Agent

X [illegible]

7. Date of Delivery

2-2-99

8. Addressee's Address *(ONLY if requested and fee paid)*

EER

[redacted]

[redacted]

E00010821

UNITED STATES POSTAL SERVICE

OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

RETURN TO

U.S. MAIL

PENALTY FOR PRIVATE USE, $300

Stone Container Corporation

Containerboard and Paper Division

Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707

E00010822

4Q-1998

Stone Container Corporation
Containerboard and Paper Division
Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707

Missoula Mill

406.626.4451
406.626.5988 Fax

January 29, 1999

Chief
c/o Katherine Schmidt (DOJ-Denver)
Environmental & Natural Resources
U.S. Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, D.C. 20044
Re: DOJ #90-5-2-1-1975

Dear Chief:

Enclosed is an addendum, providing data from the fourth quarter of 1998, for Stone Container's Missoula Mill. This report provides the data required by Civil Action No. CV 96-017-M.

If you have any questions or comments concerning this report, please call me at 406/626-4451.

Sincerely,

Lisa Philips

Lisa Philips
Environmental Engineer

cc: Tebbutt, Western Environmental Law Center
Scott

ADDENDUM

Re: United States of America,
Plaintiff,
and Montana Coalition for Health,
Environmental and Economic Rights, Inc.,
Intervenors,
v.
Stone Container Corporation,
Defendant
Civil No. CV 96-017-M
DOJ # 90-5-2-1-1975

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Ed Scott
Director of Environmental Affairs

The following data are reported for the Fourth Quarter of 1998 in accordance with Civil Action No. CV 96-017-M:

Section 1: No. 4 Recovery Boiler Emissions

- 1.1: Opacity Values Greater Than 20%
- 1.2: Monitor Malfunctions
- 1.3: Opacity Data Files

Section 2: TRS and NCG Emissions

- 2.1: Releases of NCGs
- 2.2: Lime Kiln TRS Exceedances

Section 3: Particulate Emissions

- 3.1: Recovery Boilers
- 3.2: Waste Fuel Boiler

Attachment 1: No. 4 Recovery Boiler Opacity Emissions Greater Than 20%
Attachment 2: No. 4 Recovery Boiler Opacity Data Diskette

Section 1: No. 4 Recovery Boiler Emissions

Section 1.1: Opacity Values Greater Than 20%

Please see data reported in Attachment 1. The data are reported in accordance with Civil Action No. CV 96-017-M Section V: 9 (a). During the fourth quarter of 1998, 99.1% of the six-minute periods were less than 20% opacity.

Section 1.2: Monitor Malfunctions

The following data represent periods when the Continuous Opacity Monitor (COM) on the No. 4 Recovery Boiler was not operational. The data are reported in accordance with Civil Action No. CV 96-017-M Section V: 9 (b).

Beginning Date and Time	Ending Date and Time	Duration
10/1/98 11:33 am	10/1/98 1:48 pm	2.3 Hours

Cause and Corrective Action:
A project to upgrade the Honeywell data acquisition system (DAS) prevented the collection of opacity data.

Beginning Date and Time	Ending Date and Time	Duration
12/29/98 1:50 pm	12/30/98 10:35 am	20.7 Hours

Cause and Corrective Action:
Bighorn Environmental performed the quarterly continuous opacity monitor (COM) audit on December 29, 1998. During the audit a wire was loosened when Bighorn opened the transceiver to insert the audit jig. The loose wire caused a lamp failure and the COM did not pass the audit. The wire was repaired and the monitor passed the audit on the following day.

Total Monitor Downtime 23.0 Hours

Section 1.3: Opacity Data Files

Please use the diskette in Attachment 2 to view all opacity data recorded during the quarter. The file is saved as a text file and may be viewed in most word processing, spreadsheet and database applications. The data are reported in accordance with Civil Action No. CV 96-017-M Section V: 9 (a).

Section 2: TRS and NCG Emissions

Section 2.1: Releases of Non-Condensible Gases (Duration > 15 minutes)

The following data are reported in accordance with Civil Action No. CV 96-017-M Section VII: 19 (a).

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
12/22/98	45 minutes	10:12 pm – 10:57 pm	2.5	15.9	0.1	0.3
Circumstances		Batch non-condensible gases (NCGs) were being processed in the No. 4 Lime Kiln when the fire was lost in that kiln. It took approximately 45 minutes to get a fire back in the kiln and the NCGs were vented to the atmosphere during that time period.				

Note: TRS emissions are reported as an average of the 12 hours preceding the event.

Section 2.2: Lime Kiln TRS Exceedances

The following information is reported in accordance with Civil Action No. CV 96-017-M Section VII: 19 (b).

There were no TRS exceedances on the Lime Kilns during the quarter.

Section 3: Particulate Emissions

Section 3.1: Recovery Boilers

The following information is reported in accordance with Civil Action No. CV 96-017-M Section VI: 16.

The consent decree requires that Stone Container report the mass emissions rate for the No. 4 and No. 5 Recovery Boilers once new correlation equations have been developed pursuant to the consent decree. An outside contractor has performed the appropriate source tests to determine stack gas flow as a function of boiler air flow, as required by Attachment A to the consent decree. The results from these tests and the resulting proposed, revised correlation equations have been submitted to the Environmental Protection Agency (EPA) for approval. Stone Container is awaiting a response.

Section 3.2: Waste Fuel Boiler

The following information is reported in accordance with Civil Action No. CV 96-017-M Section IX: 23.

There were no exceedances of the PM_{10} mass emissions limit on the Waste Fuel Boiler during the quarter.

ATTACHMENT 1: No. 4 Recovery Boiler Opacity Emissions >20%

In making this report, Stone Container is not implying that continuous opacity monitor (COM) values greater than 20% constitute violations.

Six Minute Opacity Values Greater Than 20% on No. 4 Recovery Boiler

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
10/1/98	13:54	20.9	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	14:00	20.4	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	14:06	21.3	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	17:48	20.3	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	18:00	24.8	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	18:06	22.6	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	18:12	24.5	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	18:18	24.1	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	18:24	24.8	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010830

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
10/1/98	18:30	22.5	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	18:36	27.6	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	18:42	21.1	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	18:48	20.8	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	18:54	26.2	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	19:00	26.1	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	19:06	23.9	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	19:12	25.3	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	19:18	21.2	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	19:24	20.2	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010831

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
10/1/98	19:30	25.0	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	19:42	20.7	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	19:48	22.4	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	19:54	22.9	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	20:06	32.2	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	20:12	23.1	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	20:18	20.8	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	20:24	22.4	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	20:30	21.7	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	20:48	20.7	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010832

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Future Il[illegible] Opacity (1)
10/1/98	20:54	23.5	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	21:06	20.6	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	21:36	20.7	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	21:48	25.1	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	21:54	27.2	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	22:00	25.3	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	22:12	20.2	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	22:18	21.3	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	22:24	29.2	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	22:30	25.8	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010833

Date	End [illegible]me*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to [illegible]vent Future Hi[illegible]pacity (1)
10/1/98	22:36	20.7	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	22:42	22.0	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	22:48	21.0	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	22:54	27.2	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	23:00	21.5	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	23:06	22.3	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	23:24	21.3	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	23:42	23.3	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/1/98	23:48	21.6	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	0:06	20.4	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010834

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
10/2/98	0:18	20.1	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	0:24	22.6	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	0:42	23.7	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	0:48	23.2	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	1:18	20.2	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	1:36	20.1	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	2:36	22.4	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	2:42	21.2	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	3:06	22.0	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	3:12	23.9	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010835

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
10/2/98	3:18	21.1	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	3:24	21.5	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	3:30	27.2	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	3:36	24.0	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	3:42	23.7	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	3:48	24.3	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	3:54	23.8	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	4:00	21.1	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	4:06	26.2	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	4:12	23.9	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010836

Date	End [illegible]e*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to [illegible]vent Future Hi[illegible]pacity (1)
10/2/98	4:18	20.7	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	4:24	23.7	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	4:30	24.0	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	4:36	22.1	☑	☐	It is believed that a broken wire in the high tension cabinet caused the D field of the ESP to malfunction.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	5:00	20.2	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	5:18	20.9	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	5:24	21.3	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	5:30	22.9	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	5:42	20.3	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	5:48	22.4	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010837

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
10/2/98	5:54	24.3	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	6:00	22.1	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	6:06	20.5	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	6:12	23.5	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	6:24	22.8	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	6:30	21.5	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	7:48	21.3	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	8:06	20.8	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	9:06	21.7	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	9:24	20.6	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010838

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
10/2/98	13:00	22.1	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	15:18	21.6	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	16:06	21.6	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	18:18	23.1	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	22:36	20.4	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/2/98	22:54	20.5	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	0:00	21.1	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	1:24	21.3	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	2:00	24.7	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	2:06	28.2	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010839

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
10/3/98	2:12	26.2	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	2:18	20.4	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	2:24	20.6	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	2:30	21.6	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	2:36	23.2	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	2:42	22.7	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	2:48	21.9	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	2:54	24.4	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	3:06	21.6	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	3:18	27.1	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010840

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
10/3/98	3:24	25.2	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	3:30	21.3	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	3:36	22.4	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	3:42	34.7	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	3:48	25.4	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	3:54	25.8	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	4:00	22.7	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	4:06	28.0	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	4:12	22.6	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	4:24	20.9	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010841

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
10/3/98	4:30	22.1	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	4:36	21.3	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	4:54	24.0	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	5:12	22.0	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	5:18	20.2	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	5:36	29.4	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	5:48	20.6	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	5:54	20.8	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	6:00	21.1	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	6:06	25.3	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010842

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
10/3/98	6:18	22.2	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	7:36	21.6	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	7:48	26.6	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	8:36	21.1	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	9:12	20.9	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	11:24	20.2	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	11:30	25.8	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	11:36	31.1	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	11:42	21.3	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	11:54	20.7	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010843

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
10/3/98	12:54	20.5	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	13:30	22.8	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	14:12	20.8	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	16:12	20.5	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	18:36	21.0	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	20:12	25.1	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/3/98	22:48	22.6	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/4/98	7:42	20.4	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/4/98	9:48	23.4	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/4/98	10:18	21.3	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010844

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
10/4/98	12:06	22.7	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/4/98	13:54	20.2	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/4/98	14:30	22.5	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/4/98	14:36	24.8	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/5/98	4:06	21.8	☑	☐	The operators, while trying to control high sulfur dioxide emissions, increased air flow, which decreases ESP efficiency.	After unsuccessful troubleshooting efforts, the boiler was taken off liquor for inspection of the ESP. The broken wire was discovered and replaced during the inspection.	
10/5/98	5:00	24.7	☑	☐	Salt cake was entrained in stack air when the doors to the ESP were opened during a maintnenance outage on the precipitator.	Maintenance was performed on the ESP during the outage. Entraining of salt cake took place while the boiler was off liquor.	
10/5/98	5:06	30.6	☑	☐	Salt cake was entrained in stack air when the doors to the ESP were opened during a maintnenance outage on the precipitator.	Maintenance was performed on the ESP during the outage. Entraining of salt cake took place while the boiler was off liquor.	
10/5/98	5:12	25.1	☑	☐	Salt cake was entrained in stack air when the doors to the ESP were opened during a maintnenance outage on the precipitator.	Maintenance was performed on the ESP during the outage. Entraining of salt cake took place while the boiler was off liquor.	
10/27/98	16:24	39.3	☐	☐	The source was down for a mill curtailment. The high opacity occurred while water washing the ESP.		
10/27/98	16:30	26.6	☐	☐	The source was down for a mill curtailment. The high opacity occurred while water washing the ESP.		

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010845

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
10/27/98	16:36	22.1	☐	☐	The source was down for a mill curtailment. The high opacity occurred while water washing the ESP.		
10/27/98	17:00	30.2	☐	☐	The source was down for a mill curtailment. The high opacity occurred while water washing the ESP.		
10/27/98	17:06	25.7	☐	☐	The source was down for a mill curtailment. The high opacity occurred while water washing the ESP.		
10/27/98	17:12	22.1	☐	☐	The source was down for a mill curtailment. The high opacity occurred while water washing the ESP.		
10/27/98	17:18	20.9	☐	☐	The source was down for a mill curtailment. The high opacity occurred while water washing the ESP.		
10/27/98	17:30	50.8	☐	☐	The source was down for a mill curtailment. The high opacity occurred while water washing the ESP.		
10/27/98	17:36	23.5	☐	☐	The source was down for a mill curtailment. The high opacity occurred while water washing the ESP.		
10/27/98	17:48	27.3	☐	☐	The source was down for a mill curtailment. The high opacity occurred while water washing the ESP.		
10/27/98	17:54	38.0	☐	☐	The source was down for a mill curtailment. The high opacity occurred while water washing the ESP.		
10/27/98	18:00	74.8	☐	☐	The source was down for a mill curtailment. The high opacity occurred while water washing the ESP.		

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010846

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
10/27/98	18:06	74.8	☐	☐	The source was down for a mill curtailment. The high opacity occurred while water washing the ESP.		
10/27/98	18:12	74.7	☐	☐	The source was down for a mill curtailment. The high opacity occurred while water washing the ESP.		
10/27/98	18:18	74.1	☐	☐	The source was down for a mill curtailment. The high opacity occurred while water washing the ESP.		
10/27/98	18:24	73.6	☐	☐	The source was down for a mill curtailment. The high opacity occurred while water washing the ESP.		
10/29/98	5:00	23.7	☐	☐	The source was down for a mill curtailment.		
10/29/98	5:12	24.3	☐	☐	The source was down for a mill curtailment.		
11/12/98	16:36	27.1	☐	☐	The source was down for a mill curtailment.		
11/12/98	16:42	27.3	☐	☐	The source was down for a mill curtailment.		
11/12/98	16:54	24.1	☐	☐	The source was down for a mill curtailment.		
11/12/98	18:42	21.0	☐	☐	The source was down for a mill curtailment.		

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010847

Date	End [illegible]e*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to [illegible] Future Hi[illegible]pacity (1)
11/13/98	20:12	34.6	☐	☐	The source was down for a mill curtailment.		
12/17/98	12:36	20.4	☑	☐	Instrument department personnel performed filter checks on the COM.		
12/29/98	14:12	NA	☑	☑	Com audit interfered with data collection		
12/29/98	14:18	NA	☑	☑	Com audit interfered with data collection		
12/29/98	14:24	NA	☑	☑	Com audit interfered with data collection		
12/29/98	14:30	NA	☑	☑	Com audit interfered with data collection		
12/29/98	14:36	NA	☑	☑	Com audit interfered with data collection		
12/29/98	14:42	NA	☑	☑	Com audit interfered with data collection		
12/30/98	9:42	NA	☑	☑	Com audit interfered with data collection		
12/30/98	9:48	NA	☑	☑	Com audit interfered with data collection		

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

☑ *=Yes*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010848

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
12/30/98	9:54	NA	☑	☑	Com audit interfered with data collection		
12/30/98	10:00	NA	☑	☑	Com audit interfered with data collection		
12/30/98	10:06	NA	☑	☑	Com audit interfered with data collection		
12/30/98	10:12	NA	☑	☑	Com audit interfered with data collection		
12/30/98	10:18	NA	☑	☑	Com audit interfered with data collection		
12/30/98	10:24	NA	☑	☑	Com audit interfered with data collection		
12/30/98	10:30	NA	☑	☑	Com audit interfered with data collection		
12/30/98	10:36	NA	☑	☑	Com audit interfered with data collection		
12/30/98	10:42	NA	☑	☑	Com audit interfered with data collection		

NA = Not Applicable

ESP = Electrostatic Precipitator

COM = Continuous Opacity Monitor

**Note: End of six minute opacity reading*

☑ *=Yes*

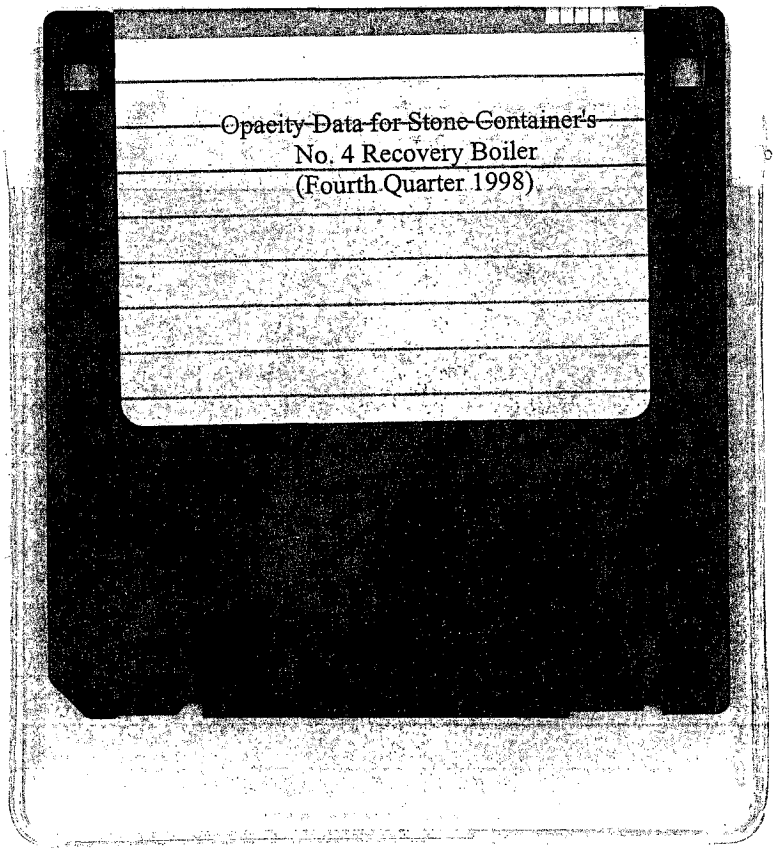
(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010849

ATTACHMENT 2: No. 4 Recovery Boiler Opacity Data Diskette

The following individuals will receive the data diskette:

Wilson, MT DEQ
Wahl, U.S. EPA, Region VIII
Chief, U.S. DOJ
Geist, MT CHEER
Tebbutt, Western Env. Law Center



The enclosed diskette includes opacity data from Stone Container's No. 4 Recovery Boiler for the fourth quarter of 1998. The data can be found in a text file named 4RBQTR4. The text file is tab delimited and can be opened in any word processing, spreadsheet or database application, provided that application can support the amount of data in the file.

PS Form 3811, July 1983

DOMESTIC RETURN RECEIPT

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. ☒ Show to whom, date and address of delivery.

2. ☐ Restricted Delivery.

3. Article Addressed to:

Darrell Geist
Montana CHEER
PO Box 7941
Missoula MT 59807

4. Type of Service:

☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number

P 168 [illegible]

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee

X

6. Signature – Agent

X [signature]

7. Date of Delivery

11/9/98

8. Addressee's Address *(ONLY if requested and fee paid)*

E00010851

UNITED STATES POSTAL SERVICE

OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

RETURN TO

U.S. MAIL

PENALTY FOR PRIVATE USE, $300

Lisa Philips
(Name of Sender)

Stone Cont. Corp. PO Box 4707
(No. and Street, Apt., Suite, P.O. Box or R.D. No.)

Missoula MT 59806
(City, State, and ZIP Code)

E00010852

PS Form 3811, July 1983

DOMESTIC RETURN RECEIPT

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. ☐ Show to whom, date and address of delivery.

2. ☐ Restricted Delivery.

3. Article Addressed to:

Chief
c/o Katherine Schmidt
Environmental [illegible]
US Department of Justice
PO Box 7611, Ben Franklin Station
Washington, DC 20044

4. Type of Service:

☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee

X

6. Signature – Agent

X Carla Fent

7. Date of Delivery

11/4/91

8. Addressee's Address *(ONLY if requested and fee paid)*

E00010853

UNITED STATES POSTAL SERVICE

OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

U.S.MAIL

PENALTY FOR PRIVATE USE, $300

RETURN TO

Lisa Philips
(Name of Sender)

Stone Container
(No. and Street, Apt., Suite, P.O. Box or R.D. No.)

PO Box 4707
(City, State, and ZIP Code)

Missoula, MT 59806

E00010854

PS Form 3811, July 1983

DOMESTIC RETURN RECEIPT

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. **The return receipt fee will provide you the name of the person delivered to and the date of delivery.** For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. ☐ Show to whom, date and address of delivery.

2. ☐ Restricted Delivery.

3. Article Addressed to:

Betsy Wahl
Air Quality Program
US EPA, Region VIII
301 S. Park, Drawer 10096
Helena, MT 59626

4. Type of Service:

☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature – Addressee

X

6. Signature – Agent

X Shawna Bush

7. Date of Delivery

OCT 30 1998

8. Addressee's Address *(ONLY if requested and fee paid)*

E00010855

UNITED STATES POSTAL SERVICE

OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- **Complete items 1, 2, 3, and 4 on the reverse.**
- **Attach to front of article if space permits, otherwise affix to back of article.**
- **Endorse article "Return Receipt Requested" adjacent to number.**

U.S.MAIL

PENALTY FOR PRIVATE USE, $300

RETURN TO

Lisa Philips
(Name of Sender)

Stone Container
(No. and Street, Apt., Suite, P.O. Box or R.D. No.)

PO Box 4707
(City, State, and ZIP Code)

Missoula, MT 59806

E00010856

3Q-1998

ADDENDUM

Re: United States of America,
Plaintiff,
and Montana Coalition for Health,
Environmental and Economic Rights, Inc.,
Intervenors,
v.
Stone Container Corporation,
Defendant
Civil No. CV 96-017-M
DOJ # 90-5-2-1-1975

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Ed Scott
Director of Environmental Affairs

The following data are reported for the Third Quarter of 1998 in accordance with Civil Action No. CV 96-017-M:

Section 1: No. 4 Recovery Boiler Emissions

- 1.1: Opacity Values Greater Than 20%
- 1.2: Monitor Malfunctions
- 1.3: Opacity Data Files

Section 2: TRS and NCG Emissions

- 2.1: Releases of NCGs
- 2.2: Lime Kiln TRS Exceedances

Section 3: Particulate Emissions

- 3.1: Recovery Boilers
- 3.2: Waste Fuel Boiler

Attachment 1: No. 4 Recovery Boiler Opacity Emissions Greater Than 20%
Attachment 2: No. 4 Recovery Boiler Opacity Data Diskette

Section 1: No. 4 Recovery Boiler Emissions

Section 1.1: Opacity Values Greater Than 20%

Please see data reported in Attachment 1. The data are reported in accordance with Civil Action No. CV 96-017-M Section V: 9 (a). During the third quarter of 1998, 99.0% of the six minute periods were less than 20%.

Section 1.2: Monitor Malfunctions

The following data represent periods when the Continuous Opacity Monitor (COM) on the No. 4 Recovery Boiler was not operational. The data are reported in accordance with Civil Action No. CV 96-017-M Section V: 9 (b).

Beginning Date and Time	Ending Date and Time	Duration
9/1/98 5:36 am	9/1/98 5:42 am	0.1 Hours

Cause and Corrective Action:
The daily automatic zero/span lasted longer than normal. The monitor was unable to collect stack opacity data during this time period.

Beginning Date and Time	Ending Date and Time	Duration
9/1/98 9:50 am	9/1/98 10:35 am	0.8 Hours

Cause and Corrective Action:
Bighorn Environmental performed the quarterly continuous opacity monitor (COM) audit. Stack opacity data cannot be collected while the COM audit is being performed.

Total Monitor Downtime 0.9 Hours

Section 1.3: Opacity Data Files

Please use the diskette in Attachment 2 to view all opacity data recorded during the quarter. The file is saved as a text file and may be viewed in most word processing, spreadsheet and database applications. The data are reported in accordance with Civil Action No. CV 96-017-M Section V: 9 (a).

Section 2: TRS and NCG Emissions

Section 2.1: Releases of Non-Condensible Gases (Duration > 15 minutes)

The following data are reported in accordance with Civil Action No. CV 96-017-M Section VII: 19 (a).

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
8/24/98	20 minutes	7:00 pm – 7:20 pm	3.5	1.3	0.1	0.4
Circumstances		Problems were experienced while switching NCGs from #3 Kiln to #4 Kiln. Venting of NCGs occurred while fixing the problem.				

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
9/1/98	2 hours	9:50 am – 11:50 am	3.0	5.1	1.3	1.9
Circumstances		Venting of NCGs from No. 5 Evaporators and No. 2 Concentrator occurred because the flow was too low to be processed in the kilns.				

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
9/23/98	3.75 hours	5:30 am – 9:15 am	11.7	0.8	1.8	1.6
Circumstances		The accumulator system was locked out to replace a valve. To provide sufficient safety for the employees working on the system, the NCGs from No. 1 & 2 Evaporators were isolated from normal flow to the lime kilns. Consequently, NCGs were vented to the atmosphere because they could not be processed in the kilns.				

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
9/23/98	14.5 hours	4:30 am – 7:00 pm	12.4	0.9	1.9	1.6
Circumstances		The accumulator system was locked out to replace a valve. To provide sufficient safety for the employees working on the system, the NCGs from No. 4 Evaporators were isolated from normal flow to the lime kilns. Consequently, NCGs were vented to the atmosphere because they could not be processed in the kilns.				

Note: TRS emissions are reported as an average of the 12 hours preceding the event.

Section 2.2: Lime Kiln TRS Exceedances

The following information is reported in accordance with Civil Action No. CV 96-017-M Section VII: 19 (b).

There were no TRS exceedances on the Lime Kilns during the quarter.

Section 3: Particulate Emissions

Section 3.1: Recovery Boilers

The following information is reported in accordance with Civil Action No. CV 96-017-M Section VI: 16.

The consent decree requires that Stone Container report the mass emissions rate for the No. 4 and 5 Recovery Boilers once new correlation equations have been developed pursuant to the consent decree. An outside contractor has performed the appropriate source tests to determine stack gas flow as a function of boiler air flow, as required by Attachment A to the consent decree. The results from these tests and the resulting proposed, revised correlation equations have been submitted to the EPA for approval. Stone Container is awaiting a response.

Section 3.2: Waste Fuel Boiler

The following information is reported in accordance with Civil Action No. CV 96-017-M Section IX: 23.

There were no exceedances of the PM_{10} mass emissions limit on the Waste Fuel Boiler during the quarter.

ATTACHMENT 1: No. 4 Recovery Boiler Opacity Emissions >20%

In making this report, Stone Container is not implying that continuous opacity monitor (COM) values greater than 20% constitute violations.

Six Minute Opacity Values Greater Than 20% on No. 4 Recovery Boiler

Date	*End Time**	*Opacity (%)*	*Boiler Operating?*	*Monitor Malfunction?*	*Cause*	*Efforts to Minimize Opacity*	*Actions to Prevent Future High Opacity (1)*
7/1/98	15:18	21.3	☑	☐	One half of the electrostatic precipitator was not active during startup after a maintenance outage.	The system returned to normal operation.	
7/8/98	11:48	27.5	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	11:54	26.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	12:00	27.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	12:06	27.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	12:12	25.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	12:18	22.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	12:24	22.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	

NA = Not Applicable ☑ *=Yes* ***Note: End of six minute opacity reading***

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010864

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
7/8/98	12:30	20.5	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	12:36	21.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	12:42	20.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	12:48	20.5	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	12:54	21.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	13:00	22.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	13:06	23.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	13:12	22.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	13:18	22.5	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010865

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
7/8/98	13:24	20.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	13:30	21.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	13:36	21.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	13:42	24.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	13:48	23.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	13:54	24.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	14:00	27.5	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	14:06	27.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	14:12	22.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010866

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
7/8/98	14:18	22.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	14:24	22.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	14:30	21.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	14:36	23.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	14:42	22.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	14:48	23.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	14:54	22.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	15:00	24.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/8/98	15:06	23.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010867

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
7/8/98	15:12	23.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment	
7/9/98	16:06	21.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/9/98	17:42	20.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/9/98	17:48	21.5	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/9/98	17:54	21.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/9/98	18:00	21.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/9/98	18:06	20.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/9/98	18:12	20.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/9/98	18:18	22.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010868

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
7/9/98	18:24	21.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/9/98	18:30	22.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/9/98	18:36	20.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/9/98	19:24	21.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/9/98	20:12	25.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/9/98	20:18	20.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/9/98	22:06	21.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/9/98	22:12	24.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/9/98	22:18	20.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010869

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
7/9/98	22:24	20.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/10/98	0:18	23.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/10/98	0:24	25.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/10/98	2:00	20.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/10/98	4:24	20.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/10/98	6:00	23.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/10/98	6:06	23.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/10/98	6:12	21.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/10/98	6:18	21.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010870

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
7/10/98	6:24	21.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/10/98	6:30	21.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/10/98	6:36	22.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/10/98	6:42	20.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/10/98	6:48	21.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/10/98	6:54	21.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/10/98	7:00	23.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/10/98	7:06	21.5	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/10/98	7:12	21.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010871

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
7/10/98	18:12	NA	☐	☑	The monitor lost power during a thunderstorm.		
7/10/98	18:18	NA	☐	☑	The monitor lost power during a thunderstorm.		
7/10/98	18:24	NA	☐	☑	The monitor lost power during a thunderstorm.		
7/10/98	18:30	NA	☐	☑	The monitor lost power during a thunderstorm.		
7/10/98	18:36	NA	☐	☑	The monitor lost power during a thunderstorm.		
7/10/98	18:42	NA	☐	☑	The monitor lost power during a thunderstorm.		
7/10/98	18:48	NA	☐	☑	The monitor lost power during a thunderstorm.		
7/10/98	18:54	NA	☐	☑	The monitor lost power during a thunderstorm.		
7/10/98	19:00	NA	☐	☑	The monitor lost power during a thunderstorm.		

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010872

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
7/10/98	19:06	NA	☐	☑	The monitor lost power during a thunderstorm.		
7/10/98	19:12	NA	☐	☑	The monitor lost power during a thunderstorm.		
7/10/98	19:18	NA	☐	☑	The monitor lost power during a thunderstorm.		
7/10/98	19:24	NA	☐	☑	The monitor lost power during a thunderstorm.		
7/10/98	19:30	NA	☐	☑	The monitor lost power during a thunderstorm.		
7/10/98	19:36	NA	☐	☑	The monitor lost power during a thunderstorm.		
7/10/98	19:42	NA	☐	☑	The monitor lost power during a thunderstorm.		
7/10/98	19:48	NA	☐	☑	The monitor lost power during a thunderstorm.		
7/10/98	19:54	NA	☐	☑	The monitor lost power during a thunderstorm.		

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010873

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
7/10/98	20:00	NA	☐	☑	The monitor lost power during a thunderstorm.		
7/10/98	20:06	NA	☐	☑	The monitor lost power during a thunderstorm.		
7/13/98	6:06	22.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/13/98	18:00	22.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/13/98	18:06	20.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/17/98	0:24	25.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/17/98	12:12	20.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/18/98	20:42	20.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/18/98	22:54	21.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010874

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
7/18/98	23:00	20.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/20/98	0:36	24.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/20/98	1:36	20.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/20/98	2:24	23.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/20/98	2:30	23.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/20/98	5:18	25.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/20/98	5:30	20.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/20/98	7:18	20.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/22/98	18:24	20.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010875

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
7/23/98	6:30	21.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/23/98	7:30	24.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/23/98	10:18	25.5	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/23/98	12:12	20.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/23/98	23:30	21.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	1:24	21.5	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	2:18	24.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	2:42	20.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	3:18	20.5	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010876

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
7/24/98	4:06	21.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	4:12	22.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	4:18	23.5	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	6:00	26.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	6:06	25.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	6:12	22.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	6:18	21.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	6:24	27.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	6:30	24.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010877

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
7/24/98	6:36	22.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	6:42	21.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	6:54	24.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	7:00	21.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	7:06	21.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	7:12	25.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	7:18	20.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	10:00	21.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	17:30	20.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010878

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
7/24/98	17:36	22.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	18:36	21.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	20:24	20.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	20:30	24.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	21:18	20.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	21:24	22.5	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	22:06	23.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/24/98	22:12	20.5	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/25/98	6:06	25.4	☑	☐	The auto flow control valve on the secondary air flow failed and increased air flow to the boiler.	Instrument personnel inspected the valve. The system operated normally when returned to automatic flow control.	

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010879

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
7/25/98	6:12	35.5	☑	☐	The auto flow control valve on the secondary air flow failed and increased air flow to the boiler.	Instrument personnel inspected the valve. The system operated normally when returned to automatic flow control.	
7/25/98	6:18	22.2	☑	☐	The auto flow control valve on the secondary air flow failed and increased air flow to the boiler.	Instrument personnel inspected the valve. The system operated normally when returned to automatic flow control.	
7/25/98	8:12	23.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/25/98	14:42	20.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/25/98	22:24	20.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/26/98	0:18	22.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/26/98	1:18	20.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/26/98	2:06	25.5	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/26/98	2:12	21.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010880

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
7/26/98	17:54	20.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/26/98	18:42	21.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/26/98	21:24	22.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/27/98	6:18	20.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/27/98	10:18	21.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/28/98	0.18	20.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
7/28/98	9:18	NA	☐	☑	Maintenance activities interfered with opacity monitor readings.		
7/28/98	12:12	NA	☐	☑	Maintenance activities interfered with opacity monitor readings.		
8/23/98	17:54	24.3	☑	☐	The air flow (primarily secondary air) was increased to reduce TRS emissions.	Liquor flow was reduced to one nozzle to prevent additional opacity exceedances.	

NA = Not Applicable ☑ *=Yes* ***Note: End of six minute opacity reading***

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010881

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
8/23/98	18:00	34.9	☑	☐	The air flow (primarily secondary air) was increased to reduce TRS emissions.	Liquor flow was reduced to one nozzle to prevent additional opacity exceedances.	
9/1/98	5:42	NA	☑	☑	Auto zero/span lasted longer than normal.	System returned to normal operation after auto zero/span.	
9/1/98	9:54	NA	☑	☑	COM audit interfered with data collection		
9/1/98	10:00	NA	☑	☑	COM audit interfered with data collection		
9/1/98	10:06	NA	☑	☑	COM audit interfered with data collection		
9/1/98	10:12	NA	☑	☑	COM audit interfered with data collection		
9/1/98	10:18	NA	☑	☑	COM audit interfered with data collection		
9/1/98	10:24	NA	☑	☑	COM audit interfered with data collection		
9/1/98	10:30	NA	☑	☑	COM audit interfered with data collection		

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010882

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
9/1/98	10:36	NA	☑	☑	COM audit interfered with data collection		
9/22/98	11:18	24.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/22/98	11:24	22.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/22/98	11:30	21.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/22/98	11:42	21.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/25/98	3:06	20.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/25/98	3:12	20.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/25/98	3:18	21.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/25/98	4:48	20.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010883

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
9/25/98	4:54	21.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/25/98	5:00	23.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/25/98	5:06	26.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/25/98	5:12	23.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/25/98	5:18	22.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/25/98	5:24	21.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/25/98	6:48	21.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/25/98	7:00	23.7	☑	☐	Maintenance was performed on the South D Field of the electrostatic precipitator.		
9/25/98	13:24	20.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010884

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
9/25/98	15:00	20.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/25/98	16:30	20.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/25/98	17:06	21.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/25/98	18:00	20.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/25/98	18:06	23.5	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/25/98	18:30	23.3	☑	☐	Normal operations - specific cause not knownNormal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/25/98	18:36	22.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/25/98	18:42	20.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/25/98	18:54	20.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010885

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
9/25/98	19:06	20.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/25/98	19:18	22.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
9/25/98	20:18	20.2	☑	☐	The South D Field of the electrostatic precipitator kicked out.		
9/25/98	20:24	22.1	☑	☐	The South D Field of the electrostatic precipitator kicked out.		
9/25/98	20:30	20.8	☑	☐	The South D Field of the electrostatic precipitator kicked out.		
9/27/98	6:30	21.4	☑	☐	Normal operations - specific cause not known		
9/27/98	17:18	20.4	☑	☐	The South D Field of the electrostatic precipitator kicked out.		
9/28/98	13:00	29.0	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/28/98	21:18	20.1	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010886

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
9/28/98	22:18	20.3	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/29/98	1:18	25.6	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/29/98	1:24	20.5	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/29/98	1:30	23.0	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/29/98	1:36	22.2	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/29/98	1:42	21.7	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/29/98	1:48	22.9	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/29/98	1:54	23.2	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/29/98	4:12	21.5	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010887

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
9/29/98	4:18	23.7	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/29/98	4:24	27.7	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/29/98	4:30	26.4	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/29/98	4:36	27.8	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/29/98	4:42	21.1	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/29/98	4:48	24.4	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/29/98	4:54	20.4	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/29/98	5:00	22.6	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/29/98	5:06	23.6	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E000108888

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
9/29/98	5:12	26.0	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/29/98	5:18	30.0	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/29/98	5:24	21.9	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/29/98	15:42	21.1	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/30/98	18:06	20.8	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/30/98	21:00	20.1	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	
9/30/98	21:12	20.1	☑	☐	A broken wire in the high tension cabinet caused the D Field of the precipitator to malfunction.	An inspection outage was performed and the wire was replaced upon discovery.	

NA = Not Applicable ☑ *=Yes* **Note: End of six minute opacity reading*

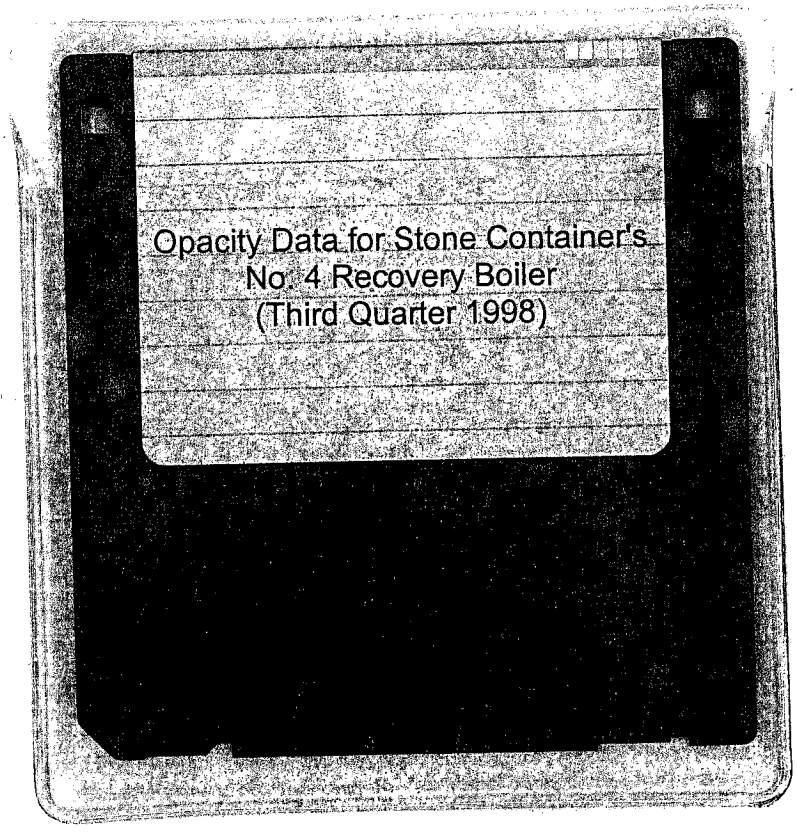
(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010889

ATTACHMENT 2: No. 4 Recovery Boiler Opacity Data Diskette

The following individuals will receive the data diskette:

Wilson, MT DEQ
Wahl, U.S. EPA, Region VIII
Chief, U.S. DOJ
Geist, MT CHEER
Tebbutt, Western Env. Law Center



The enclosed diskette includes opacity data from Stone Container's No. 4 Recovery Boiler for the third quarter of 1998. The data can be found in a text file named 4RBQTR3. The text file is tab delimited and can be opened in any word processing, spreadsheet or database application, provided that application can support the amount of data in the file.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Betsy Wahl
Air Quality Program
US. EPA, Region VIII
301 S. Park, Drawer 10096
Helena, MT 59626

4a. Article Number

P 168 580 191

4b. Service Type

☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

JUL 31 1998

5. Received By: *(Print Name)*

6. Signature: *(Addressee or Agent)*

X Heather Kroll

8. Addressee's Address *(Only if requested and fee is paid)*

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.

E00010891

UNITED STATES POSTAL SERVICE

F[illegible]
Po[illegible] Paid
US[illegible]
Permit No. G-10

• Print your name, address, and ZIP Code in this box •

Stone Container
Lisa Philips
P.O. Box 4707
Missoula, MT 59806

E00010892

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

DARREL GEIST
MONTANA C.H.E.E.R.
PO BOX 7941
MISSOULA, MT 59807

4a. Article Number

P 168 580 192

4b. Service Type

☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

7-21

5. Received By: *(Print Name)*

6. Signature: *(Addressee or Agent)*

X DG

8. Addressee's Address *(Only if requested and fee is paid)*

PS Form **3811,** December 1994 102595-98-B-0229 Domestic Return Receipt

E00010893

UNITED STATES POSTAL SERVICE

Postage Paid
Permit No. G-10

• Print your name, address, and ZIP Code in this box •

Stone Container
Lisa Philips
PO Box 4707
Missoula, MT 59806-4707

E00010894

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Charles Tebbutt
Western Environmental Law Center
1216 Lincoln Street
Eugene, OR 97401

4a. Article Number

P 168 580 188

4b. Service Type

☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

8/4/98

5. Received By: *(Print Name)*

6. Signature: *(Addressee or Agent)*

X

8. Addressee's Address *(Only if requested and fee is paid)*

PS Form **3811,** December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.

E00010895

UNITED STATES POSTAL SERVICE

Paid

• Print your name, address, and ZIP Code in this box •

Stone Container
Lisa Philips
PO Box 4707
Missoula, MT
59806-4707

E00010896

2Q-1998

2ND Q-1998

ADDENDUM

Re: United States of America,
Plaintiff,
and Montana Coalition for Health,
Environmental and Economic Rights, Inc.,
Intervenors,
v.
Stone Container Corporation,
Defendant
Civil No. CV 96-017-M
DOJ # 90-5-2-1-1975

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Ed Scott

Director of Environmental Affairs

The following data are reported for the Second Quarter of 1998 in accordance with Civil Action No. CV 96-017-M:

Section 1: No. 4 Recovery Boiler Emissions

- 1.1: Opacity Values Greater Than 20%
- 1.2: Monitor Malfunctions
- 1.3: Opacity Data Files

Section 2: TRS and NCG Emissions

- 2.1: Releases of NCGs
- 2.2: Lime Kiln TRS Exceedances

Section 3: Particulate Emissions

- 3.1: Recovery Boilers
- 3.2: Waste Fuel Boiler

Attachment 1: No. 4 Recovery Boiler Opacity Emissions Greater Than 20%
Attachment 2: No. 4 Recovery Boiler Opacity Data Diskette

Section 1: No. 4 Recovery Boiler Emissions

Section 1.1: Opacity Values Greater Than 20%

Please see data reported in Attachment 1. The data are reported in accordance with Civil Action No. CV 96-017-M Section V: 9 (a). During the second quarter of 1998, 99.2% of the six minute periods were less than 20%.

Section 1.2: Monitor Malfunctions

The following data represent periods when the Continuous Opacity Monitor (COM) on the No. 4 Recovery Boiler was not operational. The are reported in accordance with Civil Action No. CV 96-017-M Section V: 9 (b).

Beginning Date and Time	Ending Date and Time	Duration
6/5/98 3:00 pm	6/5/98 4:30 pm	1.5 Hours

Cause and Corrective Action:

An outside contractor performed the quarterly continuous opacity monitor (COM) audit. Stack opacity data cannot be collected while the COM audit is being performed.

Beginning Date and Time	Ending Date and Time	Duration
6/18/98 5:00 am	6/19/98 5:00 am	24.0 Hours

Cause and Corrective Action:

The monitor drifted outside of the control limits during the daily automatic zero/span causing the monitor malfunction. The system was recalibrated and returned to normal operation.

Section 1.3: Opacity Data Files

Please use the diskette in Attachment 2 to view all opacity data recorded during the quarter. The file is saved as a text file and may be viewed in most word processing, spreadsheet and database applications. The data are reported in accordance with Civil Action No. CV 96-017-M Section V: 9 (a).

Section 2: TRS and NCG Emissions

Section 2.1: Releases of Non-Condensible Gases (Duration > 15 minutes)

The following data are reported in accordance with Civil Action No. CV 96-017-M Section VII: 19 (a).

Date	Duration	Time Period	TRS Emissions (ppm)			
			#1 Kiln	#2 Kiln	#3 Kiln	#4 Kiln (O_2 corrected)
4/21/98	42 minutes	7:00 pm – 7:42 pm	DOWN	9.4	7.6	3.9
Circumstances		Stripper off gas was vented to the atmosphere due to a failed air flow controller card which regulates air flow to the kilns.				

Note: TRS emissions are reported as an average of the 12 hours preceding the event.

Section 2.2: Lime Kiln TRS Exceedances

The following information is reported in accordance with Civil Action No. CV 96-017-M Section VII: 19 (b).

There were no TRS exceedances on the Lime Kilns during the quarter.

Section 3: Particulate Emissions

Section 3.1: Recovery Boilers

The following information is reported in accordance with Civil Action No. CV 96-017-M Section VI: 16.

The consent order requires that Stone Container report the mass emissions rate for the No. 4 and 5 Recovery Boilers once correlation equations have been developed pursuant to the consent order. An outside contractor has performed the appropriate source tests for the correlation development. The results from this test have not been reported at this time. Stone Container expects that the results will be available in August 1998.

Section 3.2: Waste Fuel Boiler

The following information is reported in accordance with Civil Action No. CV 96-017-M Section IX: 23.

There were no exceedances of the PM_{10} mass emissions limit on the Waste Fuel boiler during the quarter.

ATTACHMENT 1: No. 4 Recovery Boiler Opacity Emissions >20%

Note: In making this report, Stone Container is not implying that continuous opacity monitor (COM) values greater than 20% constitute violations.

Six Minute Opacity Values Greater Than 20% on No. 4 Recovery Boiler

Date	*End Time**	*Opacity (%)*	*Boiler Operating?*	*Monitor Malfunction?*	*Cause*	*Efforts to Minimize Opacity*	*Actions to Prevent Future High Opacity (1)*
4/1/98	9:42	20.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/2/98	6:24	20.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/2/98	6:30	21.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/2/98	6:42	25.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/2/98	21:24	20.1	☑	☐	The power dropped off in the south B and C fields.	Power was restored to the electrostatic precipitator.	The mill has an ongoing maintenance program for the electrostatic precipitators.
4/2/98	21:30	34.1	☑	☐	The power dropped off in the south B and C fields.	Power was restored to the electrostatic precipitator.	The mill has an ongoing maintenance program for the electrostatic precipitators.
4/3/98	9:24	22.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/3/98	10:18	23.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010903

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
4/3/98	10:24	23.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/3/98	10:30	20.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/5/98	21:12	20.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/6/98	9:48	20.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/8/98	19:00	20.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/16/98	2:48	20.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/16/98	4:00	20.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/16/98	6:30	21.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/16/98	8:18	26.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010904

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
4/16/98	8:24	25.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/16/98	8:30	22.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/16/98	8:36	22.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/23/98	0:18	20.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/23/98	0:24	20.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/23/98	0:36	20.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/23/98	14:24	21.1	☑	☐	A broken wire caused the sootblowers to malfunction.	The broken wire was repaired.	The mill has an ongoing maintenance program for the sootblower system.
4/23/98	14:42	21.7	☑	☐	A broken wire caused the sootblowers to malfunction.	The broken wire was repaired.	The mill has an ongoing maintenance program for the sootblower system.
4/23/98	14:48	37.5	☑	☐	A broken wire caused the sootblowers to malfunction.	The broken wire was repaired.	The mill has an ongoing maintenance program for the sootblower system.

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010905

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
4/23/98	14:54	34.1	☑	☐	A broken wire caused the sootblowers to malfunction.	The broken wire was repaired.	The mill has an ongoing maintenance program for the sootblower system.
4/23/98	15:18	23.1	☑	☐	A broken wire caused the sootblowers to malfunction.	The broken wire was repaired.	The mill has an ongoing maintenance program for the sootblower system.
4/23/98	15:24	33.8	☑	☐	A broken wire caused the sootblowers to malfunction.	The broken wire was repaired.	The mill has an ongoing maintenance program for the sootblower system.
4/23/98	15:30	37.8	☑	☐	A broken wire caused the sootblowers to malfunction.	The broken wire was repaired.	The mill has an ongoing maintenance program for the sootblower system.
4/23/98	15:36	52.7	☑	☐	A broken wire caused the sootblowers to malfunction.	The broken wire was repaired.	The mill has an ongoing maintenance program for the sootblower system.
4/23/98	15:42	32.0	☑	☐	A broken wire caused the sootblowers to malfunction.	The broken wire was repaired.	The mill has an ongoing maintenance program for the sootblower system.
4/24/98	20:30	32.2	☑	☐	Specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/24/98	20:36	32.4	☑	☐	Specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/24/98	20:42	21.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010906

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
4/24/98	20:54	20.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/24/98	22:00	20.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/24/98	22:12	21.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/24/98	22:18	23.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/24/98	22:24	39.2	☑	☐	Specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/24/98	22:30	22.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/24/98	22:36	20.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/25/98	6:06	20.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/25/98	6:12	23.5	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010907

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
4/25/98	6:18	26.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/25/98	6:24	26.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/25/98	6:30	25.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/25/98	6:36	20.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/25/98	6:42	22.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/25/98	6:48	20.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/26/98	14:12	20.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/26/98	14:24	23.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/26/98	14:30	21.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010908

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
4/26/98	14:36	20.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/26/98	14:48	21.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/26/98	14:54	24.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/26/98	15:00	20.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/26/98	22:24	21.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/26/98	22:30	22.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/26/98	22:54	25.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/26/98	23:12	20.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/26/98	23:18	21.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010909

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
4/26/98	23:24	20.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/26/98	23:30	23.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/26/98	23:48	23.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/26/98	23:54	23.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/27/98	0:06	24.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/27/98	0:12	22.5	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/27/98	0:18	21.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/27/98	0:24	24.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/27/98	0:30	28.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010910

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
4/27/98	0:36	25.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/27/98	0:42	25.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/27/98	23:00	21.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/29/98	4:30	20.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/29/98	6:06	22.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/29/98	6:30	20.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/29/98	6:36	20.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/29/98	6:42	21.5	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/29/98	6:48	21.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010911

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
4/29/98	6:54	22.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/29/98	8:48	21.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/29/98	12:36	25.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
4/30/98	9:30	23.2	☑	☐	The ash hopper was plugged by a piece of plate metal in the grizzly.	The piece of metal was removed.	
4/30/98	9:42	20.5	☑	☐	The ash hopper was plugged by a piece of plate metal in the grizzly.	The piece of metal was removed.	
4/30/98	13:18	29.7	☑	☐	The ash hopper was plugged by a piece of plate metal in the grizzly.	The piece of metal was removed.	
4/30/98	13:24	32.9	☑	☐	The ash hopper was plugged by a piece of plate metal in the grizzly.	The piece of metal was removed.	
4/30/98	13:30	29.6	☑	☐	The ash hopper was plugged by a piece of plate metal in the grizzly.	The piece of metal was removed.	
4/30/98	13:36	46.1	☑	☐	The ash hopper was plugged by a piece of plate metal in the grizzly.	The piece of metal was removed.	

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010912

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
4/30/98	13:42	53.5	☑	☐	The ash hopper was plugged by a piece of plate metal in the grizzly.	The piece of metal was removed.	
4/30/98	13:48	45.3	☑	☐	The ash hopper was plugged by a piece of plate metal in the grizzly.	The piece of metal was removed.	
4/30/98	13:54	25.6	☑	☐	The ash hopper was plugged by a piece of plate metal in the grizzly.	The piece of metal was removed.	
4/30/98	14:00	23.9	☑	☐	The ash hopper was plugged by a piece of plate metal in the grizzly.	The piece of metal was removed.	
4/30/98	14:06	21.9	☑	☐	The ash hopper was plugged by a piece of plate metal in the grizzly.	The piece of metal was removed.	
4/30/98	14:18	28.7	☑	☐	The ash hopper was plugged by a piece of plate metal in the grizzly.	The piece of metal was removed.	
4/30/98	14:24	24.5	☑	☐	The ash hopper was plugged by a piece of plate metal in the grizzly.	The piece of metal was removed.	
4/30/98	14:30	23.7	☑	☐	The ash hopper was plugged by a piece of plate metal in the grizzly.	The piece of metal was removed.	
4/30/98	15:12	20.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010913

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
5/1/98	22:48	26.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
5/2/98	22:48	21.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
5/3/98	10:54	27.2	☐	☐	Water washing electrostatic precipitator		
5/3/98	20:30	28.2	☐	☐	Water washing electrostatic precipitator		
5/3/98	20:36	43.9	☐	☐	Water washing electrostatic precipitator		
5/3/98	20:42	20.9	☐	☐	Water washing electrostatic precipitator		
5/3/98	22:00	21.9	☐	☐	Water washing electrostatic precipitator		
5/3/98	22:06	44.0	☐	☐	Water washing electrostatic precipitator		
5/3/98	22:12	31.2	☐	☐	Water washing electrostatic precipitator		

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010914

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
5/3/98	22:18	50.6	☐	☐	Water washing electrostatic precipitator		
5/3/98	22:24	74.8	☐	☐	Water washing electrostatic precipitator		
5/3/98	22:30	70.4	☐	☐	Water washing electrostatic precipitator		
5/3/98	22:36	54.2	☐	☐	Water washing electrostatic precipitator		
5/3/98	22:42	38.8	☐	☐	Water washing electrostatic precipitator		
5/3/98	22:48	33.6	☐	☐	Water washing electrostatic precipitator		
5/3/98	22:54	27.4	☐	☐	Water washing electrostatic precipitator		
5/3/98	23:00	39.9	☐	☐	Water washing electrostatic precipitator		
5/3/98	23:06	38.8	☐	☐	Water washing electrostatic precipitator		

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010915

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
5/29/98	14:48	35.1	☑	☐	The D field of the electrostatic precipitator lost power during a thunderstorm.	Power was restored to the precipitator.	The power loss was caused by the thunderstorm only and could not have been prevented.
5/29/98	14:54	42.7	☑	☐	The D field of the electrostatic precipitator lost power during a thunderstorm.	Power was restored to the precipitator.	The power loss was caused by the thunderstorm only and could not have been prevented.
5/29/98	15:00	58.2	☑	☐	The D field of the electrostatic precipitator lost power during a thunderstorm.	Power was restored to the precipitator.	The power loss was caused by the thunderstorm only and could not have been prevented.
5/29/98	15:06	28.9	☑	☐	The D field of the electrostatic precipitator lost power during a thunderstorm.	Power was restored to the precipitator.	The power loss was caused by the thunderstorm only and could not have been prevented.
5/29/98	15:12	22.6	☑	☐	The D field of the electrostatic precipitator lost power during a thunderstorm.	Power was restored to the precipitator.	The power loss was caused by the thunderstorm only and could not have been prevented.
5/29/98	15:18	22.9	☑	☐	The D field of the electrostatic precipitator lost power during a thunderstorm.	Power was restored to the precipitator.	The power loss was caused by the thunderstorm only and could not have been prevented.
5/29/98	15:24	20.1	☑	☐	The D field of the electrostatic precipitator lost power during a thunderstorm.	Power was restored to the precipitator.	The power loss was caused by the thunderstorm only and could not have been prevented.
5/29/98	17:30	20.4	☑	☐	The D field of the electrostatic precipitator lost power during a thunderstorm.	Power was restored to the precipitator.	The power loss was caused by the thunderstorm only and could not have been prevented.
6/5/98	14:18	NA	☑	☑	COM audit interfered with data collection.		

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010916

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
6/5/98	14:24	NA	☑	☑	COM audit interfered with data collection.		
6/5/98	14:30	NA	☑	☑	COM audit interfered with data collection.		
6/5/98	14:36	NA	☑	☑	COM audit interfered with data collection.		
6/5/98	14:42	NA	☑	☑	COM audit interfered with data collection.		
6/5/98	14:48	NA	☑	☑	COM audit interfered with data collection.		
6/5/98	14:54	NA	☑	☑	COM audit interfered with data collection.		
6/5/98	15:00	NA	☑	☑	COM audit interfered with data collection.		
6/5/98	15:06	NA	☑	☑	COM audit interfered with data collection.		
6/6/98	13:54	20.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010917

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
6/11/98	17:12	21.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/11/98	22:24	20.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/11/98	22:30	20.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/12/98	0:12	20.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/12/98	0:18	20.5	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/12/98	0:24	20.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/12/98	0:30	22.5	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/12/98	0:36	21.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/12/98	0:42	21.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010918

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
6/12/98	0:48	21.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/12/98	6:06	23.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/12/98	14:18	20.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/15/98	19:00	20.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/15/98	19:30	20.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/15/98	19:36	20.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/15/98	19:54	23.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/15/98	22:24	20.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/16/98	0:00	20.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010919

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
6/16/98	1:36	20.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/16/98	4:30	20.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/16/98	10:06	21.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/18/98	2:24	20.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/18/98	5:00	NA	☑	☑	The calibration lasted longer than normal.	The monitor calibrated normally the following day.	
6/18/98	12:12	NA	☑	☑	Data invalid		
6/18/98	13:24	NA	☑	☑	Data invalid		
6/18/98	13:30	NA	☑	☑	Data invalid		
6/18/98	13:36	NA	☑	☑	Data invalid		

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010920

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
6/18/98	13:42	NA	☑	☑	Data invalid		
6/18/98	13:48	NA	☑	☑	Data invalid		
6/18/98	17:12	NA	☑	☑	Data invalid		
6/18/98	18:18	NA	☑	☑	Data invalid		
6/18/98	18:24	NA	☑	☑	Data invalid		
6/18/98	18:30	NA	☑	☑	Data invalid		
6/18/98	18:36	NA	☑	☑	Data invalid		
6/18/98	18:42	NA	☑	☑	Data invalid		
6/18/98	18:48	NA	☑	☑	Data invalid		

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010921

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
6/18/98	18:54	NA	☑	☑	Data invalid		
6/18/98	19:00	NA	☑	☑	Data invalid		
6/18/98	19:06	NA	☑	☑	Data invalid		
6/18/98	19:54	NA	☑	☑	Data invalid		
6/19/98	8:36	20.4	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/19/98	19:18	26.4	☑	☐	The A North field of the electrostatic precipitator lost power as the result of a failed controller card.	Liquor flow to the boiler was reduced to 1 nozzle while the controller card was replaced.	The power loss was caused by the failed controller card only and could not have been prevented.
6/19/98	19:24	36.2	☑	☐	The A North field of the electrostatic precipitator lost power as the result of a failed controller card.	Liquor flow to the boiler was reduced to 1 nozzle while the controller card was replaced.	The power loss was caused by the failed controller card only and could not have been prevented.
6/20/98	1:12	20.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/20/98	1:30	20.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010922

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
6/20/98	2:06	20.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/20/98	2:18	20.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/20/98	2:42	20.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/20/98	3:00	21.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/20/98	3:06	26.6	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/20/98	4:12	21.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/20/98	4:30	21.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/20/98	4:42	21.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/20/98	4:48	20.7	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010923

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
6/21/98	23:42	23.3	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/21/98	23:48	22.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/22/98	0:30	20.5	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/22/98	1:06	20.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/22/98	1:12	25.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/22/98	2:24	21.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/22/98	2:30	20.2	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/22/98	2:36	20.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/22/98	2:42	22.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010924

Date	End Time*	Opacity (%)	Boiler Operating?	Monitor Malfunction?	Cause	Efforts to Minimize Opacity	Actions to Prevent Future High Opacity (1)
6/22/98	2:48	22.1	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/22/98	4:12	22.8	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/22/98	4:18	23.0	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	
6/22/98	4:24	20.9	☑	☐	Normal operations - specific cause not known	Continue to monitor opacity, boiler operations, and performance of control equipment.	

NA = Not Available ☑ *=Yes* **Note: End of six minute opacity reading*

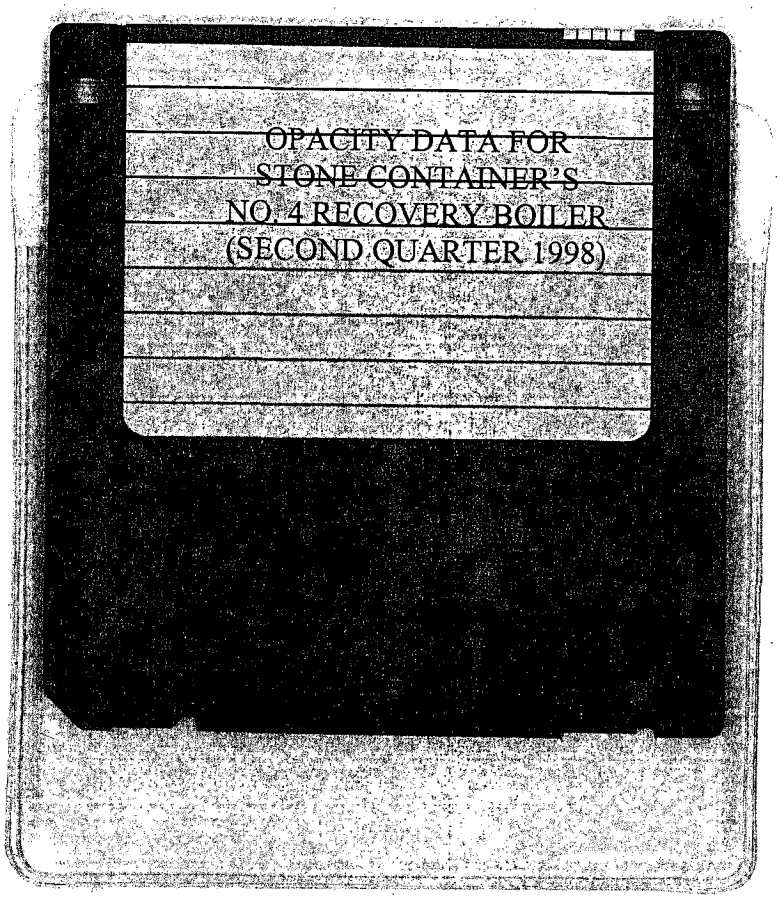
(1) The mill has an ongoing maintenance program for the No. 4 Recovery Boiler, only actions specific to a unique event are listed.

E00010925

ATTACHMENT 2: No. 4 Recovery Boiler Opacity Data Diskette

The following individuals will receive the data diskette:

Wilson, MT DEQ
Wahl, U.S. EPA, Region VIII
Chief, U.S. DOJ
Geist, MT CHEER
Tebbutt, Western Env. Law Center



The enclosed diskette includes opacity data from Stone Container's No. 4 Recovery Boiler for the second quarter of 1998. The data can be found in a text file named 4RBQTR2. The text file is tab delimited and can be opened in any word processing, spreadsheet or database application, provided that application can support the amount of data in the file.

Stipulated
Penalties

E00010927

WFB
1998-1999 (4FD)

Date	Test	Emiss	Allowable
2/18-2/19/98	Compliance	51.5	49.6
2/21-2/22/98	Compliance	43.4	50.8
2/24/98 - (2) Runs	In-House (Δ Scrubber Parameters)	36.8	45.8
3/4/98 - (3) Runs	In-House (Δ Scrubber Parameters)	36.6	49.6
6/10/98	Compliance	27.0	53.3
7/3/98 - (1) Run	In-House	43.3	48.1
8/25/98	Compliance	39.1	53.9
10/22-10/23/98	Compliance	33.5	48.8
1/25/99 - (1) Run	In-House	33.2	45.1
1/27/99	Compliance	32.5	46.9
4/8/99	Compliance	35.5	51.6
8/16/99 - (1) Run	In-House	38.0	47.3
8/18/99 - (1) Run	In-House	51.5	40.5
8/20/99 - (1) Run	In-House	44.8	44.6
8/27/99 - (1) Run	In-House	46.4	50.7

Smurfit-Stone

Missoula Mill
Containerboard and Paper Division

TO: Distribution

FROM: Ed Scott

DATE: September 30, 1999

SUBJECT: Record of Communication With DEQ Regarding WFB Particulate Allowable Calculations.

On September 30, 1999, I contacted Karen Wilson of the DEQ and told her that while completing the third quarter particulate compliance test on the Wastefuel Boiler that our stack tester (Steve Carrick) discovered that since 1997 he had been misinterpreting the natural gas flow intergrator and as a result had been underestimating the amount of natural gas co-fired with bark durring the compliance tests.

In addition, I informed Karen that during the same time period the Mill had been incorrectly calculating the allowable emission rate by subtracting out those BTUs that were contributed by co-firing natural gas.

However, I informed Karen that we had re-calculated the allowables for that time period by using the correct natural gas usage rates and correct calculation procedures and obtained essentially the same results. I indicated to Karen that this was due in part to the fact that the BTU input values are back calculated based upon steam production rates.

Karen then asked if we would provide something in writing to her to document this issue. I told her we could if she felt it was necessary. However, I reminded her that the recalculations resulted in essentially the same allowables which have been previously reported and by letting her know that September's Monthly compliance report (which is due October 20, 1999) would include the WFB's third quarter compliance test using both the correct natural gas flows and calculation procedure.

She then stated that further documentation would not be necessary.

Cc: Boschee, Marxer, Philips, Willhite, Frye, File

Smurfit-Stone

Missoula Mill
Containerboard and Paper Division

TO: Paul Willhite
FROM: Ed Scott
DATE: September 20, 1999
SUBJECT: Wastefuel Boiler Allowable Particulate Calculations

As per your request, I have attached some example calculations which are relevant to calculating the allowable mass emission rates for the Missoula mill's Wastefuel Boiler.

As previously communicated, the Mill's Stack Tester recently discovered that since about 1997 he has been misinterpreting the natural gas flow integrator in the Wastefuel Boiler control room and as a result has been underestimating the amount of natural gas co-fired with bark during particulate compliance tests. In addition, without a known basis, since about the same time the Mill had been calculating the allowable emission rate (0.1 lbs particulate/mmbtu fired) by **subtracting** out those BTUs contributed by co-firing natural gas with the bark which **reduces** the allowable emissions rate.

However, a review of both the Mill's permit and of 40 C.F.R. 60.42 (a) (1) concludes that the applicable limit is 0.1 lbs/mmbtu derived from fossil fuel (i.e. natural gas) or fossil fuel and wood residue (i.e. bark). Legal counsel confirmed this interpretation.

Recalculation of the allowable emissions rates with the correct (increased) natural gas flows and the above interpretation results in past calculations of allowable emission rates with essentially no change. This is due to the fact that BTU input values are back calculated based upon steam production rates.

Please review the following example calculations and then let's discuss how to best make any changes to previously reported compliance tests. In addition, we need to discuss if this issue effects the DOJ consent decree.

Previous Means of Calculation

Data:

Wastefuel Boiler Output Steam Production: 371, 250 lbs steam/ hr
Natural Gas Usage (**Incorrect** Interpretation of Integrator): 237 Cubic Feet

Calculation:

A. Steam Production VIA Natural Gas

Steam Production From Natural Gas = (237 Cubic ft Gas)(0.75)(0.94)

-->Where 0.75 = Boiler Efficiency & 0.94 = % Steam Product

= 167 lbs Steam From Natural Gas

B. Steam Production VIA Bark

Steam Production From Bark = Total Steam – Steam From Natural Gas

= 371,250 lbs Total Steam/hr – 167 lbs Steam From Gas

= 371,083 lbs Steam From Bark

C. BTU Input From Bark

BTU Input From Bark=(371,083 lbs Steam From Bark)(4674 BTU/lb Bark)
(1 lb Bark/3.21 lbs Steam)

= 540,324,592 BTUs

D. Allowable Emissions

Allowable Emissions = (0.1 lbs Particulate/1,000,000 BTU)
(540,324,592BTUs)

= 54.0 lbs/hr

New Means Of Calculation

Data:

Wastefuel Boiler Output Steam Production: 371, 250 lbs steam/ hr
Natural Gas Usage (**Correct** Interpretation of Integrator): 237,000 Cubic Feet

Calculation:

A. Steam Production VIA Natural Gas

Steam Production From Natural Gas = (237,000 Cubic ft Gas)(0.75)(0.94)

-->Where 0.75 = Boiler Efficiency & 0.94 = % Steam Product

= 167,085 lbs Steam From Natural Gas

B. BTU Input From Natural Gas

BTU Input Via Natural Gas=(237,000 CF Gas)(1020 BTUs/CF Gas)

= 241,740,000 BTUs Via Gas

C. Steam Production VIA Bark

Steam Production From Bark = Total Steam – Steam From Natural Gas

= 371,250 lbs Total Steam/hr – 167,085 lbs Steam From Gas

= 204,165 lbs Steam From Bark

D. BTU Input From Bark

BTU Input From Bark=(204,165 lbs Steam From Bark)(4674 BTU/lb Bark)
(1 lb Bark/3.21 lbs Steam)

= 297,279,505 BTUs From Bark

E. Allowable Emissions

Allowable Emissions = (0.1 lbs Particulate/1,000,000 BTU)
(297,279,505 BTUs From Bark + 241,740,000
BTUs From Gas) = 53.9 lbs/hr

Cc: Boschee
Marxer

Received 9/17/99

WFB - 2nd. Quarter 1999 (Run #1) 4/8/99 PM 10

Old Calculations (Allow. Part.) = 54.0 lbs/hr
New Calculations (Allow Part.) = 53.9 lbs/hr

① Pre-Aug. 1999 Allowable Particulate Calculations

A) Steam Prod. (chart) = 371,250 lbs/hr

B) Natural Gas (Integrator) = 419 ACF/AT

1) CF/hr = (ACF Gas/AT)(60 min/hr)
= (419 ACF/106 min.)(60 min/hr) = 237 CF/hr (Gas)

2) Steam Prod. (Gas) Boiler EFF. % Steam Product
lbs/hr = (237 ACF)(0.75)(0.94)
= 167. lbs/hr Steam (Gas)

c) Steam (Bark) = Total steam - Gas Steam
lbs/hr (Bark = 371,250 lbs/hr - 167 lbs/hr
= 371,083 lbs/hr Steam (Bark)

D) Btus/hr (Bark)
Btus/hr = (371,083 lbs/hr)(1 lb. Bark / 3.21 lbs/Steam)(4674 Btus/1 lb. Bark)
= 540,324,592 Btus/hr

E) Allow. Part = (0.1 lbs Part / 1 x 10^6 Btus)(540,324,592 Btus/hr) = 54.0 lbs/hr Allow Part

② Post-July 1999 Allowable Particulate Calculations)

A) Steam Prod. (Chart) = 371,250 lbs/hr

B) Natural Gas (Int.) = 419 MCF/AT
ACF/hr = (419,000 ACF/106 min.)(60 min/hr)
= 237,000 ACF/hr

c) Steam Prod (Gas) = (ACF Gas)(% Boiler EFF.)(% Steam Prod)
= (237,000 ACF/hr)(0.75)(0.94)
= 167,085 lbs/hr Steam

D) Btus/hr (Gas) = (ACF/hr Gas)(1020 Btus / 1 AT³ Gas)
= (237,000 ACF)(1020 Btus/AT³) = 241,740,000 Btus/hr Gas

E) Steam Prod (Bark) = 371,250 lbs/hr - 167,085 lbs/hr = 204,165 lbs/hr

F) Btus/hr (Bark) = (204,165 lbs/hr)(1 lb Bark / 3.21 lbs Steam)(4674 Btus/lb. Bark)
= 297,279,505 Btus/hr Bark
+ 241,740,000 Btus/hr Gas
539,019,505 Btus/hr Total

G) Allow Part = (0.1 lbs Part / 1x10^6 Btus)(539,019,505 Btus/hr) = 53.9 lbs/hr Allow. Part.

E00010934

9/7/99

WFB - 3rd. Quarter 1999 9/4/99

Run #	Date	Gr/DSCF	Steam lbs/hr	% Steam Load	Part. lbs/hr	Allow. Part lbs/hr	ISO
11	9/4/99	0.023	340,976	97.4	31.6	49.6	97.9
12	9/4/99	0.026	342,750	97.9	31.1	49.9	100.2
13	9/4/99	0.024	351,750	100.5	29.9	51.2	99.1
x =		0.024	345,159	98.6	30.9	50.2	

PM 10 Emissions 52.04 lbs/hr and 0.1 lbs/million Btus fired.

Run #11

- Steam Flow (Integrator) = 340,976 lbs/hr
- Natural Gas (Int.) = 33,659 ACF/hr

Btus/hr (Gas) = (33,659 ACF/hr)(1020 Btus/ft³) = 34,332,180 Btus/hr (Gas)

Steam Prod. (Gas) = (33,659 ACF/hr)(0.75)(0.94) = 23,730 lbs/hr Steam (Gas)

- Steam Prod (Bark) = (340,976 lbs/hr) − 23,730 lbs/hr = 317,246 lbs/hr Steam (Bark)

Btus/hr (Bark) = (317,246 lbs/hr)(1 lb. Bark / 3.21 lbs Steam)(4674 Btus/lb Bark)

= 461,933,895 Btus/hr (Bark)

+ 34,332,180 Btus/hr (Gas)

Total Btus = 496,266,075 Btus/hr = **49.6 lbs/hr Allow. Part**

Run #12

- Steam Prod. (Int.) = 342,750 lbs/hr
- Natural Gas (Int.) = 53,250 ACF/hr

Btus/hr (Gas) = (53,250 ACF/hr)(1020 Btus/ft³) = 54,315,000 Btus/hr (Gas)

Steam Prod. (Gas) = (53,250 ACF/hr)(0.75)(0.94) = 37,541 lbs/hr Steam (Gas)

- Steam Prod. (Bark) = 342,750 lbs/hr − 37,541 lbs/hr = 305,209 lbs/hr Steam (Bark)

Btus/hr (Bark) = (305,209 lbs/hr)(1 lb Bark / 3.21 lbs Steam)(4674 Btus/lb Bark)

= 444,407,123 Btus/hr (Bark)

+ 54,315,000

Total Btus 498,722,123 Btus/hr = **49.9 lbs/hr Allow. Part.**

Run #13

- Steam Prod (Int) = 351,750 lbs/hr Natural Gas (I) = 38,250 ACF/hr
- Btus/hr (Gas) = (38,250 ACF/hr)(1020 Btus/ft³) = 39,015,000 Btus/hr (Gas)
- Steam Prod (Gas) = (38,250 ACF/hr)(0.75)(0.94) = 26,966 lbs/hr Steam (Gas)
- Steam Prod. (Bark) = 351,750 lbs/hr − 26,966 lbs/hr = 342,784 lbs/hr Steam (Bark) → 324,

Btus/hr (Bark) = (342,784 lbs/hr)(1 lb Bark / 3.21 lbs Steam)(4674 Btus/lb B) =

324,784

= 472,909,786 Btus/hr (Bark) + 39,015,000 Btus/hr (Gas) =

= 511,924,786 Btus/hr = **51.2 lbs/hr Allow. Part.**

E00010935

Amended Allowable Particulate Calculations 9/28/99 SC

9/30/99 dk

WFB 2nd Quarter 1999 4/8/99

Run #	Date	Gr/DSCF	Steam lbs/hr	% Steam Load	Part. lbs/hr	Allow. Part. lbs/hr	ISO
1	4/8/99	0.031	371,250	106.1	37.6	53.9	96.8
2	4/8/99	0.030	351,250	100.4	36.1	51.0	98.2
3	4/8/99	0.028	342,500	97.9	32.8	49.8	101.1
	x	0.030	355,000	101.5	35.5	51.6	

Run #1

- Steam Total (Chart) = 371,250 lbs/hr
- Natural Gas (Log Sheet) = 167,000 CF/hr

Btus/hr (Gas) = (167,000 CF/hr) (1020 Btus/ft³) = 170,340,000 Btus/hr

Steam (Gas) = (167,000 CF/hr) (0.75)(0.94) = 117,735 lbs/hr

- Steam (Bark) = 371,250 lbs/hr − 117,735 lbs/hr = 253,515 lbs/hr

Btus/hr (Bark) = (253,515 lbs/hr) (1 lb Bark / 3.21 lbs Steam) (4674 Btus/1 lb Bark)

= 369,136,794 Btus/hr Bark

170,340,000 Btus/hr Gas

539,476,794 Btus/hr Total = 53.9 lbs/hr Allow. Part.

Run #2

- Steam Total (Chart) = 351,250 lbs/hr
- Natural Gas (Log Sheet) = 158,000 CF/hr

Btus/hr (Gas) = (158,000 CF/hr) (1020 Btus/ft³) = 161,160,000 Btus/hr

Steam (Gas) = (158,000 CF/hr) (0.75)(0.94) = 111,390 lbs/hr

- Steam (Bark) = 351,250 lbs/hr − 111,390 lbs/hr = 239,860 lbs/hr

Btus/hr (Bark) = (239,860 lbs/hr) (1 lb Bark / 3.21 lbs Steam) (4674 Btus/1 lb Bark)

= 349,254,093 Btus/hr Bark

161,160,000 Btus/hr Gas

510,414,093 Btus/hr Total = 51.0 lbs/hr Allow. Part.

Run #3

- Steam Total (Chart) = 342,500 lbs/hr
- Natural Gas (Log Sheet) = 174,000 lbs/hr

Btus/hr (Gas) = (174,000 CF/hr) (1020 Btus/ft³) = 177,480,000 Btus/hr

Steam (Gas) = (174,000 CF/hr) (0.75)(0.94) = 122,670 lbs/hr

- Steam (Bark) = 342,500 lbs/hr − 122,670 lbs/hr = 219,830 lbs/hr

Btus/hr (Bark) = (219,830 lbs/hr) (1 lb Bark / 3.21 lbs Steam) (4674 Btus/1 lb Bark)

= 320,088,916 Btus/hr Bark

177,480,000 Btus/hr Gas

497,568,916 Btus/hr Total = 49.8 lbs/hr Allow. Part.

4/12/99 OK. 4.1

WFB Source Test - 2nd Quarter 1999

4/8/99

Run #	Date	Gr/DSCF	Part. lbs/hr	Bark Steam Load (Chart)	% Steam Load	Allowable lbs/hr	ISO
1	4/8/99	0.031	37.6	371,083	106.0	54.0	96.8
2	4/8/99	0.030	36.1	350,902	100.3	51.1	98.2
3	4/8/99	0.028	32.8	342,073	97.7	49.8	101.1
	x =	0.032	35.5	354,686	101.3	51.6	

35.5 lbs/hr < 51.6 lbs/hr.

Run #1

- Steam Load (Chart) = 371,250 lbs/hr
- Natural Gas = (419 cf)(0.75)(0.94) = 295 lbs steam/gas
  lbs/hr = 295 lbs / 106 min (60 min/hr) = 167 lbs/hr Steam (Gas)
- Steam (Bark) = 371,250 lbs/hr − 167 lbs/hr = 371,083 lbs/hr Steam (Bark)
- Btus/hr = (371,083 lbs/hr)(1 lb Bark / 3.21 lbs steam)(4674 Btus/lb Bark)
  = 540,324,592 Btus/hr

Allowable Part. = 54.0 lbs/hr

Run #2 Steam Load (Chart) = 351,250 lbs/hr

Natural Gas = (749 cf)(0.75)(0.94) = 528 lbs/steam (Gas)
lbs/hr = 528 lbs / 91 min (60 min/hr) = 348 lbs/hr Steam (Gas)

Steam (Bark) = 351,250 lbs/hr − 348 lbs/hr = 350,902 lbs/hr Steam (Bark)
Btus/hr = (350,902 lbs/hr)(1 lb Bark / 3.21 lbs/steam)(4674 Btus/lb Bark)
= 510,939,547 Btus/hr

Allowable Part. = 51.1 lbs/hr

Run #3 Steam Load (Chart) = 342,500 lbs/hr

Natural Gas = (968 cf)(0.75)(0.94) = 682 lbs/steam (Gas)
lbs/hr = 682 lbs/steam / 96 min (60 min/hr) = 42.7 lbs/hr Steam (Gas)
Btus/hr Steam (Bark) = (342,500 lbs/hr − 42.7 lbs/hr)(1 lb Bark / 3.21 lbs/steam)(4674 Btus/lb Bark)
= 498,083,864 Btus/hr

Allowable Part. = 49.8 lbs/hr

Amended Allowable Particulate Calculations - 9/28/99 [initials]

9/30/99 [initials]

WFB 1st. Quarter 1999 1/27/99

Run #	Date	Gr/DSCF	Steam lbs/hr	% Steam Load	Part. lbs/hr	Allow Part. lbs/hr	ISO
1	1/27/99	0.029	331,250	94.6	33.7	48.2	101.2
2	1/27/99	0.030	316,250	90.4	34.5	46.0	100.9
3	1/27/99	0.025	320,000	91.4	29.5	46.5	105.1
	X =	0.028	322,500	92.1	32.5	46.9	

Run #1

- Steam Total (Chart) = 331,250 lbs/hr
- Natural Gas (Log Sheet) = 67,000 CF/hr

Btus/hr (Gas) = (67,000 CF/hr)(1020 Btus/ft³) = 68,340,000 Btus/hr

Steam (Gas) = (67,000 CF/hr)(0.75)(0.94) = 47,235 lbs/hr

- Steam (Bark) = 331,250 lbs/hr − 47,235 lbs/hr = 284,015 lbs/hr

Btus/hr (Bark) = (284,015 lbs/hr)(1 lb Bark / 3.21 lbs Steam)(4674 Btus/1 lb Bark)

= 413,547,075 Btus/hr Bark

68,340,000 Btus/hr Gas

481,887,075 Btus/hr Total = **48.2 lbs/hr Allow. Part.**

Run #2

- Steam Total (Chart) = 316,250 lbs/hr
- Natural Gas (Log Sheet) = 69,000 CF/hr

Btus/hr (Gas) = (69,000 CF/hr)(1020 Btus/ft³) = 70,380,000 Btus/hr

Steam (Gas) = (69,000 CF/hr)(0.75)(0.94) = 48,645 lbs/hr

- Steam (Bark) = 316,250 lbs/hr − 48,645 lbs/hr = 267,605 lbs/hr

Btus/hr (Bark) = (267,605 lbs/hr)(1 lb Bark / 3.21 lbs Steam)(4674 Btus/1 lb Bark)

= 389,652,888 Btus/hr Bark

70,380,000 Btus/hr Gas

460,032,888 Btus/hr Total = **46.0 lbs/hr Allow Part.**

Run #3

- Total Steam (Chart) = 320,000 lbs/hr
- Natural Gas (Log Sheet) = 68,000 CF/hr

Btus/hr (Gas) = (68,000 CF/hr)(1020 Btus/ft³) = 69,360,000 Btus/hr

Steam (Gas) = (68,000 CF/hr)(0.75)(0.94) = 47,940 lbs/hr

- Steam (Bark) = 320,000 lbs/hr − 47,940 lbs/hr = 272,060 lbs/hr

Btus/hr (Bark) = (272,060 lbs/hr)(1 lb. Bark / 3.21 lbs Steam)(4674 Btus/1 lb Bark)

= 396,139,701 Btus/hr Bark

69,360,000 Btus/hr Gas

465,499,701 Btus/hr Total = **46.5 lbs/hr Allow Part.**

2/3/99 OK G.S.

WFB Source Test - 1st. Quarter 1999 1/27/99

Run #	Date	Gr/DSCF	Part lbs/hr	(chart) Steam Load lbs/hr - Bark	% Steam Load	Allowable Part. lbs/hr	ISO
2	1/27/99	0.029	33.7	331,059	94.6	48.2	101.2
3	1/27/99	0.030	34.5	316,063	90.3	46.0	100.9
4	1/27/99	0.025	29.5	319,772	91.4	46.6	105.1
	x =	0.028	32.5	322,298	92.1	46.9	

Run 1

Steam Load (chart) = 331,250 lbs/hr

Natural Gas = (416 cf)(0.75)(0.94) = 293 lbs Steam-Gas

lbs/hr = 293 lbs / 92 min (60 min/hr) = 191 lbs/hr Steam-Gas

Steam (Bark) = 331,250 lbs/hr - 191 lbs/hr = **331,059 lbs/hr Steam-Bark**

Btu/hr = (331,059 lbs/hr) (1 lb. Bark / 3.21 lbs/steam) (4674 Btus/lb. Bark)

= 482,046,656 Btus/hr

Allowable Part. = (0.1 lbs Part / 1x10^6 Btus) (482,046,656 Btus/hr) = **48.2 lbs/hr Allow. Part.**

Run 2

Steam Load (chart) = 316,250 lbs/hr

Natural Gas = (420 cf)(0.75)(0.94) = 296 lbs/steam Gas

lbs/hr = 296 lbs / 95 min (60 min) = 187 lbs/hr Steam-Gas

Steam (Bark) = 316,250 lbs/hr - 187 lbs/hr = **316,063 lbs/hr Steam-Bark**

Btus/hr = (316,063 lbs/hr) (1 lb. Bark / 3.21 lbs/steam) (4674 Btu/lb Bark)

= 460,211,359 Btus/hr

Allowable Part. = (0.1 lbs Part / 1x10^6 Btus) (460,211,359 Btus/hr) = **46.0 lbs/hr Allow Part.**

Amended Allowable Particulate Calculations 9/27/99 SC

WEB 4th Quarter 1998 - 10/22/98 - 10/23/98 9/30/99 dc

Run #	Date	Gr/DSCF	Steam lbs/hr	% Steam Load	Part. lbs/hr	Allow. Part. lbs/hr.	ISO
1	10/22/98	0.025	326,250	93.2	34.1	47.4	90.1
2	10/23/98	0.026	340,000	97.1	32.9	49.5	96.3
3	10/23/98	0.030	340,000	97.1	33.4	49.4	99.0
	x =	0.027	335,417	95.8	33.5	48.8	

Run #1

- Total Steam (Chart) = 326,250 lbs/hr
- Natural Gas (Int.) = 213,714 CF/hr

Btus/hr (Gas) = (213,714 CF/hr)(1020 Btus/ft³) = 217,988,280 Btus/hr

Steam (Gas) = (213,714 CF/hr)(0.75)(0.94) = 150,668 lbs/hr

- Steam (Bark) = 326,250 lbs/hr − 150,668 lbs/hr = 175,582 lbs/hr

Btus/hr (Bark) = (175,582 lbs/hr)(1 lb Bark / 3.21 lbs steam)(4674 Btus/lb Bark)

= 255,660,520 Btus/hr Bark

217,988,280 Btus/hr Gas

473,648,800 Btus/hr Total = **47.4 lbs/hr Allow. Part.**

Run #2

- Total Steam (Chart) = 340,000 lbs/hr
- Natural Gas (Int.) = 83,036 CF/hr

Btus/hr (Gas) = (83,036 CF/hr)(1020 Btus/ft³) = 84,696,720 Btus/hr

Steam (Gas) = (83,036 CF/hr)(0.75)(0.94) = 58,540 lbs/hr

- Steam (Bark) = 340,000 lbs/hr − 58,540 lbs/hr = 281,460 lbs/hr

Btus/hr (Bark) = (281,460 lbs/hr)(1 lb Bark / 3.21 lbs steam)(4674 Btus/lb Bark)

= 409,826,804 Btus/hr Bark

84,696,720 Btus/hr Gas

494,523,524 Btus/hr Total = **49.5 lbs/hr Allow. Part.**

Run #3

- Total Steam (Chart) = 340,000 lbs/hr
- Natural Gas (Int.) = 137,684 CF/hr

Btus/hr (Gas) = (137,684 CF/hr)(1020 Btus/ft³) = 140,437,680 Btus/hr

Steam (Gas) = (137,684 CF/hr)(0.75)(0.94) = 97,067 lbs/hr

- Steam (Bark) = 340,000 lbs/hr − 97,067 = 242,933 lbs/hr

Btus/hr (Bark) = (242,933 lbs/hr)(1 lb Bark / 3.21 lb steam)(4674 Btus/lb Bark)

= 353,728,611 Btus/hr Bark

140,437,680 Btus/hr Gas

494,166,291 Btus/hr Total = **49.4 lbs/hr Allow. Part.**

E00010940

WFB 4th. Quarter 1998 10/22/98 - 10/23/98

Run #	Date	Iso	Grains/DSCF	lbs/hr Part.	lbs/hr Steam-Bark (O&A Chart)	% Steam Load	lbs/hr Allowable Part.
1	10/22/98	90.1	0.025	34.1	326,099 ~~329,849~~	93.2 ~~93.1~~	47.5 ~~47.4~~
2	10/23/98	96.3	0.026	32.9	339,942	97.1	49.5
3	10/23/98	99.0	0.030	33.4	339,903	97.1	49.5
x =			0.027	33.5	335,315 ~~335,231~~	95.8	48.8

$\boxed{33.5\ \text{lbs/hr} < 48.8\ \text{lbs/hr Allowable}}$

Run #1

Steam Load (chart) = ~~326,000~~ 326,250 lbs/hr

Natural Gas = (374 cf)(0.75)(0.94) = 264 lbs. Steam (Gas)

lbs/hr = 264 lbs / 105 min (60 min/hr) = 151 lbs/hr Steam (Gas)

Steam (Bark) = 326,~~000~~ 250 lbs/hr − 151 lbs/hr = $\boxed{\text{~~325,849~~ 326,099 lbs/hr Steam-Bark}}$

Btus/hr = (~~325,849~~ 326,099 lbs/hr)(1 lb. Bark / 3.21 lbs steam)(4674 Btus/1 lb. Bark)

= ~~474,460,507~~ Btus/hr 474,824,525

Allowable Part. = (0.1 lbs Part. / 1x10⁶ Btus)(~~474,460,507~~ Btus/hr) = $\boxed{\text{~~47.4~~ 47.5 lbs/hr part. Allow}}$

Run #2

Steam Load (chart) = 340,000 lbs/hr

Natural Gas = (155 cf)(0.75)(0.94) = 109 lbs Steam (Gas)

lbs/hr = 109 lbs / 112 min (60 min/hr) = 58 lbs/hr Steam-Gas

Steam (Bark) = 340,000 lbs/hr − 58 lbs/hr. = $\boxed{\text{339,942 lbs/hr Steam-Bark}}$

Btus/hr = (339,942 lbs/hr)(1 lb. Bark / 3.21 lbs/steam)(4674 Btu/1 lb. Bark)

= 494,980,968 Btus/hr

Allowable Part. = (0.1 lbs part / 1x10⁶ Btus)(494,980,968 Btus/hr) = $\boxed{\text{49.5 lbs/hr part. Allow.}}$

WFB 4th Quarter (cont.)

Run #3

Steam Load (chart) = 340,000 lbs/hr

Natural Gas = (218 cf)(0.75)(.0.94) = 154 lbs Steam - Gas

lbs/hr = 154 lbs / 95 min (60 min/hr) = 97 lbs/hr Steam - Gas

Steam (Bark)

= 340,000 lbs/hr − 97 lbs/hr = **339,903 lbs/hr Steam - Bark**

Btu/hr = (339,903 lbs/hr)(1 lb. Bark / 3.21 lbs Steam)(4674 Btu/lb Bark)

= 494,924,181 Btu/hr

Allowable Part. = (0.1 lbs part. / 1×10⁶ Btu)(494,924,181 Btu/hr) = **49.5 lbs/hr part. Allow**

Amended Allowable Particulate Calculations - 9/27/99 SC

9/30/99 OK S.S

WFB 3rd Quarter 1998 - 8/25/98

Run #	Date	Gr/DSCF	Steam lbs/hr	% Steam Load	Part. lbs/hr	Allow. Part. lbs/hr	ISO
1	8/25/98	0.040	359,423	102.7	43.1	52.2	103.5
2	8/25/98	0.032	398,000	113.7	37.4	57.9	99.6
3	8/25/98	0.032	353,749	101.1	36.9	51.4	97.8
	x =	0.035	370,391	105.8	39.1	53.8	

Run #1

- Total Steam (Int.) = 359,423 lbs/hr
- Natural Gas (Int.) = 143,077 CF/hr

Btus/hr (Gas) = (143,077 CF/hr)(1020 Btus/ft³) = 145,938,540 Btus/hr

Steam (Gas) = (143,077 CF/hr)(0.75)(0.94) = 100,869 lbs/hr

- Steam (Bark) = 359,423 lbs/hr - 100,869 lbs/hr = 258,554 lbs/hr

Btus/hr (Bark) = (258,554 lbs/hr)(1 lb. Bark / 3.21 lbs Steam)(4674 Btus/1 lb Bark)

= 376,473,955 Btus/hr Bark

145,938,540 Btus/hr Gas

522,412,495 Btus/hr Total = **52.2 lbs/hr Allow Part.**

Run #2

- Total Steam (Int.) = 398,000 lbs/hr
- Natural Gas (Int.) = 155,333 CF/hr

Btus/hr (Gas) = (155,333 CF/hr)(1020 Btus/ft³) = 158,439,660 Btus/hr

Steam (Gas) = (155,333 CF/hr)(0.75)(0.94) = 109,510 lbs/hr

- Steam (Bark) = 398,000 lbs/hr - 109,510 lbs/hr = 288,490 lbs/hr

Btus/hr (Bark) = (288,490 lbs/hr)(1 lb. Bark / 3.21 lbs Steam)(4674 Btus/1 lb Bark)

= 420,063,009 Btus/hr Bark

158,439,660 Btus/hr Gas

578,502,669 Btus/hr Total = **57.9 lbs/hr Allow. Part.**

Run #3

- Total Steam (Int.) = 353,749 lbs/hr
- Natural Gas (Int) = 141,250 CF/hr

Btus/hr (Gas) = (141,250 CF/hr)(1020 Btus/ft³) = 144,075,000 Btus/hr

Steam (Gas) = (141,250 CF/hr)(0.75)(0.94) = 99,581 lbs/hr

- Steam (Bark) = 353,749 lbs/hr - 99,581 lbs/hr = 254,168 lbs/hr

Btus/hr (Bark) = (254,168 lbs/hr)(1 lb Bark / 3.21 lbs Steam)(4674 Btus/1 lb Bark)

= 370,087,611 Btus/hr Bark

144,075,000 Btus/hr Gas

514,162,611 Btus/hr Total = **51.4 lbs/hr Allow. Part.**

39.1 lbs/hr < 53.9 AND 52.04 (MAX Allowable)

WFB 3rd. Quarter 1998 8/25/98

Run #	Date	ISO	Grains/DSCF	lbs/hr Part.	lbs/hr Steam-Bark	Allowable Particulate lbs/hr
1	8/25/98 ✓	103.5 ✓	0.040 ✓	43.1 ✓	359,322 ✓	52.3 ✓
2	8/25/98 ✓	99.6 ✓	0.032 ✓	37.4 ✓	397,891 ✓	57.9 ✓
3	8/25/98 ✓	97.9 ✓	0.032 ✓	36.9 ✓	353,650 ✓	51.5 ✓
	x =		0.035 ✓	39.1 ✓	370,287 ✓	~~53.9~~ 53.9

Run #1

Steam Load = $\frac{\Delta I (1000)}{\Delta T}(60\ \text{min/hr}) = \frac{623(1000)}{104\ \text{min}}(60\ \text{min/hr}) = 359,423$ lbs/hr Steam ✓

Natural Gas = (~~248~~ OK: ~~143~~ CF)(0.75)(0.94) = ~~174.8~~ OK: ~~104~~ lbs Steam-Gas ✓

lbs/hr = 174.8 lbs / 104 min (60 min/hr) = 101 lbs/hr Steam-Gas ✓

Steam-Bark = 359,423 lbs/hr − 101 lbs/hr = **359,322 lbs/hr Steam-Bark** ✓

Btue/hr = (359,322 lbs/hr)(1 lb. Bark / 3.21 lbs/steam)(4674 Btus/1 lb Bark) ✓

= 523,199,697 Btue/hr

Allowable Part. = (0.1 lbs part / 1×10⁶ Btus)(523,199,697 Btus/hr) = **52.3 lbs/hr part Allow.**

Run #2

Steam Load = $\frac{597(1000)}{90}(60\ \text{min/hr}) = 398,000$ lbs/hr Steam ✓

Natural Gas = (233 CF)(0.75)(0.94) = 164.2 lbs Steam-Gas ✓

lbs/hr = 164.2 lbs/hr / 90 min (60 min/hr) = 109 lbs/hr Steam-Gas ✓

Steam-Bark = 398,000 lbs/hr − 109 lbs/hr = **397,891 lbs/hr Steam-Bark** ✓

Btue/hr = (397,891 lbs/hr)(1 lb Bark / 3.21 lbs/steam)(4674 Btus/1 lb. Bark)

= 579,359,045 Btue/hr ✓

Allowable Part. = (0.1 lbs part / 1×10⁶ Btus)(579,359,045 Btus/hr) = **57.9 lbs/hr Part. Allow.**

Run #3

$$\text{Steam Load} = \frac{566(1000)}{96\,\text{min}}(60\,\text{min/hr}) = 353{,}749\ \text{lbs/hr Steam}$$

$$\text{Natural Gas} = (226\ \text{cf})(0.75)(0.94) = 159.0\ \text{lbs/steam Gas}$$

$$\text{lbs/hr} = \frac{159\ \text{lbs}}{96\,\text{min}}(60\,\text{min}) = 99\ \text{lbs/hr Steam-Gas}$$

$$\text{Steam-Bark} = 353{,}749\ \text{lbs/hr} - 99\ \text{lbs/hr} = \boxed{353{,}650\ \text{lbs/hr Steam-Bark}}$$

$$\text{Btus/hr} = (353{,}650\ \text{lbs/hr})\left(\frac{1\ \text{lb. Bark}}{3.21\ \text{lbs/steam}}\right)(4674\ \text{Btus/1 lb. Bark})$$

$$= 514{,}940{,}840\ \text{Btus/hr}$$

$$\text{Allowable Part.} = \left(\frac{0.1\ \text{lbs part.}}{1\times10^6\ \text{Btus}}\right)(514{,}940{,}840\ \text{Btus/hr})$$

$$= \boxed{51.5\ \text{lbs/hr Part. Allowable}}$$

Amended Allowable Particulate Calculations 9/27/99 RC

WFB 2nd. Quarter 1998 - 6/10/99 9/30/99 OK

Run #	Date	Gr/DSCF	Steam lbs/hr	% Steam Load	Part. lbs/hr	Allow. Part. lbs/hr	ISO
1	6/10/98	0.024	385,405	110.1	28.1	56.1	95.9
2	6/10/98	0.021	351,429	100.4	25.7	51.1	101.8
3	6/10/98	0.022	362,970	103.7	27.1	52.8	100.1
	x =	0.0231	366,601	104.7	27.0	53.3	

Run #1

- Total Steam (Int.) = 385,405 lbs/hr
- Natural Gas (Log Sheet) = 98,000 cf/hr

Btus/hr (Gas) = (98,000 cf/hr)(1020 Btus/ft³) = 99,960,000 Btus/hr

Steam (Gas) = (98,000 cf/hr)(0.75)(0.94) = 69,090 lbs/hr

- Steam (Bark) = 385,405 lbs/hr − 69,090 lbs/hr = 316,315 lbs/hr

Btus/hr (Bark) = (316,315 lbs/hr)(1 lb Bark / 3.21 lbs Steam)(4674 Btus/lb Bark)

= 460,578,290 Btus/hr Bark

99,960,000 Btus/hr Gas

560,538,290 Total Btus/hr = 56.1 lbs/hr Allow. Part.

Run #2

- Total Steam (Int) = 351,429 lbs/hr
- Natural Gas (Log Sheet) = 66,000 cf/hr

Btus/hr (Gas) = (66,000 cf/hr)(1020 Btus/ft³) = 67,320,000 Btus/hr

Steam (Gas) = (66,000 cf/hr)(0.75)(0.94) = 46,530 lbs/hr

- Steam (Bark) = 351,429 lbs/hr − 46,530 lbs/hr = 304,899 lbs/hr

Btus/hr (Bark) = (304,899 lbs/hr)(1 lb Bark / 3.21 lbs Steam)(4674 Btus/lb. Bark)

= 443,955,740 Btus/hr Bark

67,320,000 Btus/hr Gas

511,275,740 Btus/hr Total = 51.1 lbs/hr Allow. Part.

Run #3

- Total Steam (Int) = 362,970 lbs/hr
- Natural Gas (Log Sheet) = 112,000 cf/hr

Btus/hr (Gas) = (112,000 cf/hr)(1020 Btus/ft³) = 114,240,000 Btus/hr

Steam (Gas) = (112,000 cf/hr)(0.75)(0.94) = 78,960 lbs/hr

- Steam (Bark) = 362,970 lbs/hr − 78,960 lbs/hr = 284,010 lbs/hr

Btus/hr (Bark) = (284,010 lbs/hr)(1 lb Bark / 3.21 lbs Steam)(4674 Btus/lb. Bark)

= 413,539,794 Btus/hr Bark

114,240,000 Btus/hr Gas

527,779,794 Btus/hr Total = 52.8 lbs/hr Allow. Part.

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WFB 2nd Quarter 1998 6/10/98

Run #	Date	Iso	Grains/DSCF	lbs/hr Part	lbs/hr Steam - Bark	Allowable lbs/hr Particulate
1	6/10/98	95.9	0.024	28.1	385,051	56.1
2	6/10/98	101.8	0.021	25.7	351,088	51.1
3	6/10/98	100.1	0.022	~~26.9~~ 27.4	362,643	52.8
	X =		0.023	~~26.9~~ 27.0	366,261	53.3

Run #1

Steam Load = $\frac{\Delta I (1000)\,lbs}{\Delta T\ min}(60\ min/hr) = \frac{913(1000)\,lbs}{111\ min.}(60\ min/hr) =$ 385,405 lbs/hr Steam

Natural Gas = (928 CF)(0.75)(0.94) = 654.2 lbs Steam - Gas

lbs/hr = 654.2 lbs / 111 min (60 min/hr) = 354 lbs/hr Steam - Gas

Steam - Bark = 385,405 lbs/hr − 354 lbs/hr

= **385,051 lbs/hr Steam (Bark)**

Btus/hr = (385,051 lbs/hr)(1 lb. Bark / 3.21 lbs Steam)(4674 Btus/lb. Bark) = 560,663,045 Btus/hr

Allowable Part. = $\left(\frac{0.1\ lbs\ part}{1\times10^6\ Btus}\right)$(560,663,045 Btus/hr)

= **56.1 lbs/hr Part. Allowable**

Run #2

Steam Load = $\frac{\Delta I (1000)\,lbs}{\Delta T\ min}(60\ min/hr) = \frac{574(1000)\,lbs}{98\ min}(60\ min/hr) =$ 351,429 lbs/hr Steam

Natural Gas = (789 CF)(0.75)(0.94) = 556.2 lbs Steam - Gas

lbs/hr = 556 lbs / 98 min (60 min/hr) = 341 lbs/hr Steam - Gas

Steam - Bark = 351,429 lbs/hr − 341 lbs/hr

= **351,088 lbs/hr Steam (Bark)**

Btus/hr = (351,088 lbs/hr)(1 lb Bark / 3.21 lbs Steam)(4674 Btus/lb. Bark) = 511,210,377 Btus/hr

Allowable Part. = $\left(\frac{0.1\ lbs\ Part}{1\times10^6\ Btus}\right)$(511,210,377 Btus/hr)

= **51.1 lbs/hr Part. Allowable**

Run #3

Steam Load = $\frac{\Delta I (1000)\,lbs}{\Delta T\ min}(60\ min/hr) = \frac{611(1000)\,lbs}{101\ min.}(60\ min/hr) =$ 362,970 lbs/hr Steam

Natural Gas = (780 CF)(0.75)(0.94) = 549.9 lbs Steam - Gas

lbs/hr = 549.9 lbs / 101 min (60 min/hr) = 327 lbs/hr Steam - Gas

Steam - Bark = 362,970 lbs/hr − 327 lbs/hr =

= **362,643 lbs/hr Steam (Bark)**

Btus/hr = (362,643 lbs/hr)(1 lb. Bark / 3.21 lbs St)(4674 Btus/lb. Bark) = 528,035,321 Btus/hr

Allowable Part. = $\left(\frac{0.1\ lbs\ Part}{1\times10^6\ Btus}\right)$(528,035,321 Btus/hr)

= **52.8 lbs/hr Part. Allowable**

Amended Allowable Particulate Calculations - 9/27/99 SC

9/30/99 GG

WFB 1st. Quarter (Test 2) 1998 2/21/98 - 2/22/98

Run #	Date	Gr/DSCF	Steam lbs/hr	% Steam Load	Part lbs/hr	Allowable Part. lbs/hr	ISO
4	2/21/98	0.045	350,426	100.1	53.3	51.0	97.0
5	2/21/98	0.035	343,373	98.1	42.6	50.6	96.8
6	2/22/98	0.030	352,277	100.7	34.4	51.3	104.2
	x =	0.037	348,692	99.6	43.4	50.8	

Run #4

- Total Steam (Int.) = 350,426 lbs/hr
- Natural Gas (Int.) = 54,894 CF/hr

Btus/hr (Gas) = (54,894 CF/hr)(1020 Btus/ft³) = 55,991,880 Btus/hr

Steam (Gas) = (54,894 CF/hr)(0.75)(0.94) = 38,700 lbs/hr

- Steam (Bark) = 350,426 lbs/hr − 38,700 lbs/hr = 311,726 lbs/hr

Btus/hr (Bark) = (311,726 lb/hr)(1 lb. Bark / 3.21 lbs Steam)(4674 Btus/lb Bark)

= 453,896,363 Btus/hr Bark

55,991,880 Btus/hr Gas

509,888,243 Btus/hr Total = 51.0 lbs/hr Allow. Part.

Run #5

- Total Steam (Int.) = 343,373 lbs/hr
- Natural Gas (Int.) = 10,120 CF/hr

Btus/hr (Gas) = (10,120 CF/hr)(1020 Btus/ft³) = 10,322,400 Btus/hr

Steam (Gas) = (10,120 CF/hr)(0.75)(0.94) = 7,135 lbs/hr

- Steam (Bark) = 343,373 lbs/hr − 7,135 lbs/hr = 336,238 lbs/hr

Btus/hr (Bark) = (336,238 lbs/hr)(1 lb. Bark / 3.21 lbs Steam)(4674 Btus/lb Bark)

= 489,587,667 Btus/hr Bark

+ 10,322,400 Btus/hr Gas

499,910,067 Btus/hr Total = 50.0 lbs/hr Allow Part.

Run #6

- Total Steam (Int.) = 352,277 lbs/hr
- Natural Gas (Int.) = 26,139 CF/hr

Btus/hr (Gas) = (26,139 CF/hr)(1020 Btus/ft³) = 26,661,780 Btus/hr

Steam (Gas) = (26,139 CF/hr)(0.75)(0.94) = 18,428 lbs/hr

- Steam (Bark) = 352,277 lbs/hr − 18,428 lbs/hr = 333,849 lbs/hr

Btus/hr (Bark) = (333,849 lbs/hr)(1 lb. Bark / 3.21 lbs Steam)(4674 Btus/lb Bark)

= 486,109,104 Btus/hr Bark

26,661,780 Btus/hr Gas

512,770,884 Btus/hr Total = 51.3 lbs/hr Allow. Part.

2/11/98 4.4

WFB 1st. Quarter (Test 2) 1998 2/21/98 - 2/22/98

Run#	Date	ISO	Gr/DSCF	lbs/hr	lbs/hr Steam-Bark	Allowable Particulate
4	2/21/98	97.0	0.045	53.3	350,387	51.0
5	2/21/98	96.8	0.035	42.6	343,366	50.0
6	2/22/98	104.2	0.030	34.4	352,259	51.3
x =			0.037	43.4	348,671 lbs/hr	50.8 lbs/hr

Run #4

$$\text{Steam Load} = \frac{\Delta I\,(1000)\ \text{lbs steam}}{\Delta T_{min.}} \times 60\ \text{min/hr}$$

$$= \frac{549{,}000\ \text{lbs}}{94\ \text{min}} \times 60\ \text{min} = \boxed{350{,}426\ \text{lbs/hr Steam}}$$

Natural Gas = 86 CF

$$\text{Steam} = (86\ \text{CF})(0.75)(0.94) = 60.6\ \text{lbs. Gas Steam}$$

$$= \frac{60.6\ \text{lbs}}{94\ \text{min}} \times 60\ \text{min} = 39\ \text{lbs/hr Gas}$$

$$\text{Steam Bark} = 350{,}426\ \text{lbs/hr} - 39\ \text{lbs}$$

$$= \boxed{350{,}387\ \text{lbs/hr Bark}}$$

$$\text{BTUs/hr} = (350{,}387\ \text{lbs/hr})\left(\frac{1\ \text{lb. Bark}}{3.21\ \text{lbs steam}}\right)(4674\ \text{BTUs/lb bark})$$

$$= 510{,}189{,}669\ \text{BTUs/hr}$$

$$\text{Allowable Part./hr} = \left(\frac{0.1\ \text{lbs part}}{1 \times 10^6\ \text{BTUs}}\right)(510{,}189{,}669\ \text{BTUs/hr})$$

$$= \boxed{51.0\ \text{lbs/hr part. Allowable}}$$

Run #5

$$\text{Steam Load} = \frac{\Delta I\,(1000)\ \text{lbs steam}}{\Delta T_{min}}(60\ \text{min/hr})$$

$$= \frac{475\,(1000)}{83\ \text{min}}(60\ \text{min/hr}) = \boxed{343{,}373\ \text{lbs/hr Steam}}$$

WFB 1Q 98 2/21/98 - 2/22/98

Run #2 (cont.)

Natural Gas = 14 CF

Steam = (14 CF)(0.75)(0.94) = 9.9 lbs Steam/Gas

lbs/hr = $\frac{\text{Gas Steam}}{\Delta T}$ (60 min/hr) = $\frac{9.9 \text{ lbs}}{83 \text{ min}}$ (60 min/hr) = 7 lbs/hr Gas

Steam Bank = 343,373 lbs/hr − 7 lbs/hr

= **343,366 lbs/hr Steam (Bank)**

Btus/hr = (343,366 lbs/hr)(lb Bank / 3.21 lbs steam)(4674 Btus/lb Bank)

= 499,966,568 Btus/hr

Allowable Part./hr = $\left(\frac{0.1 \text{ lbs Part.}}{1 \times 10^6 \text{ Btus}}\right)$ (499,966,568 Btus/hr)

= **50.0 lbs/hr Allowable**

Run #3

Steam Load = $\frac{\Delta I (1000) \text{ lbs steam}}{\Delta T \text{ min.}}$ (60 min/hr)

= $\frac{543 (1000) \text{ lbs}}{101 \text{ min}}$ (60 min/hr) = **352,277 lbs/hr Steam**

Natural Gas = (44 CF)(0.75)(0.94) = 31.0 lbs Steam

lbs/hr = $\frac{\text{lbs steam}}{\Delta T}$ (60 min/hr) = $\frac{31.0 \text{ lbs}}{101 \text{ min}}$ (60 min/hr) = 18 lbs/hr Gas

Steam Bank = 352,277 lbs/hr − 18 lbs/hr

= **352,259 lbs/hr Bank**

Btus/hr = (352,259 lbs/hr)(lb. Bank / 3.21 lbs steam)(4674 Btus/lb Bank)

= 512,915,441 Btus/hr

Allowable Part/hr = $\left(\frac{0.1 \text{ lbs part}}{1 \times 10^6 \text{ Btus}}\right)$ (512,915,441 Btus/hr)

= **51.3 lbs/hr Part. Allowable**

Amended Allowable Particulate Calculations – 9/27/99 SP

9/30/99 G.G.

WFB 1st Quarter (Test 1) 1998 - 2/18/98 - 2/19/98

Run #	Date	Gr/DSCF	Steam lbs/hr	% Steam Load	Part. lbs/hr	Allow. Part. lbs/hr	ESO
1	2/18/98	0.042	362,857	103.7	51.7	52.8	92.3
2	2/19/98	0.038	327,447	93.6	45.4	47.7	97.7
3	2/19/98	0.050	331,648	94.8	57.5	48.3	103.2
x =		0.043	340,651	97.4	51.5	49.6	

Run #1

- Total Steam (Int.) = 362,857 lbs/hr
- Natural Gas (Int.) = 69,~~000~~ 143 CF/hr

Btus/hr (Gas) = (69,143 CF/hr)(1020 Btus/ft³) = 70,525,860 Btus/hr

Steam (Gas) = (69,143 CF/hr)(0.75)(0.94) = 48,746 lbs/hr

- Steam (Bark) = 362,857 lbs/hr - 48,746 lbs/hr = 314,111 lbs/hr

Btus/hr (Bark) = (314,111 lbs/hr)(1 lb Bark / 3.21 lb Steam)(4674 Btus/1 lb Bark)

= 457,369,101 Btus/hr Bark

+ 70,525,860 Btus/hr Gas

527,894,961 Btus/hr Total = **52.8 lbs/hr Allow. Part.**

Run #2

- Total Steam (Int.) = 327,447 lbs/hr
- Natural Gas (Int.) = 8936 CF/hr

Btus/hr (Gas) = (8936 CF/hr)(1020 Btus/ft³) = 9,114,720 Btus/hr

Steam (Gas) = (8936 CF/hr)(0.75)(0.94) = 6300 lbs/hr

- Steam (Bark) = 327,447 lbs/hr - 6300 lbs/hr = 321,147 lbs/hr

Btus/hr (Bark) = (321,147 lbs/hr)(1 lb Bark / 3.21 lbs Steam)(4674 Btus/1 lb Bark)

= 467,614,043 Btus/hr Bark

+ 9,114,720 Btus/hr Gas

476,728,763 Btus/hr Total = **47.7 lbs/hr Allow. Part.**

Run #3

- Total Steam (Int.) = 331,648 lbs/hr
- Natural Gas (Log Sheet) = 2,000 CF/hr

Btus/hr (Gas) = (2,000 CF/hr)(1020 Btus/ft³) = 2,040,000 Btus/hr

Steam (Gas) = (2000 CF/hr)(0.75)(0.94) = 1410 lbs/hr

- Steam (Bark) = 331,648 lbs/hr - 1410 lbs/hr = 330,238 lbs/hr

Btus/hr (Bark) = (330,238 lbs/hr)(1 lb Bark / 3.21 lbs Steam)(4674 Btus/1 lb. Bark)

= 480,851,219 Btus/hr Bark

2,040,000 Btus/hr Gas

482,891,219 Btus/hr Total = **48.3 lbs/hr Allow. Part.**

2/19/98

WFB 1st Quarter (Test 1) 1998 2/18/98 - 2/19/98

Run #	Date	Iso	Gr/DSCF	lbs/hr Part.	lbs/hr Steam Bark	Allowable Particulate
1	2/18/98	92.3	0.042	51.7	362,808	52.8
2	2/19/98	97.7	0.038	45.4	327,441	47.7
3	2/19/98	103.2	0.050	57.5	331,648	48.3
	x =		0.043	51.5 lbs/hr	340,632 lbs/hr	49.6 lbs/hr

Run #1

$$\text{Steam Load} = \frac{\Delta I\,(1000)\text{ lbs}}{\Delta T\text{ min}}\left(60\text{ min/hr}\right)$$

$$= \frac{635\,(1000)}{105\text{ min}}\left(60\text{ min/hr}\right) = \boxed{362{,}857\text{ lbs/hr Steam}}$$

$$\text{Natural Gas} = (121\text{ CF})(0.75)(0.94) = 85.3\text{ lbs Steam Gas}$$

$$\text{lbs/hr} = \frac{85.3\text{ lbs}}{105\text{ min}}\left(60\text{ min/hr}\right) = 49\text{ lbs/hr Steam (Gas)}$$

$$\text{Steam Bark} = 362{,}857\text{ lbs/hr} - 49\text{ lbs/hr}$$

$$= \boxed{362{,}808\text{ lbs/hr Steam (Bark)}}$$

$$\text{Btu/hr} = \left(362{,}808\text{ lbs/hr}\right)\left(\frac{\text{lb Bark}}{3.21\text{ lbs Steam}}\right)\left(4674\text{ Btus/lb Bark}\right)$$

$$= 528{,}275{,}574\text{ Btu/hr}$$

$$\text{Allowable Part.} = \left(\frac{0.1\text{ lbs part}}{1\times10^{6}\text{ Btus}}\right)\left(528{,}275{,}574\text{ Btu/hr}\right)$$

$$= \boxed{52.8\text{ lbs/hr part Allowable}}$$

Run #2

$$\text{Steam Load} = \frac{\Delta I\,(1000)\text{ lbs}}{\Delta T\text{ min}}\left(60\text{ min/hr}\right) = \frac{513\,(1000)}{94\text{ min}}\left(60\text{ min/hr}\right) =$$

$$= \boxed{327{,}447\text{ lbs/hr Steam}}$$

$$\text{Natural Gas} = (14\text{ CF})(0.75)(0.94) = 9.9\text{ lbs Steam Gas}$$

$$\text{lbs/hr} = \frac{9.9\text{ lbs}}{94\text{ min}}\left(60\text{ min/hr}\right) = 6\text{ lbs/hr Steam Gas}$$

WFB 1Q 98 (Test #1) 2/18/98 - 2/19/98

Run #2 (cont.)

Steam Bark = 327,447 lbs/hr - 6 lbs/hr

= 327,441 lbs/hr Steam Bark

Btu's/hr = (327,441 lbs/hr)(1 lb Bark / 3.21 lbs/steam)(4674 Btus/1 lb Bark)

= 476,778,577 Btus/hr

Allowable Part. = (0.1 lbs/part. / 1x10^6 Btus)(476,778,577 Btus/hr)

= 47.7 lbs/hr part. Allowable

Run #3

Steam Load = ΔI (1000) lbs / ΔT min (60 min/hr)

= 503 (1000) / 91 min (60 min/hr) = 331,648 lbs/hr Steam

Natural Gas = N/A Recorded wrong integrator reading

Steam Bark = 331,648 lbs/hr Steam Bark

Btu's/hr = (331,648 lbs/hr)(1 lb. Bark / 3.21 lbs/steam)(4674 Btus/1 lb Bark)

= 482,904,284 Btus/hr

Allowable Part. = (0.1 lbs part. / 1x10^6 Btus)(482,904,284 Btus/hr)

= 48.3 lbs/hr part. Allowable

Amended Allowable Particulate Calculations - 9/27/99 RC

WEB 4th Quarter 1997 10/21/97 - 10/22/97 9/30/99 OK

Run #	Date	Gr/DSCF	Steam lbs/hr	% Steam Load	Part lbs/hr	Allow. Part. lbs/hr	ISO
1	10/21/97	0.028	374,646	107.6	33.4	54.4	99.6
2	10/22/97	0.023	364,918	104.3	26.2	53.1	98.5
3	10/22/97	0.033	328,500	93.4	37.5	47.8	97.3
	x =	0.028	356,021	101.7	32.4	51.8	

Run #1

- Total Steam (Int.) = 374,646 lbs/hr
- Natural Gas (Log Sheet) = 251,000 CF/hr

Btus/hr (Gas) = (251,000 CF/hr)(1020 Btus/ft³) = 256,020,000 Btus/hr

Steam (Gas) = (251,000 CF/hr)(0.75)(0.94) = 176,955 lbs/hr

- Steam (Bark) = 374,646 lbs/hr − 176,955 lbs/hr = 197,691 lbs/hr

Btus/hr (Bark) = (197,691 lbs/hr)(1 lb Bark / 3.21 lbs Steam)(4674 Btus/lb Bark)

= 287,852,877 Btus/hr Bark

+ 256,020,000 Btus/hr Gas

543,872,877 Btus/hr Total = **54.4 lbs/hr Allow. Part.**

Run #2

- Total Steam (Int.) = 364,918 lbs/hr
- Natural Gas (Log Sheet) = 76,000 CF/hr

Btus/hr (Gas) = (76,000 CF/hr)(1020 Btus/ft³) = 77,520,000 Btus/hr

Steam (Gas) = (76,000 CF/hr)(0.75)(0.94) = 53,580 lbs/hr

- Steam (Bark) = 364,918 lbs/hr − 53,580 lbs/hr = 311,338 lbs/hr

Btus/hr (Bark) = (311,338 lbs/hr)(1 lb Bark / 3.21 lbs Steam)(4674 Btus/lb Bark)

= 453,331,406 Btus/hr Bark

77,520,000 Btus/hr Gas

530,851,406 Btus/hr Total = **53.1 lbs/hr Allow Part.**

Run #3

- Total Steam (Int.) = 328,500 lbs/hr
- Natural Gas (Log Sheet) = 76,000 CF/hr

Btus/hr (Gas) = (76,000 CF/hr)(1020 Btus/ft³) = 77,520,000 Btus/hr

Steam (Gas) = (76,000 CF/hr)(0.75)(0.94) = 53,580 lbs/hr

- Steam (Bark) = 328,500 lbs/hr − 53,580 lbs/hr = 274,920 lbs/hr

Btus/hr (Bark) = (274,920 lbs/hr)(1 lb Bark / 3.21 lbs Steam)(4674 Btus/hr)

= 400,304,075 Btus/hr Bark

+ 77,520,000 Btus/hr Gas

477,824,075 Btus/hr Total = **47.8 lbs/hr Allow. Part.**

E00010954

WFB 4th. Quarter 1997 10/21/97 - 10/22/97

Run #	Date	ESO	GR/DSCF	lbs/hr	Steam - Bark	Allowable Particulate
1	10/21	99.6	0.028	33.4	374,520 lbs/hr	54.5 lbs/hr
2	10/22	98.5	0.023	26.2	364,850 lbs/hr	53.1 lbs/hr.
3	10/22	97.3	0.033	37.5	328,453 lbs/hr	47.8 lbs/hr
	x =		0.028 ✓	32.4 ✓	355,981 lbs/hr ✓	51.8 lbs/hr. ✓

Run #1

Steam Load (Integrator) = 374,646 lbs/hr

Natural Gas = 378 CF / ΔT = 127 min

Steam from gas = (378 cf)(0.75)(0.94)

= 266 lbs Steam

$\frac{266 \text{ lbs Steam}}{127 \text{ min}} = \frac{x}{60 \text{ min}}$ x = 126 lbs Steam/hr Gas

Steam (Bark) = Total Steam - Steam (Gas.)

= 374,646 lbs/hr - 126 lbs Steam/hr Gas

= **374,520 lbs/hr Bark** ✓

BTUs/hr = (374,520 lbs/hr)(lb. Bark / 3.21 lbs. Steam)(4674 BTUs / 1 lb Bark)

= 545,329,121 Btus/hr

Part./hr = $\left(\frac{0.1 \text{ lbs part.}}{1 \times 10^6 \text{ Btus}}\right)$ (545,329,121 Btus/hr)

= **54.5 lbs/hr Allowable** ✓

Run A2 10/22/97

- Steam Load (Integrator) = 364,918 lbs/hr

Natural Gas = 196 CF / ΔT = 122 min

Steam from Gas = (196 CF)(0.75)(0.94)

= 138 lbs Steam

$\frac{138 \text{ lbs}}{122 \text{ min}} = \frac{x}{60 \text{ min}}$ $x = 68$ lbs/hr Gas

- Steam (Bark) = Total Steam - Steam (Gas)

= 364,918 lbs/hr - 68 lbs/hr gas

= **364,850 lbs/hr Bark**

Btus/hr = (364,850 lbs/hr)(1 lb Bark / 3.21 lbs Steam)(4674 Btus/1 lb Bark)

= 531,248,879 Btus/hr

Part./hr = $\left(\frac{0.1 \text{ lbs part}}{1 \times 10^6 \text{ Btus}}\right)$(531,248,879 Btus/hr) = **53.1 lbs/hr Allowable**

Run B2

Steam Load (Integrator) = 328,500 lbs/hr

Natural Gas = 134 CF / ΔT = 120 min

Steam (Gas) = (134 CF)(0.75)(0.94) = 94 lbs Steam/hr Gas

$\frac{94 \text{ lbs Steam}}{120 \text{ min}} = \frac{x}{60 \text{ min}}$ **x = 47 lbs Steam/hr Gas**

Steam (Bark) = Total Steam - Steam (Gas)

= 328,500 lbs/hr - 47 lbs/hr Gas = **328,453 lbs/hr Bark**

Btus/hr = (328,453 lbs/hr)(1 lb Bark / 3.21 lbs Steam)(4674 Btus/1 lb. Bark)

= 478,252,125 Btus/hr.

Part./hr = $\left(\frac{0.1 \text{ lbs part.}}{1 \times 10^6 \text{ Btus}}\right)$(478,252,125 Btus/hr)

= **47.8 lbs/hr Allowable**

Amended Allowable Particulate Calculations 9/23/99 RC

9/30/99 G.G.

WFB - 3rd. Quarter 1997 - 9/23/97 - 9/24/97

Run #	Date	Gr/DSCF	Steam lbs/hr	% Steam Load	Part. lbs/hr	Allow. Part lbs/hr	I SO
1	9/23/97	0.030	327,761	93.6	35.7	47.7	90.7
2	9/23/97	0.030	383,284	109.5	34.7	55.8	100.0
3	9/24/97	0.045	331,343	94.7	56.5	48.2	99.1
	x =	0.035	347,463	99.3	42.3	50.6	

Run #1

- Total Steam (Integrator) = 327,761 lbs/hr
- Natural Gas (Integrator) = 68,000 CF / 67 min (60 min/hr) = 60,896 CF/hr
  - Btus/hr (Gas) = (60,896 CF/hr)(1020 Btus/ft³) = 62,113,920 Btus/hr
  - Steam (Gas) = (60,896 CF/hr)(0.75)(0.94) = 42,932 lbs/hr
- Steam (Bark) = 327,761 lbs/hr - 42,932 lbs/hr = 284,829 lbs/hr
  - Btus/hr (Bark) = (284,829 lbs/hr)(1 lb Bark / 3.21 lbs Steam)(4674 Btus/lb)
    = 414,732,320 Btus/hr Bark
    62,113,920 Btus/hr Gas
    476,846,240 Btus/hr Total = 47.7 lbs/hr part Allow.

Run #2

- Total Steam (Int.) = 383,284 lbs/hr
- Natural Gas (Int.) = 81,000 CF / 67 min (60 min/hr) = 72,537 CF/hr
  - Btus/hr (Gas) = (72,537 CF/hr)(1020 Btus/ft³) = ~~73,987,740~~ 73,988,060 Btus/hr
  - Steam (Gas) = (72,537 CF/hr)(0.75)(0.94) = 51,139 lbs/hr
- Steam (Bark) = 383,284 lbs/hr - 51,139 lbs/hr = 332,145 lbs/hr
  - Btus/hr (Bark) = (332,145 lbs/hr)(1 lb Bark / 3.21 lbs steam)(4674 Btus/lb.)
    = 483,627,953 Btus/hr Bark
    73,988,060 Btus/hr Gas
    557,616,013 Btus/hr Total = 55.8 lbs/hr Allow part

Run #3

- Total Steam (Int.) = 331,343 lbs/hr
- Natural Gas (Log Sheet) = 90,000 CF / 67 min (60 min/hr) = 80,597 CF/hr
  - Btus/hr (Gas) = (80,597 CF/hr)(1020 Btus/ft³) = 82,208,940 Btus/hr
  - Steam (Gas) = (80,597 CF/hr)(0.75)(0.94) = 56,821 lbs/hr
- Steam (Bark) = 331,343 lbs/hr - 56,821 lbs/hr = 274,522 lbs/hr
  - Btus/hr (Bark) = (274,522 lbs/hr)(1 lb Bark / 3.21 lbs steam)(4674 Btus/lb.)
    = 399,724,557 Btus/hr Bark
    82,208,940 Btus/hr Gas
    481,933,497 Btus/hr Total = 48.2 lbs/hr Allow part

WFB 3rd Quarter 1997 9/23/97 - 9/24/97

Run #	Date	ISO	Gr/DSCF	lbs/hr	Steam - Bark	Allowable Particulate
1	9/23	90.7	0.030	35.7	327,718 lbs/hr	47.7 lbs/hr
2	9/23	100.0	0.030	34.7	383,233 lbs/hr	55.8 lbs/hr
3	9/24	99.1	0.045	56.5	331,126 lbs/hr	48.2 lbs/hr
	x =		0.035 gr/DSCF	42.3 lbs/hr	347,359 lbs/hr	50.6 lbs/hr

Run #1

Steam Load (Integrator) = 327,761 lbs/hr

Natural gas = 68 CF..

Steam from gas = (68 CF)(0.75)(0.94) = 48 lbs/steam Gas

$\frac{48 \text{ lbs}}{67 \text{ min}} = \frac{x}{60 \text{ min}}$ x = 43 lbs Steam/hr

Steam (Bark) = Total Steam - Steam (Gas)

= 327,761 lbs/hr - 43 lbs/hr = **327,718 lbs/hr Bark**

BTUs/hr = (327,718 lbs/hr)(1 lb. Bark / 3.21 lbs Steam)(4674 Btus/lb. Bark)

= 477,181,910 Btus/hr

Part./hr = $\left(\frac{0.1 \text{ lbs part}}{1 \times 10^6 \text{ Btus}}\right)$ (477,181,910 Btus/hr)

= **47.7 lbs/hr Allow.**

WFB - 3rd Quater 1997

Run #2

Steam Load (Integrator) = 383,284 lbs/hr

Natural gas = 81 CF

Steam from gas = (81 CF)(0.75)(0.94) = 57 lbs steam in Gas

$\frac{57 \text{ lbs}}{67 \text{ min}} = \frac{X}{60 \text{ min}}$ X = 51 lbs steam gas

Steam (Bark) = Total Steam - Gas Steam

= 383,284 lbs/hr - 51 lbs/hr = **383,233 lbs/hr Bark**

Btus/hr = (383,233 lbs/hr)(1 lb Bark / 3.21 lb steam)(4674 Btus/lb Bark)

= 558,015,901 Btus/hr

Part/hr = $\left(\frac{0.1 \text{ lbs part.}}{1 \times 10^6 \text{ Btus}}\right)$(558,015,901 Btus/hr)

= 55.8 lbs/hr Allow.

Run #3

Steam Total (Integrator) = 331,343 lbs/hr

Natural Gas = 308 CF

Steam (Gas) = (308 CF)(0.75)(0.94) = 217 lbs. Steam Gas

$\frac{217 \text{ lbs}}{67 \text{ min}} = \frac{X}{60}$ X = 194 lbs/hr Steam (Gas)

Steam (Bark) = Total Steam - Steam (Gas)

= 331,343 lbs/hr - 217 lbs/hr Gas

= **331,126 lbs/hr Bark**

Btus/hr = (331,126 lbs/hr)(1 lb Bark / 3.21 lb steam)(4674 Btus/lb Bark)

= 482,144,213 Btus/hr

Part./hr = $\left(\frac{0.1 \text{ lbs part.}}{1 \times 10^6 \text{ Btus}}\right)$(482,144,213 Btus/hr)

= 48.2 lbs/hr Allow

Amended Allowable Particulate Calculations - 9/23/99

9/30/99 GS

WFB - 2nd. Quarter 1997 - 4/9/97 - 4/10/97

Run #	Date	Gr/DSCF	Steam lbs/hr	% Steam Load	Part. lbs/hr	Allow. Part lbs/hr	ISO
1	4/9/97	0.026	320,000	91.4	30.5	46.6	93.2
2	4/9/97	0.033	332,500	95.0	35.6	48.4	96.7
3	4/10/97	0.025	340,000	97.1	30.8	49.5	95.8
	x =	0.028	330,833	94.5	32.3	48.2	

Run #1

- Total Steam (Chart) = 320,000 lbs/hr
- Natural Gas (Integrator) = 56,000 CF / 67 min (60 min/hr) = 50,149 CF/hr

BTUs/hr (Gas) = (50,149 CF/hr)(1020 BTUs) = 51,151,980 BTUs/hr

Steam (Gas) = (50,149 CF/hr)(0.75)(0.94) = 35,355 lbs/hr

Steam (Bark) = 320,000 lbs/hr - 35,355 lbs/hr = 284,645 lbs/hr

BTUs/hr (Bark) = (284,645 lbs/hr)(1 lb Bark / 3.21 lbs Steam)(4674 BTUs/lb)

= 414,464,402 BTUs/hr Bark

+ 51,151,980 BTUs/hr Gas

465,616,382 BTUs/hr = **46.6 lbs/hr Allow Part**

Run #2

Total Steam (Chart) = 332,500 lbs/hr

Natural Gas (Integrator) = 66,000 CF / 67 min (60 min/hr) = 59,104 CF/hr

BTUs/hr (Gas) = (59,104 CF/hr)(1020 BTUs/CF) = 60,286,080 BTUs/hr

Steam (Gas) = (59,104 CF/hr)(0.75)(0.94) = 41,668 lbs/hr

Steam (Bark) = 332,500 lbs/hr - 41,668 lbs/hr = 290,832 lbs/hr

BTUs/hr (Bark) = (290,832 lbs/hr)(1 lb Bark / 3.21 lbs Steam)(4674 BTUs/lb)

= 423,473,136 BTUs/hr Bark

+ 60,286,080 BTUs/hr Gas

483,759,216 BTUs/hr = **48.4 lbs/hr Allow Part.**

Run #3

Total Steam (Chart) = 340,000 lbs/hr

Natural Gas (Int.) = 54,000 CF / 67 min (60 min/hr) = 48,356 CF/hr

BTUs/hr (Gas) = (48,358 CF/hr)(1020 BTU/CF) = 49,325,160 BTUs/hr

Steam (Gas) = (48,358 CF/hr)(0.75)(0.94) = 34,092 lbs/hr

Steam (Bark) = 340,000 lbs/hr - 34,092 lbs/hr = 305,908 lbs/hr

BTUs/hr (Bark) = (305,908 lbs/hr)(1 lb / 3.21 lb)(4674 BTUs/hr)

= 445,424,920 BTUs/hr Bark

49,325,160 BTUs/hr Gas

494,750,080 BTUs/hr = **49.5 lb/hr Allow part**

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WFB 2nd Quarter -1997 4/9/97 - 4/10/97

Run	Date	ISO	Gr/DSCF	lbs/hr	Steam-Bark	Allowable Part.
1	4/9	93.2	0.026	30.5	319,965 lbs steam	46.5 lbs/hr
2	4/9	96.7	0.033	35.6	332,459	48.4
3	4/10	95.8	~~0.024~~ 0.025	~~29.1~~ 30.8	339,966	49.5
X =			~~0.027~~ gr. 0.028 gr/DSCF	~~31.7~~ lbs/hr 32.3 lbs/hr	330,797 lbs steam	48.1 lbs/hr

Run #1

Total Steam = 320,000 lbs/hr.

Natural Gas = 56 CF

(56 CF) (0.75) (0.94) = 40 lbs steam (Gas)

lbs steam/hr = $\frac{40 \text{ lbs steam}}{67 \text{ min}} = \frac{x}{60 \text{ min}}$ x = 35 lbs steam/hr (Gas)

Steam from bark = Total Steam - Steam Gas

= 320,000 lbs/hr - 35 lbs steam/hr

= **319,965 lbs/Steam/hr (Bark)**

BTUs/hr = (319,965 lbs steam/hr)(lb Bark/3.21 lbs steam)(4674 Btus/lb Bark)

= 465,892,963 Btus/hr

Part./hr = $\left(\frac{0.1 \text{ lbs part}}{1 \times 10^6 \text{ Btus}}\right)$ (465,892,963 Btus/hr) = **46.6 lbs/hr**

Run #2

Total steam = 332,500 lbs/hr

Natural Gas = 66 CF

(66 CF) (0.75) (0.94) = 46 lbs steam (Gas)

lbs steam/hr = $\frac{46 \text{ lbs steam}}{67 \text{ min}} = \frac{x}{60}$ x = 41 lbs steam/hr (Gas)

Steam from Bark = Total Steam - Steam gas

= 332,500 - 41 = **332,459 lbs steam/hr (Bark)**

Btus/hr = (332,459 lbs steam/hr)(lbs bark/3.21 lbs steam)(4674 Btu/lbs bark)

= 484,085,161 Btus/hr

lbs part/hr = $\left(\frac{0.1 \text{ lbs part}}{1 \times 10^6 \text{ Btus}}\right)$ (484,085,161 Btus) = [illegible] lbs/

Run #3

Total Steam = 340,000 lbs/hr

Natural Gas = 54 CF

(54 CF) (0.75) (0.94) = 38 lbs Steam

lbs steam/hr = $\frac{38 \text{ lbs}}{67 \text{ min}} = \frac{x}{60 \text{ min}}$ x = 34 lbs/hr steam (Gas)

Steam Avon bark = Total steam − steam gas

= 340,000 − 34

= 339,966 lbs steam/hr (Bark)

Btus/hr = (339,966 lbs/steam/hr) (lbs Bark / 3.21 lbs/steam) (4674 Btu/lb Bark)

= 495,015,914 Btus/hr

part/hr = $\left(\frac{0.1 \text{ lbs part.}}{1 \times 10^6 \text{ Btus}}\right)$ (495,015,914 Btus/hr)

= 49.5 lbs part./hr

Amended Allowable Particulate Calculations - 9/23/99

WFB - 1st. Quarter 1997 - 3/17/98 - 3/18/98 9/23/99 G.S.

Run #	Date	Gr/DSCF	Steam lbs/hr	% Load	Part. lbs/hr	Allowable Part. lbs/hr	ISO
1	3/17/97	0.021	317,500	90.7	28.6	46.1	94.9
2	3/18/97	0.025	321,000	91.7	28.7	46.7	105.1
3	3/18/97	0.027	352,000	100.6	30.5	51.2	100.9
	x =	0.024	330,167	94.3	29.1	48.0	

Run #1 - Allow. Part. Calculations

- Total Steam (Chart) = 317,500 lbs/hr
- Natural Gas (off log sheet) = 80,000 cf/hr

Btus/hr (Gas) = (80,000 cf/hr)(1020 Btus/cf) = 81,600,000 Btus/hr

Steam (Gas) = (80,000 cf/hr)(0.75)(0.94) = 56,400 lbs/hr

- Steam (Bark) = (317,500 lbs/hr) - (56,400 lbs/hr) = 261,100 lbs/hr

Btus/hr (Bark) = (261,100 lbs/hr)(1 lb. Bark / 3.21 lbs Steam)(4674 Btus/lb Bark)

= 380,181,121 Btus/hr Bark

+ 81,600,000 Btus/hr Gas

461,781,121 Btus/hr Total Btus = 46.1 lbs/hr Allow. Part.

Run #2

- Total Steam (Chart) = 321,000 lbs/hr
- Natural Gas (off Logsheet) = 40,000 cf/hr

Btus/hr (Gas) = (40,000 cf/hr)(1020 Btus/cf) = 40,800,000 Btus/hr (Gas)

Steam (Gas) = (40,000 cf/hr)(0.75)(0.94) = 28,200 lbs/hr

- Steam (Bark) = (321,000 lbs/hr) - (28,200 lbs/hr) = 292,800 lbs/hr

Btus/hr (Bark) = (292,800 lbs/hr)(1 lb / 3.21 lbs Steam)(4674 Btus/lb)

= 426,338,692 Btus/hr Bark

+ 40,800,000

467,138,692 Btu/hr = 46.7 lbs/hr Allow. Part.

Run #3

- Total Steam (Chart) = 352,000 lbs/hr
- Natural Gas (off Logsheet) = 100,000 cf/hr

Btus/hr (Gas) = (100,000 cf/hr)(1020 Btus/cf) = 102,000,000 Btus/hr

Steam (Gas) = (100,000 cf/hr)(0.75)(0.94) = 70,500 lbs/hr

- Steam (Bark) = (352,000 lbs/hr) - 70,500 lbs/hr = 281,500 lbs/hr

Btus/hr (Bark) = (281,500 lbs/hr)(1 lb. Bark / 3.21 lbs Steam)(4674 Btus/hr)

= 409,885,047 Btus/hr Bark

+ 102,000,000 Btus/hr Gas

511,885,047 Btus/hr Total = 51.2 lbs/hr Allow part.

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WFB 1st Quarter – 1997

Run	Date	ISO.	Gr/DSCF	lbs/hr	Steam (From Bark)	Allowable.
1	3/17	94.9	0.021	28.0	317,044	46.3
2	3/18	105.1	0.025	28.7	320,610	46.8
3	3/18	100.9	0.027	30.5	351,929	51.4
$\bar{X}$			0.024	29.1	329,861	48.2

Run #1

Total Steam = 317,500 lbs/hr.

Nat Gas Usage = 722 CF

~~(722 CF)(1020 Btu/CF) = 736,440 Btu.~~

(722 CF)(0.75)(0.94) = 509 lbs Steam From Gas.

$$\frac{509 \text{ lb steam}}{67} = \frac{X}{60}$$

X = 455.8 lbs Steam/hr.

Steam From Bark = Total Steam – Steam Gas

= 317,500 lbs/hr = 456 lbs/hr

= 317,044 lbs Steam/hr.

(317,044 lbs Steam/hr)(lb bark / 3.2 lbs Steam)

(4674 Btu/lb bark)

= 463,082,393 Btu/hr

(0.1 lbs Part / 1×10^6 Btu)(463,082,393 Btu/hr) = **46.3 lbs/hr**

0.021 28.0 317,041 46.8

2/3

WFB - 1st Q 1997 (Cont)

Run #2

Total Steam = 321,000 lbs/hr.

Natural Gas Usage = 738 CF

(738 CF)(0.75)(0.94) = 520 lbs Steam From Gas.

$$\frac{520 \text{ lbs Steam}}{80} = \frac{X}{60}$$

X = 390 lbs Steam/hr.

Total Steam From Bark = Total Steam − Steam Gas

= 321,000 − 390

= 320,610 lbs Steam/hr From bark.

(320,610 lbs Steam/hr)(lb bark / 3.2 lbs Steam)

(4674 Btu/lb bark)

= 468,290,981 Btu/hr.

= (0.1 lb Part / 1 x 10^6 Btu)(468,290,981

= 46.8 lbs Part/hr

E00010965

Run #3

Total Steam = 352,000 lbs/hr.

Nat Gas = 121 CF

(121 CF)(0.75)(0.94) = 85 lbs Steam From Gas

$$\frac{85 \text{ lbs Steam}}{72} = \frac{X}{60}$$

X = 70.8 lbs Steam/hr.

Steam From Bark = Total Steam − Steam Gas

= 352,000 − 71 = 351,929 lbs Steam/hr From Bark.

$$\left(351{,}929 \text{ lbs Steam}/\text{hr}\right)\left(\frac{1 \text{ lb bark}}{3.2 \text{ lbs Steam}}\right)$$

$$\left(4674 \text{ Btu}/1 \text{ lb bark}\right)$$

= 514,036,296 Btu/hr

$$\left(0.1 \text{ lbs Part}/1\times10^{6} \text{ Btu}\right)\left(514{,}036{,}296 \text{ Btu}/\text{hr}\right)$$

$$= \boxed{51.4 \text{ lbs Part/hr}}$$

Russ Frye
(202) 342-8400

→ Thurs 8 AM (Superintendent Meeting) — 11 A.M.

→ Packet of Info for CHEER

→

8/17/99 From Steve Carrick 8

(1) In the past we have read WFB / natural GAS integrator as actual CF.

(2) Integrator is actually 1000 CF

(3) Therefore underestimating GAS usage During Source test. ~~and~~

(4) Since 1997 been subtracting out Natural GAS to Calculate allowable (0.10 lbs Part / Million Btu Fired)

Reflect Back Btu Allowable Rather than Btus Contributed via Natural GAS.

(5) From Permit Capacity = 537 Million Btu/hr

(6) 52.04 lbs/hr ≅ 357,124 lbs Steam/hr

8/17/99

As per Permit and reference in 40 CFR – I interpret that the Limit (0.10 lbs/1,000,000 Btu input) is based on heat input derived from Fossil Fuel (natural gas) and wood Residue. Therefore natural gas Btu input should be added in rather than subtracted out. (This was confirmed w/ Russ FIYE on 8/17/99).

8/18/99 → Since Steve was underestimating natural gas usage in the past (By Misinterpreting Integrator) then we were [illegible] in essence calculating similar Btu inputs anyway (i.e. very small amount of natural gas was actually subtracted out). This is confirmed by Data put together by CARRICK.

Steve Reviewed Method of determining allowables (Addition of natural gas) with D. Mills + Myself and we all agreed on the Btu values, and efficiency assumptions.

g. Stone shall conduct an analysis of the dewatered sludge to determine compliance with the above sulfur limitation at least quarterly. The results of these analyses shall be retained by Stone for a minimum of five (5) years and shall be submitted to the department upon request. Stone does not have to conduct separate analyses for the waste fuel boiler and the hog fuel boiler if the sample of the dewatered sludge is taken prior to introduction to the waste fuel boiler or hog fuel boiler feed system.

h. Stone shall conduct an initial SO_2 compliance source test on the waste fuel boiler and demonstrate compliance with the emission limitation in Section II.F.15.f within 180 days of initial firing of the dewatered sludge in the waste fuel boiler. The source test shall be conducted in accordance with the methods specified in 40 CFR Part 60, Appendix A, and the Montana Source Test Protocol and Procedures Manual (ARM 16.8.704 and ARM 16.8.709).

i. Total suspended particulate emissions from this boiler shall not exceed 0.10 lbs/million Btu fired and 52.04 lbs/hr and 1249 lbs/day (ARM 16.8.1423 and 40 CFR, Part 60, Subpart D),

j. PM-10 emissions from this boiler shall not exceed 1249 lbs/day and 52.04 lbs/hr and 0.1 lbs/million Btu fired.

k. Sulfur dioxide emissions from this source shall not exceed 0.80 lb/million Btu and 429.6 lb/hr when firing liquid fossil fuel or liquid fossil fuel and wood residue (ARM 16.8.1423 and 40 CFR, Part 60, Subpart D).

l. Nitrogen dioxide emissions from this boiler shall not exceed 0.30 lbs/million Btu and 161.1 lbs/hr when firing liquid or gaseous fossil fuel and wood residue. This limit also applies when firing exclusively on natural gas because of a malfunction of the wood feed or ash handling systems. (ARM 16.8.1423 and 40 CFR, Part 60, Subpart D).

m. Compliance with the above standards shall be determined by EPA source sampling methods specified in 40 CFR Part 60, Appendix A and Subpart D. PM-10 sampling methods are specified by 40 CFR Part 51, Appendix M.

n. Continuous emission monitors for sulfur dioxide, nitrogen oxides, and either oxygen or carbon dioxide are required for this source.

o. Opacity is limited to 20% per ARM 16.8.1423 and 40 CFR, Part 60, Subpart D.

VIII. SPAN SETTING ON RECOVERY BOILER NO. 5

21. Stone shall maintain the span setting on the COMS of Recovery Boiler No. 5 at 70% in compliance with 40 C.F.R. § 60.284(a)(1).

IX. EMISSIONS LIMITATIONS REGARDING THE WASTEFUEL BOILER

22. Stone shall limit its mass emissions from the Wastefuel Boiler to no greater than 52.04 lbs/hr PM-10, in compliance with 40 C.F.R. 60.42(a)(1) and Section II.F.15.j. of Stone's Permit.

23. By no later than the thirtieth (30th) day of the first month following the expiration of each Quarter, Stone shall report to EPA, CHEER, and the Montana Department of Environmental Quality all exceedances of the mass emissions limit for PM-10 from the Wastefuel Boiler during the previous Quarter, including a statement of the duration and cause of each exceedance, Stone's efforts to minimize such exceedances, and Stone's description of the actions taken to prevent future exceedances.

X. CIVIL PENALTIES

24. Within thirty (30) days of the date of entry of this Consent Decree, Stone shall pay a civil penalty in the amount of three hundred twelve thousand five hundred dollars ($312,500), in accordance with Section XI herein (Payments).

XI. PAYMENTS

25. All payments made to the United States under this Consent Decree in amounts of $50,000 or greater shall be made in

E00010970

(e) Any facility covered under subpart Da is not covered under this subpart.

[42 FR 37936, July 25, 1977, as amended at 43 FR 9278, Mar. 7, 1978; 44 FR 33612, June 17, 1979]

§ 60.41 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act, and in subpart A of this part.

(a) *Fossil-fuel fired steam generating unit* means a furnace or boiler used in the process of burning fossil fuel for the purpose of producing steam by heat transfer.

(b) *Fossil fuel* means natural gas, petroleum, coal, and any form of solid, liquid, or gaseous fuel derived from such materials for the purpose of creating useful heat.

(c) *Coal refuse* means waste-products of coal mining, cleaning, and coal preparation operations (e.g. culm, gob, etc.) containing coal, matrix material, clay, and other organic and inorganic material.

(d) *Fossil fuel and wood residue-fired steam generating unit* means a furnace or boiler used in the process of burning fossil fuel and wood residue for the purpose of producing steam by heat transfer.

(e) *Wood residue* means bark, sawdust, slabs, chips, shavings, mill trim, and other wood products derived from wood processing and forest management operations.

(f) *Coal* means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society and Testing and Materials, Designation D388–77 (incorporated by reference—see §60.17).

[39 FR 20791, June 14, 1974, as amended at 40 FR 2803, Jan. 16, 1975; 41 FR 51398, Nov. 22, 1976; 43 FR 9278, Mar. 7, 1978; 48 FR 3736, Jan. 27, 1983]

§ 60.42 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which:

(1) Contain particulate matter in excess of 43 nanograms per joule heat input (0.10 lb per million Btu) derived from fossil fuel or fossil fuel and wood residue.

(2) Exhibit greater than 20 percent opacity except for one six-minute period per hour of not more than 27 percent opacity.

(b)(1) On or after December 28, 1979, no owner or operator shall cause to be discharged into the atmosphere from the Southwestern Public Service Company's Harrington Station #1, in Amarillo, TX, any gases which exhibit greater than 35% opacity, except that a maximum or 42% opacity shall be permitted for not more than 6 minutes in any hour.

(2) Interstate Power Company shall not cause to be discharged into the atmosphere from its Lansing Station Unit No. 4 in Lansing, IA, any gases which exhibit greater than 32% opacity, except that a maximum of 39% opacity shall be permitted for not more than six minutes in any hour.

[39 FR 20792, June 14, 1974, as amended at 41 FR 51398, Nov. 22, 1976; 42 FR 61537, Dec. 5, 1977; 44 FR 76787, Dec. 28, 1979; 45 FR 36077, May 29, 1980; 45 FR 47146, July 14, 1980; 46 FR 57498, Nov. 24, 1981; 61 FR 49976, Sept. 24, 1996]

§ 60.43 Standard for sulfur dioxide.

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain sulfur dioxide in excess of:

(1) 340 nanograms per joule heat input (0.80 lb per million Btu) derived from liquid fossil fuel or liquid fossil fuel and wood residue.

(2) 520 nanograms per joule heat input (1.2 lb per million Btu) derived from solid fossil fuel or solid fossil fuel and wood residue, except as provided in paragraph (e) of this section.

(b) When different fossil fuels are burned simultaneously in any combination, the applicable standard (in ng/J) shall be determined by proration using the following formula:

$$PS_{SO_2}=[y(340)+z(520)]/(y+z)$$

where:

E00010971

For: Drexel Mills
Ed Scott

Prepared by Steve Carnick 8/18/99

WFB -- Allowable Particulate Calculations

	Run #	Date	Gas 1000 ACF/hr		M5 Part. lbs/hr	Reported Allow. Part lbs/hr	Btu Calc. Allow. lbs/hr
2Q99 (1)	1)	4/8/99	167	Log	37.6	54.0	53.9
	2)	4/8/99	158	Log	36.1	51.1	51.0
	3)	4/8/99	174	Log	32.8	49.8	49.8
		Ave =			35.5	51.6	51.6
(2) 1Q99	1	1/27/99	67	Log	33.7	48.2	48.2
	2	1/27/99	69	Log	34.5	46.0	46.0
	3	1/27/99	68	Log	29.5	46.6	46.5
		Ave =			32.5	46.9	46.9
(3) 4Q98	1	10/22/98	214	I	34.1	47.5	47.3
	2	10/23/98	83	I	32.9	49.5	49.5
	3	10/23/98	138	I	33.4	49.5	49.5
		Ave =			33.5	48.8	48.8
(4) 3Q98	1	8/25/98	143	I	43.1	52.3	52.2
	2	8/25/98	155	I	37.4	57.9	57.8 *
	3	8/25/98	141	I	36.9	51.5	51.5
		Ave =			39.1	53.9	53.8
(5) 2Q98	1	6/10/98	98	Log	28.1	56.1	56.1
	2	6/10/98	66	Log	25.7	51.1	51.1
	3	6/10/98	112	Log	27.1	52.8	52.8
		Ave =			27.0	53.3	53.3
(6) 1Q98	1	2/18/998	69	I	51.7	52.8	52.7
	2	2/18/998	9	I	45.4	47.7	47.7
	3	2/19/998	2	Log	57.5	48.3	48.3
		Ave			51.5	49.6	49.6
	4	2/21/998	55	I	53.3	51.0	51.0
	5	2/21/998	10	I	42.6	50.0	50.0
	6	2/22/998	26	I	34.4	51.3	51.3
		Ave =			43.4	50.8	50.8

Log = Gas Flow From Log Sheet
I = Gas Flow From integrator

537,000,000 Btu/hr - Reviewed w/ Carrick + Mills 8/18/99

371,250 lbs Steam/hr. - Productivity

167,000 ACF/hr - Natural

$$\left(1020 \text{ Btu}/\text{ACF Nat GAS}\right)\left(167{,}000 \text{ ACF}/\text{hr}\right)$$

= 170,340,000 Btu/hr From GAS.

$$\left(167{,}000 \text{ ACF GAS}/\text{hr}\right)\left(\overset{\text{M}}{0.75}\right)\left(\overset{\text{Blowdown}}{0.94}\right)$$

= 117,735 lbs Steam/hr From GAS.

371,250 lbs Steam - 117,735

= 253,515 lbs Steam From Bark.

E00010973

235,515 lbs Steam/hr Bark.

$$\left(\frac{235{,}515 \text{ lbs Steam}}{\text{hr}}\right)\left(\frac{1 \text{ lb bark}}{3.2 \text{ lbs Steam}}\right)\left(\frac{4674 \text{ Btu}}{\text{lb bark}}\right)$$

= 342,927,000 Btu/hr - Bark.

342,927,000 — Bark
+ 170,340,000 - Gas

513,267,600

$$\boxed{= 51.3 \text{ lbs/hr.}}$$

4th Q - 1997

Reported	Actual
51.8	51.8

3Q - 1997

Reported	Actual
50.6	50.6

2Q - 1997

Reported	Actual
48.1	48.2

1Q - 1997

Reported	Actual
48.2	48.0

1000 Btus = 1 lb Steam.

170,340,000 Btus/hr → GAS

$$\frac{1000\ \text{Btu}}{1\ \text{lb Steam}} = \frac{170{,}340{,}000\ \text{Btu}}{x}$$

170,340 lbs Steam

(170,340)(0.75)(.94)

$$\boxed{= 120{,}089}$$

Recovery Production Meeting 8/20/99

1) Failed In-House Run on WFB - Noted Low Flow on West Side - Low shaker we swap pump to see if increased flow.

8/20/99 2:15 pm - Called Darrel and he said pump was swapped and flow up above 1650 gpm.

Plan to complete another in-house run on Saturday 8/21/99.

- Saturday 8/21/99 - Failed
- Clean Scrubber Trays 8/24 + 8/25
- Attempted In-House test 8/26 Aborted Due to steam cost
- Did In-House

Bob Boschee
Neal Marxer
Bill Kohl
Tom Lovrien
Ken Colyer
Bill Nagy
Denny Fifield
Brent Hawkey
Drexel Mills
Dave Stengel
Marc Olson
Brad Madison
Paula Lamey
Jenny Brown
Ed Scott
Terry McLaughlin
Pat Clevenger

PRODUCTION SUMMARY AND CHEMICAL COST REPORT

FOR: JULY 1999

Prepared by Marsha DeSilva
August 5, 1999

E00010978

STONE CONTAINER CORPORATION – MISSOULA MILL

PRODUCTION SUMMARY AND CHEMICAL COST REPORT

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PRODUCTION SUMMARY– MISSOULA MILL
****1999****

	1999 BUDGET	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	1999 YTD
PULP AND LINER TONNAGE														
Liner Produced		60,455	59,576	63,983	62,939	64,614	64,764	37,927						414,258
Cull Produced/(Consumed)		(18)	(17)	170	120	62	(309)	265						273
OCC Consumed		(15,911)	(14,939)	(17,628)	(17,438)	(17,931)	(16,738)	(11,635)						(112,220)
Purchased Pulp Consumed														
Hi–D Tons Produced/(Consumed)		(363)	(127)	462	(265)	283	(526)	210						(326)
TOTAL PULP TONS		44,163	44,493	46,987	45,356	47,028	47,191	26,767						301,985
OCC PAPER (TONS)														
Beginning Inventory		5,431	3,490	3,801	2,706	4,062	4,834	4,001						5,431
Add Receipts		15,472	16,717	18,373	20,422	20,571	17,493	13,996						123,044
Less Usage		17,413	16,406	19,467	19,066	19,799	18,326	12,977						123,454
Ending Inventory		3,490	3,801	2,707	4,062	4,834	4,001	5,020						5,021
#/Ton Produced		0.29	0.28	0.30	0.30	0.31	0.28	0.34						0.30
Material Cost/Ton Received		$75.63	$88.03	$90.49	$93.00	$92.61	$100.86	$131.04						$95.15
WOOD RECEIPTS (BDUS)														
Chips Purchased		63,194	61,747	75,745	68,161	50,689	55,871	63,240						438,647
Chips Produced														
Sawdust Purchased		1,440	2,370	1,966	5,474	7,392	8,476	7,820						34,938
TOTAL		64,634	64,117	77,711	73,635	58,081	64,347	71,060						473,585
COST/BDU														
Chips Purchased		89.38	86.90	89.42	91.57	83.07	84.49	96.50						89.05
Chips Produced														ERR
Sawdust Purchased		42.76	28.11	35.28	30.85	29.66	26.22	27.20						29.21
TOTAL		88.34	84.73	88.05	87.05	76.27	76.81	88.88						84.64
CHIP INVENTORY (BDU'S)														
Beginning Inventory		52,322	48,204	40,365	46,360	51,679	39,065	25,746						52,322
Commercial Receipts		62,886	61,714	75,297	67,445	52,249	54,505	63,052						437,148
Receipts from Sawdust (CTS)		308	33	448	716	751	615	188						3,059
Chip usage @ Digesters		65,356	67,804	67,869	64,664	67,334	68,345	39,383						440,755
Chips to Hogfuel (CTS)		1,956	1,781	1,881	1,459	1,560	1,656	1,124						11,417
Chips–Physical Inv.					3,280	3,280	1,562	1,562						9,684
Ending Inventory		48,204	40,366	46,360	51,678	39,065	25,746	50,041						50,041
Wood Usage Factor		1.530	1.530	1.500	1.500	1.500	1.500	1.500						
LOG INVENTORY (CORDS)														
Beginning Inventory		3,462	3,462	3,462	3,462	3,462	3,462	3,462						3,462
Add Receipts														
Less Usage														
Adj. to Physical														
Ending Inventory		3,462	3,462	3,462	3,462									

E00010980

NO. 1 PAPER MACHINE

PRODUCTION SUMMARY – MISSOULA MILL
*****1999*****

	1999 BUDGET	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	1999 YTD
Operating Days		31	28	31	30	31	30	21.8						203
Tons Produced		14,142	14,635	17,223	16,580	16,369	16,500	10,126						105,575
Tons/Day		456	523	556	553	528	550	464						521
% Of Tons By Grade														
26#–33#		30.8%	0.2%											4.2%
38#–69#		41.2%	64.3%	100.0%	100.0%	100.0%	100.0%	100.0%						87.2%
33# Sky White		4.2%	5.5%											1.3%
42# Sky White		11.3%	15.6%											3.7%
38# Arctic White														
69# Sky White		4.1%	3.2%											1.0%
Export–Yellow														
42# Arctic White		7.3%	10.0%											2.4%
69# Arctic White		1.2%	1.2%											0.3%
35# Arctic White														
56# Arctic White														
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						100.0%
CHEMICAL COSTS														
Alum														
#/Ton	31	32	29	28	34	35	23	31						30
Cost/#	0.074	0.068	0.074	0.071	0.069	0.067	0.068	0.075						0.070
Cost/Ton	2.29	2.19	2.16	1.98	2.34	2.35	1.59	2.37						2.12
Starch														
#/Ton	29	32	24	28	29	33	29	37						30
Cost/#	0.11	0.081	0.094	0.092	0.091	0.091	0.090	0.090						0.090
Cost/Ton	3.19	2.59	2.24	2.60	2.60	3.00	2.61	3.35						2.69
Size														
#/Ton(dry lbs)	0.29	0.11	1.45	0.01				0.06						0.22
Cost/#	0.517	0.456	0.456	0.453				0.456						0.456
Cost/Ton	0.15	0.05	0.66	0.00				0.03						0.10
Hi Phase Size														
#/Ton(dry lbs)	1.2	0.60	0.48	0.39										0.21
Cost/#	1.333	1.379	1.381	1.358										1.373
Cost/Ton	1.6	0.83	0.66	0.52										0.29
Sulphuric Acid														
#/Ton	18	17	21	24	24	21	22	21						21
Cost/#	0.0267	0.020	0.026	0.026	0.026	0.026	0.026	0.026						0.025
Cost/Ton	0.48	0.34	0.54	0.62	0.61	0.55	0.57	0.55						0.54
Biocide														
#/Ton	0.19	0.16	0.18	0.31	0.20	0.28	0.36	0.32						0.26
Cost/#	4.579	4.550	4.572	4.572	4.595	2.581	1.380	1.633						3.198
Cost/Ton	0.87	0.73	0.81	1.44	0.90	0.72	0.50	0.52						0.83
Continuous Felt Wash														
#/Ton	0.55	0.64	0.63	0.52	0.55	0.54	0.89	1.16						0.68
Cost/#	0.764	0.757	0.757	0.752	0.756	0.639	0.451	0.450						0.629
Cost/Ton	0.42	0.49	0.48	0.39	0.42	0.35	0.40	0.52						0.43
Batch Felt Wash														
#/Ton	0.21	0.13	0.19	0.28	0.12	0.06	0.25	0.22						0.18
Cost/#	0.905	0.840	0.881	0.872	0.872	0.792	0.484	0.430						0.730
Cost/Ton	0.19	0.11	0.16	0.25	0.11	0.05	0.12	0.09						0.13
Nozzle Cleaner														
#/Ton	0.05	0.08	0.06	0.05	0.06	0.08	0.06	0.07						0.07
Cost/#	1.2	1.161	1.159	1.160	1.159	1.051	0.714	0.731						1.032
Cost/Ton	0.006	0.10	0.07	0.06	0.07	0.09	0.04	0.05						0.07

E00010981

PRODUCTION SUMMARY – MISSOULA MILL
***** 1999 *****

NO. 1 PAPER MACHINE

	1999 BUDGET	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	1999 YTD
Other Felt Wash														
#/Ton														
Cost/#														
Cost/Ton														
Sky White Polymer														
#/Ton	1.2	2.02	1.29											1.71
Cost/#	1.442	1.492	1.457	1.456										1.475
Cost/Ton	1.73	3.01	1.88											2.52
Hydraid														
#/Ton														
Cost/#														
Cost/Ton														
***Clay*(S.W. Only)**														
#/Ton	163.5	254.66	209.79											229.21
Cost/#	0.09	0.097	0.077											0.086
Cost/Ton	14.72	24.62	16.14											19.81
***Blue Dye*(S.W. Only)**														
#/Ton	0.33	0.50	0.11											0.28
Cost/#	4.152	4.045	4.044											4.082
Cost/Ton	1.37	2.01	0.45											1.13
NoSlip Silica														
#/Ton	0.42	0.25	0.43	0.26	0.30	0.08	0.14	0.07						0.22
Cost/#	0.762	0.751	0.641	0.605	0.694	0.359	0.480	0.480						0.626
Cost/Ton	0.32	0.19	0.28	0.15	0.20	0.03	0.07	0.04						0.14
Wet End Starch														
#/Ton	9.25	13.64	7.33		0.30	0.75	0.37							3.06
Cost/#	0.342	0.336	0.336		0.326	0.288	0.447							0.336
Cost/Ton	3.16	4.58	2.46		0.10	0.22	0.16							1.03
Dispersant														
#/Ton	0.49	0.54	0.34	0.32	0.33	0.28	0.27	0.34						0.34
Cost/#	0.755	0.673	0.939	0.940	0.940	1.013	0.908	0.898						0.884
Cost/Ton	0.37	0.37	0.32	0.30	0.31	0.28	0.24	0.31						0.30
Other Dispersant														
#/Ton														
Cost/#														ERR
Cost/Ton														
Wire Coating														
#/Ton	0.03	0.02	0.08	0.01	0.02	0.02		0.00						
Cost/#	1.33	1.180	1.178	1.179	0.915	0.982		0.658						1.111
Cost/Ton	0.04	0.03	0.09	0.02	0.01	0.02		0.00						0.02
Scotchban–/T Greaseproof														
#/Ton		17.40												0.07
Cost/#		0.050												5.710
Cost/Ton		99.36												0.41
Total Cost														
Cost/Ton #1 PM	19.86	23.93	17.49	8.42	7.69	7.65	6.30	7.82						11.13
33SW thru 69SW Tons		3,968	5,199											9,167

E00010982

NO. 2 PAPER MACHINE	1999 BUDGET	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	1999 YTD
Operating Days		31	28	31	30	31	30	22.2						203
Tons Produced		14,167	14,211	17,470	15,190	15,722	15,277	9,062						101,099
Tons/Day		457	508	564	506	507	509	408						498
% Of Tons By Grade														
26#--33#		35.3%	18.3%	21.3%	29.9%	33.6%	54.4%	64.6%						34.9%
35.8#--61.4#		64.7%	81.7%	78.7%	70.1%	66.4%	45.7%	35.4%						65.1%
Export														
45#ST														
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						100.0%
CHEMICAL COSTS														
Alum														
#/Ton	28	39	23	18	18	19	20	26						23
Cost/#	0.074	0.075	0.074	0.071	0.069	0.067	0.068	0.078						0.072
Cost/Ton	2.07	2.91	1.69	1.26	1.25	1.24	1.32	2.00						1.62
Starch														
#/Ton	24	37	32	25	26	23	21	21						27
Cost/#	0.11	0.102	0.094	0.092	0.091	0.091	0.090	0.090						0.094
Cost/Ton	2.64	3.80	3.01	2.34	2.39	2.08	1.94	1.89						2.51
Size														
#/Ton(dry lbs)	0.08													
Cost/#	0.500													
Cost/Ton	0.04													
Sulphuric Acid														
#/Ton	18	17	21	24	24	21	22	21						21
Cost/#	0.027	0.020	0.026	0.026	0.026	0.026	0.026	0.026						0.025
Cost/Ton	0.48	0.34	0.54	0.62	0.61	0.55	0.57	0.55						0.54
Biocide														
#/Ton	0.18	0.27	0.21	0.24	0.25	0.19	0.39	0.35						0.27
Cost/#	4.556	1.501	1.403	1.399	1.286	1.191	1.380	1.633						1.399
Cost/Ton	0.82	0.40	0.30	0.34	0.32	0.23	0.54	0.58						0.37
Yellow Dye														
#/Ton	0.84													
Cost/#	1.417													
Cost/Ton	1.19													
Dispersant														
#/Ton	0.19	0.15	0.21	0.08	0.20	0.21	0.24	0.32						0.19
Cost/#	0.737	1.391	1.353	1.353	0.432	1.063	0.908	0.897						1.009
Cost/Ton	0.14	0.20	0.28	0.10	0.09	0.22	0.21	0.28						0.19
Other Dispersant														
#/Ton														
Cost/#														
Cost/Ton														
Continuous Felt Wash														
#/Ton	0.57	0.84	0.66	0.63	0.63	0.62	0.74	1.00						0.71
Cost/#	0.754	0.839	0.537	0.552	0.592	0.476	0.451	0.450						0.564
Cost/Ton	0.43	0.70	0.35	0.35	0.37	0.29	0.33	0.45						0.40
Batch Felt Wash														
#/Ton	0.13	0.32	0.13	0.07	0.25	0.12	0.27	0.24						0.19
Cost/#	0.923	0.621	0.606	0.948	0.524	0.446	0.484	0.430						0.552
Cost/Ton	0.12	0.20	0.08	0.06	0.13	0.06	0.13	0.10						0.11

E00010983

NO. 2 PAPER MACHINE	1999 BUDGET	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	1999 YTD
Nozzle Cleaner														
#/Ton	0.05	0.03	0.04	0.10	0.09	0.08	0.06	0.08						0.07
Cost/#	1.2	0.930	0.917	0.930	0.909	1.107	0.714	0.731						0.906
Cost/Ton	0.06	0.02	0.04	0.09	0.08	0.09	0.05	0.06						0.06
Other Felt Wash														
#/Ton														
Cost/#														
Cost/Ton														
NoSlip Silica														
#/Ton	0.43	0.25	0.44	0.25	0.32	0.08	0.15	0.08						0.23
Cost/#	0.767	0.751	0.747	0.605	0.694	0.359	0.480	0.479						0.655
Cost/Ton	0.33	0.19	0.33	0.15	0.22	0.03	0.07	0.04						0.15
Wire Coating														
#/Ton	0.03	0.02	0.07	0.01	0.02	0.02		0.00						0.02
Cost/#	1.33	1.182	1.178	1.178	0.918	0.990		0.735						1.114
Cost/Ton	0.04	0.02	0.09	0.01	0.01	0.02		0.00						0.02
Wet End Starch														
#/Ton	9.34	3.66	4.70	0.21		1.34		0.98						1.51
Cost/#	0.34	0.433	0.260	0.336		0.288		0.197						0.321
Cost/Ton	3.19	1.58	1.22	0.07		0.39		0.19						0.48
Total Cost														
Cost/Ton #2 PM	10.45	10.39	7.92	5.40	5.49	5.19	5.16	6.15						6.46

Export Tons

E00010984

#3 PAPER MACHINE	1999 BUDGET	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	1999 YTD
Operating Days		31	28	31	30	31	30	20.1						201
Tons Produced		32,146	30,730	29,290	31,169	32,523	32,987	18,739						207,584
Tons/Day		1,037	1,098	945	1,039	1,049	1,100	935						1,032
% Of Tons By Grade														
30.7#--62#		2.9%	9.5%	16.1%	15.0%	7.9%	2.8%	21.9%						10.0%
69#--90#		22.9%	31.1%		16.8%	8.1%	2.5%							12.3%
42#--69# Sky White														
L18--L28--L22.6--L38														
27#--57# Stackor		74.2%	59.4%	83.9%	68.2%	78.7%	84.5%	78.2%						75.2%
69#--72# Stackor						5.4%	10.1%							2.4%
Overseas Export														
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						100.0%
CHEMICAL COSTS														
Alum														
#/Ton	29	32	34	34	30	30	30	34						32
Cost/#	0.074	0.077	0.074	0.071	0.069	0.067	0.068	0.075						0.071
Cost/Ton	2.15	2.42	2.53	2.40	2.05	2.04	2.01	2.58						2.27
Wet End Starch														
#/Ton	8.75	8.66	4.96	5.28	5.85	6.16	6.36	7.12						6.32
Cost/#	0.34	0.336	0.336	0.336	0.326	0.288	0.291	0.310						0.317
Cost/Ton	2.99	2.91	1.66	1.77	1.91	1.78	1.85	2.20						2.00
Starch														
#/Ton														
Cost/#														
Cost/Ton														
Size														
#/Ton(dry lbs)	0.05							0.14						0.01
Cost/#	0.600							0.456						0.456
Cost/Ton	0.03							0.06						0.01
Sulphuric Acid														
#/Ton	18	17	21	24	24	21	22	21						21
Cost/#	0.027	0.021	0.026	0.026	0.026	0.026	0.026	0.024						0.025
Cost/Ton	0.48	0.35	0.54	0.62	0.62	0.55	0.57	0.51						0.54
Biocide														
#/Ton	0.08	0.07	0.10	0.22	0.12	0.22	0.20	0.18						0.16
Cost/#	4.625	4.552	4.572	4.572	4.596	2.242	1.380	1.633						3.113
Cost/Ton	0.37	0.32	0.45	0.99	0.56	0.50	0.27	0.30						0.49
Wet Strength Rosin--/Ton of Stakor														
Dry #'s/Ton	1.81	2.34	2.39	1.77	1.33	1.22	1.38	0.40						1.57
Cost/Dry #	1.044	1.005	1.006	1.005	1.006	0.996	1.005	1.001						1.004
Cost/Ton	1.89	2.35	2.40	1.78	1.34	1.21	1.38	0.40						1.58
Dispersant														
#/Ton	0.52	0.49	0.41	0.47	0.45	0.33	0.23	0.33						0.39
Cost/#	0.769	0.674	0.754	0.755	0.755	0.911	0.908	0.898						0.785
Cost/Ton	0.4	0.33	0.31	0.36	0.34	0.30	0.21	0.29						0.30
Other Dispersant														
#/Ton														
Cost/#														
Cost/Ton														
Continuous Felt Wash														
#/Ton	0.54	0.54	0.58	0.59	0.56	0.59	0.48	0.68						0.57
Cost/#	0.759	0.757	0.656	0.752	0.756	0.631	0.451	0.450						0.646
Cost/Ton	0.41	0.41	0.38	0.44	0.42	0.37	0.22	0.31						0.37

E00010985

#3 PAPER MACHINE	1999 BUDGET	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	1999 YTD
Batch Felt Wash														
#/Ton	0.25	0.08	0.09	0.16	0.07	0.06	0.13	0.12						0.10
Cost/#	0.92	0.840	0.881	0.872	0.872	0.671	0.484	0.430						0.721
Cost/Ton	0.23	0.06	0.08	0.14	0.06	0.04	0.06	0.05						0.07
Nozzle Cleaner														
#/Ton	0.06	0.04	0.03	0.03	0.03	0.07	0.06	0.08						0.05
Cost/#	1.167	1.160	1.159	1.159	1.160	0.968	0.715	0.731						0.962
Cost/Ton	0.07	0.04	0.04	0.03	0.04	0.07	0.04	0.06						0.05
Other Felt Wash														
#/Ton														
Cost/#														
Cost/Ton														
NoSlip Silica														
#/Ton	0.42						0.07	0.08						0.02
Cost/#	0.762						0.480	0.480						0.480
Cost/Ton	0.32						0.03	0.04						0.01
***Dye* (/Ton Export)**														
#/Ton														
Cost/#														
Cost/Ton														
Wire Coating														
#/Ton	0.01	0.01	0.05	0.01	0.01	0.01		0.00						0.02
Cost/#	1.00	1.149	1.177	1.179	0.919	0.965		0.942						1.109
Cost/Ton	0.01	0.02	0.06	0.01	0.01	0.01		0.00						0.02
Total Cost														
Cost/Ton #3 PM	8.36	8.61	7.47	8.26	6.91	6.68	6.57	6.72						7.34
Average Cost/T														
#1, #2, #3 PM		12.61	10.04	7.52	6.77	6.56	6.17	6.88						8.09
Tons Stackor		23,847	18,244	24,583	21,260	27,352	31,216	14,645						161,147

E00010986

PRODUCTION SUMMARY – MISSOULA MILL
*****1999*****

OCC PLANT

	1999 BUDGET	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	1999 YTD
Operating Days		31	28	31	30	31	30	23						204
Tons Produced		15,846	14,930	17,715	17,351	18,018	16,677	11,810						112,347
Tons/Day		511	533	571	578	581	556	513						551
Biocide														
#/Ton	0.18	0.30	0.26	0.31	0.28	0.36	0.39	0.29						0.31
Cost/#	4.556	1.501	1.403	1.399	1.284	1.259	1.380	1.633						1.392
Cost/Ton	0.82	0.46	0.36	0.43	0.35	0.45	0.53	0.48						0.44
Polymer														
#/Ton	0.62	0.65	0.49	0.87	0.97	1.19	1.14	1.02						0.91
Cost/#	1.435	1.474	1.467	1.467	1.467	1.460	1.485	1.467						1.469
Cost/Ton	0.89	0.96	0.72	1.28	1.42	1.74	1.69	1.50						1.34
Total Cost/Ton	1.71	1.42	1.08	1.71	1.77	2.20	2.23	1.98						1.78

E00010987

PRODUCTION SUMMARY -- MISSOULA MILL
*****1999*****

BLEACH PLANT

	1999 BUDGET	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	1999 YTD
Operating Days		31	28											59
Tons Produced		1,465	2,125											3,590
Tons/Day		47	76											61
Caustic														
#/Ton	106	104	114											110
Cost/#	0.1	0.108	0.099											0.103
Cost/Ton	10.6	11.25	11.36											11.31
Chlorine														
#/Ton	167	145	158											153
Cost/#	0.101	0.089	0.089											0.089
Cost/Ton	16.89	12.88	14.04											13.57
Pitch Dispersant														
#/Ton	2.94	3.40	3.49											3.45
Cost/#	1.388	1.305	1.343											1.328
Cost/Ton	4.08	4.44	4.69											4.59
Chlorate														
#/Ton	12	9	15											12
Cost/#	0.213	0.211	0.211											0.211
Cost/Ton	2.56	1.90	3.13											2.63
Sulphur Dioxide														
#/Ton	7	8	7											8
Cost/#	0.11	0.108	0.108											0.108
Cost/Ton	0.77	0.81	0.81											0.81
Sulphuric Acid														
#/Ton	6	4	7											6
Cost/#	0.027	0.026	0.026											0.026
Cost/Ton	0.16	0.11	0.19											0.16
Defoamer														
#/Ton														
Cost/#														
Cost/Ton														
Total Cost/Ton	35.06	31.40	34.22											33.07

E00010988

PRODUCTION SUMMARY – MISSOULA MILL
*****1999*****

PULP MILL

	1999 BUDGET	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	1999 YTD
Operating Days		31	28	31	30	31	30	22						203
Tons Produced		44,163	44,493	46,987	45,356	47,028	47,191	26,767						301,985
Tons/Day		1,425	1,589	1,516	1,512	1,517	1,573	1,217						1,488
Lime														
#/Ton	21	27	20	11	10	13	16	17						16
Cost/#	0.037	0.036	0.036	0.036	0.036	0.036	0.036	0.036						0.036
Cost/Ton	0.78	0.98	0.72	0.39	0.37	0.48	0.58	0.63						0.59
Defoamer														
#/Ton	2.18	1.82	1.66	1.98	2.25	2.32	2.17	2.61						2.09
Cost/#	0.509	0.507	0.505	0.502	0.504	0.503	0.502	0.486						0.502
Cost/Ton	1.11	0.92	0.84	0.99	1.14	1.16	1.09	1.27						1.05
Surfactant														
#/Ton														
Cost/#														
Cost/Ton														
Total Other	1.89	1.91	1.56	1.38	1.51	1.64	1.67	1.90						1.63
Liquor Inventory														
#/Ton		19.82	(5.82)	0.96	6.16	(19.00)	7.64	10.00						2.24
Cost/#		0.069	0.069	0.987	0.208	0.011	0.174	0.052						0.313
Cost/Ton		1.37	(0.40)	0.95	1.28	(0.22)	1.33	0.52						0.70
Caustic														
#/Ton	100.23	107	125	98	93	101	79	127						103
Cost/#	0.056	0.058	0.054	0.048	0.049	0.047	0.045	0.030						0.048
Cost/Ton	5.64	6.13	6.82	4.75	4.52	4.72	3.55	3.76						4.94
Spent Caustic														
#/Ton	1.49	3.22	0.88	1.47	1.19	1.99	1.72	6.34						2.15
Cost/#	0.027	0.013	0.012	0.012	0.012	0.039	0.013	0.005						0.014
Cost/Ton	0.04	0.04	0.01	0.02	0.01	0.08	0.02	0.03						0.03
Salt Cake														
#/Ton	33.95	35	33	34	23	29	27	19						29
Cost/#	0.056	0.057	0.050	0.053	0.052	0.056	0.049	0.053						0.053
Cost/Ton	1.9	1.97	1.64	1.77	1.20	1.64	1.31	1.00						1.53
Jupiter Spent Caustic														
#/Ton	0.53							3.7						0.3
Cost/#	0.189							0.145						0.145
Cost/Ton	0.1							0.53						0.05
Total S/C Equiv.														
#/Ton	136.2	164.36	153.62	134.19	123.46	113.19	114.93	165.87						136.38
Cost/#	0.056	0.058	0.053	0.056	0.057	0.055	0.054	0.035						0.053
Cost/Ton	7.69	9.51	8.08	7.49	7.02	6.22	6.21	5.85						7.26
Total Cost/Ton	9.58	11.42	9.63	8.86	8.52	7.86	7.88	7.75						8.89
*** Turpentine Production ***														
#/Ton	0.52	0.49	0.46	0.78	0.54	0.68	0.59	0.56						0.59

E00010989

PRODUCTION SUMMARY– MISSOULA MILL
****1999****

	1999 BUDGET	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	1999 YTD
POWER USAGE/T OF PAPER														
#2 Generator		77	71	70	70	72	69	80						72
#3 Generator		28	27	27	26	26	27	31						27
Total Produced	101	105	98	97	96	98	96	111						99
Electricity Purchased	621	588	552	562	543	546	552	674						568
TOTAL	722	693	650	659	638	645	648	785						667
Cost–Mills/KWH	35	30.56	31.70	28.32	33.63	35.18	31.50	33.92						32.03
Cost/Ton	21.74	17.96	17.50	15.90	18.25	19.22	17.39	22.88						18.18
MKWH Purch/Month		35,534	32,894	35,934	34,147	35,303	35,755	25,574						235,142
MCF OF GAS USED/T OF PAPER														
Bark Boiler														
Waste Fuel Boiler		1.58	1.30	1.64	1.58	1.42	1.17	1.63						1.46
#3 Recovery				0.18		0.02		0.16						0.05
Power Boiler		1.01	0.87	0.85	0.60	0.64	0.35	0.95						0.74
#1 Lime Kiln		0.00	0.20	0.30	0.28	0.26	0.23	0.30						0.22
#2 Lime Kiln		0.25	0.25	0.09	0.12	0.15	0.13	0.26						0.17
#3 Lime Kiln		0.53	0.54	0.53	0.53	0.55	0.46	0.51						0.52
#4 Lime Kiln		0.46	0.40	0.47	0.45	0.45	0.47	0.58						0.46
Non–Metered		1.13	1.03	0.90	0.72	0.76	0.39	0.63						0.80
#4 Recovery		0.49	0.14	0.30	0.22	0.13	0.23	0.99						0.32
#5 Recovery		0.22	0.11	0.13	0.20	0.30	0.20	0.68						0.24
TOTAL MCF/T	5.44	5.68	4.84	5.39	4.70	4.67	3.63	6.69						4.98
COST MCF	$2.14	$2.35	$2.06	$2.03	$2.10	$2.31	$2.20	$2.63						$2.23
COST/TON	11.66	13.35	9.95	10.96	9.88	10.78	7.97	17.57						11.11
MCF USED/MONTH		343,434	288,260	344,689	295,682	301,885	235,183	253,592						2,062,725
TALL OIL														
Total Tons Prod.		559	167	1,290	799	1,099	1,020	468						5,402
Lbs/T of Pulp	37	25.32	7.51	54.91	35.23	46.74	43.23	34.97						35.78
BARK BOILER PRODUCTION														
Total Steam Produced (MLBS)		195,340	161,629	175,703	194,001	198,288	211,409	43,625						176,639
Total Steam Prod.w/bark(MLBS)		127,591	105,476	101,035	123,906	133,711	158,213	89,628						122,021
Total Steam Prod.w/gas(MLBS)		67,749	56,153	74,668	70,095	64,577	53,196	133,253						70,507
Avg. Steam/hr w/gas		91,000	84,000	100,000	97,000	87,000	74,000	87,000						88,636
Avg. Steam/hr w/bark		172,000	157,000	136,000	172,000	180,000	220,000	178,000						173,467

262,103

33.8%

1998 - gas - 70,002
Bark 190,734

260,736
26.8%

E00010990

PRODUCTION SUMMARY– MISSOULA MILL
****1999****

	1999 BUDGET	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	1999 YTD
HOG FUEL INVENTORY (BDU'S)														
Beginning Inventory		15,199	14,122	13,452	18,837	16,737	16,011	13,129						15,199
Receipts – Commercial		6,253	6,786	9,515	5,060	3,601	3,568	4,147						38,930
Receipts – Chipper														
Receipts – Chips (CTS)		1,956	1,781	1,881	1,459	1,560	1,656	1,124						11,417
Receipts – Sawdust (CTS)		1,590	191	2,373	3,318	4,087	2,715	997						15,271
Usage		8,569	7,320	6,867	8,480	9,029	10,821	6,178						57,264
Physical Inv. Adj.					(2,178)									(2,178)
Fines Sales to L.P.		2,307	2,108	1,516	1,280	945		2,295						10,451
Ending Inventory		14,122	13,452	18,838	16,736	16,011	13,129	10,924						10,924
AVERAGE BDUS/LOAD														
Receipts – Rail			34.00	18.00	39.20	37.00	27.50							32.92
– Trucks		11.21	12.02	11.89	13.03	12.67	12.56	13.18						12.21
Average Lbs/Unit		4,179	4,057	4,624	4,158	4,143	3,989	3,641						
Tot Cost – Hog Fuel Used		$164,115	$110,116	$142,043	$257,576	$173,768	$88,742	$40,993						$977,353
Cost/BDU Hog Fuel	17.59	19.15	15.04	20.68	24.17	19.25	8.20	6.64						16.44
Hog Fuel/Ton Paper	0.21	0.14	0.12	0.11	0.17	0.14	0.17	0.16						0.20
FUEL OIL														
Gal/Ton Paper		0.94	2.34	0.58										0.77
Cost/Gal	0.4	0.292	0.293	0.293										0.293
Cost/Ton	0.34	0.27	0.69	0.17										0.23
Gallons Used		56,575	139,663	36,800										233,038
***COST/MM BTU'S**														
Nat. Gas	2.10	2.30	2.02	2.02	2.06	2.26	2.15	2.58						
Fuel Oil	2.76	2.02	2.02	2.02										
Hog Fuel	0.98	1.11	0.74	1.64	1.78	1.98	0.68	0.32						
***COST/M# 600# STEAM**														
Nat. gas		3.21	2.82	2.82	2.88	3.16	3.00	3.61						
Fuel Oil		2.66	2.66	2.66										
Hog Fuel		1.98	1.32	2.93	3.18	3.53	1.21	0.57						

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PRODUCTION SUMMARY – MISSOULA MILL

*****1999*****

WATER TREATMENT CHEMICAL COST–SERVICE WATER

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	1999 YTD
Tons Produced	60,455	59,576	63,983	62,939	64,614	64,764	37,927						414,258
T–Chlor													
#/Ton	0.39	0.46	0.60	0.22	0.55	0.30	0.86						0.46
Cost/#	0.119	0.120	0.119	0.120	0.118	0.120	0.116						0.119
Cost/Ton	0.05	0.05	0.07	0.03	0.06	0.04	0.10						0.05
Sulfamic Acid													
#/Ton	0.00				0.01								0.00
Cost/#	0.373				0.375								0.374
Cost/Ton	0.00				0.00								0.00
Betz Flogard													
#/Ton	0.03	0.10	0.08	0.07	0.08	0.08	0.12						0.08
Cost/#	1.336	1.338	1.340	1.331	1.331	1.331	1.344						1.336
Cost/Ton	0.04	0.14	0.11	0.10	0.11	0.11	0.16						0.11
Nalco 8356													
#/Ton	0.03	0.02	0.02	0.02	0.02	0.02	0.04						0.02
Cost/#	1.642	1.637	1.638	1.643	1.638	1.634	1.634						1.638
Cost/Ton	0.04	0.03	0.03	0.03	0.03	0.03	0.06						0.04
***Nalco 1254**													
#/Ton													
Cost/#													
Cost/Ton													
***Nalco 7348**													
#/Ton													
Cost/#													
Cost/Ton													
TOTAL SERVICE WATER	0.13	0.23	0.21	0.16	0.20	0.17	0.31						0.20

E00010992

PRODUCTION SUMMARY – MISSOULA MILL

WATER TREATMENT CHEMICAL COST--BOILER FEEDWATER

*****1999*****

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	1999 YTD
Tons Produced	60,455	59,576	63,983	62,939	64,614	64,764	37,927						414,258
Sack Salt													
#/Ton	0.13	0.79	0.76	0.39	0.54	0.62	0.99						0.58
Cost/#	0.031	0.034	0.031	0.031	0.031	0.031	0.031						0.032
Cost/Ton	0.00	0.03	0.02	0.01	0.02	0.02	0.03						0.02
Nalco 1720													
#/Ton	0.14	0.08	0.08	0.10	0.10	0.09	0.15						0.10
Cost/#	0.594	0.590	0.623	0.590	0.562	0.558	0.561						0.582
Cost/Ton	0.08	0.05	0.05	0.06	0.06	0.05	0.08						0.06
Dow Resin HGR													
#/Ton				0.040									0.006
Cost/#				1.78									1.78
Cost/Ton				0.07									0.01
Quick lime													
#/Ton	0.69	0.66	0.67	0.70	0.72	0.74	1.11						0.73
Cost/#	0.074	0.074	0.072	0.072	0.072	0.071	0.071						0.072
Cost/Ton	0.05	0.05	0.05	0.05	0.05	0.05	0.08						0.05
Nalco 2													
#/Ton	0.14	(0.01)	0.15	0.02	0.08	0.15	0.10						0.09
Cost/#	0.793	0.792	0.791	0.791	0.791	0.790	0.790						0.791
Cost/Ton	0.11	(0.01)	0.12	0.01	0.06	0.12	0.08						0.07
Nalco 354													
#/Ton	0.07	0.06	0.06	0.05	0.08	(0.12)	0.35						0.06
Cost/#	2.509	2.509	2.509	2.589	2.589	2.585	2.609						2.565
Cost/Ton	0.19	0.15	0.14	0.14	0.20	(0.30)	0.92						0.16
Magnesium Oxide													
#/Ton	0.09	0.07	0.10	0.07	0.05	0.07	0.17						0.08
Cost/#	0.163	0.163	0.164	0.164	0.164	0.164	0.164						0.164
Cost/Ton	0.01	0.01	0.02	0.01	0.01	0.01	0.03						0.01
Nalco 22104													
#/Ton	0.10	0.04	0.10	0.08	0.06	0.09	0.09						0.08
Cost/#	1.964	1.964	1.964	1.964	1.882	1.882	1.882						1.933
Cost/Ton	0.20	0.09	0.20	0.16	0.10	0.17	0.16						0.16
Anthrafilt													
#/Ton	0.16	(0.00)		0.13	(0.01)								0.04
Cost/#	0.230	0.227		0.230	0.227								0.230
Cost/Ton	0.04	(0.00)		0.03	(0.00)								0.01
Calgon 66801													
#/Ton	0.00	0.00	0.00	0.00	0.00	(0.01)	0.00						0.00
Cost/#	1.933	1.967	1.965	1.964	1.956	2.114	2.118						1.699
Cost/Ton	0.00	0.00	0.00	0.01	0.00	(0.01)	0.00						0.00
NALCO PURCHASES REBATE			($17,776)										($17,776)
Total Boiler Feedwater	$41,502	$21,996	$20,895	$34,725	$32,307	$7,748	$52,608						$211,781
Average Cost Per Ton	0.69	0.37	0.33	0.55	0.50	0.12	1.39						0.51

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PRODUCTION SUMMARY – MISSOULA MILL

ENVIRONMENTAL AND MISCELLANEOUS CHEMICAL COST

*****1999*****

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	1999 YTD
Tons Produced	60,455	59,576	63,983	62,939	64,614	64,764	37,927						414,258
Carbon Dioxide													
#/Ton	7.85	6.53	6.89	7.72	6.41	6.58	8.96						7.17
Cost/#	0.046	0.050	0.049	0.049	0.051	0.050	0.050						0.049
Cost/Ton	0.36	0.33	0.34	0.38	0.33	0.33	0.45						0.35
Vinings 2120													
#/Ton	(0.01)	0.09	0.09	0.12	0.09	0.08	0.07						0.08
Cost/#	0.968	0.964	0.940	0.940	0.856	0.630	0.687						0.856
Cost/Ton	(0.01)	0.08	0.08	0.11	0.08	0.05	0.05						0.06
Pol E–Z (G/L Floc)													
#/Ton	0.06	0.00	(0.02)	0.02	0.02	0.02							0.01
Cost/#	1.406	1.408	1.405	1.405	1.406	1.405							1.406
Cost/Ton	0.08	0.00	(0.02)	0.03	0.03	0.03							0.02
Activox													
#/Ton						0.31	0.93						0.13
Cost/#						1.371	1.354						1.360
Cost/Ton						0.42	1.26						0.18
Calgon E2272													
#/Ton	0.26	0.23	0.12	0.25	0.25		0.00						0.17
Cost/#	0.922	0.922	0.954	0.954	0.954		2.118						0.941
Cost/Ton	0.24	0.21	0.11	0.24	0.24		0.00						0.16
Phosphoric Acid													
#/Ton													
Cost/#													
Cost/Ton													
Betz DPS 1862													
#/Ton													
Cost/#													
Cost/Ton													
TOTAL TECHNICAL & MISC CHEM	$0.680	$0.624	$0.511	$0.763	$0.667	$0.824	$1.766						$0.778

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STONE CONTAINER CORP.MISSOULA MILL — CHEMICAL VARIANCE FOR MONTH Jul-99

MISSOULA MILL

	BUDGET			ACTUAL			VARIANCE			DEPT	TONNAGE
#1 PAPER MACHINE	$/#	#/T	$/T	$/#	#/T	$/T	TOTAL	USAGE	PRICE	TONNAGE	VARIANCE
ALUM	0.074	31.00	$2.29	0.075	31.44	2.37	(0.08)	(0.03)	(0.05)		
SIZE	0.517	0.29	0.15	0.319	0.09	0.03	0.12	0.10	0.02		
HI PHASE SIZE	1.333	1.20	1.60				1.60	1.60			
CLAY	0.090	44.45	4.00				4.00	4.00			
DYE	4.152	0.09	0.37				0.37	0.37			
WET END STARCH	0.342	9.25	3.16				3.16	3.16			
BIOCIDE	4.579	0.19	0.87	1.134	0.32	0.36	0.51	(0.58)	1.09		
DISPERSANT	0.755	0.49	0.37	0.898	0.34	0.31	0.06	0.11	(0.05)		
SKYWHITE POLYMER	1.442	0.33	0.47				0.47	0.47			
HYDRAID											
FELT WASH-CONTINUOUS	0.764	0.55	0.42	0.450	1.16	0.52	(0.10)	(0.47)	0.36		
FELT WASH-BATCH	0.905	0.21	0.19	0.430	0.22	0.09	0.10	(0.01)	0.10		
NOZZLE CLEANER	1.200	0.05	0.06	0.731	0.07	0.05	0.01	(0.02)	0.03		
STARCH	0.110	29.00	3.19	0.090	36.98	3.35	(0.16)	(0.88)	0.72		
SULFURIC ACID	0.027	18.00	0.48	0.026	21.29	0.55	(0.07)	(0.09)	0.02		
WIRE COATING	1.333	0.03	0.04	0.658	0.00	0.00	0.04	0.03	0.00		
SILICA	0.757	0.42	0.32	1.152	0.10	0.11	0.20	0.24	(0.04)		
OTHER DISPERSANT											
OTHER FELTWASH											
TOTAL	0.133	135.54	$17.98	0.084	92.02	7.74	10.24	8.03	2.21	10,126	930
#2 PAPER MACHINE											
ALUM	0.074	28.00	$2.07	0.078	25.63	2.00	0.07	0.18	(0.11)		
SIZE	0.500	0.08	0.04				0.04	0.04			
STARCH	0.110	24.00	2.64	0.090	20.89	1.89	0.75	0.34	0.41		
WET END STARCH	0.165	19.34	3.19	0.197	0.98	0.19	3.00	3.03	(0.03)		
DISPERSANT	0.737	0.19	0.14	0.897	0.32	0.28	(0.14)	(0.09)	(0.05)		
FELT WASH-CONTINUOUS	0.754	0.57	0.43	0.450	1.00	0.45	(0.02)	(0.32)	0.30		
FELT WASH-BATCH	0.923	0.13	0.12	0.430	0.24	0.10	0.02	(0.10)	0.12		
NOZZLE CLEANER	1.200	0.05	0.06	0.731	0.08	0.06	0.00	(0.03)	0.04		
YELLOW DYE	1.417	0.05	0.07				0.07	0.07			
BIOCIDE	4.556	0.18	0.82	1.134	0.35	0.40	0.42	(0.79)	1.21		
SULFURIC ACID	0.027	18.00	0.48	0.026	21.29	0.55	(0.07)	(0.09)	0.02		
WIRE COATING	1.333	0.03	0.04	0.735	0.00	0.00	0.04	0.03	0.00		
SILICA	0.756	0.43	0.33	1.152	0.11	0.13	0.20	0.24	(0.04)		
OTHER DISPERSANT											
OTHER FELTWASH											
TOTAL	0.115	91.05	$10.43	0.085	70.90	6.06	4.37	2.50	1.86	9,062	151
#3 PAPER MACHINE											
ALUM	0.074	29.00	$2.15	0.075	34.27	2.58	(0.43)	(0.39)	(0.04)		
SIZE	0.060	0.50	0.03	0.319	0.20	0.06	(0.03)	0.02	(0.05)		
WET STRENGTH ROSIN	1.050	0.86	0.90	1.001	0.31	0.31	0.58	0.57	0.02		
DYE											
WET END STARCH	0.342	8.75	2.99	0.310	7.12	2.20	0.79	0.56	0.23		
BIOCIDE	4.625	0.08	0.37	1.134	0.18	0.21	0.16	(0.49)	0.65		
DISPERSANT	0.769	0.52	0.40	0.898	0.33	0.29	0.11	0.15	(0.04)		
FELT WASH-CONTINUOUS	0.759	0.54	0.41	0.450	0.68	0.31	0.10	(0.11)	0.21		
FELT WASH-BATCH	0.920	0.25	0.23	0.430	0.12	0.05	0.18	0.12	0.06		
NOZZLE CLEANER	1.167	0.06	0.07	0.731	0.08	0.06	0.01	(0.02)	0.03		
STARCH											
SULFURIC ACID	0.027	18.00	0.48	0.024	21.29	0.51	(0.03)	(0.09)	0.06		
WIRE COATING	1.000	0.01	0.01	0.942	0.00	0.00	0.01	0.01	0.00		
SILICA	0.762	0.42	0.32	0.706	0.05	0.04	0.28	0.28	0.00		
OTHER DISPERSANT											
OTHER FELTWASH											
TOTAL	0.142	58.99	$8.36	0.103	64.65	6.63	1.73	0.61	1.12	18,739	(679)
BLEACHING											
CAUSTIC	0.097	106.00	10.33								
CHLORINE	0.098	167.00	16.37								
PITCH DISPERSANT	1.388	2.94	4.08								
CHLORATE	0.213	12.00	2.56								
SULFUR DIOXIDE	0.110	7.00	0.77								
SULFURIC ACID	0.027	6.00	0.16								
TOTAL	0.114	300.94	34.27								(1,201)
PULP MILL											
LIME	0.037	21.00	$0.78	0.036	17.32	0.63	0.15	0.14	0.01		
DEFOAMER	0.509	2.18	1.11	0.486	2.61	1.27	(0.16)	(0.22)	0.06		
TOTAL OTHER CHEM.	0.082	23.180	1.890	0.095	19.93	1.90	(0.01)	(0.08)	0.07	26,767	(783)
LIQUOR					10.00	0.52	(0.52)	(0.52)			
CAUSTIC	0.055	178.00	$9.77	0.030	126.76	3.76	6.01	2.81	3.19		
SPENT CAUSTIC				0.005	6.34	0.03	(0.03)		(0.03)		
SALTCAKE	0.056	18.00	1.01	0.053	19.08	1.00	0.01	(0.06)	0.07		
JUPITER S. CAUSTIC	0.194	9.90	1.92	0.145	3.68	0.53	1.39	1.39			
TOTAL S\C EQUIV.	0.062	205.9	$12.70	0.035	165.87	5.85	6.85	3.62	3.23	26,767	(783)
RECYCLE											
BIOCIDE	4.556	0.18	$0.82	0.961	0.29	0.28	0.54	(0.52)	1.05		
POLYMER	1.435	0.62	0.89	1.467	1.02	1.50	(0.61)	(0.58)	(0.03)		
PURCHASED PULP											
TOTAL	2.137	0.8	$1.71	1.354	1.31	1.78	(0.07)	(1.09)	1.02	11,810	1,835
POWER & RECOVERY											
FEEDWATER CHEMICALS			0.64			1.38	(0.74)	(0.74)			
SERVICEWATER CHEMICALS			0.17			0.31	(0.14)	(0.14)			
TOTAL			0.81			1.70	(0.89)	(0.89)			
PETROLEUM COKE (TONS)											
FUEL OIL (GAL)											
HOG FUEL (BDU'S)	18.218	0.21	3.86	6.635	0.16	1.08	2.78	0.89	1.89		
NATURAL GAS (MCF'S)	1.898	7.06	13.40	2.627	6.69	17.57	(4.16)	0.71	(4.87)		
TOTAL FUEL	2.374	7.27	$17.27	2.722	6.85	18.65	(1.38)	1.60	(2.99)	37,927	402
ELECTRICITY (MKWH)	0.0346	995.5	34.40	0.0339	674.3	22.88	11.53	11.10	0.43	37,927	402
TALL OIL	-0.03	27.16	(0.74)	-0.05	24.68	(1.30)	0.56	(0.07)	0.62		
TURPENTINE	-0.12	0.38	(0.05)	-0.15	0.40	(0.06)	0.01	0.00	0.01		
TOTAL BY PRODUCTS	-0.03	27.55	(0.79)	-0.05	25.07	(1.35)	0.57	(0.07)	0.63	37,927	402

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STONE CONTAINER CORP.MISSOULA MILL — CHEMICAL VARIANCE YEAR-TO-DATE — Jul-99

MISSOULA MILL

	BUDGET			ACTUAL			VARIANCE			DEPT	TONNAGE
#1 PAPER MACHINE	$/#	#/T	$/T	$/#	#/T	$/T	TOTAL	USAGE	PRICE	TONNAGE	VARIANCE
ALUM	0.074	31	2.29	0.070	30.31	2.12	0.17	0.05	0.12		
SIZE	0.517	0.29	0.15	0.319	0.32	0.10	0.05	(0.02)	0.06		
HI PHASE SIZE	1.333	1.20	1.60	1.373	0.21	0.29	1.31	1.32	(0.01)		
CLAY	0.090	58.59	5.28	0.086	19.90	1.72	3.55	3.48	0.07		
DYE	4.152	0.12	0.49	4.082	0.02	0.10	0.39	0.39	0.00		
WET END STARCH	0.342	9.25	3.16	0.336	3.06	1.03	2.13	2.11	0.02		
BIOCIDE	4.579	0.19	0.87	3.140	0.26	0.81	0.06	(0.31)	0.37		
DISPERSANT	0.755	0.49	0.37	0.884	0.34	0.30	0.07	0.11	(0.04)		
SKY WHITE POLYMER	1.442	0.43	0.62	1.475	0.15	0.22	0.40	0.41	(0.00)		
HYDRAID											
FELT WAS--CONTINUOUS											
FELT WAS--BATCH											
NOZZLE CLEANER	0.764	0.55	0.42	0.629	0.68	0.43	(0.01)	(0.10)	0.09		
STARCH	0.110	29.00	3.19	0.090	29.90	2.69	0.50	(0.10)	0.60		
SULFURIC ACID	0.027	18.00	0.48	0.025	21.48	0.54	(0.06)	(0.09)	0.03		
WIRE COATING	1.333	0.03	0.04	1.111	0.02	0.02	0.02	0.01	0.00		
NO SLIP SILICA	0.757	0.42	0.32	0.653	0.22	0.15	0.17	0.15	0.02		
WET STRENGTH ROSIN											
TOTAL	0.130	149.82	19.52	0.100	107.52	10.72	8.81	7.42	1.34	105,575	8,775
#2 PAPER MACHINE											
ALUM	0.074	28.00	2.07	0.072	22.59	1.62	0.45	0.40	0.05		
SIZE	0.500	0.08	0.04				0.04	0.04			
STARCH	0.110	24.00	2.64	0.094	26.75	2.51	0.13	(0.30)	0.44		
WET END STARCH	0.165	19.34	3.19	0.321	1.51	0.48	2.71	2.94	(0.23)		
DISPERSANT	0.737	0.19	0.14	1.009	0.19	0.19	(0.05)	0.00	(0.05)		
FELT WASH-CONTINUOUS	0.754	0.57	0.43	0.564	0.71	0.40	0.03	(0.11)	0.14		
FELT WASH-BATCH											
NOZZLE CLEANER											
YELLOW DYE	1.417	0.06	0.08								
BIOCIDE	4.556	0.18	0.82	1.340	0.27	0.36	0.46	(0.39)	0.86		
SULFURIC ACID	0.027	18.00	0.48	0.025	21.46	0.54	(0.06)	(0.09)	0.03		
WIRE COATING	1.333	0.03	0.04	1.114	0.02	0.02	0.02	0.01	0.00		7,299
NO SLIP SILICA	0.756	0.43	0.33	0.681	0.23	0.16	0.17	0.15	0.02		
TOTAL	0.115	91.059	10.44	0.087	73.99	6.46	3.98	2.65	1.24	101,099	
#3 PAPER MACHINE											
ALUM	0.074	29.00	2.15	0.071	31.72	2.27	(0.12)	(0.20)	0.08		
SIZE	0.060	0.50	0.03	0.319	0.02	0.01	0.02	0.03	(0.00)		
WET STRENGTH ROSIN	1.050	0.86	0.90	1.004	1.22	1.23	(0.33)	(0.38)	0.06		
DYE											
WET END STARCH	0.342	8.75	2.99	0.317	6.32	2.00	0.99	0.83	0.15		
BIOCIDE	4.625	0.08	0.37	3.060	0.16	0.48	(0.11)	(0.36)	0.25		
DISPERSANT	0.769	0.52	0.40	0.785	0.39	0.30	0.10	0.10	(0.01)		
FELT WASH-CONTINUOUS	0.759	0.54	0.41	0.646	0.57	0.37	0.04	(0.02)	0.06		
FELT WASH-BATCH											
NOZZLE CLEANER											
STARCH											3,184
SULFURIC ACID	0.027	18.00	0.48	0.025	21.32	0.54	(0.06)	(0.09)	0.03		
WIRE COATING	1.000	0.01	0.01	1.109	0.02	0.02	(0.01)	(0.01)	(0.00)		
NO SLIP SILICA	0.762	0.42	0.32	0.549	0.02	0.01	0.31	0.31	0.00		
TOTAL	0.142	58.99	8.36	0.118	61.89	7.33	1.02	0.21	0.63	207,584	
BLEACHING											
CAUSTIC	0.104	106.00	11.08	0.103	110.34	11.31	(0.24)	(0.45)	0.22		
CHLORINE	0.104	167.00	17.34	0.089	153.09	13.57	3.77	1.44	2.33		
PITCH DISPERSANT	1.388	2.94	4.08	1.328	3.45	4.59	(0.51)	(0.71)	0.21		(13,079)
CHLORATE	0.213	12.00	2.56	0.211	12.46	2.63	(0.07)	(0.10)	0.03		
SULFUR DIOXIDE	0.110	7.00	0.77	0.108	7.50	0.81	(0.04)	(0.05)	0.01		
SULFURIC ACID	0.027	6.00	0.16	0.026	6.10	0.16	0.00	(0.00)	0.01		
TOTAL	0.120	300.94	35.98	0.113	292.95	33.07	2.92	0.12	2.79	3,590	
PULP MILL											11,985
LIME	0.037	21.00	0.78	0.036	16.12	0.59	0.19	0.18	0.01		
DEFOAMER	0.509	2.18	1.11	0.502	2.09	1.05	0.06	0.05	0.02		
SURFACTANT											
TOTAL OTHER CHEM	0.082	23.18	1.89	0.090	18.21	1.63	0.26	0.23	0.03	301,985	
LIQUOR					2.24	0.70	(0.70)	(0.70)			
CAUSTIC	0.058	103.61	6.0588	0.048	102.51	4.94	1.12	0.06	1.05		11,985
SPENT CAUSTIC	0.025	1.43	0.0362	0.014	2.15	0.03	0.01	(0.02)	0.02		
SALTCAKE	0.056	33.26	1.8607	0.053	29.15	1.53	0.33	0.23	0.10		
JUPITER S. CAUSTIC	0.194	0.94	0.18	0.145	0.33	0.05	0.14	0.12			
TOTAL S\C EQUIV.	0.058	139.24	8.14	0.053	136.38	7.26	0.88	(0.31)	1.19	301,985	
											7,347
RECYCLE											
BIOCIDE	4.556	0.18	0.82	1.326	0.31	0.42	0.40	(0.61)	1.01		
POLYMER	1.435	0.62	0.89	1.469	0.91	1.34	(0.45)	(0.42)	(0.03)		
PURCHASED PULP											
	2.137	0.8	1.71	1.433	1.23	1.76	(0.05)	(1.03)	0.98	112,347	
POWER & RECOVERY											
FEEDWATER CHEMICALS			0.65			0.51	(0.14)	(0.14)			
SERVICEWATER CHEMICALS			0.17			0.20	0.02	0.02			
TOTAL CHEMICALS			0.82			0.71	(0.12)	(0.12)			
PETROLEUM COKE											19,258
FUEL OIL (GAL)	0.401	0.76	0.30	0.293	0.56	0.16	0.14	0.08	0.06		
HOG FUEL (BDU'S)	18.464	0.21	3.90	16.437	0.14	2.36	1.54	1.25	0.29		19,258
NATURAL GAS (MCF'S)	2.112	5.52	11.65	2.231	4.98	11.11	0.55	1.14	(0.59)		
TOTAL FUEL	2.444	6.49	15.86	2.398	5.69	13.63	2.23	2.47	(0.24)	414,258	
ELECTRICITY (MKWH)	0.029	627.50	18.06	0.032	563.52	18.18	(0.12)	1.84	(1.96)	414,258	19,258
TALL OIL	-0.03	27.16	(0.74)	-0.03	26.08	(0.83)	0.09	(0.03)	0.12		
TURPENTINE	-0.13	0.38	(0.05)	-0.10	0.43	(0.04)	(0.01)	0.01	(0.02)		
TOTAL BY PRODUCTS	-0.03	27.55	(0.79)	-0.03	26.51	(0.87)	0.08	(0.02)	0.10	414,258	

From: Paul Willhite/USA/SMURFIT@Exchange on 09/17/99 12:13 PM CDT

To: Neal Marxer/MISSO/Mill/STO@STO
cc: Ed Scott/MISSO/Mill/STO@STO
Subject: Heat Input

Air Compliance (the consultant for Coshocton) said they would e-mail me a copy of the spreadsheet they use to calculate heat input on Monday - I will forward it to you once I get it.

Also - I checked the definition of heat input per Montana regulations and it is very simple - "aggregate heat input of **all** fuels". 17.8.309 Particulate Matter - Fuel Burning Equipment.

Will be in touch.

-
Paul T. Willhite
770 621-6709

BOILER HEAT INPUT CALCULATION SPREADSHEET

INPUT VARIABLES

VARIABLES DETERMINED FROM STACK TEST	
Percent by Volume Carbon Dioxide in Stack Gas (Dry Basis) (%CO2)	**14.10**
Percent by Volume Oxygen in Stack Gas (Dry Basis) (%O2)	**4.00**
Percent by Volume Carbon Monoxide in Stack Gas (Dry Basis) (%CO)	**0.00**
Measured Dry Volumetric Stack Gas Flow at Standard Conditions (Qstd) (dscfm)	**112,718**
BOILER OPERATING VARIABLES	
Steam Production During Test Run (lb)	**443,200**
Total Natural Gas Usage During Test Run (ft^3)	**173,200**
Heating Value of Natural Gas Burned During Test Run (Btu/ft^3)	**1,050**
LABORATORY ULTIMATE ANALYSIS (FOR WOOD) (DRY)	
Percent Hydrogen (%H)	**5.86**
Percent Carbon (%C)	**49.42**
Percent Sulfur (%S)	**0.02**
Percent Nitrogen (%N)	**0.71**
Percent Oxygen (%O)	**41.07**
Percent Ash	**2.92**
Gross Caloric Value (GCV) (dry)	**9010**

CALCULATED VALUES

F-FACTOR FOR WOOD ONLY	
Determined F-Factor at 0% Oxygen and 68°F (Wood) (Fd) (dscf/MMBtu)	8675.0
F-FACTOR FOR NATURAL GAS ONLY	
Determined F-Factor for Natural Gas at 0% Oxygen and 68°F (Fd) (dscf/MMBtu)**	8710.0
SMURFIT-STONE CALCULATED HEAT INPUT FROM STEAM OUTPUT	
Smurfit-Stone Heat Input Calculated from Steam Produced (MMBtu)*	713.6
Calculated Heat Input Contributed by Natural Gas (MMBtu)	181.9
Calculated Percentage of Smurfit-Stone Heat Input Contributed by Natural Gas (%)	25.49
By Difference Percentage of Smurfit-Stone Heat Input Contributed by Wood (%)	74.51
PROPORTIONED F-FACTOR FROM STEAM OUTPUT DATA	
Proportioned F-Factor at 0% Oxygen and 68°F (Wood and Natural Gas) (Fd) (dscf/MMBtu)	8683.9
FINAL HEAT INPUT CALCULATED	
Measured Approximate Heat Input Rate (MMBtu/hr)	629.8

*Conversion Factor of 0.00161 obtained from Boiler Manufacturer's Efficiency Calculations
**F-Factor Value obtained from tables in U.S. EPA Method 19

From: Paul Willhite/USA/SMURFIT@Exchange on 09/16/99 01:11 PM CDT

To: Neal Marxer/MISSO/Mill/STO@STO
cc: Ed Scott/MISSO/Mill/STO@STO
Subject: Heat Input Determination

I've not received any feedback regarding your question on calculating boiler heat input. I've only got a hold of a couple of mills directly and have little to report at this time. I will keep inquiring and e-mail you my findings.

Coshocton - I am getting a written protocol (I hope) from the consultant that compliance tests their boiler. In short, they are doing an ultimate analysis with each run of the test and metering natural gas flow to the boiler (they burn wastewood - bark, sludge, white wood - and natural gas in combination). They calculate the amount of wood waste burned from total steam production - subtracting out that produced by the gas, and apply a boiler efficiency. I will provide more details when I get them.

Los Angeles - they simply ratio the actual steam production to the boiler capacity. If rated at 375,000 x10E6 Btu and 250,000 pounds of steam, and they are producing only 200,000 pounds of steam, their input would be 80% of the 375,000 x10E6 Btu/hr. They go strictly on manufactures rating.

I have calls in to Ontonagon and Hopewell and will let you know what I find out.

Paul T. Willhite
770 621-6709

Prep For 3rd Quarter Testing

MCF/Day

WFB GAS Burning Following Automation of Burners

8/17	2810
8/18	1671
8/19	915
8/20	327
8/21	691
8/22	937
8/23	1362
8/24	2560
8/25	4360
8/26	1142
8/27	1739
8/28	975
8/29	1383
8/30	1717
8/31	420

Clean Scrubber Trap

~~23,009~~ 13 | ~~16,089~~ 1,237.6

1,533.9

15 | 23009

~50 MCF/hr.

1533.9 MCF/Day.

24 | ~~1533.9~~ 1237.6

~60 MCFh

#7
ENVIRON-MENTAL CONDITIONS

INDEX

E00011002

FRENCHTOWN MILL

BRIEFING BOOK

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ENVIRONMENTAL STUDIES

E00011006

Waste Water

The present waste water discharge permit was issued to Champion on April 6, 1984 and expires on March 31, 1986. This permit allows the direct discharge of treated Kraft mill effluent during low river flows (as low as 1900 cfs) where historically the discharge was only allowed during the spring runoff, which typically occurs during April, May, and June.

The direct discharge began on April 7, 1984 and has been continuous except for 92 days where the river was below 1900 cfs and/or the D.O. was below 7.0 mg/liter. During the 12-month period ending June 30, 1985;

(1) 98% of the color readings met the State standard (increase of 5 standard color units over background color),
(2) the discharge of total suspended solids was 1,500,000 lbs/yr (4,000,000 lbs/yr permitted),
(3) the discharge of BOD was 1,500,000 lbs/yr (2,100,000 lbs/yr permitted).

The State of Montana Water Quality Bureau is completing a 1½ year comprehensive study of a 200-mile section of the Clark Fork River from above Missoula to the Idaho border. An EIS will be prepared on this study with a target completion date of December 1985. The focus of this study has been to document the impact of the pulp mill's discharge on the river. The Frenchtown Mill is not aware of any significant detrimental impacts that can be attributed to our discharge. Aesthetic impacts include localized color along the river banks within the mixing zone, an increase in foam, and a darkening of the color of the foam.

Nutrient loading in the Clark Fork River and its impact upon Lake Pend Oreille in Northern Idaho is a key issue. The Frenchtown Mill retained Weston to conduct a study of alternative treatment technologies that would be feasible for reducing pollutant loads further if a problem was identified. This study showed that demonstrated technologies exist for reducing BOD and TSS, but not color or nutrients. A 12-member Technical Advisory Committee was established to review and monitor the studies of the Clark Fork River. This committee has met 10 times, the meetings are well attended, and the committee members have acted in good faith.

Future challenges that must be met are the renewal of our waste water discharge permit and the compliance with that permit under low river flow conditions. The renewal application was submitted in September 1985

E00011007

and we requested a 5-year permit with no change to the permit requirements. The renewal of our permit will entail a hearing on the EIS in January 1985 followed by a hearing on the conditions of the new permit. The Frenchtown Mill anticipates that some additional requirement beyond those in our current permit will be required.

The program necessary to allow compliance with the discharge permit under low flow conditions is described in the attached Key Planning Issue.

E00011008

1985 STRATEGIC PLAN

KEY PLANNING ISSUE

ISSUE

Identification of the program necessary to allow compliance with effluent discharge permit requirements under low river flow conditions.

KEY FACTORS CONSIDERED

1. The Montana river color standard is the most stringent standard relative to effluent disposal.

2. The disposal capacity of the rapid infiltration system continues to decline.

3. The capacity of the waste water treatment system is dependent on river flow, effluent volume, and effluent color.

4. The current capacity of the waste water treatment system is not adequate to dispose effluent during a low river flow year (as experienced in 1977) followed by an average flow year.

5. The projected increase in bleach plant operation due to increased Spra White production will require further reductions in effluent volume and color.

6. The current effluent volume is 16.5 mgd and the color is 1400 SCU.

CONCLUSION

To dispose of the effluent in a low flow year the effluent volume must average 14 mgd and the effluent color must average 900 SCU.

RECOMMENDED STRATEGY

1. Implement the Optimization Plan projects related to improved washer operation and increased evaporation capacity.

2. Install a system to recover the tall oil brine and lignin, which are currently sewered.

3. Convert No. 3 paper machine showers from fresh water to white water.

4. Install collection systems for No. 3 and No. 4 recovery buildings to collect ash hopper and mix tank spills.

E00011009

5. Dike the area around No. 1 and No. 2 evaps and install a collection sump.

6. Install a collection system for liquor filter overflows and draining.

7. Modify the pulp mill sump to recover spills.

8. Reuse gland water throughout the mill to offset the increased volume of bleach plant effluent.

9. Investigate the use of ClO_2 in the chlorine stage as a means of further reducing the color originating from the bleach plant.

E00011010

Air

The present air quality permit contains daily maximums and monthly averages for total particulate on all major stacks. Lear Siegler transmissometers are used on the three recovery boilers to demonstrate daily compliance with the permit limits. The Lear Siegler calibrations must be checked at least quarterly by running a stack test. All other sources must be tested at least once per year. Several operational checks must be performed weekly on all wet scrubbers.

Total reduced sulfur (TRS) emissions are limited to 5 ppm for all recovery boilers, 20 ppm for three lime kilns, and 8 ppm on the #4 lime kiln. Barton titrators are used to document compliance with the TRS standards. A daily limit is also imposed on the TRS content of the stripped condensates from the air stripper.

The mill encounters occasional violations of the above standards due to mechanical failures and upset operations.

Total SO_2 emissions from the mill are limited to 5000 lbs/day. Liquor sulfidity must be controlled below 28% (Total alkali) to prevent excessive SO_2 emissions from the recovery boilers, and the use of fuel oil must be limited to units with an alkaline scrubber.

The ambient air monitoring program includes two stations for monitoring SO_2 and H_2S. Occasional violations of the 50 ppb 1-hr. standard are recorded and the effluent ponds are most likely source. A recent survey of the ponds pinpointed the emergency spills ponds as a source of H_2S, and the mill is proposing to return this effluent to the aeration basin.

The Frenchtown Mill is proposing to substitute up to 70% of the natural gas requirements on the lime kilns with petroleum coke. The alkaline scrubber on the lime kilns will control the SO_2 emissions but NO_x emissions will require a new permit. We currently have a 1-year permit to burn coke on #4 lime kiln and to evaluate a trial pulverizer/burner system. A complete emission testing program will be conducted during this evaluation to provide the necessary data to model the ambient NO_x conditions. Up to one year of monitoring may be required to obtain the permit to allow the use of coke on all 4 kilns.

E00011011

STATE DISCHARGE PERMIT

Permit No.: MT-0000035

MONTANA DEPARTMENT OF HEALTH
AND
ENVIRONMENTAL SCIENCES

AUTHORIZATION TO DISCHARGE UNDER THE

MONTANA POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with Section 75-5-101 et seq., MCA, and ARM 16.20.901 et seq., and 16.20.601 et seq.,

Champion International Corporation
Mill Operations/Packaging Division
Drawer D
Missoula, Montana 59806

is authorized to discharge from the Frenchtown Mill

to receiving waters named the Clark Fork River,

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, and III hereof.

This permit shall become effective on the date of issuance.

This permit and the authorization to discharge shall expire at midnight, March 31, 1986.

FOR THE MONTANA DEPARTMENT OF HEALTH
AND ENVIRONMENTAL SCIENCES

Steven L. Pilcher

Steven L. Pilcher, Chief
Water Quality Bureau
Environmental Sciences Division

Dated this 6th day of April, 1984.

E00011012

A. EFFLUENT LIMITATIONS

Immediate Effluent Limitations and Discharge Conditions

Effective immediately and lasting through March 31, 1986, the permittee is authorized to discharge from outfall (s) serial number (s) 001 002, 003, and 004, and by seepage. Such discharges shall be limited and conditioned as specified below:

Discharges 001, 002, 003, and Seepage

Specific discharge requirements are as follows. Whichever limitation provides the most stringent control shall govern.

1. Color - The combined discharge shall not cause violation of the 5 SCU net increase water quality standard. Instream color measured at Six Mile Station shall not exceed instream color at Harpers Bridge by more than 5 SCU.

2. The combined annual discharge shall not contain more than 5.7 pounds of total suspended solids per ton of off-machine production. The annual load limit for TSS shall equal $5.7 \frac{\text{lbs}}{\text{ton}} \times P \text{ tons}$ where P= total annual off-machine production for the year July 1-June 30. In no case shall the annual load of TSS exceed 4,000,000 pounds.

3. Total annual discharge of BOD_5 in the direct discharge and seepage combined shall not exceed 3.0 pounds of BOD_5 per ton of off-machine production.

   The annual load limit for BOD_5 shall equal $3.0 \frac{\text{lbs}}{\text{ton}} \times P$ tons where P= total annual off-machine production for the year July 1-June 30. In no case shall the annual load of BOD_5 exceed 2,100,000 pounds.

4. The direct discharge through points 001, 002, and 003 shall also comply with the following limitations:

Parameter	Collective Daily Max. Concentrations 1/	Collective 30-day Average Concentrations 2/
BOD_5	161 mg/l	87 mg/l
TSS	312 mg/l	162 mg/l

5. The pH of the discharge shall be within the range of 6.0 and 9.0 standard units.

6. There shall be no discharge of floating solids or visible foam in other than trace amounts.

7. There shall be no discharge of polychlorinated biphenols (PCB's).

8. There shall be no use of chlorphenolic-containing biocides in the facility.

E00011013

9. Fish flavor bioassays shall be conducted on the effluent as required under Monitoring Requirements.

10. The permittee shall maintain continuous specific conductance monitoring at the clarifier with an alarm system to the mill and daily pH monitoring at the clarifier for early detection of spills or process upsets. This data need not be reported to the Department; however sufficient current data shall be kept on hand to verify functioning to inspecting Department personnel.

11. Direct discharge occurring at times other than during spring high flows shall be discharged into the river through a diffuser outfall approved by the Department.

12. Direct discharge shall not occur when flow in the river at USGS station 12-3530 is less than 1900 cfs.

1/ Collective daily maximum concentrations are determined on the basis of composite samples composed of flow weighted portions of a minimum of four grab samples of each active outfall except 004, collected at two hour intervals. That is, the concentration will be determined from either (a) the flow weighted average of the composite samples taken from each discharging outfall or (b) one composite sample made up of four flow weighted grab samples from each discharging outfall.

2/ Collective 30-day average concentrations are determined on the basis of not less than three composite sample and analyses as defined in 1/ above, collected at intervals of not less than seven days during any 30-day period.

Discharge 004

Waste discharge through outfall 004 shall consist entirely of uncontaminated cooling water and shall be limited to a maximum amount of heat discharged per day. The maximum heat limitation shall be determined by the following formula: (Td) (Qd) = BQr where Qd is the cooling water discharge rate in CFS, Q_r is river flow rate (Q_r in cfs, 897 to be used for Q_r if river flow is less than 897 cfs), and Td is the temperature of the cooling water discharge in degrees Fahrenheit. Both Q and the Td shall be instantaneous measurements. B is defined as follows; based on mid-day river temperature, Tr, at Harpers Bridge: If Tr 66°F, B=1; if Tr is between 66° and 66.5°F, B=(67-Tr); if Tr 66.5°F, B=0.5.

pH of this discharge shall be within the range of 6.0 and 9.0. standard units.

B. MONITORING REQUIREMENTS

1. The permittee shall monitor each pond containing at least one-fourth of its capacity of stored wastewater once per month for BOD_5 and sodium. Ponds containing less than one-fourth of capacity of stored wastewater shall be reported as such. In addition, the remaining capacity of each pond at the end of each month shall be determined.

2. River Flow shall be measured at U.S.G.S. Station 12-3530.

3. Flow measurements in the discharge pipes must indicate values within 10% of the true flow value. Adequacy of the flow measuring equipment shall be determined by the Environmental Protection Agency and the Department.

4. The permittee shall sample and test the contents of each pond containing waste in accordance with the following schedule:

Parameter	Frequency	Sample Type
	Once not more than 14 days before discharge from each pond.	
BOD_5	" " "	Grab
Color	" " "	Grab
pH	" " "	Grab

5. The permittee shall monitor each direct outlet discharging waste from ponds prior to entry into the river in accordance with the following schedule:

Parameter	Frequency	Sample Type
Flow	Continuous	Recorder
BOD_5	Weekly	Grab
Total Nitrogen as N	Weekly	Grab
Total Phosphorus as P	Weekly	Grab
Total Suspended Solids	Weekly	Grab
Color	Weekly	Grab
pH	Weekly	Grab

6. The permittee shall note on a daily basis for each direct discharge outlet the ponds being discharged and estimated flow from each pond.

7. The river shall be sampled for color at Harper's Bridge and Six-Mile at least twice daily and the river flow shall be obtained daily. Upstream downstream paired sampling times shall be reasonably close together and shall be reported along with the color data.

8. The permittee shall monitor test wells 1R, 2R, 4R, 5R, 404, 421, 423, and 514 once every two months for BOD_5, Color and Sodium, and twice per year for total nitrogen and total phosphorus. In addition, the elevation of the water level in each test well shall be determined once every two months.

9. Discharge #004 shall be monitored for flow, temperature and pH by instantaneous measurement once a week in the drain ditch prior to entry into the river. River temperature shall be measured at mid-day, at Harper's Bridge on days that discharge #004 is monitored. Corresponding river flows shall also be recorded.

E00011015

10. Discharge #004 shall be monitored by visual inspection daily for the presence of oil sheen or foam.

11. During direct discharge the permittee shall monitor the Clark Fork River at Harper Bridge and Six Mile Station for dissolved oxygen (D.O.). D. O. monitoring shall be every other day when river D.O. is less than 10 mg/l, weekly for river D.O. at or above 10 mg/l. D. O. sampling shall occur during the one-hour period preceding sunrise. Should the dissolved oxygen content of the river drop below 7.0 mg/l (the minimum allowable level set by the State's Water Quality Standards) for any reason, Champion International Mill shall immediately cease direct surface discharge and shall so notify the Department as soon as is reasonable. This dissolved oxygen content monitoring requirement may be terminated at that time at Champion International's option. However, if dissolved oxygen monitoring is continued, if the dissolved oxygen content of the river again exceeds 7.0 mg/l (during the low portion of the diurnal curve) the permittee will be allowed to commence direct surface discharge once again upon receiving Department approval.

12. Bi-weekly hydrogen sulfide monitoring is required in discharges 001, 002, and 003, through March 31, 1986. After March 31, 1986, the data will be evaluated to determine if further monitoring or controls are necessary.

13. During July, August and September, the permittee shall monitor the Clark Fork River at Harper Bridge and Six Mile Station for total Nitrogen as N and total phosphorus as P. This nutrient monitoring shall be accomplished weekly.

14. Flavor tests shall be performed on fish maintained in dilutions of effluent and river water twice before March 31, 1986. Dilutions and testing procedure shall be as required by State Department of Fish Wildlife and Parks Pollution Control Biologist.

E00011016

B MONITORING AND REPORTING REQUIREMENTS

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. Instream sampling shall be representative of the impact of the discharge upon the receiving stream.

2. Reporting

Monitoring results obtained during the previous month shall be summarized for each month and reported on a Discharge Monitoring Report Form (EPA No. 3320-1), postmarked no later than the 28th day of the month following the completed reporting period. Self-monitoring adaptable to modified reporting forms shall be reported on those forms as acceptable to the Department.

Duplicate signed copies of these, and all other reports required herein, shall be submitted to the Department and the Regional Administrator at the following addresses:

(a) Montana Department of Health
and Environmental Sciences
Water Quality Bureau
Room A-206, Cogswell Building
Helena, Montana 59620

(b) Regional Administrator
U. S. Environmental
Protection Agency
1860 Lincoln Street
Denver, Colorado 80295
ATT: Water Mgt. Div.
Compliance Branch

NOTE:
If no discharge occurs during the reporting period, "no discharge" shall be reported, in letter form, to the above agencies. Data not adaptable to the above form shall be included as attachements on modified reporting forms.

3. Definitions

(a) The "Act" means the Federal Water Pollution Control Act.

(b) The "Administrator" means the administrator of the United States Environmental Protection Agency.

(c) The "Department" means the Montana Department of Health and Environmental Sciences.

(d) The "EPA" means the United States Environmental Protection Agency.

(e) A "grab" sample, for monitoring requirements, is defined as a single "dip and take" sample collected at a representative point in the discharge stream.

E00011017

(f) An "instantaneous" measurement, for monitoring requirements, is defined as a single reading, observation, or measurement using acceptable monitoring equipment.

(g) The "Regional Administrator" means the administrator of the region of EPA with jurisdiction over federal water pollution contol activities in the state of Montana.

(h) For compliance purposes, the "daily average" concentration means the average concentration during a calendar month. Where less than daily sampling is required by this permit, the average concentration shall be determined by the summation of all measured daily samples divided by the number of days during the calendar month when the measurements were made.

(i) For compliance purposes, the "daily maximum" concentration shall be determined by the analysis of a properly preserved composite sample composed of a minimum of four (4) grab samples collected at equally spaced two (2) hour intervals and proportioned according to flow at the time of sampling.

(j) "Net" value, noted under Parameter, is calculated on the basis of the net increase of the individual parameter over the quantity of that same parameter present in the intake water measured prior to any contamination or use in the process of this facility. Any contaminants contained in any intake water obtained from underground wells shall not be adjusted for as described above and therefore shall be considered as process input to the final effluent. Limitations in which "net" is not noted are calculated on the basis of gross measurements, of each parameter in the discharge irresspective of the quantity or quality of those parameters in the intake waters.

(k) A "composite" sample, for monitoring requirements, is defined as a minimum of four (4) grab samples collected at equally spaced two (2) hour intervals and proportioned according to flow.

(l) For compliance purposes, the "daily average" discharge means the total discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days during the calendar month when the measurements were made.

(m) For compliance purposes, the "daily maximum" discharge means the total discharge by weight during any calendar day. This limitation shall be determined by the analyses of a properly preserved composite sample composed of a minimum of four (4) grab samples collected at equally spaced two (2) hour intervals and proportioned according to flow at the time of sampling.

E00011018

4. Test Procedures

Test procedures for the analysis of pollutants shall conform to regulations published in or subsequent revisions to Part 136, Title 40 of the Code of Federal Regulations. Sample collection and preservation shall be in accordance with the best methods technologically feasible, and shall be in a manner acceptable to the Department. (The Department's Treatment and Preservation Guide should be consulted for acceptable sample collection and preservation techniques.) Color procedure may be as presented in the National Council for Air and Stream Improvement, "Technical Bulletin 253," December, 1971.

All flow-measuring and flow-recording devices used in obtaining data submitted in self-monitoring reports must indicate values within 10 percent of the actual flow being measured.

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

(a) the exact place, date, and time of sampling;

(b) the dates the analyses were performed;

(c) the person(s) who performed the analyses;

(d) the analytical techniques or methods used; and

(e) the results of all required analyses.

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Reports. Such increased frequency shall also be indicated.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, or longer if requested by the Department or the Regional Administrator.

A. MANAGEMENT REQUIREMENTS

1. Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, production increases, or process modifications which will result in new, different, or increased discharges of pollutants must be reported by submission of a new MPDES application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the Department of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.

2. Noncompliance Notification

If, for any reason, the permittee does not comply with or will be unable to comply with any effluent limitation specified in this permit, the permittee shall provide the Department and the Regional Administrator with the following information, in writing, within five (5) days of becoming aware of such condition:

(a) A description of the discharge and cause of noncompliance; and

(b) The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

3. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to state waters resulting from noncompliance with any effluent limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. Bypassing

Any diversion from or bypass of treatment or control facilities or systems necessary to maintain compliance with the terms and conditions of this permit is prohibited, except (i) where unavoidable to prevent loss of life

or severe property damage, or (ii) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the effluent limitations and prohibitions of this permit. The permittee shall promptly notify the Department and the Regional Administrator in writing of each such diversion or bypass.

If, for other reasons, a partial or complete bypass of the wastewater treatment facilities is considered necessary, a request for such bypass shall be submitted to the Department and to the Regional Administrator at least sixty (60) days prior to the proposed bypass. If the proposed bypass is judged acceptable by the Department and by the Regional Administrator, the bypass will be allowed subject to limitations imposed by the Department and the Regional Administrator.

If, after review and consideration, the proposed bypass is determined to be unacceptable by the Department and the Regional Administrator, or if limitations imposed on an approved bypass are violated, such bypass shall be considered a violation of this permit; and the fact that application was made, or that a partial bypass was approved, shall not be defense to any action brought thereunder.

6. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering state waters.

7. Power Failures

In order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

(a) In accordance with the Schedule of Compliance contained in Part I, provide an alternative power source sufficient to operate the wastewater control facilities;

or, if such alternative power source is not in existence, and no date for its implementation appears in Part I,

(b) Take such precautions as are necessary to maintain and operate the facility under his control in a manner that will minimize upsets and insure stable operation until power is restored.

B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the head of the Department or the Regional Administrator, and/or their authorized representatives, upon the presentation of credentials:

E00011021

(a) To enter upon the permittee's premises where an effluent source is located or in which any records are kept; and

(b) At reasonable times to have access to and copy and records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any discharge of pollutants.

2. Transfer of Ownership or Control

In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Department and the Regional Administrator.

3. Availability of Reports

Except for data determined to be confidential under Section 308 of the Act, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department and the Regional Administrator. As required by the Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 75-5-633, MCA.

4. Permit Modification

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

(a) Violation of any terms or conditions of this permit;

(b) Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

(c) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

5. Toxic Pollutants

Notwithstanding Part II, B-4 above, if a toxic standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee so notified.

E00011022

6. Civil and Criminal Liability

Except as provided in permit conditions on "Bypassing" (Part II, A-5), and "Power Failures" (Part II, A-7), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

7. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.

8. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

9. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

10. Reapplication

If the permittee desires to continue to discharge beyond the expiration date of this permit, he shall reapply, in writing, to the Department at least 180 days prior to the expiration date of this permit.

C. ADDITIONAL REQUIREMENTS

Storage

The permittee shall provide at least 10 days retention time following aeration of the wastewater before it is direct discharged to the Clark Fork River.

Cessation of Direct Discharge

The permittee shall immediately cease direct surface discharge upon receipt of verbal or written instructions to do so by the Department.

E00011023

Violation of Water Quality Standards

If river data resulting from the water quality monitoring program show violation of established water quality standards, including the introduction of taste and odor problems, this permit may be modified to specify additional control measures to ensure compliance with water quality standards.

Permit Modification

This permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301 (b) (2) (C), and (D), 304 (b) (2), and 307 (a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:

(a) contains different conditions or is otherwise more stringent than any other effluent limitaton in the permit; or,

(b) controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

Additional Wastewater Monitoring and Reporting

The permittee shall keep a record of the volume of wastewater disposed of through the rapid infiltration system and report the total monthly volume to the Department and the EPA on a monthly basis. The report should also include the number of days during the month that the system was dosed.

The permittee shall sample wastewaters disposed of through the rapid infiltration system once per month. Such samples shall be grab in nature and shall be analyzed for BOD_5. The samples shall be taken of wastewaters as they are being discharged to the rapid infiltraton system during the filling cycle of a basin. The results of such analyses shall be reported to the Department on a monthly basis.

The permittee shall report on a monthly basis cumulative BOD_5 and TSS loads discharged, beginning July 1 of each year.

Technique for Calculation of Total Annual BOD Discharge Limitations

The total annual BOD_5 discharge shall be the sum of the total BOD_5 discharged by direct surface discharge and the total BOD_5 discharged to the ground waters by seepage. The term seepage shall include the volume of wastewater percolated through all storage ponds and the volume disposed of through the rapid infiltration system. The procedure for calculating the amount of BOD_5 contributed by seepage shall be approved by the Department.

E00011024

DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES

STATE AIR PERMIT

TED SCHWINDEN, GOVERNOR

COGSWELL BUILDING

STATE OF MONTANA

HELENA, MONTANA 59620

September 2, 1982

Bill Henderson
Champion International
Mill Operations/Packaging Division
Drawer D
Missoula, MT 59806

Dear Bill:

This letter serves as formal notification that your air quality permit #792-13075 has been modified. The modification of your permit was conducted in accordance with ARM 16.8.1113. ARM 16.8.1113 provides you with the opportunity to request a hearing before the Board of Health and Environmental Sciences if you are aggrieved by the Department's decision. Such a request must be filed no later than 15 days after receipt of this letter. The permit shall be deemed modified if the 15 days elapse with no request for hearing.

To avoid confusion, the Department is enclosing a copy of your permit as modified. Please contact us if you have any questions.

The permit has been modified based upon a written request from you dated June 24, 1982. As you are already aware, the Department provided public notice for the request in form of a newspaper advertisement on August 6 and 7, 1982 in the Missoulian. A copy of the proof of publication is enclosed. As stated in our August 5, 1982, letter to you, the Department is making a final determination on this matter.

For clarity, the Department would like to discuss your original request and the final decision. The Department's decision is discussed below:

Champion's Proposals:

1. Discontinue all stack testing for one year.

   Department Response:

   The Department is unable to grant the request for a discontinuing of stack testing for one year solely on the basis of economics. A review, however, of the data submitted by Champion and a review of our files indicates that Champion has reasonably complied with applicable particulate standards. In addition, the opacity monitors on the recovery boilers all correlate well with particulate loading (with one exception due to statistical reasons). Based upon Champion's past history, it is

appropriate to reduce the stack sampling requirements on a permanent basis (or at least until other information or data indicate to the contrary). The Department determines that Champion may reduce its in-stack sampling requirements for particulates for all sources currently tested to once per year, save the recovery boilers which shall be quarterly. This schedule shall remain in effect indefinitely or until your permit is again altered or modified.

In order to assure proper scrubber operation on a week-to-week basis, the Department has instituted the following operational checks to be conducted weekly.

1. Lime kilns:

   a. Scrubber water flow
   b. Scrubber water solids
   c. Scrubber pressure differential

2. Smelt Tank Vents

   a. Scrubber shower water flows
   b. Scrubber pressure differential
   c. Bypass conditions

3. Waste Fuel Boiler

   a. Scrubber show water flows
   b. Scrubber water solids
   c. Scrubber pressure differential

4. Hog Fuel Boiler

   a. Scrubber water flow and weir overflow
   b. Scrubber shower water pressure
   c. Scrubber pressure differential

The Department believes that these operational checks and the yearly in-stack monitoring (except recovery boilers) will reasonably assure compliance with emission standards.

2. Discontinue ambient site #1.

The Department is denying Champion its request to discontinue monitoring at site #1. This site was designed to measure the total emissions from the plant and not just the ponds. We believe that is still appropriate to continue monitoring at this site for the above purpose and in light of the fact that exceedances of the hydrogen sulfide standard have been observed at the site. We may consider this request again in the future if violations are no longer recorded or if some other operational change indicates.

E00011026

3. Report malfunctions and violations on the monthly report only.

The Department must, for the most part, deny Champion this request. ARM 16.8 Sub-Chapter 7 addresses the requirements for malfunctions. The rule was recently modified and in conjunction with the reduced in-stack sampling should significantly reduce the current reporting requirements. Malfunctions, under the new rule, only need be reported when there is an expected violation of an emission standard, or the condition is expected to last for a period more than four hours. Short-term malfunctions and the like do not need to be reported except in the monthly reports.

If you have any questions regarding the Department's decision, please let us know as soon as possible.

On another matter, the Department would like to request that you send the Missoula County Health Department a copy of your monthly emission and ambient air quality data report on a routine basis. In order to save you this added cost, you no longer need send a copy of these reports to Don Willems of the Environmental Sciences Division. The Bureau will take care of routing in Helena for Mr. Willem's review. Let me know if this request is inconvenient or is not possible for you to institute.

Thank you again for your consideration in this matter. Please let us know of any questions or problems that arise.

Sincerely,

Harold W. Robbins

Harold W. Robbins, Chief
Air Quality Bureau

Enc.

E00011027

PROOF OF PUBLICATION

State of Montana,
County of Missoula. } ss.

Debbie Saunders being first duly sworn deposes and says, that he is the principal clerk of THE MISSOULIAN, the publishers of The Missoulian, a daily newspaper of general circulation, printed and published in the City of Missoula, County of Missoula, State of Montana, and that the subjoined

Air Quality--Champion a copy of which as
(Alias Summons, or Notice, or Order, etc.)

printed is hereto attached, was printed and published in the regular and entire issue of said paper

Daily

For ..... successive weeks, commencing on the ....., day of ....., 19 ....., and printed and published on the following dates thereafter, to-wit: August 6, 7, 1982

..... , 19.....

Debbie Saunders

Subscribed and sworn to before me this 8th day of August, 19 82

Renee Selleck

Notary public for the State of Montana,
residing at Missoula, Montana.

My commission expires December 17, 1983

NOTICE

Notice is hereby given that the Montana Air Quality Bureau has received an application from Champion Packaging near Frenchtown to modify their existing air quality permit. Champion is requesting that their permit be modified to reduce the amount of in-stack sampling and air monitoring specified in the existing permit. Specifically, the request contains the following provisions:

1. Discontinue all particulate stack monitoring for one year.
2. Discontinue ambient air quality monitoring at site 4.

Champion proposes to continue to monitor stack emissions for total reduced sulfur, opacity, and the like as specified in the permit. Champion also proposes to institute operational checks on air pollution control equipment in order to assess the operating efficiency of the equipment.

The Air Quality Bureau is seeking public comment on this action. The Air Quality Bureau is authorized to make modifications to permits so long as the change does not involve the construction, installation or use of a new source or stack and there is no increase in total air emissions. Any member of the public who would like to comment on this proposed action or who would like more information regarding the action must contact the Air Quality Bureau, Cogswell Building, Helena, Montana 59620 (449-3454) by August 20, 1982. The Air Quality Bureau intends to make a decision on this matter on or before August 31, 1982.

Aug 6, Aug 7 1982

(Note: This proof should be attached to the original instrument of which publication is made.)

artcraft 2M

Attachment A
(Modified September 1, 1982)
Conditions of Permit #2R792-013075

This modified version of Attachment A - Conditions of Permit #2R792-013075 hereby replaces the original Attachment A as amended November 24, 1980. The effective date of this document is September 1, 1982.

1. Total particulate emissions from the plant shall not exceed 4337 #/day, monthly average as specified below. Particulate emissions from any one source shall not exceed the limits specified below.

Source	Daily Maximum, lbs/day	Monthly Ave. lb/day
#3 recovery boiler	979	451
#4 recovery boiler	1253	928
#5 recovery boiler	912	384
#3 smelt dissolving tank	140	103
#4 smelt dissolving tank	607	218
#5 smelt dissolving tank	120	87
#1 lime kiln	288	147
#2 lime kiln	266	118
#3 lime kiln	359	153
#4 lime kiln	342	136
#1 lime slaker	110	34
#2 lime slaker	146	45
#3 lime slaker	72	23
Hog fuel boiler	446	317
Waste fuel boiler	1249	888
Conveying systems	--	177
Brown stock washers	--	128

Monthly average emissions from the recovery boilers shall be determined by the continuous opacity monitors. The results of any single emission test or daily average from the continuous opacity monitors shall be evaluated against the specified daily maximum. Emission tests shall be conducted on the recovery boilers quarterly.

All other sources listed above, with the exception of Conveying Systems and Brown Stock Washers, shall be tested once per year. Results of such tests shall be evaluated against the specified daily maximum.

2. The following scrubber operational checks shall be performed on a weekly basis:

1. Lime kilns

   a. Scrubber water flow
   b. Scrubber water solids
   c. Scrubber pressure differential

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2. Smelt Tank Vents

   a. Scrubber shower water flows
   b. Scrubber pressure differential
   c. Bypass conditions

3. Waste Fuel Boiler

   a. Scrubber show water flows
   b. Scrubber water solids
   c. Scrubber pressure differential

4. Hog Fuel Boiler

   a. Scrubber water flow and wier overflow
   b. Scrubber shower water pressure
   c. Scrubber pressure differential

Champion International shall maintain a record of such checks which the Department may inspect at any time.

3. Total sulfate emissions from the plant shall not exceed 2286 #/day monthly average as specified below or 3167 #/day daily maximum. Sulfate emissions from any one source shall not exceed the limits specified:

Source	Daily Maximum, lbs/day	Monthly Ave., lbs/day
#3 recovery boiler	979	451
#4 recovery boiler	1253	928
#5 recovery boiler	912	384
#1 lime kiln	259	132
#2 lime kiln	239	106
#3 lime kiln	323	138
#4 lime kiln	308	122
Salt Cake Unloading		25

Compliance with these limits shall be determined as indicated in Condition #1.

4. Total reduced sulfur emissions shall not exceed 723 lbs/day as specified below:

Source	Concentration	Lbs/day
#3 recovery boiler	5 ppm (1)	
#4 recovery boiler	5 ppm (1)	128
#5 recovery boiler	5 ppm (2)	
#1 lime kiln	20 ppm (1)	
#2 lime kiln	20 ppm (1)	
#3 lime kiln	20 ppm (1)	102
#4 lime kiln	8 ppm (2)	
Brown stack washers		125
Foul Condensates	--	185
All Other sources		183

E00011030

(1) Twenty-four hour averages, determined by continuous monitoring
(2) Twelve-hour average, determined as specified in Part 60, Title 40, Code of Federal Regulations.

5. Total sulfur dioxide emissions from the mill shall not exceed 5000 pounds per day. In the event of a natural gas curtailment, Champion International shall report, in addition to the normal report, the following:

(1) Daily SO2 emissions from recovery boilers and power boilers
(2) Dates and times of curtailment
(3) Quantity and sulfur content of fuel oil burned

6. Those sources subject to Federal New Source Performance Standards shall comply with the testing and monitoring requirements as promulgated.

7. Champion International shall conduct an ambient air monitoring program consisting of the following:

(1) At least two gas chromatographs
(2) At least two high volume samplers
(3) At least one wind system.

Sampling sites, data reporting, and parameters to be monitored will be specified by the department.

8. Champion International shall fund, in whole or part, a study of the meteorology and air quality of the Missoula Valley. The purpose of the study will be the collection and analysis of a minimum of 12 months of meteorological data that can be used to determine to the extent possible the effect of Champion International's emissions on pollutant levels in the Missoula Valley. The study will be conducted by a mutually acceptable third party at a cost to Champion International not to exceed $50,000.

9. As soon as possible, but no later than 60 days prior to construction or installation of specific pieces of equipment or emission sources, Champion International shall submit detailed design data and specifications to the Department for approval. This data shall include but not be limited to, such information as nature and quantity of raw material and fuel inputs and outputs; equipment sizes and configuration; expected pollutant generation rates; control equipment sizes, efficiencies, flow rates; and design capacity and expected operational levels.

E00011031

XC: Dan Potts, [redacted], Roy Countryman

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII
1860 LINCOLN STREET
DENVER, COLORADO 80203

APR 5 1977

EPA AIR PERMIT

CERTIFIED MAIL - 357813
RETURN RECEIPT REQUESTED

REF: 8AH-A

Mr. R. E. Springer
Vice President and General Manager
Hoerner Waldorf Corporation
Drawer D
Missoula, Montana 59801

Dear Mr. Springer:

We have completed final review of the Hoerner Waldorf Corporation's application to expand its Missoula paper and pulp mill and have issued conditional approval pursuant to 40 CFR, Section 52.1382, Significant Deterioration of Air Quality (PSD). In accordance with 40 CFR 52.21(e)(1)(v), the following reasons are provided for the conditions contained in Article III of the enclosed Conditional Permit to Commence Construction and Operate:

Condition (1): The New Source Performance Standards (NSPS) must be met to ensure that Best Available Control Technology (BACT) is being applied.

Conditions (2) and (3): These conditions establish emission limitations for particulate matter and sulfur dioxide. Such emission limitations, if met, will ensure that the Class II PSD air quality increments will be met.

Condition (4): This condition will eliminate the potential for this EPA action to conflict with the State of Montana's inherent and delegated powers.

The Conditional Permit to Commence Construction and Operate shall become effective in accordance with the provision of Article IV of the enclosed Permit. Construction may not be commenced if this Permit or any part thereof is rejected.

Sincerely yours,

John A. Green
Regional Administrator

Enclosure

E00011032

CONDITIONAL PERMIT TO
COMMENCE CONSTRUCTION AND OPERATE

40 CFR 52.21(d)
(Significant Deterioration of Air Quality --
Review of New Sources)

HOERNER WALDORF CORPORATION/
MISSOUAL PULP MILL EXPANSION

I. INTRODUCTION

On September 29, 1976, the United States Environmental Protection Agency, Region VIII, (EPA), was informed that the Hoerner Waldorf Corporation was planning to expand their existing pulp and paper mill near Missoula, Montana. EPA informed Hoerner Waldorf that this proposed expanded facility was subject to the requirements of 40 CFR 52.21(d) (Significant Deterioration of Air Quality--Review of New Sources). This determination was made on the basis of the information listed in Appendix 1.

On October 5, 1976, Hoerner Waldorf submitted an application to EPA to expand their mill pursuant to 40 CFR 52.21(d). Supplemental information was received from the Company on November 23, 1976, December 13, 1976, December 16, 1976, and December 21, 1976. Based on the information provided, EPA issued a public notice on December 30, 1976 that proposed to grant conditional approval to expand the source and requested comments on this proposed action. The public comment period ended on January 31, 1977. Fifty-eight letters of comment were received by EPA. On March 1, 1977, a time extension was taken, as authorized under 40 CFR 52.21(e)(1)(vi), for the purposes of reviewing the public comments submitted. The application and public comments received and considered by EPA are incorporated herein by reference and listed in Appendix 2.

II. FINDINGS

On the basis of the information listed in Appendix 2, EPA has determined that:

1) Hoerner Waldorf will reduce emissions by the application of Best Available Control Technology as defined in 40 CFR 52.01(f) in meeting the conditions in III below.

2) Such emission limitations will ensure that applicable air quality increments are met.

These findings are based upon the analyses listed in Appendix 2.

E00011033

III. CONDITIONAL AUTHORITY TO CONSTRUCT AND OPERATE

On the basis of the findings set forth in II above, and pursuant to the authority (as delegated by the Administrator) of 40 CFR 52.21 (d)(2), this Regional Office hereby grants conditional approval to Hoerner Waldorf Corporation to expand its existing pulp and paper mill near Missoula, Montana as follows:

1. Standards of Performance for new Kraft mills were proposed in the September 24, 1976 Federal Register. The applicant, not having commenced construction prior to this date, shall therefore be subject to the final Kraft mill new source performance standards for particulate matter when they are promulgated.

2. The following sources shall not cause to be discharged into the atmosphere sulfur dioxide and particulate matter exceeding the following rates:

Source	Maximum 3-Hr Emissions (#/hour) Particulates	Sulfur Dioxide
Lime Kiln #4		
Natural Gas Fired	12.6	19.0
Fuel Oil Fired	24.5	19.0
New Hogged Fuel Boiler		
Hogfuel or natural gas	52.0	
Fuel Oil Fired	52.0	79.8
Smelt Tank #5	5.0	
Slaker Vent #3	3.0	
Recovery Boiler #5	30.5	81.5

3. The applicant shall develop an acceptable plan to limit sulfur dioxide emissions from the #5 Recovery Boiler to a thirty (30) day average of 631 #/day.

4. No condition here shall excuse the source from complying with all provisions of the Montana State Implementation Plan, 40 CFR Part 52, Subpart BB, nor of the responsibility for compliance with all other applicable Federal, State, or local regulations.

E00011034

5. The applicant shall conduct performance tests of the above sources listed in Condition 2 within ninety (90) days following start-up. EPA test methods and procedures applicable at the time of the tests shall be used. Alternate test procedures may be used if approved in advance by the Administrator or his representative. Such performance tests may be waived at the discretion of the Administrator or his representative.

IV. GENERAL

This permit is issued in reliance upon the accuracy and completeness of the information supplied by Hoerner Waldorf. The conditions herein become, upon the effective date of this permit, enforceable by EPA pursuant to any remedies it now has, or may in the future have, under the Clean Air Act. Each and every condition of this permit is a material part hereof, and is not severable. This permit is effective ten (10) days after receipt unless within that time you notify this Regional Office in writing (Attn: Norman Huey, 8AH-A), that the permit or a term or condition thereof is rejected. Such notice should include the reason or reasons for rejection.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII

By: John A. Green
Regional Administrator

Dated: April 6, 1977

E00011035

APPENDIX 1

1. Meeting between representatives of Hoerner Waldorf Corporation and Region VIII, EPA, September 29, 1976.

2. "Statement in Application for Exclusion from PSD Review" by Hoerner Waldorf, dated October 4, 1976.

3. Letter from R. E. Springer (Hoerner Waldorf) to Cab Baldwin (EPA), dated October 14, 1976.

E00011036

APPENDIX 2

1. Letter from James H. Carlson (Missoula City-County Health Department) to Norman Huey (EPA), dated September 24, 1976.

2. Application of Hoerner Waldorf to expand the Missoula mill, dated October 5, 1976.

3. "State of Montana Construction Permit Renewal Application, Submitted by Hoerner Waldorf", dated September 14, 1976.

4. "Montana Department of Health and Environmental Sciences Final Environmental Impact Statement For The Proposed Expansion of the Hoerner Waldorf Pulp and Paper Mill at Missoula, Montana", dated November 6, 1976.

5. Letter from Dr. James Law to Dr. Arthur C. Knight (Department of Health and Environmental Studies), dated October 18, 1976.

6. "Supplemental Information for EPA Expansion Permit Application" (Submitted by Hoerner Waldorf), dated November 23, 1976.

7. Letter from Larry Weeks (Hoerner Waldorf) to Fred Longenberger (EPA), dated December 10, 1976.

8. Letter from Larry Weeks (Hoerner Waldorf) to Norman Huey (EPA) dated December 14, 1976.

9. File memorandum of David B. Joseph (EPA) Technical Advisor, dated December 23, 1976.

10. File memorandum of Fred Longenberger, EPA Senior Technical Advisor, dated December 21, 1976.

11. Letters received during public comment period:

    1. Ms. Linda Kurtz, Missoula, Montana, Private Citizen.
    2. Mrs. William H. Bricker, Jr. Missoula, Montana Private Citizen.
    3. Mr. David Olesen, Missoula, Montana, Private Citizen.
    4. Mr. Bob Page, Missoula, Montana, Private Citizen.
    5. John and Nancy Ferko, Missoula, Montana, Private Citizens.
    6. Ms. Robin S. Ames, Missoula, Montana, Private Citizen.
    7. Ms. Linda Lapin, Missoula, Montana, Private Citizen.
    8. Ms. Barbara Sharman, Missoula, Montana, Private Citizen.

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9. Mr. Gary LeDeau, Missoula, Montana, Private Citizen.
10. Mr. Walter Sedoff, Alberton, Montana, Private Citizen.
11. Mr. Leo P. Joron, Group Chairman, Bitterroot-Mission Group, Sierra Club, Missoula, Montana.
12. Ms. Cynthia White, Missoula, Montana, Private Citizen.
13. Ms. Carole Rosenbloom, Missoula, Montana, Private Citizen.
14. Ms. Dawn Marineau, Missoula, Montana, Private Citizen.
15. Mr. Anthony Hoyt, Arlee, Montana, Private Citizen.
16. Ms. Janet Swarthout, Missoula, Montana, Private Citizen.
17. Mr. John Monfils, Missoula, Montana, Private Citizen.
18. Swain and Lynn Wolfe, Missoula, Montana, Owners Bitterroot Film Processors.
19. Mr. Dale Kerkvleet, Missoula, Montana, Private Citizen.
20. Mrs. Walter Sedoff, Alberton, Montana, Private Citizen.
21. Mr. Paul Smith, Missoula, Montana, Attorney Representing Smith, Connor, VanValkenburg, and Larrivee.
22. Mr. Robert H. Torheim, Regional Forester, U.S. Forest Service, Missoula, Montana.
23. Mr. Gerald Jacobson, President, City Electric, Missoula Montana.
24. Ms. Bess Reed, Missoula, Montana, Private Citizen.
25. Mr. Robert Helding, Executive Director, Montana Wood Products Association, Missoula, Montana.
26. Mr. Werner Stebner, President, Taylor Sheet Metal Company, Missoula, Montana.
27. Mr. Philip Shultz, Industrial Relations Director, Diamond International Corporation, Coeur D'Alene, Idaho.
28. Mr. Robert Bemis, General Manager, Diamond International Corporation, Coeur D'Alene, Idaho.
29. E.W. Lister, President, Board of Trustees, Missoula Community Hospital, Missoula, Montana.
30. Mr. Leo Cummins, Associate Professor, School of Forestry, University of Montana, Missoula, Montana.
31. Mr. John Leary, President, Treasure State Equipment Company, Kalispell, Montana.
32. Messrs. Weilland and Corrick, Champion Building Products, Bonner, Montana.
33. Mr. Robert DeMarois, Turmell-DeMarois Company, Missoula, Montana.
34. Mr. William Wright, General Manager, Castle Mountain Corporation, White Sulfur Springs, Montana.
35. R.L. Kenyon, Vice President, Western Montana National Bank, Missoula, Montana.
36. Mr. Ken Reesman, Sales Manager, Westmont Tractor Company, Missoula, Montana.
37. Mr. and Mrs. Vern Cheff, Jr., Northwest Erection, Incorporated, Missoula, Montana.

E00011038

38. Messers. Joe Crosswhite and Peter Jackson, Western Environmental Trade Association, Helena, Montana.
39. Mr. Ben Ferguson, Vice President, Yellowstone Pine Company, Belgrade, Montana.
40. C.O. Thompson, Vice President, Veneers, Incorporated, Kalispell, Montana.
41. Mr. Dale Moore, Chairman, Western Broadcasting Company, Missoula, Montana.
42. Mr. Earl Margenroth, Western Broadcasting Company, Missoula, Montana.
43. Mr. Doug Kilner, Resident Manager, St. Regis Paper Company, Libby, Montana.
44. Mr. Arnold Arnett, Vice President, Mill Supply Company, Missoula, Montana.
45. Mr. John Roemer, President, Missoula Area Chamber of Commerce, Missoula, Montana.
46. Mr. Ted Carson, President, Carson Company, Helena, Montana.
47. Mr. George Leland, President, Western Montana National Bank, Missoula, Montana.
48. Mr. Gareth Moon, Administrator, Division of Forestry, Montana Department of Natural Resources and Conservation.
49. Mr. Dennis Swift, F.H. Stoltze Land and Lumber Company, Columbia Falls, Montana.
50. Mr. Conrad LaSalle, et al., Hydro Point Engineering Company, Hamilton, Montana.
51. Mr. Paul Chumrau, President, First Federal Savings and Loan Association, Missoula, Montana.
52. C.L. Smith, Refinery Manager, Thunderbird Resources, Incorporated, Cut Bank, Montana.
53. C.D. Ough, President, Burland Studs, Incorporated, Livingston, Montana.
54. Mr. Earl W. Johnson, President, South Side National Bank of Missoula, Missoula, Montana.
55. Mr. Wm. Evan Jones, Garlington, Lohn and Robinson, Missoula, Montana.
56. Skyline Timber Company, St. Regis, Montana.
57. Mr. Charles Davis, Missoula, Montana, Private Citizen.
58. Mr. Larry Weeks, Technical Director, Hoerner Waldorf Corporation, Missoula, Montana.

E00011039

Western Environmental Law Center

Defending the West

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July 10, 2003

Via Telefacsimile (202) 342-8451 and U.S. Mail

Russell Frye
Collier, Shannon, Rill & Scott
3050 K St., NW, Ste. 400
Washington DC 20007

Bob Boschee, General Manager
Missoula Mill
Smurfit-Stone Corporation
P.O. Box 4707
Missoula, MT 59806-4707

Dear Russ and Bob:

With the end of our client's Consent Decree in sight, CHEER remains unsatisfied with Stone's compliance with Addendum A, for the same reasons we have previously stated. We have also reviewed Stone's compliance with the terms and conditions of its environmental permits from the time of CHEER's original allegations. There are continuing, actionable violations of law. This letter, while intended to bring about resolution of existing differences through negotiation, also satisfies CHEER's pre-action requirements pursuant to paragraph 9 of the Consent Decree. Attached is an outline, summarizing many, but not all of the potentially actionable violations of Clean Air Act and Clean Water Act. The outline reflects violations only through the second quarter of 2002. They were compiled from Stone's reports to DEQ and other documents on DEQ's files which have been generated or seen by Stone.

If, however, Stone is willing to agree to the following outline of terms, CHEER would not seek penalties from the mill for new allegations of environmental non-compliance from the date of the original allegations through the date of entry of the extended Consent Decree, to be extended for three more years, as long as the mill complies with the terms of the following revisions. CHEER also believes that, to the extent the mill has a P2 Program that significantly analyzes operations to search for inefficiencies, the risk of future non-compliance is reduced.

POLLUTION PREVENTION

At the end of CHEER's annual review of the Missoula mill's Pollution Prevention (P2)

unbleached • 100% postconsumer waste • soy ink

Program, postponed to April 2003, Bob Boschee agreed to talk to Dr. Pojasek about our ongoing concerns with the P2 Program. It was implied that Bob Boschee would get back to one of the CHEER members about that results of that discussion. We have not heard of the results of that talk and would like to know what has transpired from that discussion. My clients' goal has always been for the mill to achieve an effective P2 Program, thus we proposed what became Addendum A of the Consent Decree. The mill's continuing failure to implement Addendum A in a sequential manner every year (e.g., performing Addendum A, Sec. IV(5) with the results of Sec. IV(4)), as agreed to), has posed an ongoing debate about Consent Decree compliance. At this point, rather than trying to shoehorn Stone into that model, we propose instead a modification to include the following sequence. It significantly lessens the analytical burden for the mill, while keeping the focus on analysis of mill operations necessary to operate ever more efficiently:

* During the life of an extended Consent Decree, Dr. Pojasek would continue to be retained and continue to certify overall and specific compliance with the P2 Program.

* Second, delete the requirements to identify tentative P2 annual projects and to quantify/describe their impacts (roughly, sec. IV(1) through IV(3) of Addendum A).

* Third, the P2 Program's process maps would be improved: add the missing processes, e.g., electricity and steam flows; and improve their data and resolution, to the level of the quantified total inputs and outputs of individual major pieces of equipment.

* Fourth, using this better-detailed general data, brainstorm annually P2 projects to implement. The MOEC already does this, but now it would be required to use tools that make visible links between mill processes, e.g., Visio software. Selection of projects to implement would have to be based on root cause and forced-pair ("bubble-up/bubble-down") analysis, not just on Pareto diagrams. Roughly, this would replace sec. IV(4)- IV(6) of Addendum A.

* Fifth, quantify, both pre- & post P2 project, the process/es involved in each implemented project; via producing resource accounting maps and data sheets that are much more detailed than the current mill-wide process maps--all the inputs into the process must be accounted for (including time, when significant). This step is not currently in Addendum A.

* Sixth, a new annual third-party audit. Not an audit of Addendum A compliance, rather it seeks outside feedback to improve the P2 Program, as Dr. Pojasek recommends in his publications. This outside audit, which Dr. Pojasek can be involved in, might be performed by the Missoula Sustainable Business Council (SBC), a new local independent sustainability certification organization, but with ties to the local business community and to the Business School of the Univ. of Montana. Similarly, the individual process resource maps and data sheets of completed

P2 projects will be updated annually, to ensure the ongoing financial benefits of P2 are quantified. Investments in efficiency often take longer to payback than other investments, but often have greater return on investment rate, according to EPA's P2 publications.[1] But cost allocation itself--the conversion of these masses and volumes into dollars--occurs naturally to cost managers, so it need not be required (as it currently is in Sec. IV(3)).

We believe that such a program has the potential to transform the Missoula mill into Smurfit-Stone's leading performer, both as to cost/profits and product quality. It has always been our hope that the P2 Program would propagate naturally through the company on its own economic merits, thus achieving greater ecological sustainability as a consequence.

OCC REJECTS

Permanently discontinue practice of burning plastics and other combustible wastes from the mill's OCC recycling facility, with the mill manager certifying annually to MT DEQ that the mill is no longer burning OCC rejects. Stone shall fund a careful market-share potential survey/study for the concrete-block substitute product to be performed within six months or one year. With that in hand, it should be clear if this product can be successfully marketed, from which point Stone can decide if it wants to participate further with other parties who are becoming involved in the economic development of this waste-alternative product.

To further minimize the waste that it is purchasing, Stone will work with all the box-making plants it provides linerboard to, to print "PLEASE DISPOSE OF EXTRANEOUS

---

[1]The National Pollution Prevention Roundtable recently released the first national report on P2 results achieved by state & local pollution prevention programs. In 1998-2000 it estimates that every dollar spent on state and local P2 assistance programs returned $6.00 dollars of savings. During the 1990's, P2 programs helped implement & document $666 million in savings; plus 4.1 billion gallons of water conserved and 215 million kW of energy conserved (13 projects closely analyzed returned $404 m. on $1.9 m. invested). The report did not include savings from P2 that corporations have conducted with their own resources. 70% of companies indicated that lack of capital hindered successful pollution prevention implementation. Other barriers to P2 include the failure to 1) adequately quantify operational costs, and 2) to calculate to the full term the savings of P2 when calculating return on investment.

The report is "An Ounce of Pollution Prevention is Worth 167 Billion Pounds of Cure - A Decade of Pollution Prevention Results: 1990-2000", avail. at http://www.p2.org/p2results/.

PLASTIC MATERIAL (INCLUDING TAPE) BEFORE RECYCLING"on boxes; and improve its outreach program with OCC vendors to get more people upstream to remove the waste materials before recycling boxes. Until such actions are taken by the mill, CMCR, Women's Voices for the Earth, CHEER and other Montana public interest groups will continue to raise public awareness of what we all believe are the hazards of burning this waste stream.

ALTERNATIVE FIBERS AND BIOPULPING

The third and final biennial update to CHEER, regarding the Decree's Sec.7.F requirement to investigate the economic and technical feasibility of incorporating alternative fibers into the mill's production, is due soon. Given that wood fiber will only increase in price over the medium and long-term, the following is what this update should closely investigate. First, Montana has about 5 million acres of spotted knapweed alone, 400-1200 pounds per acre, or 1.5 to 3 million tons per year. Weeds also have potential for marketing byproducts. Second, satellite pulping near a fiber source avoids transporting large masses of non-product (water and non-cellulose) to Missoula; and it allows pulping agents tailored to the fiber source. Many biopulping experiments have investigated wood chips, however, so the potential efficiencies of biopulping wood at the Missoula mill should be investigated too, as well as updating the investigation of any potential to pulp different fibers at the mill. Some of these fiber and pulping agent variables could be analyzed as potential P2 projects.

Please contact me at your earliest convenience, as CHEER is aware of the approaching expiration of the Consent Decree and the pre-action requirements set out in the Consent Decree. A meeting within 30 days, pursuant to paragraph 9, to discuss potential resolution is called for. It remains CHEER's goal to reach meaningful resolution without resorting to formal means.

Sincerely,

Charlie Tebbutt

cc: CHEER, CMCR, Native Forest Network, Jack Tuholske, Dr. Robert Pojasek (via fax)

AIR VIOLATION OUTLINE

Exceedances	Malfunctions
RB4 2Q98 (3)	WFB (NOX) 2Q98 (4)
RB4 3Q98	RB4 2Q98 (15)
RB4 4Q98 (same as 3Q)	RB5 2Q98 (3)
RB4 1Q99 (2)	RB4 3Q98 (opacity)
RB4 3Q99 (6/20)	RB4 4Q98 (opacity) (4)
RB4 4Q99 (6/20 = 10)	LK4 1Q99
RB5 4Q99 (6/20 = 8)	RB4 1Q99 (2)
RB4 1Q00 (6/20 = 4)	RB4 2Q99 (2)
RB4 2Q00 (6/20 = 8)	RB5 2Q99 (10)
RB4 4Q00 (6/20 = 41)	RB4 3Q99 (4)
RB4 1Q01 (6/20 = 6)	RB5 4Q99 (4)
RB5 1Q01 (6/20)	RB5 1Q00
RB4 4Q01 (6/20 = 7)	RB4 2Q00 (16)
RB4 1Q02 (6/20 = 13)	RB5 2Q00
RB4 2Q02 (6/20 = 8)	RB4 4Q00 (7)
Total	RB5 1Q01 (TRS)
Violations: 111	RB4 1Q01 (4)
	RB5 1Q01 (5)
	RB5 2Q02 (TRS)
	WFB (NOX) 2Q02
	RB4 2Q02
	Total Malfunctions: 88

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WATER VIOLATION OUTLINE

Instream Color	Ph	Monitoring Violations	Dissolved Oxygen
June 98 (7)	1-Jul	Sep-99	2-Jun
Jul 98 (1)	Dec-99	Oct-99	
Jan 99 (1)	Jul 02 (2)	Feb-00	
Feb 99 (1)	2-Aug	Mar-00	
May 01 (2)		Aug-00	
Jun 01 (12)		Mar-03	
Jul 01 (1)		May-03	
Aug 01 (1)		Jul-03	

Emissions Calculations

Natural Gas Usage

Million SCF	0		
Pollutant	Factor Lbs/MMSCF	Emission (tons)	Emission (pounds)
CO	84	0.0	0
CO2	120,000	0.0	0
Lead	0.0005	0.0	0
Methane	2.3	0.0	0
NOx (1)	190	0.0	0
PM Total	7.6	0.0	0
SO2	0.6	0.0	0
TOC	11	0.0	0
VOC	5.5	0.0	0

(1) assumes post NSPS uncontrolled

input megawatts hours/year		0	Emissions1 tons per year in Montana	Emissions1 pounds per year in Montana
		factor		
	PM 10	3.52113E-05	0	0
	PM	5.16432E-05	0	0
	SO2	0.00306338	0	0
	Nox	0.000892019	0	0
	CO	4.10798E-05	0	0
	VOC as C	4.92958E-06	0	0
	Pb	3.52113E-08	0	0
	HAPs	0.000111502	0	0

Total Emissions in Montana

Pollutiant	tons per year	pounds per year
Carbon Monoxide	0.0	0
Carbon Dioxide	0.0	0
Lead	0.0	0
Methane	0.0	0
Nitrogen Oxides	0.0	0
Particulate Matter	0.0	0
Surfur Dioxide	0.0	0
Total Organic Compounds	0.0	0
Volitile Organic Compounds	0.0	0
Hazardous Air Pollutants	0	0

1 assumes 56 percent of electricity generated in Montana comes from coal fired boilers

Janet: Complete copy for Morty & Jim D.

Stone Container Corporation

INTERNAL CORRESPONDENCE

Return to me, please

DATE: October 22, 1985

To: File — Location: Atlanta T & E

From: A.M. Koleff — Location: Atlanta T & E

CC: G.B. Hills
J. Harrison
C. Barton
C. Ackel

RECEIVED
NOV 4 1985
G. B. HILLS

VISIT TO CHAMPION HEADQUARTERS STAMFORD CONNECTICUT ENVIRONMENTAL REVIEW CONTAINER & BAG PLANTS

I met with Dick Wigger, Champion Environmental Vice President, and Ed Clem, Champion's Director of Environmental Affairs on Monday afternoon, October 14 and Tuesday morning, October 15 to review the environmental compliance status of the converting plants to be acquired from Champion.

Wigger and Clem were cooperative and had prepared information which greatly facilitated the review of the operations.

I questioned them about normal relationships between their corporate office and the plants and was advised that their operations are very similar to ours in that strong environmental guidance is given to the local operations from corporate offices and their corporate people participate in all permit negotiations and regulatory compliance meetings with state or federal or local personnel.

From an organizational standpoint, reporting to Wigger are Mr. Jim Carraway, Senior Manager of Special Projects who is used for most negotiating situations particularly in southern mills since he has a southern regulatory agency background. He also handles special projects overflow from Ed Clem's group. Also reporting to Wigger in a recent reorganization is Jim Woodman, who is responsible for all forest related environmental matters. A third person reporting to Wigger is Kathleen Bennett, who handles Washington and State regulatory issues. The fourth person reporting to Wigger is Ed Clem who has effectively 6 1/2 people

reporting to him. Three are located in Stamford, handling air, water and solid waste issues respectively and three field coordinators located in Hamilton, Ohio; Eugene, Oregon and Jacksonville, Florida who do most of the routine coordination work with the building products division of Champion. Also reporting to Clem, located in Hamilton, is Mr. Ted Blair, formerly with Hoerner Engineering, who has been the principal liaison for the container plant environmental matters. Champion has recently conducted several corporate wide RCRA workshops and have area coordinators for RCRA activities (divisional operating people) which report to the solid waste person reporting to Clem. Champion's remaining operations which will be served by this same staff are 15 mills, 10 lumber mills in the southeast, 4 lumber mills in the west, 5 milk container plants and 2 converting operations. They have just begun full scale environmental audits and have done 2 mills, neither of which is included in the acquisition, and one converting plant.

General comments on the mills are as follows:

MISSOULA

The NPDES permit expires on March 31, 1986. In a preliminary meeting three to four weeks ago, Champion asked for renewal of the permit with exactly the same conditions as now exist for a five year period of time. The meeting was held with Steve Pilcher, Head of the state water quality group. The state of Montana has agreed to conduct an environmental impact assessment to assure that the suspended solids increase, which is included in their present permit was not a problem and to further identify any impact on the river. Pilcher concurred that unless other data comes in which indicates adverse impact the permit could be renewed as is. According to Wigger and Clem, the Governor likes Pilcher very well and frequently goes around Pilcher's boss directly to Pilcher for information and advice on environmental issues. They both independently, reported the state's attitude as environmentally impartial or biased in favor of Champion in most matters.

They believe the use of coke in the lime kilns on a full scale basis might trigger a PSD review and this is the primary reason for the PSD study proposed prior to full conversion of the kilns to coke. They reported that particulate and TRS testing was done internally but the So_2 and NO_x testing were contracted with outside laboratories.

They advised that there was a PCB spill several years ago at the Missoula mill resulting from a leak from a hidden transformer bushing which could not be readily seen on inspection. The clean up was contracted to an outside firm and EPA was notified. There was no ground clean up required as the spill occurred on a concrete pad. They received a surprise EPA inspection about 2 years ago and were cited for having one transformer unlabeled. This resulted from an error in labeling in which two labels had been put on one transformer and one had been missed. They did pay a fine for this infraction. The inspection also alleged that records were not all kept in one place but was withdrawn when the allegation was proved false. They also alleged during a subsequent inspection that a small leak in a transformer had not been reported but were able to show that the inspection had occurred less than 48 hours previously and therefore they were within the allowable notification period.

Smurfit-Stone
Missoula Mill
Containerboard and Paper Division

Date: July 15, 2003
To: Bob Boschee, Jerry Stuart, Curt Barton, Roy Cobb, Russ Frye, Leif Griffin, Bob Pojasek
From: Neal Marxer
Subject: Attached Letter from Charlie Tebbutt dated July 10, 2003

I will set up a conference call this week to discuss the attached letter from Charlie Tebbutt of the Western Environmental Law Center on behalf of CHEER. I suggest the following times for the conference call;

1. 3:00 p.m. mountain time Wednesday
2. 9:00 a.m. mountain time Thursday
3; 3:00 p.m. mountain time Thursday

Please e-mail me times when you are available for this conference call.

In a brief review of the letter I have the following comments:

1. CHEER wants the consent decree extended for three more years. I feel that we have met the conditions of the current consent decree and at the end of three more years they will want it extended again. They have nothing to loose by doing this.
2. During the April 2003 meeting that was attended by Bob Boschee, Leif Griffin and myself. We did not agree to talk to Dr. Pojasek about CHEER's ongoing concerns with the P2 program. In efforts to resolve CHEER's concern with Addendum A etc. the Identification of Pollution Prevention Opportunity (IPPO) form was developed in 1999. The original form was used in 1999 and 2000. CHEER had some suggestions on modifications to the form during a meeting held with CHEER on August 2, 2001. The form was revised and the revised form was used in the 2001 and 2002 annual reports.
3. To further improve the P2 Program process maps to the level that CHEER is asking for would be very difficult and time consuming.
4. I am not familiar with the VISIO software they suggest we use to select P2 projects.
5. They are asking to pre and post audit each P2 project that is completed. This is currently done by identifying the pollution reductions from each project and they are listed in the annual report.
6. The addition of a new annual third-party audit beyond the annual audit that Dr Pojasek does would make the process even more cumbersome. It seems to me that they are proposing that the P2

program would change each year and that we would continually have to audit each the previous years projects.

7. They are asking to permanently discontinue the practice of burning OCC rejects in the Multi-fuel boiler. This would cost the mill approximately $320,000 per year.
8. CHEER wants Smurfit-Stone to fund a market-share potential survey/study to determine if a plastic block made from OCC rejects and other recycled plastic could replace concrete blocks. I believe this survey/study could be costly.
9. We have completed all three of the required reports on the economic and technical feasibility of alternative fibers. The first report was sent on May 18, 1999. The second report was in the 2000 annual report, and the third report was in the 2002 annual report. It appears to me that CHEER does not even read the annual P2 reports because it is clearly stated in both the 2000 and 2002 annual reports that the second and third required reports on the economic and technical feasibility of alternative fibers are in appendices of these reports.
10. The consent decree requires Stone to provide the CHEER with the Missoula mill monthly air and water compliance reports, quarterly excess emission reports and annual Form R reports fro the term of the agreement. We began supplying these reports in June of 1998, thus we have currently sent CHEER reports for the five year term of the agreement. I suggest we send them a letter stating this requirement is now satisfied and we will stop sending them these reports.

Western Environmental Law Center

Defending the West

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www.westernlaw.org

July 10, 2003

Via Telefacsimile (202) 342-8451 and U.S. Mail

Russell Frye
Collier, Shannon, Rill & Scott
3050 K St., NW, Ste. 400
Washington DC 20007

Bob Boschee, General Manager
Missoula Mill
Smurfit-Stone Corporation
P.O. Box 4707
Missoula, MT 59806-4707

Dear Russ and Bob:

With the end of our client's Consent Decree in sight, CHEER remains unsatisfied with Stone's compliance with Addendum A, for the same reasons we have previously stated. We have also reviewed Stone's compliance with the terms and conditions of its environmental permits from the time of CHEER's original allegations. There are continuing, actionable violations of law. This letter, while intended to bring about resolution of existing differences through negotiation, also satisfies CHEER's pre-action requirements pursuant to paragraph 9 of the Consent Decree. Attached is an outline, summarizing many, but not all of the potentially actionable violations of Clean Air Act and Clean Water Act. The outline reflects violations only through the second quarter of 2002. They were compiled from Stone's reports to DEQ and other documents on DEQ's files which have been generated or seen by Stone.

If, however, Stone is willing to agree to the following outline of terms, CHEER would not seek penalties from the mill for new allegations of environmental non-compliance from the date of the original allegations through the date of entry of the extended Consent Decree, to be extended for three more years, as long as the mill complies with the terms of the following revisions. CHEER also believes that, to the extent the mill has a P2 Program that significantly analyzes operations to search for inefficiencies, the risk of future non-compliance is reduced.

POLLUTION PREVENTION

At the end of CHEER's annual review of the Missoula mill's Pollution Prevention (P2)

unbleached • 100% postconsumer waste • soy ink

Program, postponed to April 2003, Bob Boschee agreed to talk to Dr. Pojasek about our ongoing concerns with the P2 Program. It was implied that Bob Boschee would get back to one of the CHEER members about that results of that discussion. We have not heard of the results of that talk and would like to know what has transpired from that discussion. My clients' goal has always been for the mill to achieve an effective P2 Program, thus we proposed what became Addendum A of the Consent Decree. The mill's continuing failure to implement Addendum A in a sequential manner every year (e.g., performing Addendum A, Sec. IV(5) with the results of Sec. IV(4)), as agreed to), has posed an ongoing debate about Consent Decree compliance. At this point, rather than trying to shoehorn Stone into that model, we propose instead a modification to include the following sequence. It significantly lessens the analytical burden for the mill, while keeping the focus on analysis of mill operations necessary to operate ever more efficiently:

* During the life of an extended Consent Decree, Dr. Pojasek would continue to be retained and continue to certify overall and specific compliance with the P2 Program.

* Second, delete the requirements to identify tentative P2 annual projects and to quantify/describe their impacts (roughly, sec. IV(1) through IV(3) of Addendum A).

* Third, the P2 Program's process maps would be improved: add the missing processes, e.g., electricity and steam flows; and improve their data and resolution, to the level of the quantified total inputs and outputs of individual major pieces of equipment.

* Fourth, using this better-detailed general data, brainstorm annually P2 projects to implement. The MOEC already does this, but now it would be required to use tools that make visible links between mill processes, e.g., Visio software. Selection of projects to implement would have to be based on root cause and forced-pair ("bubble-up/bubble-down") analysis, not just on Pareto diagrams. Roughly, this would replace sec. IV(4)- IV(6) of Addendum A.

* Fifth, quantify, both pre- & post P2 project, the process/es involved in each implemented project; via producing resource accounting maps and data sheets that are much more detailed than the current mill-wide process maps--all the inputs into the process must be accounted for (including time, when significant). This step is not currently in Addendum A.

* Sixth, a new annual third-party audit. Not an audit of Addendum A compliance, rather it seeks outside feedback to improve the P2 Program, as Dr. Pojasek recommends in his publications. This outside audit, which Dr. Pojasek can be involved in, might be performed by the Missoula Sustainable Business Council (SBC), a new local independent sustainability certification organization, but with ties to the local business community and to the Business School of the Univ. of Montana. Similarly, the individual process resource maps and data sheets of completed

P2 projects will be updated annually, to ensure the ongoing financial benefits of P2 are quantified. Investments in efficiency often take longer to payback than other investments, but often have greater return on investment rate, according to EPA's P2 publications.[1] But cost allocation itself--the conversion of these masses and volumes into dollars--occurs naturally to cost managers, so it need not be required (as it currently is in Sec. IV(3)).

We believe that such a program has the potential to transform the Missoula mill into Smurfit-Stone's leading performer, both as to cost/profits and product quality. It has always been our hope that the P2 Program would propagate naturally through the company on its own economic merits, thus achieving greater ecological sustainability as a consequence.

OCC REJECTS

Permanently discontinue practice of burning plastics and other combustible wastes from the mill's OCC recycling facility, with the mill manager certifying annually to MT DEQ that the mill is no longer burning OCC rejects. Stone shall fund a careful market-share potential survey/study for the concrete-block substitute product to be performed within six months or one year. With that in hand, it should be clear if this product can be successfully marketed, from which point Stone can decide if it wants to participate further with other parties who are becoming involved in the economic development of this waste-alternative product.

To further minimize the waste that it is purchasing, Stone will work with all the box-making plants it provides linerboard to, to print "PLEASE DISPOSE OF EXTRANEOUS

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[1]The National Pollution Prevention Roundtable recently released the first national report on P2 results achieved by state & local pollution prevention programs. In 1998-2000 it estimates that every dollar spent on state and local P2 assistance programs returned $6.00 dollars of savings. During the 1990's, P2 programs helped implement & document $666 million in savings; plus 4.1 billion gallons of water conserved and 215 million kW of energy conserved (13 projects closely analyzed returned $404 m. on $1.9 m. invested). The report did not include savings from P2 that corporations have conducted with their own resources. 70% of companies indicated that lack of capital hindered successful pollution prevention implementation. Other barriers to P2 include the failure to 1) adequately quantify operational costs, and 2) to calculate to the full term the savings of P2 when calculating return on investment.

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PLASTIC MATERIAL (INCLUDING TAPE) BEFORE RECYCLING"on boxes; and improve its outreach program with OCC vendors to get more people upstream to remove the waste materials before recycling boxes. Until such actions are taken by the mill, CMCR, Women's Voices for the Earth, CHEER and other Montana public interest groups will continue to raise public awareness of what we all believe are the hazards of burning this waste stream.

ALTERNATIVE FIBERS AND BIOPULPING

The third and final biennial update to CHEER, regarding the Decree's Sec.7.F requirement to investigate the economic and technical feasibility of incorporating alternative fibers into the mill's production, is due soon. Given that wood fiber will only increase in price over the medium and long-term, the following is what this update should closely investigate. First, Montana has about 5 million acres of spotted knapweed alone, 400-1200 pounds per acre, or 1.5 to 3 million tons per year. Weeds also have potential for marketing byproducts. Second, satellite pulping near a fiber source avoids transporting large masses of non-product (water and non-cellulose) to Missoula; and it allows pulping agents tailored to the fiber source. Many biopulping experiments have investigated wood chips, however, so the potential efficiencies of biopulping wood at the Missoula mill should be investigated too, as well as updating the investigation of any potential to pulp different fibers at the mill. Some of these fiber and pulping agent variables could be analyzed as potential P2 projects.

Please contact me at your earliest convenience, as CHEER is aware of the approaching expiration of the Consent Decree and the pre-action requirements set out in the Consent Decree. A meeting within 30 days, pursuant to paragraph 9, to discuss potential resolution is called for. It remains CHEER's goal to reach meaningful resolution without resorting to formal means.

Sincerely,

Charlie Tebbutt

cc: CHEER, CMCR, Native Forest Network, Jack Tuholske, Dr. Robert Pojasek (via fax)

AIR VIOLATION OUTLINE

Exceedances	Malfunctions
RB4 2Q98 (3)	WFB (NOX) 2Q98 (4)
RB4 3Q98	RB4 2Q98 (15)
RB4 4Q98 (same as 3Q)	RB5 2Q98 (3)
RB4 1Q99 (2)	RB4 3Q98 (opacity)
RB4 3Q99 (6/20)	RB4 4Q98 (opacity) (4)
RB4 4Q99 (6/20 = 10)	LK4 1Q99
RB5 4Q99 (6/20 = 8)	RB4 1Q99 (2)
RB4 1Q00 (6/20 = 4)	RB4 2Q99 (2)
RB4 2Q00 (6/20 = 8)	RB5 2Q99 (10)
RB4 4Q00 (6/20 = 41)	RB4 3Q99 (4)
RB4 1Q01 (6/20 = 6)	RB5 4Q99 (4)
RB5 1Q01 (6/20)	RB5 1Q00
RB4 4Q01 (6/20 = 7)	RB4 2Q00 (16)
RB4 1Q02 (6/20 = 13)	RB5 2Q00
RB4 2Q02 (6/20 = 8)	RB4 4Q00 (7)
Total	RB5 1Q01 (TRS)
Violations: 111	RB4 1Q01 (4)
	RB5 1Q01 (5)
	RB5 2Q02 (TRS)
	WFB (NOX) 2Q02
	RB4 2Q02
	Total Malfunctions: 88

E00011056

WATER VIOLATION OUTLINE

Instream Color	Ph	Monitoring Violations	Dissolved Oxygen
June 98 (7)	1-Jul	Sep-99	2-Jun
Jul 98 (1)	Dec-99	Oct-99	
Jan 99 (1)	Jul 02 (2)	Feb-00	
Feb 99 (1)	2-Aug	Mar-00	
May 01 (2)		Aug-00	
Jun 01 (12)		Mar-03	
Jul 01 (1)		May-03	
Aug 01 (1)		Jul-03	

E00011057

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July 10, 2003

Via Telefacsimile (202) 342-8451 and U.S. Mail

Russell Frye
Collier, Shannon, Rill & Scott
3050 K St., NW, Ste. 400
Washington DC 20007

Bob Boschee, General Manager
Missoula Mill
Smurfit-Stone Corporation
P.O. Box 4707
Missoula, MT 59806-4707

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Sincerely,

Charlie Tebbutt

cc: CHEER, CMCR, Native Forest Network, Jack Tuholske, Dr. Robert Pojasek (via fax)

AIR VIOLATION OUTLINE

Exceedances	Malfunctions
RB4 2Q98 (3)	WFB (NOX) 2Q98 (4)
RB4 3Q98	RB4 2Q98 (15)
RB4 4Q98 (same as 3Q)	RB5 2Q98 (3)
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RB4 3Q99 (6/20)	RB4 4Q98 (opacity) (4)
RB4 4Q99 (6/20 = 10)	LK4 1Q99
RB5 4Q99 (6/20 = 8)	RB4 1Q99 (2)
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Total	RB5 1Q01 (TRS)
Violations: 111	RB4 1Q01 (4)
	RB5 1Q01 (5)
	RB5 2Q02 (TRS)
	WFB (NOX) 2Q02
	RB4 2Q02
	Total Malfunctions: 88

E00011062

WATER VIOLATION OUTLINE

Instream Color	Ph	Monitoring Violations	Dissolved Oxygen
June 98 (7)	1-Jul	Sep-99	2-Jun
Jul 98 (1)	Dec-99	Oct-99	
Jan 99 (1)	Jul 02 (2)	Feb-00	
Feb 99 (1)	2-Aug	Mar-00	
May 01 (2)		Aug-00	
Jun 01 (12)		Mar-03	
Jul 01 (1)		May-03	
Aug 01 (1)		Jul-03	

E00011063

OUTLINE OF CHEER et al.'s 13 August 2003 P2 PROPOSAL:

A. PROCESS MAPPING AND RESOURCE DATA SHEETS

[current requirement: "The initial P2 Plan shall...include at least the following: preparing process flow maps for every major operation, accounting of materials used and lost from the operation, ..." (Adden. A, Sec. III, Intro)]

1. QUANTIFY (on resource data sheets) MISSING INPUTS & OUTPUTS TO EACH PROCESS (electricity; steam; supporting systems (e.g. water, chemicals, ventilation, exhaust, fire protection, compressed air, vacuum, maintenance, cleaning, etc.); AS NECESSARY UPDATE QUANTIFICATION OF OTHER PROCESS MAPS (such as waste streams & emissions). CREATE SEPARATE PROCESS MAPS FOR SUB-PROCESSES THAT ARE DIFFERENT--e.g. bulk vs. continuos pulp digestors.

NOTE: EPA says Dr. Pojasek is modifying VISIO-type software, so that each process map is hot-linked to its data resource sheets.

B. USING THE DATA GENERATED in step A. above, SELECT PROJECTS TO IMPLEMENT EACH YEAR

1. To perform this ranking of areas of greatest inefficiency, some conversion of these material & energy units into costs is necessary (e.g., a small waste volume can be a large expense if hazardous). Generally, much of every process's total activity (quantified in step A. above) is not costed--only accounts payable items may be. Operational knowledge can substitute initially for complete activity-based costing (ABC); which CHEER et al. will not insist on; but we do ask for proofs that ABC is being steadily developed.

2. Pareto diagrams, brain-writing and forced-pair analysis are tools to help select projects.

C. IDENTIFY THE ROOT-CAUSE(s) OF THE ANNUALLY IDENTIFIED PROJECTS (step B. above)

1. Cause/effect (fish-bone) diagrams list all conceivable causes for deviation from theoretical performance of a process (whether in materials, methods, people or machines). In identifying all possible causes of the problem, all possible solutions--including the best ones--are revealed.

2. Again, tools such as Pareto diagrams and operational knowledge can help chose which inefficiencies of a process are worth addressing. But the more ABCosting that is available, the more the inefficiencies can measured--i.e. greater savings. For more complex or hidden inefficiencies, engineering feasibility studies can clarify the value of potential fixes, and help justify significant capital expenditures.

Marxer, Neal

From: Tony Tweedale [ttweed@wildrockies.org]
Sent: Wednesday, August 13, 2003 9:33 AM
To: Marxer, Neal
Subject: RE: CHEER Meeting

Will do.

At 10:09 AM -0500 13/8/03, Marxer, Neal wrote:
>Tony try to arrive about 10 minutes early so I can get the faxing done
>before 1:30 p.m.
>
>
>Neal Marxer
>Technical Services Manager
>Missoula Mill
>Smurfit-Stone Container Corp.
>P.O. Box 4707
>Missoula, MT 59809-4707
>Phone 406-626-4848
>fax 406-626-4806
>nmarxer@smurfit.com
>
>
>-----Original Message-----
>From: Tony Tweedale [mailto:ttweed@wildrockies.org]
>Sent: Wednesday, August 13, 2003 8:40 AM
>To: Marxer, Neal
>Subject: Re: CHEER Meeting
>
>Hi Neal -- Don't forget to bring your print-out of the Ammended P2 Plan
>(incl. its 11 x 17" maps), it might help during our discussion of
>process maps. And will it be OK to fax to Russ as the meeting starts a
>1-pg overview of our P2 proposal, and a 2 pg example of Visio-created
>process maps?

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E00011068

Missoula's Quarterly Emissions Data

SOURCE INFORMATION						EXCURSIONS				MALFUNCTIONS				CEMS INFO		REPORTED % COMPLIANCE				% MONITOR UP	
DATE	QTR.	TIME in QTR.	SOURCE	Op Time (Hrs)	Parameter	CHEER #	SSCC #	TOTAL TIME (Hrs)	% of Op Time	CHEER #	SSCC #	TOTAL TIME (Hrs)	% of Op Time	CEMS Downtime (Hrs)	% of Op Time	EEM	DMOH & EEM	IEM	DMOH & IEM	DOH	DRP
1998	2	2184	LK4	1624	TRS		0		0		0		0	24	1.48	100	100	100	100	98.5	98.9
1998	2		RB5	1760	TRS		0		0		0		0	14	0.80	100	100	100	100	99.2	99.4
1998	2		WFB	1752	SO2		0		0		0		0	171	9.76	100	100	100	100	90.2	92.2
1998	2		WFB	1752	NOx		0		0	4	1	12	0.685	171	9.76	100	100	99.3	99.2	90.2	92.2
1998	2		RB3	1073	Opacity		0		0		0		0	1.5	0.14	100	100	100	100	99.9	99.9
1998	2		RB4	1903	Opacity	3	3	0.3	0.016	15	5	1.5	0.079	25.5	1.34	100	100	99.9	99.9	98.7	98.8
1998	2		RB5	1760	Opacity		0		0	3	2	0.3	0.017	1.5	0.09	100	100	100	100	99.9	99.9
1998	3	2208	LK4	2105	TRS		0		0		0		0	11	0.52	100	100	100	100	99.5	99.5
1998	3		RB5	2099	TRS		0		0		0		0	8.5	0.40	100	100	100	100	99.6	99.6
1998	3		WFB	2173	SO2		0		0		0		0	110.7	5.09	100	100	100	100	94.9	95
1998	3		WFB	2173	NOx		0		0		0		0	110.7	5.09	100	100	100	100	94.9	95
1998	3		RB3	397	Opacity		0		0		0		0	0.4	0.10	100	100	100	100	99.9	100
1998	3		RB4	2105	Opacity	1	1	0.1	0.005	1	1	0.1	0.005	0.9	0.04	100	100	100	100	100	100
1998	3		RB5	2099	Opacity		0		0		0		0	20	0.95	100	100	100	100	99	99.1
1998	4	2208	LK4	890.5	TRS		0		0		0		0	84	9.43	100	100	100	100	90.6	96.2
1998	4		RB5	1624	TRS		0		0		0		0	109.2	6.72	100	100	100	100	93.3	95.1
1998	4		WFB	1632	SO2		0		0		0		0	151.1	9.26	100	100	100	100	90.7	93.2
1998	4		WFB	1632	NOx		0		0		0		0	151.1	9.26	100	100	100	100	90.7	93.2
1998	4		RB3	54	Opacity		0		0		0		0	2.3	4.26	100	100	100	100	95.7	99.9
1998	4		RB4	1608	Opacity		0		0	4	2	0.4	0.025	23	1.43	100	100	100	100	98.6	99
1998	4		RB5	1624	Opacity		0		0		0		0	30.9	1.90	100	100	100	100	98.1	98.6
1998			**LK4**	**4619.5**	**TRS**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**119**	**2.58**						
1998			**RB5**	**5483**	**TRS**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**131.7**	**2.40**						
1998			**WFB**	**5557**	**SO2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**432.8**	**7.79**						
1998			**WFB**	**5557**	**NOx**	**0**	**0**	**0**	**0**	**4**	**1**	**12**	**0.216**	**432.8**	**7.79**						
1998			**RB3**	**1524**	**Opacity**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4.2**	**0.28**						
1998			**RB4**	**5616**	**Opacity**	**4**	**4**	**0.4**	**0.007**	**20**	**8**	**2**	**0.036**	**49.4**	**0.88**						
1998			**RB5**	**5483**	**Opacity**	**0**	**0**	**0**	**0**	**3**	**2**	**0.3**	**0.005**	**52.4**	**0.96**						
1999	1	2160	LK4	1974	TRS		0		0	1	1	12	0.608	96.7	4.90	100	100	99.4	99.4	95.1	95.5
1999	1		RB5	2152	TRS		0		0		0		0	73	3.39	100	100	100	100	96.6	96.6
1999	1		WFB	2094	SO2		0		0		0		0	14	0.67	100	100	100	100	99.3	99.4
1999	1		WFB	2094	NOx		0		0		0		0	14	0.67	100	100	100	100	99.3	99.4
1999	1		RB3	79.5	Opacity		0		0		0		0	24	30.19	100	100	100	100	69.8	98.9
1999	1		RB4	2104	Opacity	2	2	0.2	0.01	2	1	0.1	0.005	231.3	10.99	100	100	100	100	89	89.3
1999	1		RB5	2152	Opacity		0		0		1	0.2	0.009	117.6	5.46	100	100	100	100	94.5	94.6
1999	2	2184	LK4	2040	TRS		0		0		0		0	132	6.47	100	100	100	100	93.5	94
1999	2		RB5	2138	TRS		0		0		0		0	35	1.64	100	100	100	100	98.4	98.4
1999	2		WFB	2118	SO2		0		0		0		0	48	2.27	100	100	100	100	97.7	97.8
1999	2		WFB	2118	NOx		0		0		0		0	48	2.27	100	100	100	100	97.7	97.8
1999	2		RB3	53	Opacity		0		0		0		0	0	0.00	100	100	100	100	100	100
1999	2		RB4	2178	Opacity		0		0	2	2	0.2	0.009	68.6	3.15	100	100	100	100	96.9	96.9
1999	2		RB5	2138	Opacity		0		0	10	5	1	0.047	36.4	1.70	100	100	100	100	98.3	98.3
1999	3	2208	LK4	1789	TRS		0		0		0		0	33.7	1.88	100	100	100	100	98.1	98.5
1999	3		RB5	1904	TRS		0		0		0		0	69	3.62	100	100	100	100	96.4	96.9
1999	3		WFB	1994	SO2		0		0		0		0	7.5	0.38	100	100	100	100	99.6	99.7
1999	3		WFB	1994	NOx		0		0		0		0	7.5	0.38	100	100	100	100	99.6	99.7
1999	3		RB3	177	Opacity		0		0		0		0	21	11.86	100	100	100	100	88.1	99
1999	3		RB4	1912	Opacity	1	1	0.1	0.005	4	3	0.4	0.021	133.5	6.98	100	100	100	100	93	94
1999	3		RB5	1904	Opacity		0		0		2	0.3	0.016	49.6	2.61	100	100	100	100	97.4	97.8
1999	4	2208	LK4	1906.9	TRS		0		0		0		0	48	2.52	100	100	100	100	97.5	97.8

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Missoula's Quarterly Emissions Data

SOURCE INFORMATION						EXCURSIONS				MALFUNCTIONS				CEMS INFO		REPORTED % COMPLIANCE				% MONITOR UP	
DATE	QTR.	TIME in QTR.	SOURCE	Op Time (Hrs)	Parameter	CHEER #	SSCC #	TOTAL TIME (Hrs)	% of Op Time	CHEER #	SSCC #	TOTAL TIME (Hrs)	% of Op Time	CEMS Downtime (Hrs)	% of Op Time	EEM	DMOH & EEM	IEM	DMOH & IEM	DOH	DRP
1999	4		RB5	1985	TRS		0		0		0		0	72	3.63	100	100	100	100	96.4	96.7
1999	4		WFB	2009	SO2		0		0		0		0	174	8.66	100	100	100	100	91.3	92.1
1999	4		WFB	2009	NOx		0		0		0		0	174	8.66	100	100	100	100	91.3	92.1
1999	4		RB3	222	Opacity		0		0		0		0	72	32.43	100	100	100	100	67.6	96.7
1999	4		RB4	1947	Opacity	10	10	1	0.051		0		0	97.1	4.99	100	100	100	100	95	95.6
1999	4		RB5	1985	Opacity	8	8	0.8	0.04	4	1	0.4	0.02	72	3.63	100	100	100	100	96.4	96.7
1999			**LK4**	**7709.9**	**TRS**	**0**	**0**	**0**	**0**	**1**	**1**	**12**	**0.156**	**310.4**	**4.03**						
1999			**RB5**	**8179**	**TRS**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**249**	**3.04**						
1999			**WFB**	**8215**	**SO2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**243.5**	**2.96**						
1999			**WFB**	**8215**	**NOx**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**243.5**	**2.96**						
1999			**RB3**	**531.5**	**Opacity**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**117**	**22.01**						
1999			**RB4**	**8141**	**Opacity**	**13**	**13**	**1.3**	**0.016**	**8**	**6**	**0.7**	**0.009**	**530.5**	**6.52**						
1999			**RB5**	**8179**	**Opacity**	**8**	**8**	**0.8**	**0.01**	**14**	**9**	**1.9**	**0.023**	**275.6**	**3.37**						
2000	1	2184	LK4	1567	TRS		0		0		0		0	2.1	0.13	100	100	100	100	99.9	99.9
2000	1		RB5	2154	TRS				0				0	33.4	1.55	100	100	100	100	98.4	98.5
2000	1		WFB	1999	SO2		0		0		0		0	41.3	2.07	100	100	100	100	97.9	98.1
2000	1		WFB	1999	NOx		0		0		0		0	41.3	2.07	100	100	100	100	97.9	98.1
2000	1		RB3	62	Opacity		0		0		0		0	29	46.77	100	100	100	100	53.2	98.7
2000	1		RB4	2175	Opacity	4	4	0.4	0.018		0		0	75	3.45	100	100	100	100	96.6	96.6
2000	1		RB5	2154	Opacity		0		0	1	1	0.1	0.005	86.5	4.02	100	100	100	100	96	96
2000	2	2184	LK4	1983	TRS		0		0		0		0	24	1.21	100	100	100	100	98.8	98.9
2000	2		RB5	2150	TRS		0		0		0		0		0.00	100	100	100	100	100	100
2000	2		WFB	2184	SO2		0		0		0		0	3	0.14	100	100	100	100	99.9	99.9
2000	2		WFB	2184	NOx		0		0		0		0	3	0.14	100	100	100	100	99.9	99.9
2000	2		RB3	1	Opacity		0		0		0		0	0	0.00	100	100	100	100	100	100
2000	2		RB4	2163	Opacity	8	8	0.8	0.037	16	8	1.6	0.074	6.7	0.31	100	100	99.9	99.9	99.7	99.7
2000	2		RB5	2150	Opacity		0		0	1	1	0.1	0.005	34	1.58	100	100	100	100	98.4	98.4
2000	3	2208	LK4	1165	TRS		0		0		0		0	26.7	2.29	100	100	100	100	97.7	98.8
2000	3		RB5	2000	TRS		0		0		0		0	26.2	1.31	100	100	100	100	98.7	98.8
2000	3		WFB	2182	SO2		0		0		0		0	192.8	8.84	100	100	100	100	91.2	91.3
2000	3		WFB	2182	NOx		0		0		0		0	168.8	7.74	100	100	100	100	92.3	92.4
2000	3		RB3	1	Opacity		0		0		0		0	0	0.00	100	100	100	100	100	100
2000	3		RB4	2150	Opacity		0		0		0		0	33.9	1.58	100	100	100	100	98.4	98.5
2000	3		RB5	2000	Opacity		0		0		0		0	35.6	1.78	100	100	100	100	98.2	98.4
2000	4	2208	LK4	1662	TRS		0		0		0		0	12	0.72	100	100	100	100	99.3	99.5
2000	4		RB5	1468	TRS		0		0		0		0	24	1.63	100	100	100	100	98.4	98.9
2000	4		WFB	1784	SO2		0		0		0		0	316.8	17.76	100	100	100	100	See O91 & O92.	
2000	4		WFB	1784	NOx		0		0		0		0	316.8	17.76	100	100	100	100		
2000	4		RB3	1	Opacity		0		0		0		0	0	0.00	100	100	100	100		14.1
2000	4		RB4	1934	Opacity	41	41	4.1	0.212	7	4	0.7	0.036	35.7	1.85	100	100	100	100	98.2	98.4
2000	4		RB5	1468	Opacity		0		0		0		0	34.5	2.35	100	100	100	100	97.6	98.4
2000			**LK4**	**6377**	**TRS**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**64.8**	**1.02**						
2000			**RB5**	**7772**	**TRS**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**83.6**	**1.08**						
2000			**WFB**	**8149**	**SO2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**553.9**	**6.80**						
2000			**WFB**	**8149**	**NOx**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**529.9**	**6.50**						
2000			**RB3**	**65**	**Opacity**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**29**	**44.62**						
2000			**RB4**	**8422**	**Opacity**	**53**	**53**	**5.3**	**0.063**	**23**	**12**	**2.3**	**0.027**	**151.3**	**1.80**						
2000			**RB5**	**7772**	**Opacity**	**0**	**0**	**0**	**0**	**2**	**2**	**0.2**	**0.003**	**190.6**	**2.45**						
2001	1	2160	LK4	1388.9	TRS		0		0		0		0	50.3	3.62	100	100	100	100	96.4	97.7

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SOURCE INFORMATION						EXCURSIONS				MALFUNCTIONS				CEMS INFO		REPORTED % COMPLIANCE				% MONITOR UP	
DATE	QTR.	TIME in QTR.	SOURCE	Op Time (Hrs)	Parameter	CHEER #	SSCC #	TOTAL TIME (Hrs)	% of Op Time	CHEER #	SSCC #	TOTAL TIME (Hrs)	% of Op Time	CEMS Downtime (Hrs)	% of Op Time	EEM	DMOH & EEM	IEM	DMOH & IEM	DOH	DRP
2001	1		RB5	1940	TRS		0		0	1	1	12	0.619	3	0.15	100	100	99.4	99.4	99.8	99.9
2001	1		WFB	2135	SO2		0		0		0		0	37.5	1.76	100	100	100	100	98.2	98.3
2001	1		WFB	2135	NOx		0		0		0		0	37.5	1.76	100	100	100	100	98.2	98.3
2001	1		RB3	1	Opacity				0				0		0.00	100	100	100	100	100	100
2001	1		RB4	2132	Opacity	6	6	0.6	0.028	4	2	0.4	0.019	0.8	0.04	100	100	100	100	100	100
2001	1		RB5	1940	Opacity	1	1	0.1	0.005	5	2	0.5	0.026	0.8	0.04	100	100	100	100	100	100
2001	2	2184	LK4	1491	TRS		0		0		0		0	0	0.00	100	100	100	100	100	100
2001	2		RB5	6	TRS		0		0		0		0	0	0.00	100	100	100	100	100	100
2001	2		WFB	2183	SO2		0		0		0		0	33	1.51	100	100	100	100	98.5	98.5
2001	2		WFB	2183	NOx		0		0		0		0	33	1.51	100	100	100	100	98.5	98.5
2001	2		RB3	1	Opacity				0				0		0.00	100	100	100	100	100	100
2001	2		RB4	2134	Opacity		0		0		0		0	5.8	0.27	100	100	100	100	99.7	99.7
2001	2		RB5	6	Opacity		0		0		0		0	0	0.00	100	100	100	100	100	100
2001	3	2208	LK4	1400	TRS		0		0		0		0	48	3.43	100	100	100	100	96.6	97.8
2001	3		RB5	67	TRS		0		0		0		0	0	0.00	100	100	100	100	100	100
2001	3		WFB	2087	SO2		0		0		0		0	247.2	11.84	100	100	100	100	88.2	88.8
2001	3		WFB	2087	NOx		0		0		0		0	247.2	11.84	100	100	100	100	88.2	88.8
2001	3		RB3	1	Opacity				0				0		0.00	100	100	100	100	100	100
2001	3		RB4	2187	Opacity		0		0		0		0	24.9	1.14	100	100	100	100	98.9	98.9
2001	3		RB5	67	Opacity		0		0		0		0	0	0.00	100	100	100	100	100	100
2001	4	2208	LK4	2020	TRS		0		0		0		0	141.6	7.01	100	100	100	100	93	93.6
2001	4		RB5	1	TRS				0				0		0.00	100	100	100	100	100	100
2001	4		WFB	2037	SO2		0		0		0		0	78	3.83	100	100	100	100	96.2	96.5
2001	4		WFB	2037	NOx		0		0		0		0	69.3	3.40	100	100	100	100	96.6	96.9
2001	4		RB3	1	Opacity				0				0		0.00	100	100	100	100	100	100
2001	4		RB4	2001	Opacity	7	7	0.7	0.035		0		0	13.5	0.67	100	100	100	100	99.3	99.4
2001	4		RB5	1	Opacity				0				0		0.00	100	100	100	100	100	100
2001			**LK4**	**6299.9**	**TRS**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**239.9**	**3.81**						
2001			**RB5**	**2014**	**TRS**	**0**	**0**	**0**	**0**	**1**	**1**	**12**	**0.596**	**3**	**0.15**						
2001			**WFB**	**8442**	**SO2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**395.7**	**4.69**						
2001			**WFB**	**8442**	**NOx**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**387**	**4.58**						
2001			**RB3**	**4**	**Opacity**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.00**						
2001			**RB4**	**8454**	**Opacity**	**13**	**13**	**1.3**	**0.015**	**4**	**2**	**0.4**	**0.005**	**45**	**0.53**						
2001			**RB5**	**2014**	**Opacity**	**1**	**1**	**0.1**	**0.005**	**5**	**2**	**0.5**	**0.025**	**0.8**	**0.04**						
2002	1	2160	LK4	866	TRS		0		0		0		0	19.6	2.26	100	100	100	100	97.7	99.1
2002	1		RB5	1	TRS				0				0		0.00	100	100	100	100	100	100
2002	1		WFB	2122	SO2		0		0		0		0	28.5	1.34	100	100	100	100	98.7	98.7
2002	1		WFB	2122	NOx		0		0		0		0	28.5	1.34	100	100	100	100	98.7	98.7
2002	1		RB3	1	Opacity				0				0		0.00	100	100	100	100	100	100
2002	1		RB4	2108	Opacity	13	13	1.3	0.062		0		0	21.2	1.01	100	100	100	100	99	99
2002	1		RB5	1	Opacity				0				0		0.00	100	100	100	100	100	100
2002	2	2184	LK4	1869.6	TRS		0		0		0		0	24	1.28	100	100	100	100	98.7	98.9
2002	2		RB5	48.2	TRS		0		0	1	1	4.8	9.959		0.00	100	100	90	90	100	100
2002	2		WFB	2145	SO2		0		0		0		0	86.5	4.03	100	100	100	100	96	96
2002	2		WFB	2145	NOx		0		0	1	1	69	3.217	14.5	0.68	100	100	96.8	96.8	99.3	99.3
2002	2		RB3	1	Opacity				0				0		0.00	100	100	100	100	100	100
2002	2		RB4	2132	Opacity	8	8	0.8	0.038	1	1	0.1	0.005	5.6	0.26	100	100	100	100	99.7	99.7
2002	2		RB5	48.2	Opacity		0		0		0		0	24	49.79	100	100	100	100	50.2	98.9
2002	3	2256	LK4	1320.2	TRS		0		0		0		0	121	9.17	100	100	100	100	90.8	94.6

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Missoula's Quarterly Emissions Data

SOURCE INFORMATION						EXCURSIONS				MALFUNCTIONS				CEMS INFO		REPORTED % COMPLIANCE				% MONITOR UP	
DATE	QTR.	TIME in QTR.	SOURCE	Op Time (Hrs)	Parameter	CHEER #	SSCC #	TOTAL TIME (Hrs)	% of Op Time	CHEER #	SSCC #	TOTAL TIME (Hrs)	% of Op Time	CEMS Downtime (Hrs)	% of Op Time	EEM	DMOH & EEM	IEM	DMOH & IEM	DOH	DRP
2002	3		RB5	195	TRS		0		0		0		0	0	0.00	100	100	100	100	100	100
2002	3		WFB	1800	SO2		0		0		0		0	252	14.00	100	100	100	100	86	88
2002	3		WFB	1800	NOx		0		0		0		0	180	10.00	100	100	100	100	90	92
2002	3		RB3	1	Opacity				0				0		0.00	100	100	100	100	100	100
2002	3		RB4	1920	Opacity		12	1.2	0.063		1	0.3	0.016	25.6	1.33	100	100	100	100	98.7	98.9
2002	3		RB5	195	Opacity		1	0.1	0.051		0		0	1.5	0.77	100	100	100	100	99.2	99.9
2002	4	2208	LK4	1665.6	TRS		0		0		0		0	2.6	0.16	100	100	100	100	99.8	99.9
2002	4		RB5	1	TRS				0				0		0.00	100	100	100	100	100	100
2002	4		WFB	2158	SO2		0		0		0		0	213.1	9.87	100	100	100	100	90.1	90.3
2002	4		WFB	2158	NOx		0		0		0		0	93.1	4.31	100	100	100	100	95.7	95.8
2002	4		RB3	1	Opacity				0				0		0.00	100	100	100	100	100	100
2002	4		RB4	2183	Opacity		11	1.1	0.05		0		0	71.7	3.28	100	100	100	100	96.7	96.8
2002	4		RB5	1	Opacity				0				0		0.00	100	100	100	100	100	100
2002			**LK4**	**5721.4**	**TRS**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**167.2**	**2.92**						
2002			**RB5**	**245.2**	**TRS**	**0**	**0**	**0**	**0**	**1**	**1**	**4.8**	**1.958**	**0**	**0.00**						
2002			**WFB**	**8225**	**SO2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**580.1**	**7.05**						
2002			**WFB**	**8225**	**NOx**	**0**	**0**	**0**	**0**	**1**	**1**	**69**	**0.839**	**316.1**	**3.84**						
2002			**RB3**	**4**	**Opacity**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.00**						
2002			**RB4**	**8343**	**Opacity**	**21**	**44**	**4.4**	**0.053**	**1**	**2**	**0.4**	**0.005**	**124.1**	**1.49**						
2002			**RB5**	**245.2**	**Opacity**	**0**	**1**	**0.1**	**0.041**	**0**	**0**	**0**	**0**	**25.5**	**10.40**						
2003	1	2160	LK4	1899	TRS		0		0		0		0	57	3.00	100	100	100	100	97	97.4
2003	1		RB5	1	TRS				0				0		0.00	100	100	100	100	100	100
2003	1		WFB	2150	SO2		0		0		0		0	57	2.65	100	100	100	100	97.3	97.4
2003	1		WFB	2150	NOx		0		0		0		0	57	2.65	100	100	100	100	97.3	97.4
2003	1		RB3	1	Opacity				0				0		0.00	100	100	100	100	100	100
2003	1		RB4	2120	Opacity		0		0		0		0	42.9	2.02	100	100	100	100	98	98
2003	1		RB5	1	Opacity				0				0		0.00	100	100	100	100	100	100
2003	2	2184	LK4	1954	TRS		0		0		0		0	108	5.53	100	100	100	100	94.5	95.1
2003	2		RB5	47	TRS		0		0		0		0	3.75	7.98	100	100	100	100	92	99.8
2003	2		WFB	2134	SO2		0		0		0		0	83	3.89	100	100	100	100	96.1	96.2
2003	2		WFB	2134	NOx		0		0		0		0	83	3.89	100	100	100	100	96.1	96.2
2003	2		RB3	1	Opacity				0				0		0.00	100	100	100	100	100	100
2003	2		RB4	2132	Opacity		44	4.4	0.206		0		0	1	0.05	100	100	100	100	100	100
2003	2		RB5	47	Opacity		0		0		0		0	0.75	1.60	100	100	100	100	98.4	100
2003			**LK4**	**3853**	**TRS**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**165**	**4.28**						
2003			**RB5**	**48**	**TRS**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3.75**	**7.81**						
2003			**WFB**	**4284**	**SO2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**140**	**3.27**						
2003			**WFB**	**4284**	**NOx**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**140**	**3.27**						
2003			**RB3**	**2**	**Opacity**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.00**						
2003			**RB4**	**4252**	**Opacity**	**0**	**44**	**4.4**	**0.103**	**0**	**0**	**0**	**0**	**43.9**	**1.03**						
2003			**RB5**	**48**	**Opacity**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.75**	**1.56**						

EEM - excluding equipment malfunctions
DMOH&EEM - during monitor operating hours & excluding equipment malfunctions
IEM - including equipment malfunctions
DMOH&IEM - during monitor operating hours & including equipment malfunctions
DOH - during operating hours
DRP - during reporting period

E00011072

Table 45
Stone Container Corporation
Ambient H_2S Trend Analysis
Years 1993-2002

	Number of Hours with Concentrations Greater Than 0.050 ppm[1]												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1993													
Total	5	10	6	1	3	3	12	1	0	0	0	0	41
1994													
#1A	0	0	0	0	1	0	1	1	2	8	0	0	13
#2	0	0	0	0	0	0	1	1	1	0	0	0	3
Total	0	0	0	0	1	0	2	2	3	8	0	0	16
1995													
#1A	1	0	0	0	0	4	2	18	3	1	0	0	29
#2	0	0	0	0	0	2	4	4	5	0	0	0	15
Total	1	0	0	0	0	6	6	22	8	1	0	0	44
1996													
#1A	0	0	1	0	0	2	1	6	4	0	0	0	14
#2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	0	2	1	6	4	0	0	0	14
1997													
#1A	0	0	0	0	0	0	33	7	1	0	0	0	41
#2	0	0	0	2	0	0	7	3	2	0	0	0	14
Total	0	0	0	2	0	0	40	10	3	0	0	0	55
1998													
#1A	0	1	0	0	0	1	0	0	0	0	ND[2]	2	4
#2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	1	0	0	0	0	0	2	4
1999													
#1A	0	0	0	4	0	4	14	5	0	0	0	0	27
#2	0	0	0	0	0	0	3	9	1	0	0	0	13
Total	0	0	0	4	0	4	17	14	1	0	0	92	40
2000													
#1A	0	0	0	0	0	9	34[3]	10[3]	0	0	0	0	53
#2	0	0	0	0	1	8	66[3]	26[3]	4	0	0	0	105
Total	0	0	0	0	1	17	100	36	4	0	0	0	158
2001													
#1A	0	0	0	0	0	0	14	5	1	0	0	0	20
#2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	14	5	5	0	0	0	20
2002													
#1A	0	0	2	0	0	1	0	3	3	0	0	0	9
#2	0	0	0	0	0	0	1	0	1	0	0	0	2
Total	0	0	2	0	0	1	1	3	4	0	0	0	11

(1) MAAQS is 0.05 ppm or 50 ppb, ARM 17.8.214.
(2) No valid data were collected at Site #1A during November 1998 due to an anomalous calibration conducted on October 30.
(3) May have been influenced by the presence of forest fire-created smoke and the accompanying meteorological conditions.

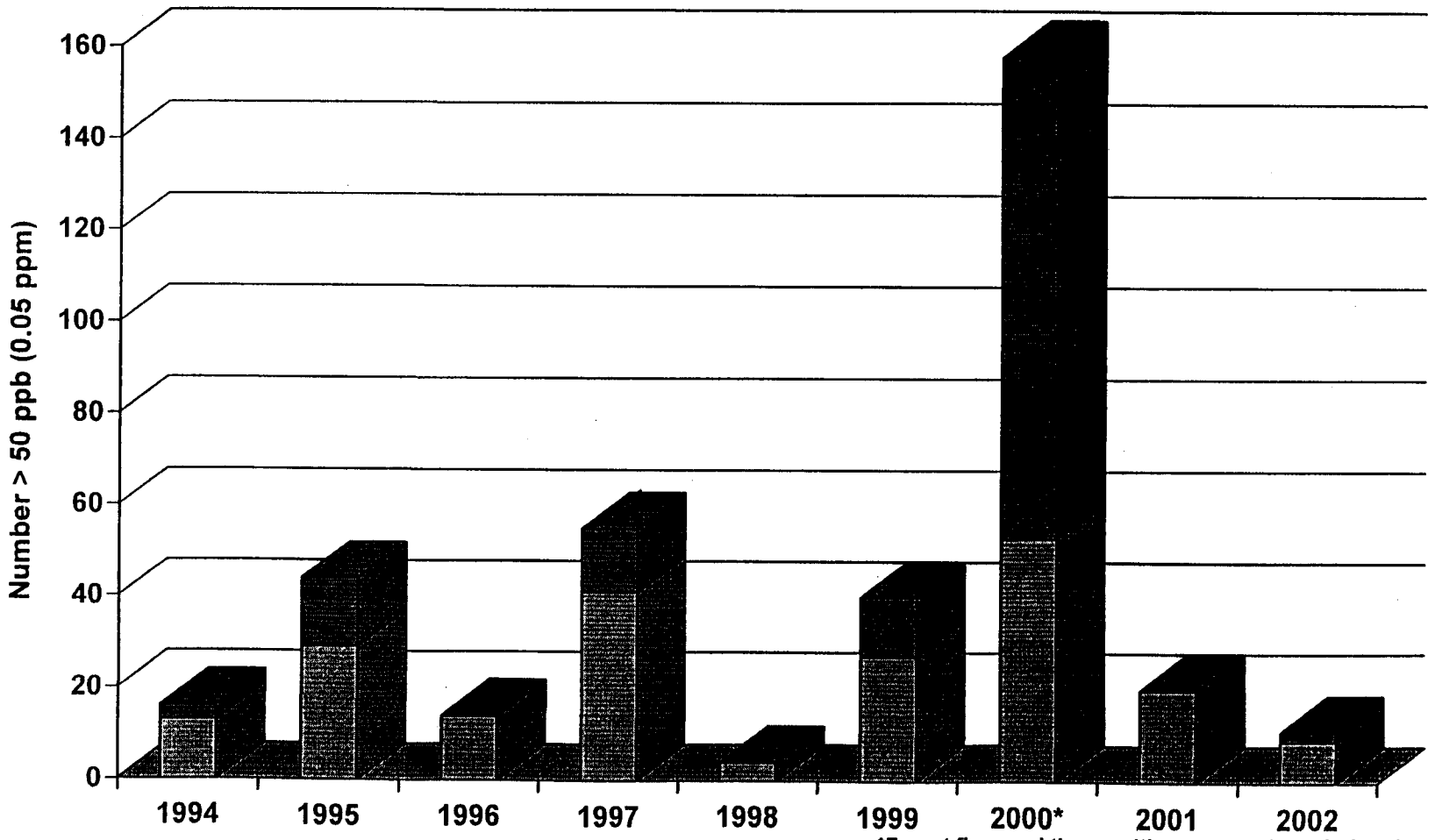
E00011073

Table 46
Stone Container Corporation
Ambient PM_{10} Trend Analysis
Years 1995-2002

	Number of Samples with Concentrations Greater Than 150 ug/m^3 [1]												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1995													
#1A	0	0	0	0	0	0	0	0	0	0	0	0	0
#2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1996													
#1A	0	0	0	0	0	0	0	0	0	0	0	0	0
#2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1997													
#1A	0	0	0	0	0	0	0	0	0	0	0	0	0
#2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1998													
#1A	0	0	0	0	0	0	0	0	0	0	0	0	0
#2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1999													
#1A	0	0	0	0	0	0	0	0	0	0	0	0	0
#2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
2000													
#1A	0	0	0	0	0	0	0	1[2]	0	0	0	0	1
#2	0	0	0	0	0	0	0	1[2]	0	0	0	0	1
Total	0	0	0	0	0	0	0	2	0	0	0	0	2
2001													
#1A	0	0	0	0	0	0	0	0	0	0	0	0	0
#2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
2002													
#1A	0	0	0	0	0	0	0	0	0	0	0	0	0
#2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0

[1] MAAQS is 150 µg/m^3, ARM 17.8.223.
[2] Most likely due to forest fire-generated particulates and not to activities at the Missoula Mill.

Figure 7
Ambient H_2S Trend Analysis

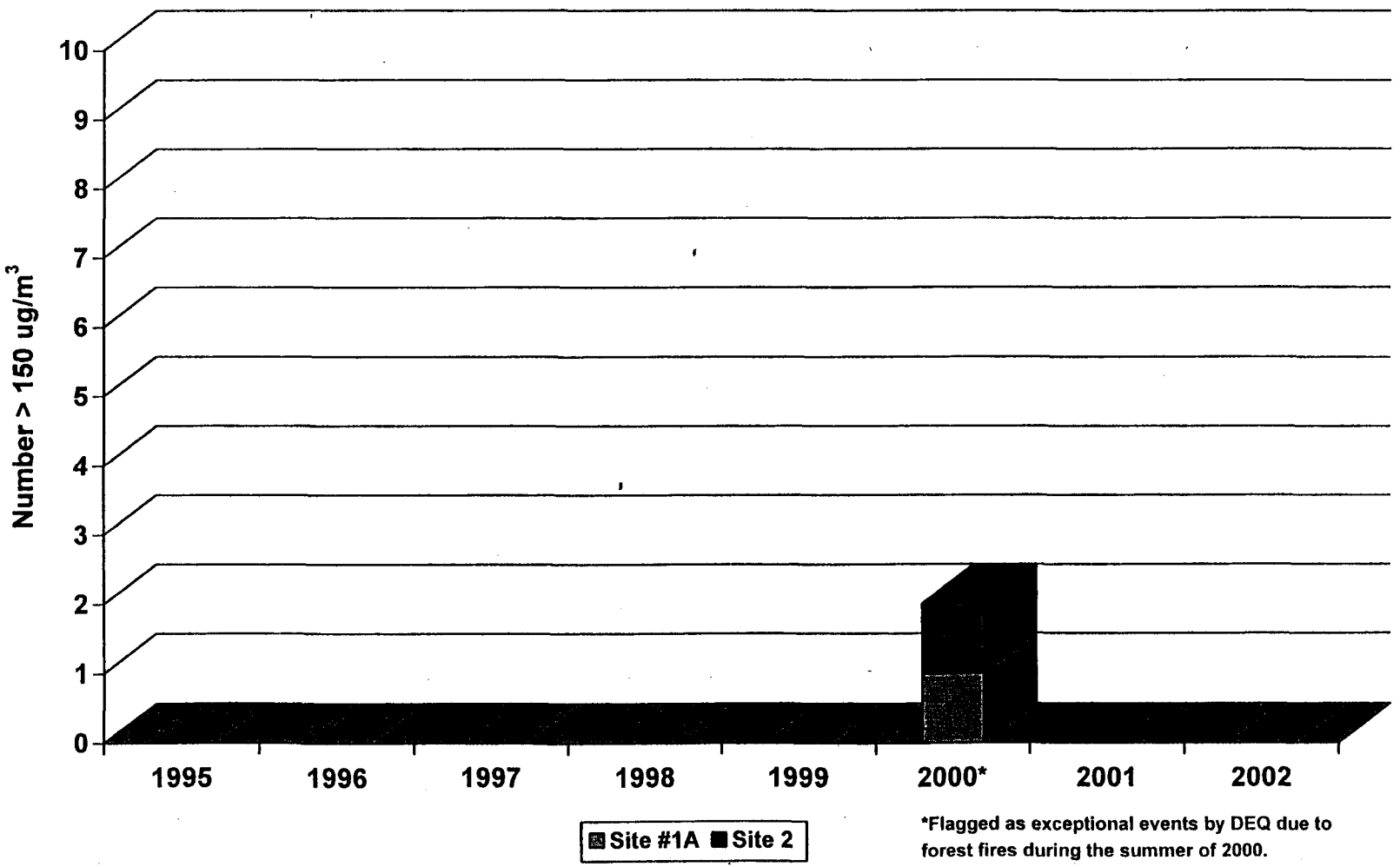


MAAQS is 0.050 ppm or 50 ppb, ARM 17.8.214.

*Forest fires and the resulting meteorology during the summer of 2000 likely influenced the number of measured concentrations > 50 ppb (0.050 ppm).

E00011074

Figure 8
Ambient PM_{10} Trend Analysis



*Flagged as exceptional events by DEQ due to forest fires during the summer of 2000.

Missoula's Monthly NPDES Discharge Data

DATE	EXCURSIONS									MONITORING EXCEPTIONS	
	Δ Color (Δ5 SCU)			pH (6 - 9)			DO				
	C #	S #	Value(s)	C #	S #	Value(s)	C #	S #	Value(s)	C #	EXPLANATION
May-98		7	6,7,7,7,6,7,8								
Jun-98	7	1	6								
Jul-98	1	0									
Aug-98		0									
Sep-98		0									
Oct-98		0									
Nov-98		0									
Dec-98		1	7								
Jan-99	1	1	6								
Feb-99	1	0									
Mar-99		0									
Apr-99		0									
May-99		0									
Jun-99		0									
Jul-99		0									
Aug-99		0									Temp. not recorded: 8/11-17, but there was no direct discharge during this period.
Sep-99		0								1	6-Mile temp. recorder was removed from service on 9/15
Oct-99		0								1	
Nov-99		0			1	9.3/8.3					
Dec-99		0		1							
Jan-00		0									On 1/8/00, the lab spectrophotometer became erratic, but direct discharge was stopped until it was repaired.
Feb-00		0								1	On 2/6/00, the lab spectrophotometer became erratic, but direct discharge was stopped until it was repaired.
Mar-00		0								1	
Apr-00		0									
May-00		0									
Jun-00		0									
Jul-00		0									From 7/22-31/00, temp. recorder for 004 was not tracking time, but was tracking temp.
Aug-00		0								1	
Sep-00											
Oct-00		0									
Nov-00											
Dec-00		0									
Jan-01		0									
Feb-01		0									
Mar-01		0									
Apr-01		2	6,6								
May-01	2	12	6,6,7,7,8,8,6,7,6,6,6,7								
Jun-01	12	1	6		1	9.1					

E00011076

E00011077

Missoula's Monthly NPDES Discharge Data

DATE	EXCURSIONS									MONITORING EXCEPTIONS	
	Δ Color (Δ5 SCU)			pH (6 - 9)			DO				
	C #	S #	Value(s)	C #	S #	Value(s)	C #	S #	Value(s)	C #	EXPLANATION
Jul-01	1	1	6	1							
Aug-01	1	0									
Sep-01		0									
Oct-01		0									
Nov-01		0									
Dec-01											
Jan-02		0									
Feb-02		0									From 2/21-25/02, temp was not recorded at 004, but we were not discharging directly.
Mar-02		0								1	
Apr-02		0									On 4/6/02, the composite sample was not taken, however the now two-day composite sample collected on the 7th was divided for both days.
May-02		0								1	On 5/15/02, the river DO dropped below 9, requiring measuring every other day which was not done until 5/22/02 (7 days later).
Jun-02		0			2	9, 9.3	1				The continuous river temp recorder could not be installed until July due to flooded conditions, but readings were taken twice a day.
Jul-02		0		2	1	9.3				1	
Aug-02		0		1							
Sep-02		0									
Oct-02		0									
Nov-02		0									
Dec-02		0									
Jan-03		0									
Feb-03		0									
Mar-03		0								1	
Apr-03		0			1	9.1					On 5/22/03, the river DO dropped below 9, requiring measuring every other day which was not done until 5/29/03 (7 days later).
May-03		1	8		8	4x9.1, 2x9.2, 9.3, 9.5				1	One set of TKN (5/23/03) was not reported due to digestion unit malfunction.
Jun-03											
Jul-03										1	

Marxer, Neal

From: Heatley, Bill
Sent: Monday, August 11, 2003 10:59 AM
To: Barton, Curtis; Boschee, Bob ; Griffin, Leif ; Vanhorn, Jim; Cobb, Roy; Marxer, Neal
Subject: Missoula Data Review

Importance: High
Sensitivity: Confidential

Please find attached an Excel file that contains several worksheets with info related to Missoula in regards to air and wastewater for our conference call at 4 PM EDST today. The call in number is 800-747-5150 with an access code of: 6216732.

Missoula Data Review.xls (199 ...

William R. Heatley, Jr., Ph.D.
Director, Environmental Services, U.S. Mills
Office: 770-621-6732
Cell: 678-296-8527
Smurfit-Stone
Environmental Affairs

E00011078

Missoula's Quarterly Emissions Data

SOURCE INFORMATION						EXCURSIONS				MALFUNCTIONS				CEMS INFO		REPORTED % COMPLIANCE				% MONITOR UP	
DATE	QTR.	TIME in QTR.	SOURCE	Op Time (Hrs)	Parameter	CHEER #	SSCC #	TOTAL TIME (Hrs)	% of Op Time	CHEER #	SSCC #	TOTAL TIME (Hrs)	% of Op Time	CEMS Downtime (Hrs)	% of Op Time	EEM	DMOH & EEM	IEM	DMOH & IEM	DOH	DRP
1998	2	2184	LK4	1624	TRS		0		0		0		0	24	1.48	100	100	100	100	98.5	98.9
1998	2		RB5	1760	TRS		0		0		0		0	14	0.80	100	100	100	100	99.2	99.4
1998	2		WFB	1752	SO2		0		0		0		0	171	9.76	100	100	100	100	90.2	92.2
1998	2		WFB	1752	NOx		0		0	4	1	12	0.685	171	9.76	100	100	99.3	99.2	90.2	92.2
1998	2		RB3	1073	Opacity		0		0		0		0	1.5	0.14	100	100	100	100	99.9	99.9
1998	2		RB4	1903	Opacity	3	3	0.3	0.016	15	5	1.5	0.079	25.5	1.34	100	100	99.9	99.9	98.7	98.8
1998	2		RB5	1760	Opacity		0		0	3	2	0.3	0.017	1.5	0.09	100	100	100	100	99.9	99.9
1998	3	2208	LK4	2105	TRS		0		0		0		0	11	0.52	100	100	100	100	99.5	99.5
1998	3		RB5	2099	TRS		0		0		0		0	8.5	0.40	100	100	100	100	99.6	99.6
1998	3		WFB	2173	SO2		0		0		0		0	110.7	5.09	100	100	100	100	94.9	95
1998	3		WFB	2173	NOx		0		0		0		0	110.7	5.09	100	100	100	100	94.9	95
1998	3		RB3	397	Opacity		0		0		0		0	0.4	0.10	100	100	100	100	99.9	100
1998	3		RB4	2105	Opacity	1	1	0.1	0.005	1	1	0.1	0.005	0.9	0.04	100	100	100	100	100	100
1998	3		RB5	2099	Opacity		0		0		0		0	20	0.95	100	100	100	100	99	99.1
1998	4	2208	LK4	890.5	TRS		0		0		0		0	84	9.43	100	100	100	100	90.6	96.2
1998	4		RB5	1624	TRS		0		0		0		0	109.2	6.72	100	100	100	100	93.3	95.1
1998	4		WFB	1632	SO2		0		0		0		0	151.1	9.26	100	100	100	100	90.7	93.2
1998	4		WFB	1632	NOx		0		0		0		0	151.1	9.26	100	100	100	100	90.7	93.2
1998	4		RB3	54	Opacity		0		0		0		0	2.3	4.26	100	100	100	100	95.7	99.9
1998	4		RB4	1608	Opacity		0		0	4	2	0.4	0.025	23	1.43	100	100	100	100	98.6	99
1998	4		RB5	1624	Opacity		0		0		0		0	30.9	1.90	100	100	100	100	98.1	98.6
1998			**LK4**	**4619.5**	**TRS**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**119**	**2.58**						
1998			**RB5**	**5483**	**TRS**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**131.7**	**2.40**						
1998			**WFB**	**5557**	**SO2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**432.8**	**7.79**						
1998			**WFB**	**5557**	**NOx**	**0**	**0**	**0**	**0**	**4**	**1**	**12**	**0.216**	**432.8**	**7.79**						
1998			**RB3**	**1524**	**Opacity**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4.2**	**0.28**						
1998			**RB4**	**5616**	**Opacity**	**4**	**4**	**0.4**	**0.007**	**20**	**8**	**2**	**0.036**	**49.4**	**0.88**						
1998			**RB5**	**5483**	**Opacity**	**0**	**0**	**0**	**0**	**3**	**2**	**0.3**	**0.005**	**52.4**	**0.96**						
1999	1	2160	LK4	1974	TRS		0		0	1	1	12	0.608	96.7	4.90	100	100	99.4	99.4	95.1	95.5
1999	1		RB5	2152	TRS		0		0		0		0	73	3.39	100	100	100	100	96.6	96.6
1999	1		WFB	2094	SO2		0		0		0		0	14	0.67	100	100	100	100	99.3	99.4
1999	1		WFB	2094	NOx		0		0		0		0	14	0.67	100	100	100	100	99.3	99.4
1999	1		RB3	79.5	Opacity		0		0		0		0	24	30.19	100	100	100	100	69.8	98.9
1999	1		RB4	2104	Opacity	2	2	0.2	0.01	2	1	0.1	0.005	231.3	10.99	100	100	100	100	89	89.3
1999	1		RB5	2152	Opacity		0		0		1	0.2	0.009	117.6	5.46	100	100	100	100	94.5	94.6
1999	2	2184	LK4	2040	TRS		0		0		0		0	132	6.47	100	100	100	100	93.5	94
1999	2		RB5	2138	TRS		0		0		0		0	35	1.64	100	100	100	100	98.4	98.4
1999	2		WFB	2118	SO2		0		0		0		0	48	2.27	100	100	100	100	97.7	97.8
1999	2		WFB	2118	NOx		0		0		0		0	48	2.27	100	100	100	100	97.7	97.8
1999	2		RB3	53	Opacity		0		0		0		0	0	0.00	100	100	100	100	100	100
1999	2		RB4	2178	Opacity		0		0	2	2	0.2	0.009	68.6	3.15	100	100	100	100	96.9	96.9
1999	2		RB5	2138	Opacity		0		0	10	5	1	0.047	36.4	1.70	100	100	100	100	98.3	98.3
1999	3	2208	LK4	1789	TRS		0		0		0		0	33.7	1.88	100	100	100	100	98.1	98.5
1999	3		RB5	1904	TRS		0		0		0		0	69	3.62	100	100	100	100	96.4	96.9
1999	3		WFB	1994	SO2		0		0		0		0	7.5	0.38	100	100	100	100	99.6	99.7
1999	3		WFB	1994	NOx		0		0		0		0	7.5	0.38	100	100	100	100	99.6	99.7
1999	3		RB3	177	Opacity		0		0		0		0	21	11.86	100	100	100	100	88.1	99
1999	3		RB4	1912	Opacity	1	1	0.1	0.005	4	3	0.4	0.021	133.5	6.98	100	100	100	100	93	94
1999	3		RB5	1904	Opacity		0		0		2	0.3	0.016	49.6	2.61	100	100	100	100	97.4	97.8
1999	4	2208	LK4	1906.9	TRS		0		0		0		0	48	2.52	100	100	100	100	97.5	97.8
1999	4		RB5	1985	TRS		0		0		0		0	72	3.63	100	100	100	100	96.4	96.7
1999	4		WFB	2009	SO2		0		0		0		0	174	8.66	100	100	100	100	91.3	92.1

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Missoula's Quarterly Emissions Data

SOURCE INFORMATION						EXCURSIONS				MALFUNCTIONS				CEMS INFO		REPORTED % COMPLIANCE				% MONITOR UP	
DATE	QTR.	TIME in QTR.	SOURCE	Op Time (Hrs)	Parameter	CHEER #	SSCC #	TOTAL TIME (Hrs)	% of Op Time	CHEER #	SSCC #	TOTAL TIME (Hrs)	% of Op Time	CEMS Downtime (Hrs)	% of Op Time	EEM	DMOH & EEM	IEM	DMOH & IEM	DOH	DRP
1999	4		WFB	2009	NOx		0		0		0		0	174	8.66	100	100	100	100	91.3	92.1
1999	4		RB3	222	Opacity		0		0		0		0	72	32.43	100	100	100	100	67.6	96.7
1999	4		RB4	1947	Opacity	10	10	1	0.051		0		0	97.1	4.99	100	100	100	100	95	95.6
1999	4		RB5	1985	Opacity	8	8	0.8	0.04	4	1	0.4	0.02	72	3.63	100	100	100	100	96.4	96.7
1999			**LK4**	**7709.9**	**TRS**	**0**	**0**	**0**	**0**	**1**	**1**	**12**	**0.156**	**310.4**	**4.03**						
1999			**RB5**	**8179**	**TRS**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**249**	**3.04**						
1999			**WFB**	**8215**	**SO2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**243.5**	**2.96**						
1999			**WFB**	**8215**	**NOx**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**243.5**	**2.96**						
1999			**RB3**	**531.5**	**Opacity**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**117**	**22.01**						
1999			**RB4**	**8141**	**Opacity**	**13**	**13**	**1.3**	**0.016**	**8**	**6**	**0.7**	**0.009**	**530.5**	**6.52**						
1999			**RB5**	**8179**	**Opacity**	**8**	**8**	**0.8**	**0.01**	**14**	**9**	**1.9**	**0.023**	**275.6**	**3.37**						
2000	1	2184	LK4	1567	TRS		0		0		0		0	2.1	0.13	100	100	100	100	99.9	99.9
2000	1		RB5	2154	TRS				0				0	33.4	1.55	100	100	100	100	98.4	98.5
2000	1		WFB	1999	SO2		0		0		0		0	41.3	2.07	100	100	100	100	97.9	98.1
2000	1		WFB	1999	NOx		0		0		0		0	41.3	2.07	100	100	100	100	97.9	98.1
2000	1		RB3	62	Opacity		0		0		0		0	29	46.77	100	100	100	100	53.2	98.7
2000	1		RB4	2175	Opacity	4	4	0.4	0.018		0		0	75	3.45	100	100	100	100	96.6	96.6
2000	1		RB5	2154	Opacity		0		0	1	1	0.1	0.005	86.5	4.02	100	100	100	100	96	96
2000	2	2184	LK4	1983	TRS		0		0		0		0	24	1.21	100	100	100	100	98.8	98.9
2000	2		RB5	2150	TRS		0		0		0		0		0.00	100	100	100	100	100	100
2000	2		WFB	2184	SO2		0		0		0		0	3	0.14	100	100	100	100	99.9	99.9
2000	2		WFB	2184	NOx		0		0		0		0	3	0.14	100	100	100	100	99.9	99.9
2000	2		RB3	1	Opacity		0		0		0		0	0	0.00	100	100	100	100	100	100
2000	2		RB4	2163	Opacity	8	8	0.8	0.037	16	8	1.6	0.074	6.7	0.31	100	100	99.9	99.9	99.7	99.7
2000	2		RB5	2150	Opacity		0		0	1	1	0.1	0.005	34	1.58	100	100	100	100	98.4	98.4
2000	3	2208	LK4	1165	TRS		0		0		0		0	26.7	2.29	100	100	100	100	97.7	98.8
2000	3		RB5	2000	TRS		0		0		0		0	26.2	1.31	100	100	100	100	98.7	98.8
2000	3		WFB	2182	SO2		0		0		0		0	192.8	8.84	100	100	100	100	91.2	91.3
2000	3		WFB	2182	NOx		0		0		0		0	168.8	7.74	100	100	100	100	92.3	92.4
2000	3		RB3	1	Opacity		0		0		0		0	0	0.00	100	100	100	100	100	100
2000	3		RB4	2150	Opacity		0		0		0		0	33.9	1.58	100	100	100	100	98.4	98.5
2000	3		RB5	2000	Opacity		0		0		0		0	35.6	1.78	100	100	100	100	98.2	98.4
2000	4	2208	LK4	1662	TRS		0		0		0		0	12	0.72	100	100	100	100	99.3	99.5
2000	4		RB5	1468	TRS		0		0		0		0	24	1.63	100	100	100	100	98.4	98.9
2000	4		WFB	1784	SO2		0		0		0		0	316.8	17.76	100	100	100	100	See O91 & O92.	
2000	4		WFB	1784	NOx		0		0		0		0	316.8	17.76	100	100	100	100		
2000	4		RB3	1	Opacity		0		0		0		0	0	0.00	100	100	100	100		14.1
2000	4		RB4	1934	Opacity	41	41	4.1	0.212	7	4	0.7	0.036	35.7	1.85	100	100	100	100	98.2	98.4
2000	4		RB5	1468	Opacity		0		0		0		0	34.5	2.35	100	100	100	100	97.6	98.4
2000			**LK4**	**6377**	**TRS**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**64.8**	**1.02**						
2000			**RB5**	**7772**	**TRS**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**83.6**	**1.08**						
2000			**WFB**	**8149**	**SO2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**553.9**	**6.80**						
2000			**WFB**	**8149**	**NOx**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**529.9**	**6.50**						
2000			**RB3**	**65**	**Opacity**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**29**	**44.62**						
2000			**RB4**	**8422**	**Opacity**	**53**	**53**	**5.3**	**0.063**	**23**	**12**	**2.3**	**0.027**	**151.3**	**1.80**						
2000			**RB5**	**7772**	**Opacity**	**0**	**0**	**0**	**0**	**2**	**2**	**0.2**	**0.003**	**190.6**	**2.45**						
2001	1	2160	LK4	1388.9	TRS		0		0		0		0	50.3	3.62	100	100	100	100	96.4	97.7
2001	1		RB5	1940	TRS		0		0	1	1	12	0.619	3	0.15	100	100	99.4	99.4	99.8	99.9
2001	1		WFB	2135	SO2		0		0		0		0	37.5	1.76	100	100	100	100	98.2	98.3
2001	1		WFB	2135	NOx		0		0		0		0	37.5	1.76	100	100	100	100	98.2	98.3
2001	1		RB3		Opacity				0				0		0.00	100	100	100	100	100	100
2001	1		RB4	2132	Opacity	6	6	0.6	0.028	4	2	0.4	0.019	0.8	0.04	100	100	100	100	100	100

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Missoula's Quarterly Emissions Data

SOURCE INFORMATION						EXCURSIONS				MALFUNCTIONS				CEMS INFO		REPORTED % COMPLIANCE				% MONITOR UP	
DATE	QTR.	TIME in QTR.	SOURCE	Op Time (Hrs)	Parameter	CHEER #	SSCC #	TOTAL TIME (Hrs)	% of Op Time	CHEER #	SSCC #	TOTAL TIME (Hrs)	% of Op Time	CEMS Downtime (Hrs)	% of Op Time	EEM	DMOH & EEM	IEM	DMOH & IEM	DOH	DRP
2001	1		RB5	1940	Opacity	1	1	0.1	0.005	5	2	0.5	0.026	0.8	0.04	100	100	100	100	100	100
2001	2	2184	LK4	1491	TRS		0		0		0		0	0	0.00	100	100	100	100	100	100
2001	2		RB5	6	TRS		0		0		0		0	0	0.00	100	100	100	100	100	100
2001	2		WFB	2183	SO2		0		0		0		0	33	1.51	100	100	100	100	98.5	98.5
2001	2		WFB	2183	NOx		0		0		0		0	33	1.51	100	100	100	100	98.5	98.5
2001	2		RB3		Opacity				0				0		0.00	100	100	100	100	100	100
2001	2		RB4	2134	Opacity		0		0		0		0	5.8	0.27	100	100	100	100	99.7	99.7
2001	2		RB5	6	Opacity		0		0		0		0	0	0.00	100	100	100	100	100	100
2001	3	2208	LK4	1400	TRS		0		0		0		0	48	3.43	100	100	100	100	96.6	97.8
2001	3		RB5	67	TRS		0		0		0		0	0	0.00	100	100	100	100	100	100
2001	3		WFB	2087	SO2		0		0		0		0	247.2	11.84	100	100	100	100	88.2	88.8
2001	3		WFB	2087	NOx		0		0		0		0	247.2	11.84	100	100	100	100	88.2	88.8
2001	3		RB3		Opacity				0				0		0.00	100	100	100	100	100	100
2001	3		RB4	2187	Opacity		0		0		0		0	24.9	1.14	100	100	100	100	98.9	98.9
2001	3		RB5	67	Opacity		0		0		0		0	0	0.00	100	100	100	100	100	100
2001	4	2208	LK4	2020	TRS		0		0		0		0	141.6	7.01	100	100	100	100	93	93.6
2001	4		RB5		TRS				0				0		0.00	100	100	100	100	100	100
2001	4		WFB	2037	SO2		0		0		0		0	78	3.83	100	100	100	100	96.2	96.5
2001	4		WFB	2037	NOx		0		0		0		0	69.3	3.40	100	100	100	100	96.6	96.9
2001	4		RB3		Opacity				0				0		0.00	100	100	100	100	100	100
2001	4		RB4	2001	Opacity	7	7	0.7	0.035		0		0	13.5	0.67	100	100	100	100	99.3	99.4
2001	4		RB5		Opacity				0				0		0.00	100	100	100	100	100	100
2001			**LK4**	**6299.9**	**TRS**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**239.9**	**3.81**						
2001			**RB5**	**2014**	**TRS**	**0**	**0**	**0**	**0**	**1**	**1**	**12**	**0.596**	**3**	**0.15**						
2001			**WFB**	**8442**	**SO2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**395.7**	**4.69**						
2001			**WFB**	**8442**	**NOx**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**387**	**4.58**						
2001			**RB3**	**4**	**Opacity**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.00**						
2001			**RB4**	**8454**	**Opacity**	**13**	**13**	**1.3**	**0.015**	**4**	**2**	**0.4**	**0.005**	**45**	**0.53**						
2001			**RB5**	**2014**	**Opacity**	**1**	**1**	**0.1**	**0.005**	**5**	**2**	**0.5**	**0.025**	**0.8**	**0.04**						
2002	1	2160	LK4	866	TRS		0		0		0		0	19.6	2.26	100	100	100	100	97.7	99.1
2002	1		RB5		TRS				0				0		0.00	100	100	100	100	100	100
2002	1		WFB	2122	SO2		0		0		0		0	28.5	1.34	100	100	100	100	98.7	98.7
2002	1		WFB	2122	NOx		0		0		0		0	28.5	1.34	100	100	100	100	98.7	98.7
2002	1		RB3		Opacity				0				0		0.00	100	100	100	100	100	100
2002	1		RB4	2108	Opacity	13	13	1.3	0.062		0		0	21.2	1.01	100	100	100	100	99	99
2002	1		RB5		Opacity				0				0		0.00	100	100	100	100	100	100
2002	2	2184	LK4	1869.6	TRS		0		0		0		0	24	1.28	100	100	100	100	98.7	98.9
2002	2		RB5	48.2	TRS		0		0	1	1	4.8	9.959		0.00	100	100	90	90	100	100
2002	2		WFB	2145	SO2		0		0		0		0	86.5	4.03	100	100	100	100	96	96
2002	2		WFB	2145	NOx		0		0	1	1	69	3.217	14.5	0.68	100	100	96.8	96.8	99.3	99.3
2002	2		RB3		Opacity				0				0		0.00	100	100	100	100	100	100
2002	2		RB4	2132	Opacity	8	8	0.8	0.038	1	1	0.1	0.005	5.6	0.26	100	100	100	100	99.7	99.7
2002	2		RB5	48.2	Opacity		0		0		0		0	24	49.79	100	100	100	100	50.2	98.9
2002	3	2256	LK4	1320.2	TRS		0		0		0		0	121	9.17	100	100	100	100	90.8	94.6
2002	3		RB5	195	TRS		0		0		0		0	0	0.00	100	100	100	100	100	100
2002	3		WFB	1800	SO2		0		0		0		0	252	14.00	100	100	100	100	86	88
2002	3		WFB	1800	NOx		0		0		0		0	180	10.00	100	100	100	100	90	92
2002	3		RB3		Opacity				0				0		0.00	100	100	100	100	100	100
2002	3		RB4	1920	Opacity		12	1.2	0.063		1	0.3	0.016	25.6	1.33	100	100	100	100	98.7	98.9
2002	3		RB5	195	Opacity		1	0.1	0.051		0		0	1.5	0.77	100	100	100	100	99.2	99.9
2002	4	2208	LK4	1665.6	TRS		0		0		0		0	2.6	0.16	100	100	100	100	99.8	99.9

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Missoula's Quarterly Emissions Data

SOURCE INFORMATION						EXCURSIONS				MALFUNCTIONS				CEMS INFO		REPORTED % COMPLIANCE				% MONITOR UP	
DATE	QTR.	TIME in QTR.	SOURCE	Op Time (Hrs)	Parameter	CHEER #	SSCC #	TOTAL TIME (Hrs)	% of Op Time	CHEER #	SSCC #	TOTAL TIME (Hrs)	% of Op Time	CEMS Downtime (Hrs)	% of Op Time	EEM	DMOH & EEM	IEM	DMOH & IEM	DOH	DRP
2002	4		RB5		TRS				0				0		0.00	100	100	100	100	100	100
2002	4		WFB	2158	SO2		0		0		0		0	213.1	9.87	100	100	100	100	90.1	90.3
2002	4		WFB	2158	NOx		0		0		0		0	93.1	4.31	100	100	100	100	95.7	95.8
2002	4		RB3		Opacity				0				0		0.00	100	100	100	100	100	100
2002	4		RB4	2183	Opacity		11	1.1	0.05		0		0	71.7	3.28	100	100	100	100	96.7	96.8
2002	4		RB5		Opacity				0				0		0.00	100	100	100	100	100	100
2002			**LK4**	**5721.4**	**TRS**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**167.2**	**2.92**						
2002			**RB5**	**245.2**	**TRS**	**0**	**0**	**0**	**0**	**1**	**1**	**4.8**	**1.958**	**0**	**0.00**						
2002			**WFB**	**8225**	**SO2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**580.1**	**7.05**						
2002			**WFB**	**8225**	**NOx**	**0**	**0**	**0**	**0**	**1**	**1**	**69**	**0.839**	**316.1**	**3.84**						
2002			**RB3**	**4**	**Opacity**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.00**						
2002			**RB4**	**8343**	**Opacity**	**21**	**44**	**4.4**	**0.053**	**1**	**2**	**0.4**	**0.005**	**124.1**	**1.49**						
2002			**RB5**	**245.2**	**Opacity**	**0**	**1**	**0.1**	**0.041**	**0**	**0**	**0**	**0**	**25.5**	**10.40**						
2003	1	2160	LK4	1899	TRS		0		0		0		0	57	3.00	100	100	100	100	97	97.4
2003	1		RB5		TRS				0				0		0.00	100	100	100	100	100	100
2003	1		WFB	2150	SO2		0		0		0		0	57	2.65	100	100	100	100	97.3	97.4
2003	1		WFB	2150	NOx		0		0		0		0	57	2.65	100	100	100	100	97.3	97.4
2003	1		RB3		Opacity				0				0		0.00	100	100	100	100	100	100
2003	1		RB4	2120	Opacity		0		0		0		0	42.9	2.02	100	100	100	100	98	98
2003	1		RB5		Opacity				0				0		0.00	100	100	100	100	100	100
2003	2	2184	LK4	1954	TRS		0		0		0		0	108	5.53	100	100	100	100	94.5	95.1
2003	2		RB5	47	TRS		0		0		0		0	3.75	7.98	100	100	100	100	92	99.8
2003	2		WFB	2134	SO2		0		0		0		0	83	3.89	100	100	100	100	96.1	96.2
2003	2		WFB	2134	NOx		0		0		0		0	83	3.89	100	100	100	100	96.1	96.2
2003	2		RB3		Opacity				0				0		0.00	100	100	100	100	100	100
2003	2		RB4	2132	Opacity		44	4.4	0.206		0		0	1	0.05	100	100	100	100	100	100
2003	2		RB5	47	Opacity		0		0		0		0	0.75	1.60	100	100	100	100	98.4	100
2003			**LK4**	**3853**	**TRS**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**165**	**4.28**						
2003			**RB5**	**48**	**TRS**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3.75**	**7.81**						
2003			**WFB**	**4284**	**SO2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**140**	**3.27**						
2003			**WFB**	**4284**	**NOx**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**140**	**3.27**						
2003			**RB3**	**2**	**Opacity**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.00**						
2003			**RB4**	**4252**	**Opacity**	**0**	**44**	**4.4**	**0.103**	**0**	**0**	**0**	**0**	**43.9**	**1.03**						
2003			**RB5**	**48**	**Opacity**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.75**	**1.56**						

EEM - excluding equipment malfunctions
DMOH&EEM - during monitor operating hours & excluding equipment malfunctions
IEM - including equipment malfunctions
DMOH&IEM - during monitor operating hours & including equipment malfunctions
DOH - during operating hours
DRP - during reporting period

35% opacity allowed for a RB installed before 11/23/68, but after this date 30% opacity is allowed.
On 2/11/99 variability allowance for opacity emissions were revised to 6% and 3% for RB4 and RB5 respectively.

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CLUSTER RULE MACT I REPORTS

	Excess Emissions - 1% Allowance			10% Allowance	5% Allowance		
DATES	LVHC-NCG System	LVHC-NCG Closed Vent & Treatment Sys	Pulping Condensate Collection	Pulping Condensate Treatment	Closed Vent Bypass	Thermal Oxidizer Temp.	Stripper Monitoring System
10/02 - 4/03	0.5	0.8	0	2.5	0	0	0
4/02 - 10/02	0.4	0.4	0	2.3	0	0	0.1
10/01 - 4/02	0.2	0.5	0	13.5	0	0	1.1
4/01 - 10/01	0.7	1.8	0	13.4	0	0	0.6

Above allowance.

Stone Container Corporation

Ambient PM_{10} Trend Analysis

Years 1995 - 2003

	Number of Samples with Concentrations Greater Than 150 ug/m^3 [1]												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1995													
#1A	0	0	0	0	0	0	0	0	0	0	0	0	0
#2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1996													
#1A	0	0	0	0	0	0	0	0	0	0	0	0	0
#2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1997													
#1A	0	0	0	0	0	0	0	0	0	0	0	0	0
#2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1998													
#1A	0	0	0	0	0	0	0	0	0	0	0	0	0
#2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1999													
#1A	0	0	0	0	0	0	0	0	0	0	0	0	0
#2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
2000													
#1A	0	0	0	0	0	0	0	1[2]	0	0	0	0	1
#2	0	0	0	0	0	0	0	1[2]	0	0	0	0	1
Total	0	0	0	0	0	0	0	2	0	0	0	0	2
2001													
#1A	0	0	0	0	0	0	0	0	0	0	0	0	0
#2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
2002													
#1A	0	0	0	0	0	0	0	0	0	0	0	0	0
#2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
2003													
#1A	0	0	0	0	0	0							0
#2	0	0	0	0	0	0							0
Total	0	0	0	0	0	0							0

[1] MAAQS is 150 µg/m^3, ARM 17.8.223.

[2] Most likely due to forest fire-generated particulates and not to activities at the Missoula Mill.

Stone Container Corporation

Ambient H_2S Trend Analysis

Years 1993 - 2003

	Number of Hours with Concentrations Greater Than 0.050 ppm[1]												
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1993													
Total	5	10	6	1	3	3	12	1	0	0	0	0	41
1994													
Total	0	0	0	0	1	0	2	2	3	8	0	0	16
1995													
Total	1	0	0	0	0	6	6	22	8	1	0	0	44
1996													
#1A	0	0	1	0	0	2	1	6	4	0	0	0	14
#2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	0	2	1	6	4	0	0	0	14
1997													
#1A	0	0	0	0	0	0	33	7	1	0	0	0	41
#2	0	0	0	2	0	0	7	3	2	0	0	0	14
Total	0	0	0	2	0	0	40	10	3	0	0	0	55
1998													
#1A	0	1	0	0	0	1	0	0	0	0	ND[2]	2	4
#2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	1	0	0	0	0	0	2	4
1999													
#1A	0	0	0	4	0	4	14	5	0	0	0	0	27
#2	0	0	0	0	0	0	3	9	1	0	0	0	13
Total	0	0	0	4	0	4	17	14	1	0	0	92	40
2000													
#1A	0	0	0	0	0	9	34[3]	10[3]	0	0	0	0	53
#2	0	0	0	0	1	8	66[3]	26[3]	4	0	0	0	105
Total	0	0	0	0	1	17	100	36	4	0	0	0	158
2001													
#1A	0	0	0	0	0	0	14	5	1	0	0	0	20
#2	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	14	5	5	0	0	0	20
2002													
#1A	0	0	2	0	0	1	0	3	3	0	0	0	9
#2	0	0	0	0	0	0	1	0	1	0	0	0	2
Total	0	0	2	0	0	1	1	3	4	0	0	0	11
2003													
#1A	0	0	0	0	0	28							28
#2	0	0	0	0	0	0							0
Total	0	0	0	0	0	28							28

(1) MAAQS is 0.05 ppm or 50 ppb, ARM 17.8.214.

(2) No valid data were collected at Site #1A during November 1998 due to an anomalous calibration conducted on October 30.

(3) May have been influenced by the presence of forest fire-created smoke and the accompanying meteorological conditions.

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DEQ COMMUNICATION CONCERNS

DATE	COMMUNICATION	CONCERN
7/28/2003	Inspection	NFA of H2S ambient exceedances.
7/3/2003	Warning Letter	Failure to test the MF Boiler during 1st Qtr. Of 2003.
5/19/2003	Warning Letter	For 2002 H2S exceedances.
2/26/2003	RFI	For 2002 3rd & 4th Qtr. High MFB SO2 CEMS downtime.
9/30/2002	Inspection	NFA of H2S ambient exceedances.
4/24/2002	NFA	For MFB scrubbing system demister problem.
10/16/2002	NFA	For 2002 2nd Qtr. High RB5 opacity CEMs downtime.
6/14/2001	Inspection	NFA of H2S ambient exceedances.
4/24/2001	NFA	For 2000 H2S exceedances.
11/16/2000	NFA	For 2000 3rd Qtr. High WFB SO2 & NOx CEMS downtime.
8/9/2000	NOV?	For LK1 TSP limit exceedance.
3/14/2000	RFI	For RB#4 TRS exceedance on 1/8/00.
3/13/2000	NFA	For 1999 4th Qtr. High WFB SO2 & NOx & RB3 opacity CEMS downtime.
6/10/1999	NFA	For 1999 1st Qtr. RB4 & RB3 opacity CEMS downtime.
3/5/1999	Concern	For 1998 4th Qtr. LK4 TRS & WFB SO2 & NOx CEMS downtime.
8/6/1998	NFA	For 1998 2nd Qtr. WFB SO2 & NOx CEMS downtime.
5/5/1998	NFA	For February 1998 WFB stack test failure.

Other issues at Missoula.

1) Outstanding audit items.
2) Millwide June SO2 (5000 lb/day) exceedance. Expect DEQ warning letter.
3) Overdue on MACT I compliance status report by at least 1 year. Now about 90% complete.
4) H2S/TRS release reporting.
5) No. 4 Smelt Dissolving Tank scrubber malfunction (pluggage) which includes the #3 slaker.
DEQ is planning a Request for More Information.
6) Potential discharge of plastic to the Clark Fork River.
7) Open UST removal/remediation seven years ago.

NCG release - CERCLA 10 lbs - Bill Hatty

Missoula's Monthly NPDES Discharge Data

DATE	EXCURSIONS									MONITORING EXCEPTIONS	
	Δ Color (Δ5 SCU)			pH (6 - 9)			DO				
	C #	S #	Value(s)	C #	S #	Value(s)	C #	S #	Value(s)	C #	EXPLANATION
May-98		7	6,7,7,7,6,7,8								
Jun-98	7	1	6								
Jul-98	1	0									
Aug-98		0									
Sep-98		0									
Oct-98		0									
Nov-98		0									
Dec-98		1	7								
Jan-99	1	1	6) below								
Feb-99	1	0	7Q10								
Mar-99		0									
Apr-99		0									
May-99		0									
Jun-99		0									
Jul-99		0									
Aug-99		0									Temp. not recorded: 8/11-17, but there was no direct discharge during this period.
Sep-99		0								1	6-Mile temp. recorder was removed from service on 9/15
Oct-99		0								1	
Nov-99		0			1	9.3/8.3					
Dec-99		0		1							
Jan-00		0									On 1/8/00, the lab spectrophotometer became erratic, but direct discharge was stopped until it was repaired.
Feb-00		0								1	On 2/6/00, the lab spectrophotometer became erratic, but direct discharge was stopped until it was repaired.
Mar-00		0								1	
Apr-00		0									
May-00		0									
Jun-00		0									
Jul-00		0									From 7/22-31/00, temp. recorder for 004 was not tracking time, but was tracking temp.
Aug-00		0								1	
Sep-00											
Oct-00		0									
Nov-00											
Dec-00		0									
Jan-01		0									
Feb-01		0									
Mar-01		0									
Apr-01		2	6,6								

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Missoula's Monthly NPDES Discharge Data

DATE	EXCURSIONS									MONITORING EXCEPTIONS	
	Δ Color (Δ5 SCU)			pH (6 - 9)			DO				
	C #	S #	Value(s)	C #	S #	Value(s)	C #	S #	Value(s)	C #	EXPLANATION
May-01	2	12	6,6,7,7,8,8,6,7,6,6,6,7								
Jun-01	12	1	6		1	9.1					
Jul-01	1	1	6	1							
Aug-01	1	0									
Sep-01		0									
Oct-01		0									
Nov-01		0									
Dec-01											
Jan-02		0									
Feb-02		0									From 2/21-25/02, temp was not recorded at 004, but we were not discharging directly.
Mar-02		0								1	
Apr-02		0									On 4/6/02, the composite sample was not taken, however the now two-day composite sample collected on the 7th was divided for both days.
May-02		0								1	On 5/15/02, the river DO dropped below 9, requiring measuring every other day which was not done until 5/22/02 (7 days later).
Jun-02		0			2	9, 9.3	1				The continuous river temp recorder could not be installed until July due to flooded conditions, but readings were taken twice a day.
Jul-02		0		2	1	9.3				1	
Aug-02		0		1							
Sep-02		0									
Oct-02		0									
Nov-02		0									
Dec-02		0									
Jan-03		0									
Feb-03		0									
Mar-03		0								1	
Apr-03		0			1	9.1					On 5/22/03, the river DO dropped below 9, requiring measuring every other day which was not done until 5/29/03 (7 days later).
May-03		1	8		8	4x9.1, 2x9.2, 9.3, 9.5				1	One set of TKN (5/23/03) was not reported due to digestion unit malfunction.
Jun-03											
Jul-03										1	

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CHEER

CHEER PROJECTS

CHEERCD

Agreement

E00011092

UNITED STATES DISTRICT COURT
DISTRICT OF MONTANA

MONTANA COALITION for HEALTH, ENVIRONMENTAL and ECONOMIC RIGHTS, Inc., COLD MOUNTAIN, COLD RIVERS, Inc. and NATIVE FOREST NETWORK, Inc. Plaintiff, VS. STONE CONTAINER CORPORATION, Defendant.	Civil Action No. CV 96-24-M-CCL

CONSENT DECREE

WHEREAS, the Plaintiffs, Montana Coalition for Health, Environmental and Economic Rights, Inc. ("Montana CHEER"), Cold Mountain, Cold Rivers, Inc. ("CMCR"), and Native Forest Network, Inc. ("NFN"), filed a Complaint on January 29, 1996, and an Amended Complaint on February 7, 1996, against Defendant, Stone Container Corporation ("Stone") alleging violations of the terms and conditions of Stone's National/Montana Pollutant Discharge Elimination System ("MPDES") Permit number MT-0000035 and effluent standards or limitations pursuant to § 505(a)(1)(A) of the Clean Water Act ("CWA"), 33 U.S.C. § 1365(a)(1)(A); violations of the terms and conditions of Stone's Air Quality Permits numbers 2589-01 through 05 and emission standards or limitations pursuant to § 304(a)(1)(A) of the Clean Air Act

UNITED STATES DISTRICT COURT
DISTRICT OF MONTANA

MONTANA COALITION for HEALTH, ENVIRONMENTAL and ECONOMIC RIGHTS, Inc., COLD MOUNTAIN, COLD RIVERS, Inc. and NATIVE FOREST NETWORK, Inc. Plaintiff, VS. STONE CONTAINER CORPORATION, Defendant.	Civil Action No. CV 96-24-M-CCL

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("CAA"), 42 U.S.C. § 7604(a)(1)(A); and violations of reporting requirements under § 313 of the Emergency Planning and Community Right-to-Know Act ("EPCRA"), 42 U.S.C. § 11023, and § 6607 of the Pollution Prevention Act of 1990, 42 U.S.C. 13106(a) (hereinafter incorporated into Section 313 of EPCRA, 42 U.S.C. 11023), pursuant to EPCRA § 326, 42 U.S.C. § 11046, seeking declaratory and injunctive relief, civil penalties and attorneys fees and costs;

WHEREAS, Defendant denies Plaintiffs' claims and any liability for the alleged violations; and

WHEREAS, the parties to this action have engaged in discussions relating to the potential settlement of this litigation, which discussions have included an assessment of the facts surrounding the alleged violations; and

WHEREAS, Defendant has committed itself to, and will continue implementing, measures to prevent pollution and assure compliance with its MPDES permit, the CWA, its CAA permit, and reporting requirements of EPCRA; and

WHEREAS, Plaintiffs and Defendant agree that settlement of these matters is in the best interest of the parties and the public, and that entry of this Consent Decree without additional litigation is the most appropriate means of resolving these actions; and

WHEREAS, Plaintiffs and Defendant, by their authorized counsel and without trial or final adjudication of the issues of

fact or law, with respect to Plaintiffs' claims or allegations, consent to the entry of this Decree in order to avoid the risks (and, as to Defendant, the costs) of litigation and to resolve the controversy between them;

NOW THEREFORE, without trial of any issue of fact or law, and without admission by the Defendant of the facts or violations alleged in the Amended Complaint, and upon consent of the parties, and upon consideration of the mutual promises herein contained, it is hereby ORDERED, ADJUDGED AND DECREED as follows:

1. For purposes of entering this decree, this Court finds that it has jurisdiction over the parties and subject matter of this action, pursuant to 33 U.S.C. § 1365, 42 U.S.C. § 7604, 42 U.S.C. § 11026, and 28 U.S.C. § 1331.

2. The undersigned representative for each party certifies that he/she is fully authorized by the party or parties whom he/she represents to enter into the terms and conditions of this Decree and to legally bind the party or parties to it.

3. This Decree shall apply to and be binding upon the parties to this action, and upon the successors and assigns of the parties.

4. Stone operates container board manufacturing facilities located in Frenchtown, Montana, near Missoula.

5. This Decree constitutes a full and complete settlement of the claims contained in the Amended Complaint filed in this case and is determined to be in the public interest and an

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appropriate resolution of the allegations in Plaintiffs' Amended Complaint.

6. This Decree shall not constitute evidence in any proceeding, an admission or adjudication with respect to any allegation of the Amended Complaint, any fact or conclusion of law with respect to any matter alleged in or arising out of the Amended Complaint, or the admission or evidence of any wrongdoing or misconduct on the part of the Defendant, any director, officer or any affiliated person.

7. In full and complete satisfaction of the claims covered by the Amended Complaint filed in this case, Stone shall make payments to the following named recipients in the amounts, and for the periods described, and Stone shall implement and perform the following substantive programs, subject to the following terms and conditions:

A. Penalties and Payments

1. Stone shall pay a penalty of fifty thousand dollars ($50,000.00) within thirty (30) days of the entry of this Consent Decree to the United States Treasury, c/o Saundra Doyle, United States Department of Justice, Executive Office, Room 6732, P.O. Box 7754, Washington, D.C. 20044-7754. A copy of this Consent Decree shall be sent with the payment. A copy of the check and covering letter shall be sent simultaneously to Plaintiffs.

2. Stone shall provide funding in the amount of three hundred thousand dollars ($300,000.00) over a five (5) year period commencing with the entry of this Consent Decree for the projects specified below. Approximately $60,000 per year will be apportioned among a) the Missoula City-County Air Pollution Control Board, b) the Missoula Water Quality District Board, and c) the Missoula County Local Emergency Planning Committee, such that at

least $150,000 shall be paid within thirty (30) months of the date of entry of this Consent Decree. It is the parties' intent that over the five-year period the Missoula City-County Air Pollution Control Board and the Missoula Water Quality District Board shall each receive approximately $120,000 and the Missoula County Local Emergency Planning Committee shall receive approximately $60,000. A copy of this Consent Decree shall be sent with the first payment made to each of the respective entities. Payments shall be sent to:

For the Missoula City-County Air Pollution Control Board: Chairman, Missoula City-County Air Pollution Control Board, 301 W. Alder St., Missoula, MT 59802-4123;

For the Missoula Water Quality District Board: Chairman, Missoula Water Quality District Board, 301 W. Alder St., Missoula, MT 59802-4123;

For the Missoula Local Emergency Planning Committee: Bill Silverman, Missoula County Office of Emergency Management, 200 W. Broadway, Missoula, MT 59802-4292.

A copy of the check and covering letter for each payment made shall be sent simultaneously to Plaintiffs. The money shall be used by the above-named entities to fund the projects described below:

- Approximately $90,000 over five (5) years to assist the Missoula City-County Air Pollution Control Board in performing source characterization and ambient level studies of PM-2.5 and PM-10 in the Missoula valley airshed.
- Approximately $30,000 over two (2) years to assist the Missoula City-County Air Pollution Control Board in performing source characterization and ambient level studies of volatile organic compounds in the Missoula valley airshed. These studies may also include hazardous air pollutants, to the extent that the Missoula City-County Air Pollution Control Board determines such expansion of the studies is appropriate and will not impair adequate assessment of volatile organic compounds with the available funds.
- Approximately $70,000 over five (5) years to perform or enhance a study or studies to

better define, quantify, and interpret nonpoint source contribution of nutrients (nitrogen and phosphorus) into the Clark Fork watershed. This study or studies may also include nonpoint source contributions of other pollutants, if the Missoula Water Quality District Board determines such expansion of the study is appropriate and will not prevent adequate assessment of nutrients with the available funds.

- Approximately $10,000 per year over five (5) years to expand the annual household hazardous waste collection weekend to extend to more days and/or to cover a wider range of wastes, and for public education to prevent or minimize release or generation of household hazardous wastes.
- Approximately $2,000 per year over five (5) years to the Local Emergency Planning Committee to assist it in implementing programs consistent with its statutory mandate.
- Approximately $10,000.00 per year over five (5) years to pay for professional trainers to put on programs throughout Missoula County, or for selected individuals to travel from Missoula for professional training, to better prepare the Local Emergency Planning Committee to respond to releases of hazardous substances; and to purchase emergency response and communication equipment identified by the Local Emergency Planning Committee as needed for emergency responders throughout Missoula County to be better prepared to respond to releases of hazardous substances.

The money is intended to be for additional work, rather than replacing existing funding or for expenditures required by law.

3. Habitat Restoration and Creation

a. Stone shall spend one hundred thousand dollars ($100,000) over a maximum five (5) year period commencing with the entry of this Consent Decree for habitat restoration and creation projects adjacent to the Clark Fork River between Harper's Bridge and Alberton. Regarding the identification of project areas along the Clark Fork River

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adjacent to Stone's property that are suitable for habitat restoration and creation projects, Stone shall consult with Bitterroot Restoration, Inc. ("BRI") and the Wildlife Habitat Council ("WHC") to identify areas that will provide lasting benefits to the Clark Fork River riparian zone. At least half of the $100,000 (i.e., $50,000) shall be spent on projects on the Clark Fork River not adjacent to Stone's property. With respect to areas not adjacent to Stone's property but between Harper's Bridge and Alberton, Stone shall spend money on projects that are among those identified as suitable for habitat restoration and creation projects by BRI and WHC after consultation with the parties. At least $60,000 shall be expended by the end of three (3) years after entry of the Consent Decree, with at least $30,000 having been spent in areas not adjacent to Stone's property.

b. Stone shall, after consultation with Plaintiffs, spend fifty thousand dollars ($50,000) over a maximum of three years, commencing with entry of this Consent Decree, on habitat restoration and creation projects to enhance the recovery of Bull Trout in the Clark Fork Basin within the Western Montana region.

B. Pollution Prevention Program

1. Stone shall retain as a consultant Dr. Robert Pojasek to assist in developing and implementing a five (5) year Pollution Prevention Program ("P2 Program"), the criteria of which are set out in Addendum A. An initial Pollution Prevention Plan ("P2 Plan") shall be completed and provided to Plaintiffs no later than six (6) months after the entry of this Consent Decree.

2. The P2 Plan shall address and begin to prioritize for activities actual and potential pollution sources at Stone's facility, including chemicals transferred, stored, used, produced, generated, or released into the environment, and be based upon pollution prevention priorities identified in Addendum A and in this Consent Decree.

3. Stone shall produce and provide to Plaintiffs an annual report detailing and updating Stone's implementation of the P2 Program. Dr. Pojasek (or another expert acceptable to Plaintiffs) shall

provide annual certification as to whether Stone is complying with the P2 Program, which shall be appended to Stone's annual report. The first annual report shall be due on or before the date 12 months after the P2 Plan is submitted to Plaintiffs and annually thereafter on or before the succeeding four anniversary dates of submission of the initial P2 Plan.

4. Stone shall provide Plaintiffs, Montana DEQ, US EPA, and the Missoula County Health Department with a copy of the P2 Plan described in subsection B.1. above and the annual reports described in subsection B.3. above upon their completion.

5. Stone's P2 Program shall be consistent with the criteria described in Addendum A, which are incorporated herein by reference.

6. Stone shall designate Bleach Plant Effluents ("BPE") as a priority pollution prevention item for its P2 Program, including the separation of the BPE from the general wastewater treatment system to eliminate mixing of BPE with effluent from other wastewater processes until after those other wastewaters have undergone primary clarification.

7. Stone shall designate Old Corrugated Container ("OCC") rejects as a priority pollution prevention item for its P2 Program as more specifically set forth in subsection E below.

C. Risk Management Program

1. As part of Stone's implementation and compliance with the U.S. Environmental Protection Agency's Risk Management Program ("RMP") regulations promulgated pursuant to Section 112(r) of the Clean Air Act, Dr. Pojasek (or another expert acceptable to plaintiffs) shall review any draft accident prevention program prepared by the Missoula Mill under the RMP regulations to assess whether pollution prevention opportunities have been or could be considered as part of the accident prevention program. In addition, Stone will provide an opportunity for Dr. Pojasek to discuss Stone's implementation of the hazard assessment portion of the RMP regulations with Stone personnel and/or consultants performing the RMP hazard assessment, to be sure that the

information Dr. Pojasek has obtained during his work with the Missoula Mill on its P2 Program is taken into account in structuring the hazard assessment, to the extent appropriate and consistent with the RMP regulations. Likewise, Dr. Pojasek will assist Stone in developing a mechanism so that information about hazards identified through Stone's activities to comply with the RMP regulations are taken into account in Stone's P2 Program. Dr. Pojasek will have access to all Stone personnel and information necessary to perform his role.

2. Dr. Pojasek's annual report certifying Stone's implementation and compliance with the P2 Program, discussed in subsection B.3, will include a section which indicates how pollution prevention opportunities were considered in the RMP program, if any relevant activity occurred in that year.

D. Conversion to Alternative Bleaching Process

1. Stone has already included Dr. Pojasek in Stone's ongoing evaluation of alternatives to its current bleaching technology. Dr. Pojasek shall discuss, with the officials responsible for that analysis, the factors that Stone is evaluating, including the process Stone used to identify TCF technologies for further evaluation and the extent to which environmental costs and benefits of the various technology options are being included in the analysis. Dr. Pojasek shall submit to Stone a written review of the process Stone is using to identify and evaluate alternative technologies and shall make suggestions for including pollution prevention considerations, as identified in Addendum A, into that process. Stone will take Dr. Pojasek's comments and suggestions into account and will reflect or respond to those comments, as appropriate, in its discussion of its analysis of bleaching alternatives with the Plaintiffs described in subsection D.2. below. Dr. Pojasek will have access to all Stone personnel and information necessary to perform his role.

2. Subject to subsection I., Stone shall provide the results of its completed analysis of alternatives to its current bleaching technology, as well as the results of Dr. Pojasek's review, to the Plaintiffs as soon as it is available and at

least thirty (30) days prior to any final decision on technologies is made. Stone shall schedule a meeting with Plaintiffs within twenty-five (25) days after the results of Stone's analyses of alternative bleaching processes have been provided to Plaintiffs to discuss the analyses with Plaintiffs and review any comments provided by Plaintiffs.

3. Stone will continue to evaluate any new information that might further reduce the environmental impact of the pulp bleaching technology chosen above as part of its P2 Program described in subsection B.

E. OCC Rejects

1. Stone shall assess technologies and processes for handling OCC rejects with the goal of eliminating the burning of OCC rejects containing chlorinated plastics. Stone shall continue to work with Philip Environmental Services, Inc., or any other presently identified entities, to identify, evaluate, and implement, where determined to be technically and economically feasible, processes to handle OCC rejects such that burning would be reduced or eliminated.

2. Stone shall commit at least $150,000, to be spent as needed over the term of this Consent Decree, to the OCC alternatives identification and assessment process.

3. Stone shall work with Dr. Pojasek (or another expert acceptable to plaintiffs), to identify and prioritize potential alternative processes for handling the OCC reject waste stream and to establish schedules and costs for exploring potential alternatives.

4. Stone shall provide a written report to Plaintiffs by August 1, 1998 and February 1, 1999, detailing the status of the OCC alternatives review processes. Thereafter, Stone shall provide a detailed status report as part of the annual pollution prevention report required by this Consent Decree, unless burning of OCC rejects containing chlorinated plastics has been eliminated.

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5. If Plaintiffs should identify a third party that will take or purchase the OCC rejects, and Stone concludes that transferring the OCC rejects to that third party would not entail significant risk to Stone in light of the planned use of the OCC rejects, the experience and record of the third party, the reliability of the technology to be used, and the like, then Stone will use any net savings achieved by avoiding landfilling the OCC rejects to fund projects Stone identifies in the Missoula area that would help improve recycling of paper and paperboard.

F. Alternative and Recycled Fibers

1. Within one year after entry of the Consent Decree, and again no later than the third and fifth anniversary dates of entry of the Consent Decree, Stone shall update its analysis of the economic and technical feasibility, including issues of fiber availability, of incorporating alternative fibers into its production processes. As part of this analysis, Stone will retain Dr. Pojasek (or another expert acceptable to Plaintiffs) to assist Stone in identifying and accounting for any pollution prevention benefits that might accompany the use of an alternative fiber.

2. Subject to the provisions of subsection I.1., Stone shall provide Plaintiffs with a report on these biennial updates of its analysis of the feasibility of incorporating alternative fibers into its production processes, by the dates provided in the preceding paragraph. That biennial report, as well as an update on Stone's use of recycled fibers in its production processes, shall be included as part of Stone's P2 Program annual reports required under subsection B.3. above.

G. Mill Operations Environmental Committee

1. Stone shall establish a Mill Operations Environmental Committee ("MOEC") consisting of equal numbers of Stone's salaried and hourly employees, with at least three (3) members from each group.

2. The MOEC shall meet at least bimonthly, during working hours, for the purpose of

identifying and addressing environmental issues at Stone's facility, including but not limited to the implementation of the P2 Program, discussed in subsection B, and subsections C-F. Dates such meetings took place shall be listed as part of the P2 Program annual reports.

H. Community Advisory Panel

1. Stone has established a Community Advisory Panel ("CAP") to provide a forum for dialogue with the community regarding Stone's facility and processes. One of Plaintiffs' representatives has been invited to participate as an initial member of the CAP.

2. Stone shall provide the CAP with each completed report or similar document required to be prepared by this Consent Decree; except that parts of reports or documents required under this Consent Decree revealing confidential information may be withheld from the CAP.

I. Plaintiffs' Access to Stone's Facility, Management Personnel, and Documents Required to be Produced Under this Consent Decree

1. Stone shall make available for Plaintiffs' review each report or similar document, upon completion, required to be prepared by this Consent Decree; parts of reports or documents required under this Consent Decree to be released to Plaintiffs may contain proprietary, trade secret, or other non-public information, the disclosure of which might cause substantial harm to Stone's competitive position, market share, customer base, and the like. Such information shall be handled in accordance with a Stipulation and Protective Order of the form attached as part of Addendum B to this Consent Decree. Each representative of Plaintiffs shall execute and provide to Stone an Oath of Confidentiality, such as that included in Addendum B attached hereto, prior to receiving information so designated by Stone.

2. After each completed report or document required by this Consent Decree to be generated by Stone and submitted to Plaintiffs is received by Plaintiffs, Stone shall schedule, within thirty (30) days of Plaintiffs' request, a meeting

between Plaintiffs' representatives and Stone's management personnel responsible for implementing the provisions of this Consent Decree, whereby Plaintiffs will be able to ask questions about and discuss the report or document with Stone's management personnel responsible for implementing the provisions of this Consent Decree. In addition, where such meeting is to discuss the annual report on the P2 Program required by subsection B.3., Stone will arrange for Dr. Pojasek (or the other expert described in subsection B.3.) to participate in the meeting to answer questions about his review of Stone's implementation of the P2 Program.

3. Stone shall give an annual tour of its facilities, if requested, for up to three (3) Plaintiffs' representatives. Such tour shall take place within ninety (90) days of the annual reports required in subsection B.3. above and shall include any portion of the Missoula Mill where activities covered by this Consent Decree have taken place in the preceding year.

8. The sums to be paid and the substantive programs to be developed and implemented under the terms of this Consent Decree shall constitute full settlement of the allegations in the Amended Complaint and, with regard to the allegations in the Amended Complaint, shall completely discharge Defendant, with respect to the Defendant's facilities located in Frenchtown, Montana, from any and all liability to the Plaintiffs under the CWA concerning the allegations in Plaintiffs' Amended Complaint through the date of December 10, 1996, from any and all liability to the Plaintiffs under the CAA concerning the allegations in Plaintiffs' Amended Complaint through the date of December 10, 1996, and from any and all liability to the Plaintiffs under EPCRA concerning the allegations in Plaintiffs' Amended Complaint through the date of December 10, 1996.

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9. Neither Plaintiffs nor any other person or entity acting with, by or through Plaintiffs, in either their own or in a representative capacity, shall file or cause to be filed any suit in any court under the CWA, CAA or EPCRA or participate in any administrative enforcement proceeding or hearing concerning enforcement of the same alleged violations or exceedances referred to in paragraph 8 above. In addition, prior to June 10, 1999, neither Plaintiffs nor any other person or entity acting with, by or through Plaintiffs, in either their own or in a representative capacity, shall file or cause to be filed any suit in any court under the CWA, CAA or EPCRA or participate in any administrative enforcement proceeding or hearing concerning any other alleged violation or exceedances of the same requirements referred to in paragraph 8 above that may occur between December 10, 1996 and June 10, 1999; provided, however, that nothing in this paragraph shall preclude Plaintiffs or any other person or entity acting with, by or through Plaintiffs, in either their own or in a representative capacity, from filing or causing to be filed any suit in any court, or participating in any administrative proceeding or hearing, concerning enforcement of regulatory requirements not covered in Plaintiffs' Amended Complaint, or for violations of the requirements referred to in paragraph 8 that occur after December 10, 1996 and are fundamentally different in magnitude or duration from the alleged violations or exceedances referred to in paragraph 8. In

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addition, during the term of this Consent Decree, at least sixty (60) days before Plaintiffs or any one of them serves a sixty-day notice of intent to sue Stone for any alleged violation of environmental law of the type covered by Plaintiffs' Amended Complaint, they shall send a written notice to Stone outlining the nature of the alleged violations and offering to meet with Stone to discuss the matter within thirty (30) days of the letter.

10. Stone agrees to provide Plaintiffs with its monthly air and water Compliance Reports, Quarterly Excess Emission Reports, and annual Form Rs submitted under EPCRA for the term of this Decree at the same time as such documents are submitted to the United States Environmental Protection Agency and/or the Montana Department of Environmental Quality pursuant to Stone's MPDES permit, CAA permits and Section 313 of EPCRA.

11. Notwithstanding the provisions of paragraph 8 and paragraph 9 above, if Stone should fail to make any payment, or fail to implement or comply with any of the substantive provisions required by this Consent Decree, Plaintiffs shall have the right to bring suit, to intervene in any other suit, or to take any other action they desire to effectuate or enforce this Consent Decree. Before a party invokes the Court's jurisdiction to interpret, enforce or modify this Decree, the party shall send a written notice to the other party outlining the nature of the matter and requesting informal negotiations to resolve the

matter. If the parties are unable to resolve the matter within thirty (30) days from the date of the notice (or within an additional period of time agreed to by the parties), any party may request the Court to resolve the matter.

12. Stone recognizes that reasonable attorney and expert witness fees are available to Plaintiffs as authorized by § 505(d) of the CWA, 33 U.S.C. 1365(d); § 304(d) of the CAA, 42 U.S.C. § 7604(d); and § 326(f) of EPCRA, 42 U.S.C. 11046(f). After determining the hours expended in preparation and prosecution of this litigation, as well as the time anticipated to be required to monitor Defendant's compliance with the terms of this Consent Decree, Defendant and Plaintiffs agree that the sum of one hundred twenty-four thousand eight hundred seventy-three dollars ($129,373.00) will be paid to the Western Environmental Law Center, 1216 Lincoln Street, Eugene, Oregon 97401, Attention: Charles M. Tebbutt, as attorneys for the Plaintiffs, within thirty (30) days of the entry of this Decree, in full and complete payment of an award of such costs and fees.

13. Plaintiffs agree to dismiss any claims asserted in their Complaint covering conduct which is the subject of claims asserted by the United States in United States v. Stone Container, CV-96-003-BLG, upon their intervention in that case.

14. Whenever this Decree requires notice to, or service of documents on, either party, the communication to Plaintiffs shall be directed to President, Cold Mountain, Cold Rivers, P.O. Box

7941, Missoula, MT 59807, and the communication to Stone shall be directed to General Manager, Missoula Mill, Stone Container Corporation, P.O. Box 4707, Missoula, MT 59806-4707.

15. The parties recognize that no consent judgment can be entered in Clean Water Act or Clean Air Act suits in which the United States is not a party prior to 45 days following the receipt of a copy of the proposed consent judgment by the United States Attorney General and the Administrator of the United States Environmental Protection Agency pursuant to § 505(c)(3) of the Clean Water Act and § 304(c) of the Clean Air Act. Therefore, upon the signing of this Consent Decree by the parties, Plaintiffs shall serve copies of it upon the Administrator of the U.S. EPA and the Attorney General and provide notice to the Court, as required by applicable regulations.

16. The Court shall retain jurisdiction over this matter for the purpose of enabling the parties to this Decree to apply to the Court for any further order that may be necessary to construe, carry out or enforce compliance with the terms of this Decree. This Decree shall terminate upon completion of the requirements set forth in section 7.

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Dated and entered this _____ day of _____, 1998

_____

UNITED STATES DISTRICT JUDGE

MONTANA COALITION FOR HEALTH, ENVIRONMENTAL AND ECONOMIC RIGHTS, INC.

Signature: Hope Sick

Title: Secretary

Dated: 3/11/98

COLD MOUNTAIN, COLD RIVERS, INC.

Signature: Darrell Hurt

Title: President

Dated: March 11, 1998

NATIVE FOREST NETWORK, INC.

Signature: Jake Kreilick

Title: Campaign Coordinator

Dated: 3/11/98

STONE CONTAINER CORPORATION

Signature: B Bosche

Title: General Manager

Dated: 3/11/98

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ADDENDUM A
CRITERIA FOR POLLUTION PREVENTION PROGRAM

I. GENERAL AGREEMENT

This document sets forth the elements of the comprehensive Pollution Prevention Program ("P2 Program"), including the initial Pollution Prevention Plan ("P2 Plan"), which Stone Container Corporation ("Stone") has agreed to undertake as part of the Consent Decree with Montana CHEER, Cold Mountain, Cold Rivers, and the Native Forest Network ("Plaintiffs") for its pulp and linerboard mill in Missoula, Montana (the Missoula Mill).

Stone shall retain as a consultant Dr. Robert Pojasek, or another mutually agreeable consultant (the "Consultant"), to assist Stone in the design, preparation and implementation of the pollution prevention program. The Consultant shall assist Stone in developing the initial P2 Plan, preparing the annual reports documenting implementation of the P2 Program, addressing the specific items referenced in the Consent Decree, and shall certify whether Stone is implementing this agreement, as described below. This Addendum is incorporated into and is a part of the Consent Decree.

The initial P2 Plan shall be completed and provided to Plaintiffs no later than six (6) months after entry of this Consent Decree. The Consultant shall certify the adequacy of the initial P2 Plan and, on an annual basis for five consecutive years commencing 12 months after submission of the initial P2 Plan, certify that the P2 Program has been satisfactorily implemented for the preceding year.

Certification shall be sent, along with the initial P2 Plan and thereafter with the annual report, to the person(s) designated to receive notices for Plaintiffs under Paragraph 14 of the Consent Decree in the form of a letter signed by the Consultant specifying whether the pollution prevention program is being implemented consistent with the criteria set forth in this Addendum A.

II. REPORTS REQUIRED FROM STONE

Stone shall prepare two separate reports. They are as follows:

-- An initial pollution prevention plan (P2 Plan) which identifies and prioritizes hazardous chemicals, processes and/or emission sources that will be the subject of more extensive evaluation of pollution

prevention measures consistent with the elements listed in Sections III and IV.

-- Annual progress/certification reports which identify the progress and accomplishments of the previous year and any new ideas or modifications to the initial P2 Plan consistent with the elements listed in Sections III and IV.

III. THE POLLUTION PREVENTION PLAN (P2) REQUIREMENTS

The initial P2 Plan is intended to be a general blueprint for P2 Program implementation over the course of the term of the Consent Decree. The P2 Plan shall identify the steps by which pollution prevention opportunities shall be identified for possible implementation at the Missoula Mill. These steps shall include at least the following: preparing process flow maps for every major operation in the facility, accounting of materials used and lost from the operation, identifying P2 opportunities using consistent factors, a system for identifying the most beneficial opportunities, preparing a materials balance for each process opportunity targeted for consideration in each year of the program, a description of the system the Missoula Mill will use for assessing costs and measuring results of the alternatives identified for pollution prevention, and an action planning sequence for implementing the alternatives selected in the planning efforts.

The initial P2 Plan shall present the action plans for each of the alternatives to be implemented during the first year of the P2 Program. The P2 Plan (and if modifications are made the annual reports) shall also include, at a minimum, the following facility-wide information:

(1) Statement of the corporate and facility-wide management commitment to and support for the P2 Plan, as well as the following items:

a) A listing of the facility's Mill Operations Environmental Committee. The mill manager should serve as an active member of the Committee. The Committee shall include both salaried and hourly personnel. The Committee should meet on a regular basis and review the action plans on a quarterly basis. Problem-solving teams will be set up if necessary to work on particular projects. Such teams will report periodically on their progress to the Committee.

b) A description of the P2 Plan worker and management training program.

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c) A description of Stone's "Environmental Cost Accounting" program that will be used to assess costs of the departments/processes as they exist at the time of the P2 Plan preparation and to assess the differences attributable to the P2 alternatives selected in the planning process.

d) A statement of whether employees are evaluated based on environmental performance.

(2) Statement of the scope and objectives of the P2 Plan.

(a) The P2 Plan shall describe generally the current pollution prevention measures in place at Stone's facility at the start of the planning process and provide a measure of the reductions in emissions, discharges, waste generation, and hazardous chemical usage those measures have achieved. This analysis should be limited to examples where independently verifiable data exist and should not go back more than five (5) years.

(b) The general objectives of the P2 Program shall be to identify and prioritize pollution reduction opportunities at Stone's facility from emissions, discharges and waste generation, including the use, generation, or emission of hazardous chemicals and/or other pollutants, and to identify pollution prevention alternatives that benefit human health or the environment.

(c) Plans to reduce the use or waste of other materials (e.g. other regulated materials, solid waste, BOD, water, energy) shall be discussed in this section.

IV. ELEMENTS REQUIRED TO BE INCORPORATED INTO POLLUTION PREVENTION PROGRAM

The P2 Plan is the blueprint for the P2 Program as a whole. Implementation of the P2 Plan shall be documented in the annual reports in the form of discrete action plans. If changes or modifications are made to the P2 Plan, they shall be described in the annual reports. The elements listed below provide the factors which may be appropriate to be considered in coming to decisions concerning pollution prevention alternatives for each of the pollution prevention opportunities under consideration and the prioritization of these alternatives consistent with assessing benefits that the implementation of the alternative would entail. The parties recognize that not all factors listed in this section may be applicable to the pollution prevention alternative under consideration, but Stone will consider any

factors it believes are relevant. The purpose for listing the factors is to ensure that these factors are consistently considered. If other factors are applicable to a case-specific situation, such factors considered by Stone shall be discussed.

(1) Identification of P2 opportunities.

Stone shall identify, with the assistance of the Consultant, those hazardous chemicals, production processes and emission/discharge sources that will be the subject of more extensive evaluation of potential pollution reduction alternatives. Chemicals, processes and emission/discharge sources shall be identified based on such factors as the toxicity or level of other hazard presented by the chemicals or pollutants, the amount of the chemical used or generated, and information available to Stone and the Consultant that suggests there may be potential for significant reductions in use or emissions/discharges or the chemical or pollutant.

For each hazardous chemical, production process or emission/discharge source identified for more extensive evaluation, the P2 Plan or annual reports, as applicable, shall include the information described below in subsections (2), (3) and (4).

(2) Analysis of current and projected chemical use, waste byproduct generation, and emissions. To perform this analysis Stone shall, if applicable:

(a) Name the production unit(s) and list its product(s) and process(es).

(b) Describe the "unit of product" most useful for measuring the rate of production (e.g., pounds produced, or dollars of net sales), and quantify the number of units of product. (Note that for all the years during which the facility implements a P2 Plan for one production unit, it must use the same "unit of product.") Description and quantification of unit of product is not required if the chemical use, waste byproduct generation, or emissions are not related to production rate.

(c) Describe the effects of any anticipated pollution prevention alternatives on the rate of material used, waste byproducts generated or emissions associated with the activity.

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(3) Analysis of economic impacts. To perform this analysis, Stone shall:

(a) Quantify the cost, or give a detailed qualitative analysis where quantification is not possible, of generating and controlling pollutants from, and using each chemical at, the production unit to the extent possible, considering, where relevant, the following factors:

- purchase of the chemical;
- manufacture, if the chemical is manufactured at the facility;
- fees;
- taxes;
- energy costs associated with the chemical use or process;
- storage or accumulation of input chemicals and byproducts;
- handling of input chemicals and byproducts;
- operation and maintenance procedures associated with the chemical or process;
- worker health or safety costs associated with the chemical or process, including training, protective equipment, and lost employee time due to accidents;
- byproduct treatment;
- byproduct disposal;
- environmental management activities not listed above; and
- insurance costs associated with the chemical or process;
- potential liability associated with the process or with emission, use and disposal of the chemical.

(4) Evaluation of potential pollution prevention alternatives. To perform this evaluation Stone shall:

(a) Identify technologies, procedures, and training programs that could potentially reduce the generation of pollutants and/or byproducts and the use of chemicals in the manufacture of the product through (as applicable):

- elimination of process or chemical;
- input substitution;
- product reformulation;
- production unit redesign, modification or modernization;
- improved operation and maintenance or production unit equipment and methods;

- improved training;
- recycling, reuse, or extended use of the chemical through a means that is integral to the production process.

(b) Select from the above-mentioned pollution prevention technologies, procedures, and training programs the potential pollution prevention alternatives which are determined to be of highest priority for further analysis. Describe the basis on which these specific potential pollution prevention alternatives were selected.

(5) Selection of pollution prevention alternatives Stone will implement. In the initial P2 Plan and in each annual progress report as part of the overall P2 Program provided for herein, Stone shall, with the assistance of the Consultant:

(a) Select the alternatives evaluated in step (4) that Stone plans to implement in the succeeding year. Describe interactions between the chosen alternatives with respect to chemical and energy use, byproducts and emissions, and cost savings.

(b) Explain the reason for selecting the alternatives to be implemented, including the basis for concluding whether the chosen alternatives will provide environmental or health benefits.

(c) Before selecting each opportunity Stone must explore the extent to which the activity may shift releases from one environmental medium to another (e.g., air to water, water to solid waste, etc.).

(6) With regard to the implementation of pollution prevention alternatives, as set forth in step (5), Stone shall, in the initial P2 Plan and the applicable annual progress report:

(a) Describe a schedule for implementation of the pollution prevention alternatives selected and describe the milestones by which progress will be evaluated during implementation in the P2 Plan. In the annual progress reports, measure and describe progress against these milestones.

(b) Identify reasonably foreseeable factors that could cause delays in implementation of the P2 Plan.

(c) Identify factors that caused delays in implementing previous P2 Plan (not applicable for the initial P2 Plan).

(7) Statement of Certification

The Consultant shall certify that the initial P2 Plan was prepared in accordance with the criteria set forth in this Addendum A. Thereafter, the Consultant shall certify that the annual progress reports required by this Consent Decree and the selection by Stone of additional pollution prevention alternatives described in those annual progress reports are consistent with the criteria set forth in this Addendum A. Should the Consultant fail to certify the initial P2 Plan or the annual progress reports, Stone's failure to obtain such certification shall constitute a breach of this Agreement.

(8) The initial P2 Plan and annual progress reports shall be submitted to the person(s) designated to receive notices for Plaintiffs under paragraph 14 of the Consent Decree, the Missoula County Local Emergency Planning Committee, Missoula County Health Department, Montana DEQ and US EPA at the same time.

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ADDENDUM B

UNITED STATES DISTRICT COURT
DISTRICT OF MONTANA

MONTANA COALITION for HEALTH, ENVIRONMENTAL and ECONOMIC RIGHTS, Inc., COLD MOUNTAIN, COLD RIVERS, Inc. and NATIVE FOREST NETWORK, Inc.	)	
Plaintiffs,	)	
vs.	)	**Civil Action No. CV 96-24-M-CCL**
STONE CONTAINER CORPORATION,	)	
Defendant.	)	

STIPULATION AND PROTECTIVE ORDER

Montana CHEER, CMCR and NFN (collectively referred to as "Plaintiffs") and Defendant, Stone Container Corporation ("Stone") hereby stipulate that:

1. Plaintiffs and Stone have agreed that Plaintiffs shall have access to certain information from Stone, some of which Stone may claim is trade secret and confidential commercial information. The information is for purposes of follow up to the Consent Decree in this litigation.

2. Stone represents that it is required to provide certain documents to Plaintiffs pursuant to the Consent Decree in this action. These documents may contain information which Stone may claim is trade secret or confidential commercial information.

3. This stipulation shall not constitute a waiver of the rights or position of any party with regard to the merits of any designation of information as trade secret or confidential commercial information.

In view of these stipulations, the Court finds that good cause exists to issue an order requiring limited disclosure of information legitimately claimed to be trade secret or confidential commercial information. Upon consideration of the joint motion for such an order filed by the parties hereto, IT IS HEREBY ORDERED:

1. Information which is determined to be "Confidential Business Information" pursuant to this Consent Decree and to this Stipulation and Protective Order ("Protective Order") shall be handled by Plaintiffs in accordance with the requirements of this Protective Order.

2. Information designated as Confidential Business Information shall be handled in accordance with the terms of this Protective Order unless and until the Court, on the Motion of a party challenging its designation, enters an order determining that the designated information is not trade secret or confidential commercial information or the parties otherwise agree.

3. Documents which contain information claimed as Confidential Business Information shall be stamped "Contains Confidential Business Information" and such information claimed as Confidential Business Information shall be conspicuously marked and separated from the non-confidential text of the documents.

4. Information designated as Confidential Business Information under this Protective Order shall not be used by Plaintiffs for any purpose other than for purpose of comment and discussion with Stone concerning Stone's implementation of the

requirements of the Consent Decree, or for purposes of Consent Decree enforcement, if necessary.

5. Plaintiffs who obtain information designated as Confidential Business Information hereunder, and any nonparty subject to this Protective Order, shall not disclose or permit the disclosure of Confidential Business Information to any other person, including without limitation any officer, director, employee, agent, member or representative of Plaintiffs, or any nonparty, except that Confidential Business Information may be disclosed to employees of the Western Environmental Law Center and Jack Tuholske, as counsel for Plaintiffs, and any technical consultant designated by Plaintiffs. Prior to providing any Confidential Business Information to a technical consultant, Plaintiffs shall notify Stone of the person(s) designated to receive the Confidential Business Information and shall have the person(s) execute the Oath of Confidentiality annexed hereto. Any employee or agent to whom disclosure is made shall be first advised of, and become subject to, the provisions of this Protective Order prior to such disclosure by executing the Oath of Confidentiality. Plaintiffs shall serve the executed Oaths of Confidentiality on Stone prior to divulging any such information. Plaintiffs, and any other person who pursuant to this Protective Order obtains information designated as Confidential Business Information hereunder, shall take all necessary and appropriate measures to maintain the confidentiality of the information, and shall retain the information in a secure manner.

6. Any person who obtains access to information designated as Confidential Business Information under this Protective Order may make copies, duplicates, extracts, summaries, or descriptions of the information or any portion thereof only for the

purpose of follow up with Stone's implementation of the terms of the Consent Decree. All copies, duplicates, extracts, summaries or descriptions shall be subject to the terms of this Protective Order to the same extent and manner as original documents.

7. Within 60 days after termination of this action by completion of the obligations of this Consent Decree, or as may otherwise be determined by the Court, any person who obtained information designated as Confidential Business Information hereunder shall assemble and return such information to the person who provided the information, including all copies, duplicates, extracts, summaries, or descriptions of the information or portions thereof, except that information which the Court or parties by agreement, determine is not trade secret or confidential commercial information is not subject to the requirement to be returned. Such return shall be certified in writing by the person who obtained the information.

Dated:_____ FOR: Defendant

Dated:_____ FOR: Plaintiffs

Dated:_____

SO ORDERED this _____day of _____, 199__.

_____

United States District Court Judge

UNITED STATES DISTRICT COURT
DISTRICT OF MONTANA

MONTANA COALITION for HEALTH, ENVIRONMENTAL and ECONOMIC RIGHTS, Inc., COLD MOUNTAIN, COLD RIVERS, Inc. and NATIVE FOREST NETWORK, Inc.	)	
Plaintiffs,	)	
vs.	)	Civil Action No. CV 96-24-M-CCL
STONE CONTAINER CORPORATION,	)	
Defendant.	)	

CONFIDENTIALITY ORDER

It is hereby ordered that the following provisions shall govern claims of confidentiality in these proceedings:

(a) Only documents containing trade secrets, special formulas, company security matters, customer lists, financial data, cost information and projections, projected sales data, production data, matters relating to mergers and acquisitions, and data which touch upon the topic of price may be designated "confidential," provided such documents have not previously been disclosed by the producing party to anyone except those in its employment or those retained by it. Such documents or parts thereof will be designated after review by an attorney for the producing party by stamping the word "confidential" on each page and identifying the specific text for which confidentiality is claimed. All text not identified as confidential is not subject to this order.

(b) If any party believes a document not described in the above paragraph should nevertheless be considered confidential, it may make application to the Court or Special Master. Such application shall only be granted for reasons shown and for extraordinary grounds.

(c) Documents designated "confidential" shall be shown only to the attorneys, the parties, parties' experts, actual or proposed witnesses, and other persons whom the attorneys deem necessary to review the documents for the purposes of Consent Decree follow up and enforcement, if necessary. Each person who is permitted to see confidential documents shall first be shown a copy of this Order and shall first have executed the attached "Oath Of Confidentiality", and shall further be advised of the obligation to honor the confidentiality designation.

(d) If a party believes that a document designated or sought to be designated confidential by the producing party does not warrant such designation, it shall first make a good faith effort to resolve such dispute with opposing counsel. In the event that such a dispute cannot be resolved by the parties, either party may apply to the Court or Special Master for a determination as to whether the designation is appropriate. The burden rests on Stone to demonstrate that such confidentiality designation is proper.

(e) In any application to the Court or Special Master referred to or permitted by this Order, the Court or Special Master may exercise discretion in determining whether the prevailing party in such a dispute may recover the costs incurred by it in applying to the Court or Special Master and, if so, the amount to be awarded.

Dated_____

By the Court:

_____

United States District Judge

DEMO

UNITED STATES DISTRICT COURT
DISTRICT OF MONTANA

MONTANA COALITION for HEALTH, ENVIRONMENTAL and ECONOMIC RIGHTS, Inc., COLD MOUNTAIN, COLD RIVERS, Inc. and NATIVE FOREST NETWORK, Inc.	)	
Plaintiffs,	)	
vs.	)	Civil Action No. CV 96-24-M-CCL
STONE CONTAINER CORPORATION,	)	
Defendant.	)	

OATH OF CONFIDENTIALITY

I acknowledge receiving information claimed as Confidential Business Information in the captioned matter. Additionally, I have read and understand the Stipulation and Protective Order entered in this civil action governing the use and disclosure of information designated as Confidential Business Information.

Accordingly, I AGREE:

(1) to refrain from revealing such Confidential Business Information to any person, except that I understand I may reveal Confidential Business Information to individuals who are authorized to have access to Confidential Business Information by the terms of the Stipulation and Protective Order filed in this action and who have executed an oath of confidentiality in this form; and

(2) to refrain from using such Confidential Business Information for any purpose other than for purposes of follow up to obligations in this Consent Decree and

(3) to otherwise be bound by all relevant terms of the Stipulation and Protective Order.

(4) This Oath need not be filed with the Court, but shall have the force and effect as if filed with the Court.

_____
SIGNATURE

_____
PRINT NAME

_____
DATE

AGREEMENT CONCERNING HABITAT CREATION AND RESTORATION PROJECTS

WHEREAS, on January 29, 1996, Montana Coalition for Health, Environmental and Economic Rights, Inc., Cold Mountain, Cold Rivers, Inc., and Native Forest Network, Inc. (collectively, "CHEER") filed an action in the U.S. District Court for the District of Montana, alleging that Stone Container Corporation's ("Stone's") Missoula Mill violated various environmental laws; and

WHEREAS, the parties negotiated a Consent Decree, which was entered by the court on May 19, 1998; and

WHEREAS, Section 7.A.3. of the Consent Decree specifies how Stone will spend $100,000 over the ensuing five-year period for habitat restoration and creation projects; and

WHEREAS, the parties have recently engaged in discussions with an independent organization, Five Valleys Land Trust ("FVLT"), about how that money might be spent most effectively to further the riparian wildlife protection goals behind Section 7.A.3.; and

WHEREAS, the parties have reviewed a proposal, dated December 18,1998, from FVLT to collaborate with the parties to provide conservation easement opportunities to private property owners who own land along the Clark Fork River between Reserve Street and Alberton with significant wildlife and riparian values, which the parties agree would be an effective and desirable mechanism for creating, protecting, and restoring riparian wildlife habitat, but which might not literally meet each and every one of the specifications in Section 7.A.3. of the Consent Decree; and

WHEREAS, the parties would like for Stone to implement the FVLT proposal, without fear that either party will assert that Stone has failed to comply with the Consent Decree because the FVLT proposal departs in some way from Section 7.A.3. of the Consent Decree;

NOW, THEREFORE, the parties agree not to assert to the court or in any other forum, whether written or oral, that Stone has failed to comply with the

Consent Decree because Stone has implemented the FVLT proposal. Without limiting the generality of the foregoing, CHEER agrees that it will not assert that Stone's implementation of the FVLT proposal fails to satisfy the requirements of Section 7.A.3. of the Consent Decree because it:

A. Uses $50,000 that had been designated in the Consent Decree for habitat restoration and creation projects to fund landowner out-of-pocket expenses for at least seven conservation easement projects over a five-year period along the Clark Fork River corridor that might otherwise not be completed.

B. May involve projects between Reserve Street and Alberton (i.e., one or more easements could be all or partially upstream of Harper's Bridge but downstream of Reserve Street).

C. Uses $5,000 of the up to $50,000 set aside in the Consent Decree for habitat restoration and creation projects on the Clark Fork River adjacent to Stone's property for 1999 FVLT staff time and contract expenses for researching, mapping, and prioritizing conservation easement projects according to their riparian resource value.

D. Will not necessarily consult with Bitterroot Restoration Inc. and the Wildlife Habitat Council about the FVLT proposal in general or about specific conservation easement projects to be funded by Stone, in particular.

CHEER does not contend that the above-listed issues necessarily are inconsistent with the Consent Decree, but, to the extent that they are, CHEER believes that such deviations are desirable because the FVLT proposal will allow substantially greater habitat benefits, by leveraging Stone's committed expenditures to assist others with the expenses of donating easements that have substantially more value.

E00011129

AGREED this 6th day of January, 1999.

for Stone Container Corporation Missoula Mill

(Tweedale - Board)

for Montana Coalition for Health, Environmental and Economic Rights, Inc.

for Cold Mountain, Cold Rivers, Inc.

for Native Forest Network, Inc.

E00011130

Schedule

EdScottesta.com.

7/30/99
XC: McLaughlin

REVISED

Philips
Griffin
Frye

September 24, 1998

Please Comply
Ed.

Ed Scott

Distribution Requirements
Required Under CHEER/DOJ
Consent Decrees *(Revised)*

As a reminder, the following reports must be sent to the following organizations as required by the CHEER & DOJ Consent Decrees. *Please remember to send all copies of these reports VIA certified mail.*

CHEER CONSENT DECREE

Report	Distribution	Address
Initial 5-year P2 Plan & Annual P2 Report	CHEER	President Cold Mountain, Cold Rivers P.O. Box 7941 Missoula, MT 59807
	DEQ	Ms. Jan Sensibaugh Permitting & Compliance Division Administrator 1520 E. 6th Avenue Helena, MT 59620
	U.S. EPA	Ms. Wahl Air Quality Program U.S. EPA, Region VIII Montana Office 301 South Park Helena, MT 59626
	MCCHD	Ms. Ellen Leahy Missoula City County Health Dept. 301 W. Alder St. Missoula, MT 59802
	CAP	(Single Copy Provided At Regular Meeting)

CHEER CONSENT DECREE (CONT.)

Report	Distribution	Address
Analysis of Alternative B.P. Sequence	CHEER	(See Above)
	CAP	(Single Copy Provided At Regular Meeting)
Alternative Fiber Report	CHEER	(See Above)
	CAP	(Single Copy Provided At Regular Meeting)
OCC Reject Report	CHEER	(See Above)
	CAP	(Single Copy Provided At Regular Meeting)
Monthly Discharge Report	CHEER	(See Above)
Monthly Air Report	CHEER	(See Above)
Quarterly EER	CHEER	(See Above)
Form R	CHEER	(See Above)
Community Contributions (APCB)	Missoula City-County Air Pollution Ctrl Board	Chairman Missoula City-County Air Pollution Control Board 301 W. Alder St. Missoula, MT 59802-4123
	CHEER	(See Above)
Community Contributions (WQDB)	Missoula Water Quality District Board	Chairman Water Quality District Board 301 W. Alder St. Missoula, MT 59802-4123
	CHEER	(See Above)
Community Contributions (LEPC)	Missoula LEPC	Bill Silverman Missoula County Office of Emergency Management

		200 W. Broadway Missoula, MT 59802-4292
	CHEER	(See Above)

DOJ CONSENT DECREE

Report	Distribution	Address
Quarterly Compliance Report	EPA	Chief Env. Enforcement Section Env & Natural Resources U.S. Dept. of Justice P.O. Box 7611, Ben Franklin Station Washington, D.C. 20044 Re: DOJ #90-5-2-1-1975
		Air Quality Program U.S. EPA, Region 8 Montana Office 301 S. Park Helena, MT 59626
	CHEER	Charles M. Tebbutt Western Env. Law Center 1216 Lincoln Street Eugene, OR 97401
		Darrel Geist Montana CHEER P.O. Box 7941 Missoula, MT 59807
	DEQ	Ms. Karen Wilson Air & Waste Management Bureau Permitting & Compliance Division DEQ 301 W. Alder Missoula, Montana 59802
	Stone	Russell S. Frye, Esq. Chadbourne & Parke LLP 1200 New Hampshire Ave., N.W. Washington, D.C. 20036

cc: Bob Boschee Paul Willhite

Stone Container Corporation
Missoula Mill
Containerboard and Paper Division

To: **Distribution**

Date: **May 19, 1998**

From: **Ed Scott**

Subject: **Summary of Requirements Under CHEER & DOJ Settlement Agreements**

Attached please find the following documents:

CHEER CONSENT DECREE

1. **Timeline of CHEER consent decree requirements**
2. **Additional requirements of CHEER consent decree**
3. **Summary of reports and other documents required by CHEER consent decree**

DOJ CONSENT DECREE

1. **Timeline of DOJ consent decree requirements**
2. **Additional requirements of DOJ consent decree**
3. **Summary of reports and other documents required by DOJ consent decree**

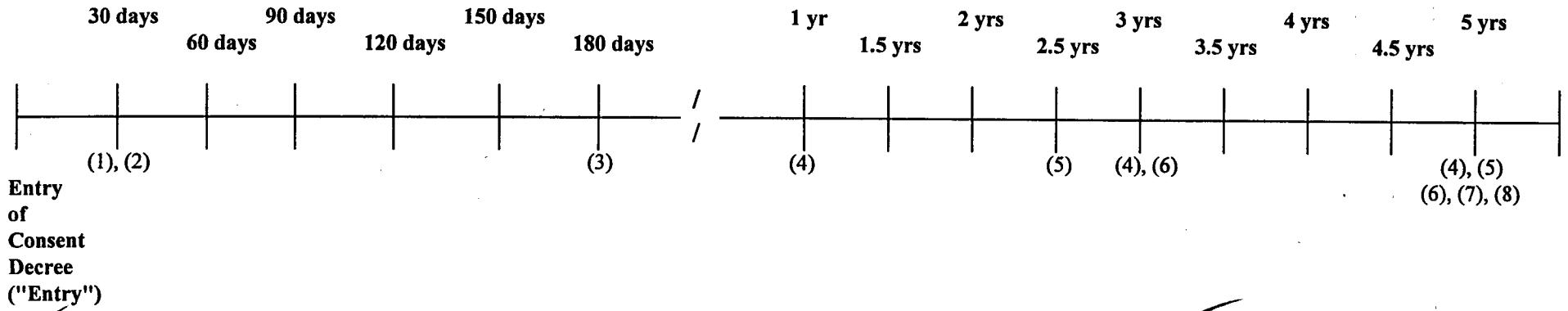
Please review the attached information and be prepared to ask questions at the monthly superintendents meeting scheduled for Friday May 22, 1998 at 10:00 a.m.

Distribution: **Boschee**
Lamey
Marxer
Kohl
Clevenger
Lovrien
Bendschneider
Mills
Olson
Nagy
Vetaly
Evans
Presta
Jensen
Adams
T. McLaughlin --> L. Griffin-->L. Philips-->Lee
C. Barton-->P. Willhite, Atlanta

IQS Innovation Quality Service

E00011136

STONE CONTAINER MISSOULA MILL: TIMELINE OF CHEER CONSENT DECREE REQUIREMENTS



1. Stone must pay a penalty of $50,000 to the U.S. Treasury within 30 days of Entry (¶ 7.A.1). (Mill)

2. Stone must pay the Western Environmental Law Center $129,373 in attorneys' fees within 30 days of Entry (¶ 12). (Mill)

3. Within 6 months after Entry, Stone must submit an initial 5-year Pollution Prevention Plan to CHEER (¶ 7.B.1). Bleach plant effluents (including keeping bleach plant effluents out of the primary clarifier) and OCC rejects shall be designated as priorities for pollution prevention planning (¶ 7.C.6 and 7.C.7). (Mill)

4. Within 1 year after Entry (and again by the third and fifth anniversary dates of Entry), Stone must update its analysis of the economic and technical feasibility of incorporating alternative fibers into its production processes and provide a copy of the resultant reports to CHEER (¶ 7.F.1). (Guyton Wilkerson)

5. Stone must provide $300,000 over a five-year period from Entry in specified amounts for specified pollution control projects at three local agencies; at least $150,000 of the total must be paid within 30 months of Entry (¶ 7.A.2). (Mill)

6. Stone must spend $100,000 over a maximum five-year period from Entry for habitat restoration and creation projects adjacent to the Clark Fork River between Harper's Bridge and Alberton, with at least half spent on projects not adjacent to the Missoula Mill. At least $60,000 must be spent in such a manner within 3 years after Entry (¶ 7.A.3.a). (Mill & David Ledford)

7. Stone must spend $50,000 over a maximum five-year period from Entry for habitat restoration and creation projects to enhance recovery of Bull Trout in the Clark Fork Basin within the Western Montana Region (¶ 7.A.3.b). (David Ledford)

8. Stone has committed $150,000, to be spent as needed over the term of the Consent Decree, to the identification and assessment of alternatives for handling OCC rejects, such that burning of OCC rejects containing chlorinated plastics would be reduced or eliminated (¶ 7.E.2).(Mill & Atlanta)

E00011137

STONE CONTAINER MISSOULA MILL: ADDITIONAL REQUIREMENTS OF CHEER CONSENT DECREE

1. Stone must produce and provide to CHEER* an annual report detailing and updating Stone's implementation of its Pollution Prevention Program. Stone's annual report must include a certification from an acceptable expert as to whether Stone is complying with its Program. The first annual report will be due on or before the date which is 12 months after the Program is submitted to CHEER; subsequent annual reports will be due on or before the succeeding four anniversary dates of submission of the initial Program (¶ 7.B.3). (Mill)

2. Stone must provide CHEER, the Montana DEQ, the U.S. EPA, and the Missoula County Health Department with a copy of its Pollution Prevention Program and the annual reports described in (1) above (¶ 7.B.4). (Mill)

3. The draft accident prevention program prepared by Stone under EPA Risk Management Program (RMP) regulations must be reviewed by an acceptable expert to assess whether pollution prevention opportunities have been or could be considered as part of the accident prevention program. Also, Dr. Pojasek must have an opportunity to discuss hazard assessment and interplay with pollution prevention planning (¶ 7.C.1). The consultant's certification described in (1) above must describe how pollution prevention opportunities were considered in RMP implementation, if at all (¶ 7.C.2). (Mill) + Art Hoenle

4. Stone must provide the results of its completed analysis of alternatives to its current bleaching technology, as well as the results of the consultant's review of such analysis, to CHEER as soon as it is available and at least 30 days prior to any final decision on technologies is made; Stone must schedule a meeting with CHEER within 25 days after the results of Stone's analysis of alternative bleaching processes have been provided to CHEER, to discuss the analysis and review any comments (¶ 7.D.2). (Mill & Atlanta)

5. Stone must assess technologies and processes for handling OCC rejects with the goal of eliminating the burning of OCC rejects containing chlorinated plastics. Stone must continue to evaluate potential alternatives to the burning of OCC rejects and, by August 1, 1998 and February 1, 1999, provide reports to CHEER detailing the status of the OCC alternatives review process. Thereafter, Stone must provide a

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* Notices, service of documents, etc. to the plaintiff (referred to here collectively as "CHEER"), go to President, Cold Mountain, Cold Rivers, Inc. (¶ 14).

status report as part of the annual reporting required by (1) above, unless burning of OCC rejects containing chlorinated plastics ceases (¶ 7.E). (Mill & Atlanta) VanHoenu

6. Stone must consult with Bitterroot Restoration Inc. (BRI) and the Wildlife Habitat Council (WHC) before undertaking habitat restoration projects along the Clark Fork adjacent to the mill; projects along the Clark Fork but not adjacent to mill property will be chosen from those identified by BRI and WHC after consultation with the parties (¶ 7.A.3.a). (Mill & David Ledford)

7. Stone must establish a Mill Operations Environmental Committee, which shall meet at least bimonthly to identify and address environmental issues at the facility. The dates of meetings of this committee must be included in the annual reporting required by (1) above (¶ 7.G). (Mill)

8. Stone must provide the Community Advisory Panel with each completed report or similar document required to be prepared under the Consent Decree (with the exception of confidential information, which may be withheld) (see attached list) (¶ 7.H.2). (Mill)

9. Stone must make each report or similar document, required to be prepared by the Consent Decree, available to CHEER (with special provision for confidential business information) (¶ 7.I.1). After submission, Stone shall schedule, within 30 days of a request by CHEER, a meeting to discuss the document (¶ 7.I.2). (Mill)

10. Stone shall provide an annual mill tour for up to 3 representatives of CHEER within 90 days after the annual report described in (1) above (¶ 7.I.3). (Mill)

11. Stone must provide CHEER with its monthly air and water compliance reports, Quarterly Excess Emission Reports, and annual Form Rs submitted under EPCRA for the term of the Consent Decree at the same time as such documents are submitted to the U.S. EPA and/or the Montana DEQ (¶ 10). (Mill)

12. The Consent Decree will terminate upon completion of the requirements set forth in Section 7 of the Decree (¶ 16).

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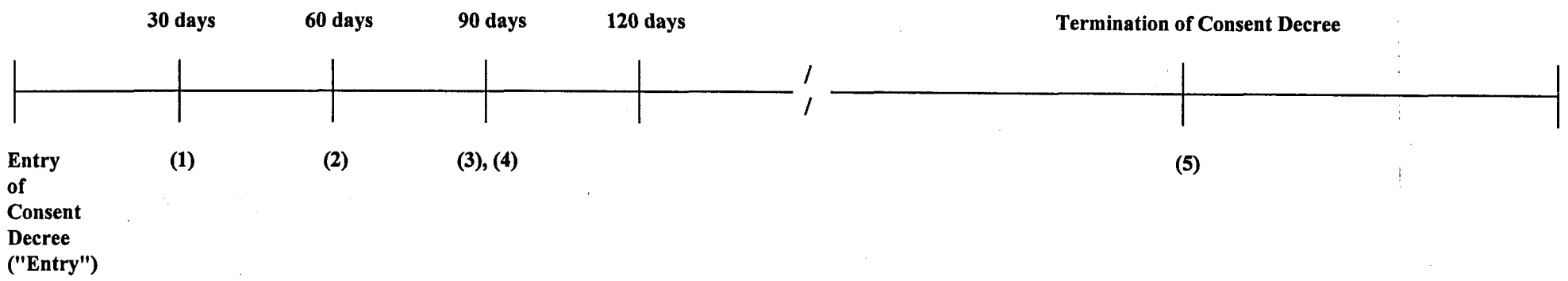
REPORTS & OTHER DOCUMENTS REQUIRED TO BE PREPARED PER CONSENT DECREE IN *MONTANA CHEER v. STONE CONTAINER*

	Subject	Recipient	Deadline
1.	Initial 5-year Pollution Prevention Plan (¶ 7.B.1)	CHEER CAP	within 6 months after entry of consent decree
2.	Annual report detailing and updating implementation of the Pollution Prevention Program. Stone's annual report must include a certification from an acceptable expert as to whether Stone is complying with its Program. (¶ 7.B.3) & (¶ 7.B.4)	CHEER, the Montana DEQ, the U.S. EPA, and the Missoula County Health Department	The first annual report will be due on or before the date which is 12 months after the Program is submitted to CHEER; subsequent annual reports will be due on or before the succeeding four anniversary dates of submission of the initial Program
3.	Analysis of alternatives to current bleaching technologies, including results of Pojasek's review. (¶ 7.D.2)	CHEER CAP	at least 30 days prior to final decision on technology
4.	Report on updated of analysis of the economic and technical feasibility of incorporating alternative fibers into production processes, and update on use of recycled fiber. (¶ 7.F.2)	CHEER CAP	within 1 year after entry of consent decree and again by the third and fifth anniversary dates of entry (as part of report on Pollution Prevention Program)
5.	Report on identification and assessment of alternatives for handling OCC rejects, such that burning of OCC rejects containing chlorinated plastics would be reduced or eliminated. (¶ 7.E.2)	CHEER CAP	August 1, 1998, February 1, 1999; thereafter included in annual report on Pollution Prevention Program

E00011140

STONE CONTAINER MISSOULA MILL: TIMELINE OF DOJ CONSENT DECREE REQUIREMENTS



1. Stone must pay a civil penalty of $312,500 within 30 days of Entry (¶ 24). Payment must be via electronic funds transfer (¶ 25). (Chicago)

2. Stone must conduct volumetric flow rate testing for Recovery Boiler Nos. 4 and 5, as described in Attachment A to the Consent Decree, within 60 days of Entry. At least 30 days advance notice of testing must be provided to EPA and CHEER (¶ 11). (Mill)

3. Within 90 days of Entry, Stone must submit results of testing and proposed correlation equations from (2) above to EPA, Montana DEQ, and CHEER (¶ 12). (Mill)

4. If EPA disapproves of the proposed correlation equations submitted under (3) above, Stone must submit an alternative correlation equation to EPA within 90 days of the disapproval (¶ 14). Once EPA approves a correlation equation, Stone must use it in reporting and incorporate it into the Mill's CAA Title V permit application. (Mill)

5. Stone must retain all records and documents pertaining to its performance of its obligations under the Consent Decree during the pendency of the Decree; after termination of the Decree, Stone must provide at least 90 days notice to EPA and CHEER prior to the destruction of any such documents (¶ 42). (Mill & Atlanta)

E00011141

STONE CONTAINER MISSOULA MILL: ADDITIONAL REQUIREMENTS OF DOJ CONSENT DECREE

1. Stone must operate and maintain its Recovery Boiler No. 4 in compliance with the applicable federally-approved SIP (¶ 7), and must maintain, calibrate, and operate COMS at Recovery Boiler No. 4 in full compliance with 40 C.F.R. §60.13 and 40 C.F.R. Part 60, Appendix B, Performance Specification 1 (¶8); Stone is required to comply with the Consent Decree provisions regarding Recovery Boiler No. 4 until such time that ARM 17.8.304(2) is superseded by a federally-approved SIP applicable to opacity omissions from Recovery Boiler No. 4 (¶10). (Mill)

2. Stone represents and certifies in the Consent Decree that it is currently fueling Recovery Boiler No. 3 with only natural gas (¶15). Should Stone subsequently begin fueling Recovery Boiler No. 3 with black liquor, it must develop a correlation between airflow into the boiler and stack exit airflow from the boiler pursuant to Section VI of the Consent Decree. Stone must develop such a correlation by conducting testing within 30 days of the date it commences use of black liquor in Recovery Boiler No. 3 (¶15). (Mill)

3. Stone's emissions of total reduced sulfur ("TRS") from its Lime Kiln No. 4 may be no greater than 8.0 ppm, twelve-hour average (¶ 17); Stone must operate all Lime Kilns in compliance with ARM 17.8.111 (regarding bypassing control equipment) (¶ 18); and Stone may not release noncondensible gas streams ("NCGs") to the atmosphere in response to actual or imminent potential exceedances of applicable TRS limitations (¶ 18). (Mill)

4. Stone must maintain the span setting on the COMS for Recovery Boiler No. 5 at 70% (¶ 21). (Mill)

5. Stone must limit its mass emissions from the waste fuel boiler to no greater than 52.04 lbs/hr PM-10 (¶ 22). (Mill)

6. By no later than the thirtieth (30th) day of the first month following the expiration of each Quarter, Stone must report to EPA, CHEER, and the Montana DEQ the following information: (Mill)

    - All six-minute average opacity readings of emissions from Recovery Boiler No. 4 during the previous Quarter, with an explanation of opacity readings of 20% or greater (¶ 9.a); [1]

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[1] This reporting is required for only two years after the date of entry of the Consent Decree.

E00011142

- All six-minute periods during the previous Quarter when the COMS for Recovery Boiler No. 4 was not operational, with an explanation of any such periods (¶ 9.b);[2]

- Stone's monthly average pounds per day mass emissions rate of total suspended particulates during the previous Quarter from each Recovery Boiler for which there has been developed a correlation pursuant to Section VI of the Consent Decree, along with the data and calculations underlying such emissions rate (¶ 16);

- All releases of collected NCGs and all actually known releases of non-collected NCGs to the atmosphere lasting for any period of 15 consecutive minutes or longer during the previous Quarter, including a statement describing the circumstances of each release and the TRS emissions from all Lime Kilns during the twelve-hour period immediately preceding each release (¶ 19.a);

- All TRS exceedances from the Lime Kilns during the previous Quarter, including a statement of the duration and cause of each exceedance, Stone's efforts to minimize such exceedances, and Stone's description of the actions taken to prevent future exceedances (¶ 19.b); and

- All exceedances of the mass emissions limit for PM-10 from the Wastefuel Boiler during the previous Quarter, including a statement of the duration and cause of each exceedance, Stone's efforts to minimize such exceedances, and Stone's description of the actions taken to prevent future exceedances (¶ 23).

7. Stone must provide EPA with copies of all records required to be retained under the Consent Decree upon the request of EPA (¶ 43). (Mill & Atlanta)

8. Stone must notify EPA and CHEER in writing of any failure to meet Consent Decree requirements for which stipulated penalties may be due as soon as Stone has knowledge of such failure. Stone must pay the stipulated penalties and supply a letter summarizing the violations with 15 days

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[2] This reporting is required for only two years after the date of entry of the Consent Decree.

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after the end of the month in which the violation occurs (¶ 34). The procedures for payment depends on the size of the penalty (¶ 25). Stipulated penalties are set forth in ¶ 22 and ¶ 23. Note that there are no stipulated penalties for noncompliance with opacity limitations. (Mill & Atlanta)

9. In the event that Stone proposes to sell or transfer any interest in its real property or operations subject to the Consent Decree before its termination, Stone must advise in writing the prospective owner or operator that the future operation of the facility is subject of the terms of the Consent Decree and must condition such sale or transfer on the agreement of the prospective owner or operator to comply with terms of the Consent Decree; Stone must also send a copy of such written notification to DOJ and CHEER at least 30 days prior to the closing date of such sale or transfer (¶ 6). (Atlanta & Chicago)

10. The terms of the Consent Decree will terminate as follows:

- Stone's liability for stipulated penalties regarding violations of emissions limitations for Recovery Boiler 4, the Lime Kilns, (except for the TRS limit for Lime Kiln No. 4), the Wastefuel Boiler, and the Span Setting on Recovery Boiler No. 5 will terminate when Stone has been in compliance with the relevant limitations under the Consent Decree for a period of 12 consecutive months after Entry (¶61);

- Stone's liability for stipulated penalties regarding TRS emissions from Lime Kiln No. 4 shall terminate two years after Entry (¶ 62); and

- The remainder of the Consent Decree will terminate when (i) Stone has paid all civil and stipulated penalties due, with interest, (ii) Stone has been in compliance with every term of the Consent Decree – except the provisions regarding the operation and maintenance of Recovery Boiler No. 4 in compliance with a federally-approved SIP and any provisions terminated pursuant to Paragraphs 61 or 62 – for a period of 12 consecutive months following Entry, and (iii) all correlations developed under Section VI of the Consent Decree have been incorporated into an amended application by Stone for a permit for the Mill under Title V of the Clean Air Act.

Stone must initiate termination of a section of the Consent Decree by filing a certification that the conditions for termination of that section have been met (¶ 64). (Mill & Atlanta)

E00011144

REPORTS & OTHER DOCUMENTS REQUIRED PER CONSENT DECREE IN *U.S. v. STONE CONTAINER, 96-017-M*

	Subject	Recipient	Deadline
1.	Notice of volumetric flow rate testing for Recovery Boiler Nos. 4 and 5, as described in Attachment A to the Consent Decree; testing must be conducted within 60 days of Entry (¶ 11)	EPA and CHEER	at least 30 days prior to testing
2.	Results of volumetric flow rate testing for Recovery Boiler Nos. 4 and 5 and proposed correlation equations (¶ 12)	EPA, Montana DEQ, and CHEER	within 90 days of entry of consent decree
3.	Alternative correlation equation if EPA disapproves of the proposed correlation equations submitted per no. 2 above (¶ 14)	EPA	within 90 days of the disapproval
4.	Report concerning all six-minute average opacity readings of emissions from Recovery Boiler No. 4 during the previous Quarter, with an explanation of opacity readings of 20% or greater (¶ 9.a);♦	EPA, CHEER, and the Montana DEQ	no later than the thirtieth (30th) day of the first month following the expiration of each quarter

♦ This reporting is required for only two years after the date of entry of the Consent Decree.

E00011145

	Subject	Recipient	Deadline
5.	Report concerning all six-minute periods during the previous Quarter when the COMS for Recovery Boiler No. 4 was not operational, with an explanation of any such periods (¶ 9.b),♦	EPA, CHEER, and the Montana DEQ	no later than the thirtieth (30th) day of the first month following the expiration of each quarter
6.	Report concerning monthly average pounds per day mass emissions rate of total suspended particulates during the previous Quarter from each Recovery Boiler for which there has been developed a correlation pursuant to Section VI of the Consent Decree, along with the data and calculations underlying such emissions rate (¶ 16)	EPA, CHEER, and the Montana DEQ	no later than the thirtieth (30th) day of the first month following the expiration of each quarter
7.	Report concerning all releases of collected NCGs and all actually known releases of non-collected NCGs to the atmosphere lasting for any period of 15 consecutive minutes or longer during the previous Quarter, including a statement describing the circumstances of each release and the TRS emissions from all Lime Kilns during the twelve-hour period immediately preceding each release (¶ 19.a)	EPA, CHEER, and the Montana DEQ	no later than the thirtieth (30th) day of the first month following the expiration of each quarter

♦ This reporting is required for only two years after the date of entry of the Consent Decree.

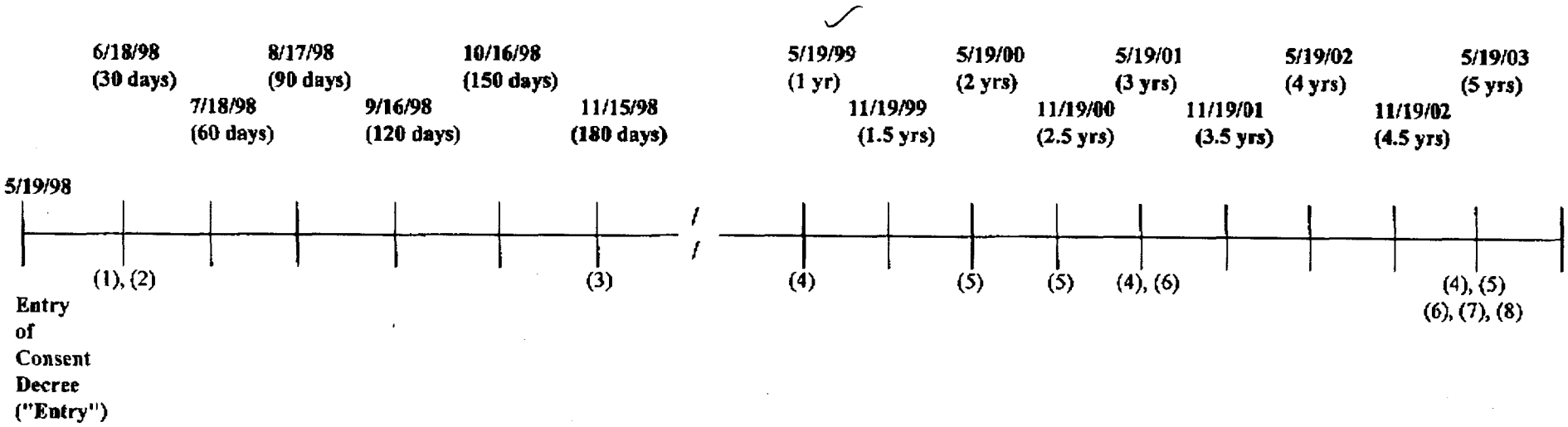
	Subject	Recipient	Deadline
8.	Report concerning all TRS exceedances from the Lime Kilns during the previous Quarter, including a statement of the duration and cause of each exceedance, efforts to minimize such exceedances, and a description of the actions taken to prevent future exceedances (¶ 19.b)	EPA, CHEER, and the Montana DEQ	no later than the thirtieth (30th) day of the first month following the expiration of each quarter
9.	Report concerning all exceedances of the mass emissions limit for PM-10 from the Wastefuel Boiler during the previous Quarter, including a statement of the duration and cause of each exceedance, efforts to minimize such exceedances, and a description of the actions taken to prevent future exceedances (¶ 23)	EPA, CHEER, and the Montana DEQ	no later than the thirtieth (30th) day of the first month following the expiration of each quarter
10.	Written notice of any failure to meet Consent Decree requirements for which stipulated penalties may be due as soon as Stone has knowledge of such failure. Stone must pay the stipulated penalties and supply a letter summarizing the violations (¶ 34)	EPA and CHEER	within 15 days after the end of the month in which the violation occurs
11.	In the event that Stone proposes to sell or transfer any interest in its real property or operations subject to the Consent Decree before its termination, advise in writing that the future operation of the facility is subject of the terms of the Consent Decree and must condition such sale or transfer on the agreement of the prospective owner or operator to comply with terms of the Consent Decree (¶ 6)	prospective owner or operator	(none stated)

E00011146

	Subject	Recipient	Deadline
12.	Provide copy of written notification that, in the event of a sale or transfer of property interests, the future operation of the facility is subject of the terms of the Consent Decree and must condition such sale or transfer on the agreement of the prospective owner or operator to comply with terms of the Consent Decree (¶ 6).	DOJ and CHEER	at least 30 days prior to the closing date of such sale or transfer
13.	To initiate termination of a section of the Consent Decree, file a certification that the conditions for termination of a section have been met (¶ 64)	court	(none stated)

E00011147

STONE CONTAINER MISSOULA MILL: TIMELINE OF CHEER CONSENT DECREE REQUIREMENTS



1. Stone must pay a penalty of $50,000 to the U.S. Treasury no later than June 18, 1998 (¶ 7.A.1). (Mill)

2. Stone must pay the Western Environmental Law Center $129,373 in attorneys' fees no later than June 18, 1998 (¶ 12). (Mill)

3. No later than November 15, 1998, Stone must submit an initial 5-year Pollution Prevention Plan to CHEER (¶ 7.B.1). Bleach plant effluents (including keeping bleach plant effluents out of the primary clarifier) and OCC rejects shall be designated as priorities for pollution prevention planning (¶ 7.C.6 and 7.C.7). (Mill)

4. No later than May 19, 1999 (and again by May 19, 2001 and May 19, 2003), Stone must update its analysis of the economic and technical feasibility of incorporating alternative fibers into its production processes and provide a copy of the resultant reports to CHEER (¶ 7.F.1). (Guyton Wilkerson)

5. Stone must provide $300,000 over a five-year period from May 19, 1998 to May 19, 2003 in specified amounts for specified pollution control projects at three local agencies; at least $150,000 of the total must be paid no later than November 19, 2000. Ambient air study ($30,000) is over 2 years. (¶ 7.A.2). (Mill)

6. Stone must spend $100,000 over a maximum five-year period from May 19, 1998 to May 19, 2003 for habitat restoration and creation projects adjacent to the Clark Fork River between Harper's Bridge and Alberton, with at least half spent on projects not adjacent to the Missoula Mill. At least $60,000 must be spent in such a manner no later than May 19, 2001 (¶ 7.A.3.a). (Mill & David Ledford)

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CHAD & PARKE D.C.
JUN-02-1998 12:50
E00011148

7. Stone must spend $50,000 over a maximum five-year period from May 19, 1998 to May 19, 2003 for habitat restoration and creation projects to enhance recovery of Bull Trout in the Clark Fork Basin within the Western Montana Region (¶ 7.A.3.b). (David Ledford)

8. Stone has committed $150,000, to be spent as needed over the term of the Consent Decree, to the identification and assessment of alternatives for handling OCC rejects, such that burning of OCC rejects containing chlorinated plastics would be reduced or eliminated (¶ 7.E.2).(Mill & Atlanta)

STONE CONTAINER MISSOULA MILL: ADDITIONAL REQUIREMENTS OF CHEER CONSENT DECREE

1. Stone must produce and provide to CHEER* an annual report detailing and updating Stone's implementation of its Pollution Prevention Program. Stone's annual report must include a certification from an acceptable expert as to whether Stone is complying with its Program. The first annual report will be due on or before the date which is 12 months after the Program is submitted to CHEER; subsequent annual reports will be due on or before the succeeding four anniversary dates of submission of the initial Program (¶ 7.B.3). (Mill)

2. Stone must provide CHEER, the Montana DEQ, the U.S. EPA, and the Missoula County Health Department with a copy of its Pollution Prevention Program and the annual reports described in (1) above (¶ 7.B.4). (Mill)

3. The draft accident prevention program prepared by Stone under EPA Risk Management Program (RMP) regulations must be reviewed by an acceptable expert to assess whether pollution prevention opportunities have been or could be considered as part of the accident prevention program. Also, Dr. Pojasek must have an opportunity to discuss hazard assessment and interplay with pollution prevention planning (¶ 7.C.1). The consultant's certification described in (1) above must describe how pollution prevention opportunities were considered in RMP implementation, if at all (¶ 7.C.2). (Mill)

4. Stone must provide the results of its completed analysis of alternatives to its current bleaching technology, as well as the results of the consultant's review of such analysis, to CHEER as soon as it is available and at least 30 days prior to any final decision on technologies is made; Stone must schedule a meeting with CHEER within 25 days after the results of Stone's analysis of alternative bleaching processes have been provided to CHEER, to discuss the analysis and review any comments (¶ 7.D.2). (Mill & Atlanta)

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* Notices, service of documents, etc. to the plaintiff (referred to here collectively as "CHEER"), go to President, Cold Mountain, Cold Rivers, Inc. (¶ 14).

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5. Stone must assess technologies and processes for handling OCC rejects with the goal of eliminating the burning of OCC rejects containing chlorinated plastics. Stone must continue to evaluate potential alternatives to the burning of OCC rejects and, by August 1, 1998 and February 1, 1999, provide reports to CHEER detailing the status of the OCC alternatives review process. Thereafter, Stone must provide a status report as part of the annual reporting required by (1) above, unless burning of OCC rejects containing chlorinated plastics ceases (¶ 7.E). (Mill & Atlanta)

6. Stone must consult with Bitterroot Restoration Inc. (BRI) and the Wildlife Habitat Council (WHC) before undertaking habitat restoration projects along the Clark Fork adjacent to the mill; projects along the Clark Fork but not adjacent to mill property will be chosen from those identified by BRI and WHC after consultation with the parties (¶ 7.A.3.a). (Mill & David Ledford)

7. Stone must establish a Mill Operations Environmental Committee, which shall meet at least bimonthly to identify and address environmental issues at the facility. The dates of meetings of this committee must be included in the annual reporting required by (1) above (¶ 7.G). (Mill)

8. Stone must provide the Community Advisory Panel with each completed report or similar document required to be prepared under the Consent Decree (with the exception of confidential information, which may be withheld) (see attached list) (¶ 7.H.2). (Mill)

9. Stone must make each report or similar document, required to be prepared by the Consent Decree, available to CHEER (with special provision for confidential business information) (¶ 7.I.1). After submission, Stone shall schedule, within 30 days of a request by CHEER, a meeting to discuss the document (¶ 7.I.2). (Mill)

10. Stone shall provide an annual mill tour for up to 3 representatives of CHEER within 90 days after the annual report described in (1) above is submitted (¶ 7.I.3). (Mill)

11. Stone must provide CHEER with its monthly air and water compliance reports, Quarterly Excess Emission Reports, and annual Form Rs submitted under EPCRA for the term of the Consent Decree at the same time as such documents are submitted to the U.S. EPA and/or the Montana DEQ (¶ 10). (Mill)

12. The Consent Decree will terminate upon completion of the requirements set forth in Section 7 of the Decree (¶ 16).

REPORTS & OTHER DOCUMENTS REQUIRED TO BE PREPARED PER CONSENT DECREE IN *MONTANA CHEER v. STONE CONTAINER*

	Subject	Recipient	Deadline
1.	Initial 5-year Pollution Prevention Plan (¶ 7.B.1)	CHEER	by November 15, 1998
2.	Annual report detailing and updating implementation of the Pollution Prevention Program. Stone's annual report must include a certification from an acceptable expert as to whether Stone is complying with its Program. (¶ 7.B.3) & (¶ 7.B.4)	CHEER, the Montana DEQ, the U.S. EPA, and the Missoula County Health Department	The first annual report will be due on or before the date which is 12 months after the Program is submitted to CHEER; subsequent annual reports will be due on or before the succeeding four anniversary dates of submission of the initial Program
3.	Analysis of alternatives to current bleaching technologies, including results of Pojasek's review. (¶ 7.D.2)	CHEER	at least 30 days prior to final decision on technology
4.	Report on updated of analysis of the economic and technical feasibility of incorporating alternative fibers into production processes, and update on use of recycled fiber. (¶ 7.F.2)	CHEER	by May 19, 1999 and again by May 19, 2001 and May 19, 2003 (as part of report on Pollution Prevention Program)
5.	Report on identification and assessment of alternatives for handling OCC rejects, such that burning of OCC rejects containing chlorinated plastics would be reduced or eliminated. (¶ 7.E.2)	CHEER	August 1, 1998, February 1, 1999; thereafter included in annual report on Pollution Prevention Program

Memos

E00011153

Smurfit-Stone

Missoula Mill
Containerboard and Paper Division

* Also Provided Copy of training Module.

8/20/99
XC: Boschee
Marxer
Willhite

This info will be passed on (Status Report & Training Module) to B.114 Steen at 8/24/99 CAP Meeting. Ed

TO: Missoula Mill CAP

FROM: Ed Scott

DATE: June 30, 1999

SUBJECT: Status of Missoula Mill's Pollution Prevention Program

The following is a summary of the status of the Mill's Pollution Prevention Program. If after reviewing this summary you have any questions or desire more information regarding the Mill's pollution prevention efforts please do not hesitate to contact me.

I. Background

As most are already aware, with the assistance of an outside consultant (Dr. Pojasek) in November 1998 the Mill completed a Pollution Prevention Plan (P2 Plan). The P2 Plan essentially serves as a road map for the Mill's overall Pollution Prevention Program (P2 Program).

It is important to note that the Mill has always practiced pollution prevention, however, the completion of the actual P2 Plan has allowed the Mill to *document* the actual pollution prevention type projects that are routinely initiated and completed. In addition, the documentation of the P2 Plan has to some degree *formalized* the Mill's P2 Program.

II. Mill Operations Environmental Committee

As part of the P2 Plan, the Mill organized a committee (Mill Operations & Env. Committee or MOEC) which is responsible for tracking the status and progress of the P2 Program. The MOEC meets every other month and is currently made up 10 employees (5 salaried employees and 5 hourly employees. All Operating Departments and the Maintenance Department are represented on the committee.

III. Pollution Prevention Policy Statement

In order to communicate mill-wide commitment to pollution prevention, a policy statement was drafted by a subcommittee of the MOEC and latter approved by both the entire MOEC, Mill Management, and Union Leadership (Please see attachment). This policy statement is in the process of being presented to hourly and salaried employees as part of our pollution prevention training and it will be displayed in appropriate areas throughout the Mill.

IV. Pollution Prevention Training

With the assistance of Dr. Pojasek, a subcommittee of the MOEC developed a pollution prevention training module which is in the process of being used to complete pollution prevention training for both hourly and salaried employees. The training is set up to be given by department superintendents and/or a representative of the MOEC and to cover some of the following key elements:

1. Inform the employees about the differences between pollution control & pollution prevention.
2. Inform the employees about the specific pollution prevention program items that are taking place in their respective departments.
3. Solicit ideas from the employees regarding potential P2 projects. (i.e. encourage employees to complete pollution prevention idea forms - please see attached).

V. Pollution Prevention Projects (1998 - 1999)

The Mill has committed to initiate a minimum of 12 P2 projects in 1998 and 1999. A description and the status of those projects is as follows:

Project Description/Status

1. Continue to evaluate & document the findings regarding productive uses for dewatered sludge from the wastewater treatment system.

   Status: Potential alternative uses for dewatered sludge have been identified. In addition, potential obstacles and benefits associated with each option have also been identified. A draft feasibility study for those alternatives identified will be completed this Fall. What are they??

2. Should the Mill plan to continue bleaching past April 1999, prepare a formal "Best Management Practice Plan" to help reduce spills.

   Status: With the assistance of an outside consultant, the Mill completed a draft "Best Management Practice Plan" (BMP Plan) which met the EPA regulations for bleached paper mills. However, since the Mill discontinued bleaching in February of this year this project has been put on hold pending the promulgation of BMP requirements for non-bleach paper mills.

3. Continue to evaluate alternative uses for OCC Plant rejects to reduce the need to burn or landfill.

   Status: Since last year, the Mill has contracted various organizations (i.e. Philip Environmental Services, All Paper Recycling, Alton Corp etc..) to assist in identifying and evaluating feasible alternatives including a trial to construct pallets from OCC rejects. The pallet trials are ongoing. Another potential process option was identified in May which is based out of Missoula. What is it?

V. Pollution Prevention Projects (1998 - 1999)

The Mill is currently considering their proposal to conduct trials to determine if the OCC reject material can be blended with other plastics and processed into acceptable low cost products (i.e. interlocking landscaping blocks, etc.).

4. Continue to evaluate potential compliance alternatives to meet EPA's recently finalized MACT I standards.

   Status: The Mill has organized a team (MACT I Team) which has determined the compliance requirements, evaluated compliance options, prepared process design of preferred alternative, and submitted the project for funding. More recently, the Mill has contracted Sandwell Engineering to complete the detailed engineering for this project and the Mill's Environmental Department has began the process of permitting the project.

5. Complete a study of upsets in the recaust area that result in increased soda losses.

   Status: Beginning in March, the Mill has been documenting process upsets that cause elevated soda loss in the wastewater treatment system. These upsets are categorized by the cause and magnitude. Based on this information, a report will be produced which identifies and prioritizes potential projects to reduce these losses. Thus far as a result of the project the Mill is beginning to catch even more spills than prior to the project. In addition, total salt cake make up and lime makeup have trended downward since January 1999.

6. Explore modifications to the chemical feed systems that will reduce upsets in the paper making process and reduce cull.

   Status: Last year a team was organized to investigate opportunities to reduce the generation of cull caused by the chemical feed systems in the Paper Department. The team is in the process of identifying cull reduction goals and means to reach those goals and will develop a list of recommended modifications. The Mill has already seen a reduction in the generation of cull.

7. Evaluate stock preparations systems to improve consistency of stock to reduce upsets in the paper making process and reduce cull.

   Status: Last year the Mill contracted an outside consultant to assist in this area. A report was generated which benchmarked the current status. Based on this report, modifications will be recommended. More recently the Mill has been working to improve the consistency of the OCC stock. The preliminary results have been very favorable.

8. Upgrade the No. 2 Evaporator pumps to reduce the quantity of water that is introduced into the liquor.

   Status: This project was completed in January 1999 and is accomplishing all of the pre-stated goals. Documentation of results is forthcoming.

V. Pollution Prevention Projects (1998 - 1999)

9. Install a new surface condenser on the No. 2 Evaps to increase efficiency and reduce steam requirements.

Status: This project was also completed in January 1999 and is accomplishing all of the pre-stated goals. Documentation of results is forthcoming.

10. Complete a study on the #4 Evaporator liquor filter operation to evaluate upsets.

Status: Beginning in March, the Mill has been documenting process upsets. These upsets are categorized by the cause, effect, and frequency. Based on this information, a report will be produced which identifies potential equipment modifications. More recently, the Mill has increased preventive maintenance to help reduced upsets.

11. Increase level of plant-wide preventative maintenance and measure the increase through equipment up time values.

Status: Last year, both Operations and Maintenance personnel attended a training session which focused on improving preventative maintenance. A plan is in the process of being developed and implemented which is designed to identify "red-line" equipment throughout the Mill. In addition, "root cause" meetings are also being conducted.

12. The MOEC will act as a "look out" panel. "Look-out" items are to include pollution prevention type projects which have been completed which are not already identified as 1998-1999 projects and ideas that may address future pollution prevention projects.

Status: The MOEC has agreed to serve as a look out panel for the Mill's Pollution Prevention Plan. Look out items are to include pollution prevention type projects which have been completed which are not already identified as 1999 P2 projects and ideas that may address future P2 projects. Thus far, three lookout projects which have already been completed, however, were not specifically identified as 1999 projects have been identified. By utilizing the recently drafted "Pollution Prevention Idea Form", representatives of the MOEC will solicit "Look-Out Projects" from all mill employees . To aid the MOEC in developing a list of possible P2 projects for next year, a list of "priority" waste streams is in the process of being developed.

VI. Outside Audit

Dr. Pojasek is scheduled to audit the Mill's Pollution Prevention Plan on October 6 - 8, 1999.

THE

MISSOULA MILL

POLLUTION PREVENTION POLICY STATEMENT

The Missoula Mill's Management Team is committed to excellence and leadership in protecting the environment through implementation of a Pollution Prevention Program.

The objective of the Missoula Mill's Pollution Prevention Program, is to strive continuously to reduce all waste and emissions to the environment by identifying and implementing feasible pollution prevention alternatives.

Where practicable, prevention of pollution at the source is our preferred alternative. By successfully reducing pollution at its source, the mill will minimize potential impacts to the environment, achieve cost savings, and increase operational efficiencies.

Where process losses cannot be avoided, the mill is committed to try to find ways of recycling, treatment, and disposal that minimize undesirable effects on the air, water, and the land.

We will work to promote cooperation and coordination between industry, government, the public, and our own employees to achieve the shared goal of preventing pollution. And finally, the Management team is committed to keep our own employees, as well as the general public, informed as to the status of the Mill's Pollution Prevention Program.

Bob Boschee
General Manager - Missoula Mill

Dave Serba
Union President

MISSOULA MILL'S

POLLUTION PREVENTION

IDEA FORM

DATE: _____ ORIGINATOR OF IDEA (OPTIONAL): _____

IS THIS IDEA SOMETHING THAT HAS ALREADY BEEN COMPLETED OR IS IT BEING PROPOSED? _____

DESCRIPTION OF NEW IDEA OR PROJECT ALREADY COMPLETED: _____

_____

_____

_____

_____

_____

_____

DESCRIPTION OF THE EXPECTED BENEFIT(S) OF THE PROJECT: _____

_____

_____

_____

_____

_____

_____

PLEASE MAKE THIS FORM AVAILABLE TO A M.O.E.C. REPRESENTATIVE. YOUR M.O.E.C. REPRESENTATIVE WILL KEEP THE ORIGINATOR OF THE IDEA(S) INFORMED AS TO THE STATUS OF THE SUGGESTION.

THANKS FOR TAKING THE TIME TO SHARE YOUR THOUGHTS & IDEAS!!!

Stone Container Corporation
Missoula Mill
Containerboard and Paper Division

To: Distribution

Date: June 15, 1998

From: Ed Scott

Subject: Operations/Maint Dept. Requirements Under EPA/CHEER Consent Decrees

As previously reported, the consent decrees with these groups was entered (became final) on *May 19, 1998.* The following represents the major activities (related to the Operations, Engineering, and Maintenance Departments) and the respective schedule associated with compliance with the various provisions.

Compliance Schedule (CHEER)

Activity	Assignment	Completion Date
Submit an initial 5-yr P2 Plan to CHEER. Bleach plant effluent (including keeping out of clarifier) & OCC rejects priority for P2.	Env, Oper, and Maint	Due 11/15/98 (See June 1 Memo For Sched)
Form a Mill Operations Env. Committee. (3 hrly & salaried employees)	Env, Oper, and Maint	First meeting by 7/19/98 and bimonthly thereafter.
Provide the results of its completed analysis of alternatives to its current bleaching technology & consultant's review of such analysis to CHEER & meet with CHEER to review their comments.	Env, Oper, and Eng.	Provide analysis as soon as available & at least 30 days prior to final decision is made. Schedule meeting within 25 days of providing CHEER analysis.
Have consultant review Mill's draft Risk Management Plan (RMP) to assess whether pollution prevention opportunities have been or could be considered.	Env, Oper, and Eng.	RMP due 6/99

IQS Innovation Quality Service

Compliance Schedule (CHEER) -Cont.

Activity	Assignment	Completion Date
Produce & provide to CHEER an annual report detailing Stone's implementation of P2 Plan.	Mill Operations Env. Committee (MOEC)	Due 11/15/99 & annually thereafter
After each completed report is submitted to CHEER, Stone shall schedule (within 30 days of CHEER's request) a meeting to allow CHEER to ask questions regarding provided info.	Env, Oper, & Maint	As requested
Stone shall provide (3) CHEER representatives with annual tour of mill (ie Pollution Prev Projects, etc)	Env, Oper, & Maint	Within 90 days of dist of annual reports.
Stone shall provide CHEER with copies of monthly compliance reports, Quarterly Excess Emiss Reports, and Form Rs.	Env	As dist to regulatory agencies.

Compliance Schedule (EPA)

Activity	Assignment	Completion Date
Notify EPA & CHEER of schedule to conduct volumetric flow rate test on 4 & 5 rec boilers	Env	By 6/12/98.
Conduct volumetric testing on #4 & #5 rec	Env & Oper	By 7/18/98
Provide results of tests to EPA & CHEER	Env	By 8/17/98

Compliance Schedule (EPA)

Activity	Assignment	Completion Date
On a Quarterly basis, Stone must provide EPA, CHEER, & DEQ with the following:	Env, Oper, Maint	Quarterly

(All beginning April 1, 1998)

1. All six min opacity values from #4 rec with an explanation of values greater than 20%.
2. All six minute periods during the previous quarter when opacity monitor for #4 rec boiler was not operational, with an explanation of such periods.
3. Monthly average pounds/day of particulate for each rec boiler for which a correlation equation has been developed - along with the calcs /data underlying the results.
4. All releases of collected NCGs and all actually known releases of non-collected NCGs to the atmosphere lasting for any period of 15 consecutive minutes or longer including a description of such releases and the TRS emissions from all lime kilns during the 12 hour period preceding the releases.
5. All TRS exceedances from the lime kilns during the previous quarter including a statement as to the cause/corrective action.
6. All exceedances of mass emissions from WFB.

Operate opacity monitor on #4 rec in compliance with 40 CFR 60.13, Part 60 Appendix B, Pef Spec 1.	Env, & Maint	5/19/98
Do not exceed 8. 0 ppm TRS on No. 4 kiln and do not vent NCGs to the atmosphere in response to actual or imminent potential exceedances of TRS on any kiln.	Oper	Ongoing
Maintain span setting on for opacity monitor on #5 rec at 70%.	Maint.	Ongoing

If you have any questions or comments regarding this information, please contact me.

Ed Scott

Distribution: **Boschee**
Marxer
Kohl
Nagy
Olson
Mills
Philips
Griffin
McLaughlin

Barton --> Willhite

27. Stone shall not claim any tax deductions, federal, state, local or otherwise, for any civil or stipulated penalties paid to the United States Treasury.

XII. STIPULATED PENALTIES

28. Upon any failure of Stone to comply with emissions limits, operating requirements, or testing requirements pursuant to Paragraph 8 or Sections VI through IX of this Consent Decree, Stone shall pay stipulated penalties as set forth below:

Number of Violations of Consent Decree	Penalty per Violation
First	$ 1,500
Second	$ 2,500
Third	$ 5,000
Fourth and Subsequent	$10,000

29. Upon any failure of Stone to submit timely and complete reports or certifications as required under Sections V through XIV and Section XVI of this Consent Decree, Stone shall pay stipulated penalties as follows:

Days Late	Penalty per day
Days 1-7	$ 500
Days 8-14	$ 1,000
Days Over 14	$ 2,500

30. Failure to pay any amount due the United States pursuant to Paragraph 24 shall result in payment of a stipulated penalty of $5,000 per day of non-payment, plus Interest.

31. If Stone fails to pay stipulated penalties when due, proceedings to collect the penalties and any Interest due thereon may be instituted. All stipulated penalties begin to accrue on the day after performance is due or on the day a violation occurs, and continue to accrue through the final day of

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Legal Fees

E00011165

CHADBOURNE & PARKE LLP

1200 NEW HAMPSHIRE AVENUE, N.W. • WASHINGTON, D.C. 20036 • TELEPHONE (202) 974-5600 • FACSIMILE (202) 974-5602

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RESIDENT PARTNERS

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CORNELIUS J. GOLDEN, JR.
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RUSSELL S. FRYE
DAVID M. RAIM
WILLIAM K. PERRY*
ELLEN H. WOODBURY*
ANDREW A. GIACCIA
PETER F. FITZGERALD*
THOMAS P. HECHL*

*NOT ADMITTED IN D.C.

July 3, 1998

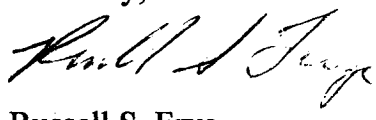
Lou Aleksich, Jr., Clerk
United States District Court
District of Montana
Russell Smith Courthouse
201 E. Broadway
Missoula, MT 59802

Re: *United States and Montana CHEER, et al. v. Stone Container*, CV 96-017-M CCL

Dear Mr. Aleksich:

Enclosed for filing please find (1) Defendant's Memorandum in Opposition to Intervenors-Plaintiffs' Motion for Attorney and Expert Fees and Expenses, (2) a proposed order denying Intervenors-Plaintiffs' Motion, and (3) a certificate of service. Thank you for your assistance.

Sincerely,



Russell S. Frye

cc: Kathryn Schmidt, Esq.
Sherry Scheel Matteucci, Esq.
Lorraine D. Gallinger, Esq.
Charles M. Tebbutt, Esq.

DC1: 93660.01

RUSSELL S. FRYE
Chadbourne & Parke LLP
1200 New Hampshire Avenue, NW
Washington, DC 20036
(202) 974-5600
Attorney for Defendant

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MONTANA

UNITED STATES OF AMERICA, Plaintiff,	Civil No. 96-017-M-CCL
MONTANA COALITION FOR HEALTH, ENVIRONMENTAL AND ECONOMIC RIGHTS, INC., COLD MOUNTAIN, COLD RIVERS, INC. AND NATIVE FOREST NETWORK, INC., Intervenors-Plaintiffs, v. STONE CONTAINER CORPORATION, Defendant.	MEMORANDUM IN OPPOSITION TO INTERVENORS-PLAINTIFFS' MOTION FOR ATTORNEY AND EXPERT FEES AND EXPENSES

INTRODUCTION

Intervenor-Plaintiffs Montana Coalition for Health Environmental and Economic Rights, Inc., Cold Mountain, Cold Rivers, Inc. and Native Forest Network, Inc. ("CHEER") filed a Motion for Attorney and Expert Fees and Expenses with this

1 Court seeking from Defendant Stone Container Corporation ("Stone") a total of
2 $49,757.30 in fees and $1,651.72 in expenses allegedly incurred during CHEER's
3 involvement as intervenor-plaintiff in an enforcement action brought and prosecuted
4 by the United States Government.

5 CHEER's fee petition disregards the plain language of the Clean Air Act
6 and an appellate court decision directly on point, relying instead on an alleged "joint
7 prosecution" for which there is no statutory basis and no authorization for awarding
8 legal fees. For the reasons set forth below, there is absolutely no basis upon which
9 CHEER is entitled to any such fees and expenses.

10 **BACKGROUND**

11 On January 22, 1996, the United States Department of Justice ("DOJ"),
12 on behalf of the United States Environmental Protection Agency ("EPA"), filed a
13 complaint against Stone pursuant to section 113 of the Clean Air Act, 42 U.S.C.
14 § 7413, alleging violations of the Clean Air Act (the "U.S. Action"). The same day,
15 counsel for Stone informed CHEER's counsel of the U.S. Action and explained that the
16 filing of the U.S. Action precluded CHEER from filing a complaint alleging the same
17 violations of the Clean Air Act, by virtue of Clean Air Act section 304(b)(1)(B), , 42
18 U.S.C. § 7604(b)(1)(B). See Exhibit B.

19 On January 29, 1996, CHEER filed a citizen suit in this court against
20 Stone alleging violations of the Clean Air Act, the Clean Water Act and the
21 Emergency Planning and Community Right to Know Act ("EPCRA"), Montana

1 Coalition for Health, Environmental, and Economic Rights, Inc., et. al v. Stone
2 Container Corporation , No. CV 96-24-M-CCL (the "CHEER case"). Despite having
3 received the notification from Stone evidenced in Exhibit B, CHEER's counsel
4 nevertheless included in CHEER's complaint three alleged violations of the Clean Air
5 Act that were the same as those alleged in the U.S. Action. CHEER conceded this
6 duplication in its Proposed Intervenor Complaint dated March 9, 1998, at paragraphs
7 29, 37, and 43.

8 CHEER pursued those of its claims that were not duplicative of the U.S.
9 Action in negotiations with Stone and resolved these claims by entering into a consent
10 decree with Stone. As part of that consent decree, Stone agreed to pay over $129,373
11 in attorney and other fees to CHEER. See Exhibit A at 16.

12 Section 304(b)(1)(B) of the Clean Air Act, 42 U.S.C. § 7604(b)(1)(B),
13 barred CHEER from pursuing those of its claims that overlapped with the U.S. Action.
14 With respect to those duplicative claims, CHEER had no right other than to become an
15 intervenor in the U.S. Action. The fact that the DOJ, over Stone's objection, insisted
16 that CHEER be involved in discussions between Stone and the United States and
17 permitted CHEER to play a role in conducting factual investigations and in negotiating
18 the Consent Decree that resolved the U.S. Action did not and could not convert
19 CHEER from an intervenor under Clean Air Act section 304(b)(1)(B) to a plaintiff
20 under section 304(a) to whom attorney and expert fees and costs may be awarded
21 under section 304(d).

Now, CHEER seeks recovery of the attorneys' fees and other litigation costs it incurred while acting as an intervenor-plaintiff in the U.S. Action. There is no basis upon which CHEER is entitled to such fees and costs.

ARGUMENT

I. Intervenor-Plaintiffs Are Not Authorized to Recover Attorneys' Fees Under the Clean Air Act

A prevailing party is generally not entitled to recover attorneys' fees in the absence of an express statutory authority. Alyeska Pipeline Service Co. v. Wilderness Society, 421 U.S. 240, 247 (1975).

A. Section 304 of the Clean Air Act Does Not Authorize the Award of Attorneys' Fees to Intervenor-Plaintiffs

Section 304(d) of the Clean Air Act contains a narrowly tailored provision authorizing the court, when appropriate, to grant reasonable attorneys' fees to private parties that have brought citizen suit actions under section 304(a). Section 304 provides in relevant part:

> **(a) Authority to bring civil action; jurisdiction**
> Except as provided in subsection (b) of this section, any person may commence a civil action on his own behalf –
> (1) against any person . . . who is alleged to have violated . . . or to be in violation of (A) an emission standard or limitation under this chapter or (B) an order issued by the Administrator or a State with respect to such a standard or limitation,
> . . . .
> **(b) Notice**
> No action may be commenced - (1) under subsection (a)(1) . . .
> . . . .
> (B) if the Administrator or State has commenced and is diligently prosecuting a civil action in a court of the United

> States or a State to require compliance with the standard, limitation, or order, but in any such action in a court of the United States any person may intervene as a matter or right.
>
> . . .
>
> **(d) Award of Costs; Security**
>
> The court, in issuing any final order in any action brought pursuant to subsection (a) of this section, may award costs of litigation (including reasonable attorney and expert witness fees) to any party, whenever the court determines such award is appropriate . . .

42 U.S.C. 7604 (emphases added).

Perhaps not surprisingly, CHEER quotes sparingly from section 304 in its Brief. This is likely because a plain reading of section 304 compels the conclusion that courts can authorize the payment of attorneys' fees only where the underlying action was a citizen suit filed under Clean Air Act section 304(a). Where, as here, the underlying action was an enforcement action brought by the Government under Clean Air Act section 113, attorneys' fees simply are not available.

In a case, such as here, where the Government files an enforcement action before a citizen suit is filed, and there is no evidence, much less a finding, that the Government has not diligently prosecuted its enforcement action, a private citizen may not commence an action under section 304(a), "but in any such [federal enforcement action]...any person may intervene as a matter of right." Clean Air Act section 304(b)(1)(B), 42 U.S.C. § 7604(b)(1)(B) (emphasis added). Congress unequivocally distinguished between a citizen filing an enforcement action in advance of the Government, and a citizen who after the filing of an action by a state or the United States who can only intervene in the Government action. Congress just as

clearly extended this distinction to the provision authorizing a fee award only in a citizen suit action brought under section 304(a). See Clean Air Act section 304(d), 42 U.S.C. § 7604(d).

The Sixth Circuit squarely addressed this issue in United States v. National Steel Corp., 782 F.2d 62 (6th Cir. 1986), where an environmental organization had sought to recover fees as an intervenor-plaintiff in a government action brought under section 113 of the Clean Air Act. Basing its opinion on a straight-forward reading of section 304, the court emphatically rejected intervenor-plaintiff's fee request:

> The statute makes clear that the courts have authority to award attorneys' fees only if the action was "brought pursuant to subsection (a)." As we have noted, the instant action was brought "pursuant to section 113(b) of the Federal Clean Air Act" . . . and not section 304(a) of the Act. .... Accordingly, ... attorney fees are available to intervenors under section 304(d) of the Act only in cases in which the Administrator or State is not diligently prosecuting the action. Id. at 64.

CHEER's primary response to the plain language of the statute and the clear holding in National Steel is to not discuss the statutory language, and to argue that National Steel was incorrectly decided. See CHEER Brief at 6. This is not a particularly compelling basis upon which to overturn the intent of Congress and well-established case law.

The Ninth Circuit has strongly endorsed a plain-language approach to interpreting citizen suit provisions, and has emphasized that "[t]he most persuasive evidence of . . . [congressional] intent is the words selected by Congress." Wash. PIRG v. Pendleton Woolen Mills, 11 F. 3d 883, 886 (9th Cir. 1993) (quoting Turner v.

McMahon, 830 F. 2d 1003, 1007 (9th Cir. 1987), cert. denied, 488 U.S. 818 (1988)). Thus, general arguments about the congressional intent with respect to citizen suits "cannot persuade us [the Ninth Circuit] to abandon the clear language that Congress used when it drafted the statute." Id. (interpreting section 505 of Clean Water Act). As noted in National Steel, the plain language of section 304 authorizes attorneys' fees only for a citizen suit brought under section 304(a). The U.S. Action was brought by the Government under section 113 of the Clean Air Act, not section 304(a). Therefore, CHEER cannot recover attorneys' fees.

CHEER's assertion that it is eligible to recover attorneys' fees because it filed a claim under 304(a) is disingenuous. See CHEER Brief at 6. Clean Air Act Section 304(b)(1)(b) clearly prohibited CHEER from pursuing in a citizen suit action those claims and issues covered by the U.S. Action, which DOJ was diligently prosecuting. CHEER's invalid citizen suit cannot make CHEER eligible to recover fees and costs under 304(d). See United States v. National Steel Corp., 782 F.2d at 64 (no attorneys fees' available to intervenor-plaintiff where United States is diligently prosecuting the action).[1]

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[1] CHEER seems to imply that Stone somehow waived its right to object to this fee request because Stone did not move to dismiss the overlapping claims in CHEER's first amended complaint. As CHEER well knows, Stone consistently stated its position throughout the pendency of CHEER's complaint (and before it was filed, as indicated in Exhibit B), that the claims in the CHEER complaint that were duplicative of the U.S. Action were not

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1 B. Analogy to RCRA

2 In a weak attempt to counter the clear statutory language and case law
3 prohibiting the award of attorneys' fees to intervenor-plaintiffs under the Clean Air
4 Act, CHEER cites a lone case decided under the Resource Conservation and Recovery
5 Act ("RCRA"), in which an intervenor-plaintiff was awarded a portion of its attorneys'
6 fees and litigation costs. CHEER Brief at 6 (citing U.S. EPA v. Environmental Waste
7 Control Inc., 737 F. Supp. 1485 (N.D. Ind. 1990)). However, CHEER fails to note that
8 in that case, intervenor-plaintiff was pursuing claims that were beyond and in addition
9 to the claims being pursued by EPA. See U.S. EPA v. Environmental Waste Control
10 Inc., 710 S. Supp. 1172, 1192 (N.D. Ind. 1989). Indeed, in authorizing the award of
11 attorneys' fees, the court emphasized that intervenor-plaintiff could have pursued a
12 separate action independent of EPA, and, had it done so and prevailed, would have
13 been eligible to recover attorneys' fees in that action. Id. at 1248. Consistent with the
14 rule that an intervenor-plaintiff cannot recover fees for claims that are the subject of a

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properly included in the first amended complaint, and Stone did not include those claims in its negotiations with CHEER or in the consent decree resolving the CHEER case, other than insisting that CHEER dismiss those claims. See Exhibit A at p. 16, para. 13. Stone chose not to file motions to dismiss and for summary judgment in the CHEER case in order to minimize legal fees while settlement negotiations with the plaintiffs in that case were ongoing. Stone in fact did avoid the cost of a motion to dismiss the overlapping counts, since CHEER agreed to dismiss them in their action and to be bound by the resolution reached in the U.S. Action.

government enforcement action, the court limited intervenor-plaintiff's recovery to those fees associated with non-overlapping claims upon which intervenor-plaintiff prevailed. See Id. at 1248; see also Environmental Waste Control, 737 F. Supp. at 1493; cf. U.S. v. Maine Dept. of Transp., 980 F. Supp. 546, 549 (no attorneys' fees to intervenor-plaintiff under the Clean Water Act where intervenor-plaintiff did not seek any additional relief beyond that sought by the U.S.).

In the present matter, CHEER seeks recovery of attorneys' fees related to issues and remedies that admittedly were duplicative of the claims DOJ was diligently prosecuting and for which CHEER therefore could not have pursued a separate citizen suit action. See 42 U.S.C. § 7604(b)(1)(B). Therefore, even if Environmental Waste Control were relevant to a decision under the Clean Air Act, it would not authorize what CHEER seeks.

C. Analogy to the Clean Water Act

Additional insight on the unavailability of fees to intervenor-plaintiffs can be gained by examining how this issue has been addressed under the Clean Water Act. The Clean Water Act authorizes government civil and administrative enforcement actions in section 309, 33 U.S.C. § 1319. In addition, section 505 of the Clean Water Act contains a citizen suit provision that is similar to the citizen suit provision in the Clean Air Act, and subsection (d) provides that:

> The court, in issuing any final order in any action brought pursuant to this section, may award costs of litigation (including reasonable attorney and expert witness fees) to any prevailing or substantially

> prevailing party, whenever the court determines such award is appropriate.

33 U.S.C. § 1365(d). As in the Clean Air Act, subsection 505(b)(1)(B), 33 U.S.C. § 1365(b)(1)(B), precludes a citizen suit when a government enforcement action has been filed for the same violation, but requires that the citizen be allowed to intervene in the government action. The courts have confirmed that this provision does not authorize an intervenor-plaintiff in a government enforcement action to recover attorneys' fees:

> Subsection 1365(d) unambiguously authorizes an award of fees only "in any action brought pursuant to this section" (emphasis added). Plaintiffs-Intervenor never brought an action pursuant to 33 U.S.C. §1365. Instead, after sending 60-day notice letters to Defendants and EPA, Plaintiffs-Intervenor participated in settlement discussions with the other parties and intervened in the United States' civil enforcement suit brought pursuant to 33 U.S.C. § 1319. As a result, Plaintiff-Intervenors' fee application falls outside of the statutory authorization of fees in subsection 1365(d).

U.S. v. Maine Dept. of Transp., 980 F. Supp. 546, 548-49 (D.Me. 1997). CHEER has emphasized that the citizen suit provisions of the Clean Air Act were modeled after those in the Clean Water Act. CHEER Memorandum at 4. Stone agrees with CHEER and is perplexed that CHEER could believe in good faith that either statute authorizes the award of attorneys' fees to intervenor-plaintiffs.

D. Concept of "Joint Prosecution"

CHEER tries to gloss over the fact that it could not be a plaintiff under Clean Air Act section 304(a) with respect to the violations alleged in and resolved in the U.S. Action by referring over and over again to a concept for which CHEER can offer no legal support: "joint prosecution" by CHEER and the United States. As the

1 National Steel and Maine Dept. of Transportation courts emphasized, Congress
2 provided status as an intervenor in a government enforcement action as an alternative
3 for a citizen who is prohibited by statute from bringing his own civil action because the
4 government action preceded his. There can be no such thing as "joint prosecution" of
5 the claims covered by the U.S. Action. In fact, if the United States was sharing
6 responsibility for prosecuting its claims with CHEER, that would have been a violation
7 of the Anti-deficiency Act, 31 U.S.C. § 1342, as Stone's counsel explained in his May
8 14, 1996 letter to Peter Mounsey of DOJ (Exhibit 4 to Tebbutt affidavit in support of
9 fee petition).

10 CHEER's suggestion that Stone consented to this "joint prosecution," and
11 CHEER's implication that Stone is thereby estopped from opposing its fee petition, is
12 ridiculous. Stone consistently told CHEER and DOJ that the duplicative claims in
13 CHEER's complaint were not authorized by the Clean Air Act and that DOJ's
14 insistence that CHEER be involved in negotiations between Stone and DOJ over DOJ's
15 claims was inappropriate.[2] Stone's position was clearly stated in Russell Frye's May

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[2] CHEER claims at p. 6 of its Memorandum that Stone agreed to the "joint prosecutorial role" of CHEER, apparently based on the fact that Stone's counsel signed an agreement concerning extensions of the time to answer in the U.S. Action and the CHEER case and procedures for exchange of information during informal discovery, drafted by CHEER's counsel, which makes reference to disclosure of documents "which would not otherwise be nondiscoverable because of the joint prosecution being undertaken by Montana CHEER and the United States." That hardly constitutes an agreement to anything, much

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14, 1996 letter to Mr. Mounsey. Stone also expressly stated its concern that, because work performed by CHEER's counsel on DOJ's case, for which he was not entitled to fees, would inevitably get blurred with work on CHEER's case, for which an award of fees might be authorized under Clean Air Act section 304(d), Stone might end up paying for a portion of CHEER's legal fees for which there was no statutory authorization for an award of fees. Id.[3]

II. Even if the Clean Air Act Authorized the Award of Attorneys' Fees to Intervenor-Plaintiffs, Such Fees Would Not Be Allowable in this Instance

Even if the CAA authorized the granting of attorneys' fees to intervenor-plaintiffs, and it clearly does not, CHEER would not be entitled to any such fees given the nature of their involvement in this matter.

As a general rule, even in cases where an award of attorneys' fees is to a citizen intervenor or additional plaintiff is authorized, they will only be granted if the following conditions are met: (i) the government litigant did not adequately represent the intervenor's interests; (ii) the intervenor proposed different theories and arguments for the court's consideration; (iii) the work that the intervenor performed was of

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less a waiver of Stone's objections to CHEER's inclusion of duplicative claims in the CHEER case or an agreement to pay CHEER'S fees in the U.S. Action.

[3] Stone obviously never even contemplated that CHEER could obtain fees even for work that clearly related only to the U.S. Action and was not blurred with the CHEER case.

1 important value to the court; and (iv) the result obtained in settlement reflects the
2 position espoused by the intervenor rather than the government. See Friends of the
3 Earth v. Potomac Elec. Power Co., 546 F. Supp. 1357, 1362 (D.D.C. 1982); Donnell v.
4 United States, 682 F.2d 240, 248-49 (D.C. Cir. 1982).

5 CHEER argues that it contributed to DOJ's prosecution of this case,
6 CHEER Brief at 6, and has submitted statements from DOJ attorneys evidencing
7 CHEER's involvement in factual investigations and negotiations. Significantly,
8 however, CHEER's memorandum does not indicate that CHEER did anything other
9 than provide assistance in advancing the Government's action. Indeed, CHEER's
10 counsel has previously asserted that the Government's position and CHEER's were the
11 same. See, e.g., Letter from Charles Tebbutt to Russell Frye, at 2 (May 30,
12 1996)(Exhibit 6 to Tebbutt affidavit in support of fee petition) ("the interests of the
13 government and Montana CHEER are essentially the same.. . "). CHEER cannot
14 obtain attorneys' fees where its activities have been simply to support the
15 Government's enforcement action.[4]

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[4] While not addressed in its memorandum, in the affidavit of CHEER's counsel, Charles Tebbutt, there is a claim at paragraph 13 that one element of the settlement in the U.S. Action concerned a claim not asserted in the United States' complaint, but asserted in the CHEER case as Count 12. Stone was never served with the original complaint, but neither the first amended complaint in the CHEER case nor CHEER's intervenor complaint in this case contains an allegation concerning the particulate emissions from the wastefuel boiler covered by Section IX, p. 12 of the consent decree in the U.S. Action, as

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1 Statements by CHEER's lawyers and representatives and by DOJ lawyers
2 asserting that CHEER's involvement helped the United States pursue its claims ignore
3 the substantial *increased* difficulty of negotiating among multiple parties and *increased*
4 cost associated with CHEER's involvement. Even if CHEER's involvement benefited
5 the United States, however, that is no basis on which to expand the statutory provision
6 authorizing an award of fees only in a citizen suit under Clean Air Act section 304(a).
7 In both the National Steel case and the Maine Dept. of Transportation case cited above,
8 which rejected intervenors' claim for attorneys fees, it was acknowledged that the
9 intervenors' involvement had furthered the enforcement of the environmental statute
10 involved.
11 As the Friends of the Earth and Donnell cases cited above indicate,
12 whether or not the litigation resulted in some benefit to the intervenors is not the
13 relevant consideration. Even if it were, though, CHEER has vastly overstated the
14 benefit it received from the consent decree in this case (as well as the benefit Stone
15 received from CHEER's involvement). The information that CHEER will receive
16 under paragraphs 11, 12, 16, 19, 23, 34, 42, and 45 of the Consent Decree is nothing
17 more than it could receive from the public records of either the Montana Department of

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Mr. Tebbutt claims. Even if that particular element of the consent decree in the U.S. Action did relate to a claim made first by CHEER, though, at best that would entitle

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1 Environmental Quality or EPA; the only benefit is that CHEER does not have to ask
2 for the information before receiving it. Stone did not pay a civil penalty in this case
3 "to resolve claims brought against it by CHEER and EPA," as CHEER asserts. See
4 Memorandum in Support of Plaintiff's Motion for Fees at 2. In fact, Stone and the
5 United States had agreed upon a civil penalty and other elements of the settlement at a
6 time when it was still unclear whether CHEER would even be a party to the settlement.
7 See February 6, 1998 letter from Kathryn Schmidt of DOJ (Exhibit C).
8
9 **III. The Fees and Costs Sought by CHEER Are Not Appropriate and**
10 **Reasonable**
11
12 Awarding attorneys' fees to CHEER in this case would not only be
13 against unambiguous statutory mandates and case law, it would be inappropriate on
14 public policy grounds. The award of attorneys' fees to intervenors in government
15 enforcement actions would encourage private parties to "volunteer" their enforcement
16 services to the U.S. Government, with the hope that they would subsequently recover
17 attorneys' fees. The result would be a distortion of the government's role as
18 independent prosecutor and public representative. This would disrupt the
19 administration of the Clean Air Act which "contemplates that the federal government,
20 the states and private citizens will each implement and enforce the Act in different

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CHEER to only the small portion of its legal fees spent on that issue.

1 ways." Friends of the Earth v. Potomac Elec. Power Co., 546 F. Supp. at 1360-61. As
2 such, the award of attorneys' fees would be inappropriate. See id. at 1360.
3 Moreover, an award of fees in a case of this sort would impose a penalty
4 on the alleged violator clearly not contemplated by Congress. If DOJ prosecutes the
5 case alone, there is no question that the defendant is not required to pay the DOJ's fees,
6 and in fact the Consent Decree in this case contains no award of attorneys fees or
7 expert fees to the United States. If DOJ allows a private citizen to perform much of the
8 work in the case, though, under CHEER's view the defendant would be required to pay
9 the citizen's attorney and expert fees. This would produce a result Congress clearly did
10 not intend.
11 The fees and costs that CHEER claims are also unreasonable. Pursuant to the
12 Consent Decree between CHEER and Stone, CHEER has already recovered fees and
13 costs totaling over $129,000, which resolved any fees and costs incurred by CHEER to
14 pursue claims that were not duplicative of the claims being pursued by the United
15 States. It is unreasonable for CHEER to have incurred any fees or costs with respect to
16 the U.S. Action.
17 Even if there were a legal basis to award fees to CHEER, it would not be
18 entitled to fees that did not advance the government's claims. CHEER's Memorandum,
19 Tebbutt's affidavit, the time records provided, and other documents submitted all show
20 that a large amount of time was spent explaining the negotiations and the legal issues
21 to CHEER, seeking CHEER's opinions, reviewing documents that were already being

1 reviewed by DOJ, as so forth. None of this helped the United States. Likewise,
2 CHEER does not even offer a legal theory for why CHEER should be entitled to fees
3 for future "monitoring" of Stone's compliance with the Consent Decree, when the
4 United States clearly has the obligation to do so (and a substantial incentive, in the
5 form of stipulated penalties).

6 CHEER's claim that its fee request is reasonable in comparison to the
7 fees incurred by Stone is nonsensical. CHEER's role, even under its own view, was at
8 best supplemental to the United States. It is simply irrelevant to assessing the
9 reasonableness of fees incurred in that limited role to compare them to the fees
10 incurred by the defendant in an action brought against it by the United States in which
11 potential civil penalties were millions of dollars. "[T]he task of defending a civil case
12 may require more work than the task of prosecuting. The number of hours spent
13 defending the case may therefore have little relevance to the number of hours
14 reasonably expended by the plaintiff's counsel." Ohio-Sealy Mattress Manufacturing
15 Company v. Sealy Inc., 776 F. 2d 646, 659 (7th Cir. 1985)(citations omitted); see also
16 Henson v. Columbus Bank & Trust Co., 770 F.2d 1566, 1574 (11th Cir. 1985). In the
17 instant case, the comparison of the time defendant's counsel spent to the time
18 reasonably spent by counsel for citizen intervenors is even less appropriate.

19 A major difference recognized by the courts is that the defendant often
20 has much more to lose than the plaintiff, and therefore reasonably invests much more
21 effort in the defense. This has been noted particularly in antitrust cases, but it is

1 equally true for environmental enforcement cases, where the potential daily penalties
2 are in the tens of thousands of dollars. See, e.g., Sealy, supra. If intervenors in this
3 case had "lost," they would have suffered little or no economic loss, and if they "won"
4 they would have received no economic gain (save potentially recovery of their
5 attorneys fees). Thus, the effort expended by Stone in defending itself against multi-
6 million dollar penalty liabilities is irrelevant to how much effort it was reasonable for
7 intervenors to invest.

8 In addition, courts have recognized that "a given case may have greater
9 precedential value for one side than the other," and "the amount of fees which one side
10 is paid by its client is a matter involving various motivations in an on-going attorney-
11 client relationship and may, therefore, have little relevance to the value which
12 petitioner has provided to his clients in a given case." Mirabal v. General Motors
13 Acceptance Corp., 576 F.2d 729 731 (7th Cir. 1978). See also Henson, supra.

14 A review of the time records provided indicate that Mr. Tebbutt charged
15 $7041.50 and Ms. Stillwell charged $750.00 for preparation of a petition to recover
16 fees and costs of less than $44,000. It seems patently unreasonable to spend more than
17 one-sixth of the total fees and costs incurred over two-plus years just to prepare a fee
18 petition. In addition, CHEER has not provided any contemporaneous time records for
19 the legal interns who worked on this matter, so it could not in any case recover for their
20 time.

CONCLUSION

Based on the foregoing, it is difficult to fathom how CHEER could argue in good faith that it is entitled to attorneys' fees as an intervenor-plaintiff in this matter. Only by calling its claims that were barred by Clean Air Act section 304(a) an action "brought under" section 304(a), ignoring applicable case law (which Stone had brought to its attention), and creating an extra-statutory concept of "joint prosecution" (and extra-statutory authorization for attorneys fees to go along with it) can CHEER piece together a claim.

Plaintiffs-Intervenors' Motion for Attorney and Expert Fees and Expenses should be DENIED.

Respectfully submitted

RUSSELL S. FRYE
July 3, 1998
Chadbourne & Parke LLP
1200 New Hampshire Avenue, NW
Washington, DC 20036
(202) 974-5600

ATTORNEY FOR DEFENDANT

CERTIFICATE OF SERVICE

I certify that on July 3, 1998, I caused a copy of the foregoing United States Motion to Enter Consent Decree to be served, prepaid, upon the following:

Kathryn Schmidt Trial Attorney Environmental Enforcement Section Environmental and Natural Resources Division U.S. Department of Justice 999 18th Street, Suite 945 North Denver, Colorado 80202 (303) 312-7327	[ ] [ ] [ ] [x]	Hand Delivery U.S. Mail Via Facsimile Federal Express
Sherry Scheel Matteucci United States Attorney District of Montana United States Attorney	[ ] [x] [ ] [ ]	Hand Delivery U.S. Mail Via Facsimile Federal Express
Lorraine D. Gallinger First Assistant United States Attorney P.O. Box 1478 Billings, Montana 59103	[ ] [x] [ ] [ ]	Hand Delivery U.S. Mail Via Facsimile Federal Express
Charles M. Tebbutt, Esq. Western Environmental Law Center 1216 Lincoln Street Eugene, Oregon 97401	[ ] [ ] [ ] [x]	Hand Delivery U.S. Mail Via Facsimile Federal Express

Russell S. Frye

RUSSELL S. FRYE
July 3, 1998
Chadbourne & Parke LLP
1200 New Hampshire Avenue, NW
Washington, DC 20036
(202) 974-5600

ATTORNEY FOR DEFENDANT

Exhibit A

UNITED STATES DISTRICT COURT
DISTRICT OF MONTANA

FILED

MAR 11 1998

LOU ALEKSICH, JR. CLERK
By _____
DEPUTY CLERK

MONTANA COALITION for HEALTH, ENVIRONMENTAL and ECONOMIC RIGHTS, Inc., COLD MOUNTAIN, COLD RIVERS, Inc. and NATIVE FOREST NETWORK, Inc. Plaintiff, VS. STONE CONTAINER CORPORATION, Defendant.	Civil Action No. CV 96-24-M-CCL

CONSENT DECREE

WHEREAS, the Plaintiffs, Montana Coalition for Health, Environmental and Economic Rights, Inc. ("Montana CHEER"), Cold Mountain, Cold Rivers, Inc. ("CMCR"), and Native Forest Network, Inc. ("NFN"), filed a Complaint on January 29, 1996, and an Amended Complaint on February 7, 1996, against Defendant, Stone Container Corporation ("Stone") alleging violations of the terms and conditions of Stone's National/Montana Pollutant Discharge Elimination System ("MPDES") Permit number MT-0000035 and effluent standards or limitations pursuant to § 505(a)(1)(A) of the Clean Water Act ("CWA"), 33 U.S.C. § 1365(a)(1)(A); violations of the terms and conditions of Stone's Air Quality Permits numbers 2589-01 through 05 and emission standards or limitations pursuant to § 304(a)(1)(A) of the Clean Air Act

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("CAA"), 42 U.S.C. § 7604(a)(1)(A); and violations of reporting requirements under § 313 of the Emergency Planning and Community Right-to-Know Act ("EPCRA"), 42 U.S.C. § 11023, and § 6607 of the Pollution Prevention Act of 1990, 42 U.S.C. 13106(a) (hereinafter incorporated into Section 313 of EPCRA, 42 U.S.C. 11023), pursuant to EPCRA § 326, 42 U.S.C. § 11046, seeking declaratory and injunctive relief, civil penalties and attorneys fees and costs;

WHEREAS, Defendant denies Plaintiffs' claims and any liability for the alleged violations; and

WHEREAS, the parties to this action have engaged in discussions relating to the potential settlement of this litigation, which discussions have included an assessment of the facts surrounding the alleged violations; and

WHEREAS, Defendant has committed itself to, and will continue implementing, measures to prevent pollution and assure compliance with its MPDES permit, the CWA, its CAA permit, and reporting requirements of EPCRA; and

WHEREAS, Plaintiffs and Defendant agree that settlement of these matters is in the best interest of the parties and the public, and that entry of this Consent Decree without additional litigation is the most appropriate means of resolving these actions; and

WHEREAS, Plaintiffs and Defendant, by their authorized counsel and without trial or final adjudication of the issues of

fact or law, with respect to Plaintiffs' claims or allegations, consent to the entry of this Decree in order to avoid the risks (and, as to Defendant, the costs) of litigation and to resolve the controversy between them;

NOW THEREFORE, without trial of any issue of fact or law, and without admission by the Defendant of the facts or violations alleged in the Amended Complaint, and upon consent of the parties, and upon consideration of the mutual promises herein contained, it is hereby ORDERED, ADJUDGED AND DECREED as follows:

1. For purposes of entering this decree, this Court finds that it has jurisdiction over the parties and subject matter of this action, pursuant to 33 U.S.C. § 1365, 42 U.S.C. § 7604, 42 U.S.C. § 11026, and 28 U.S.C. § 1331.

2. The undersigned representative for each party certifies that he/she is fully authorized by the party or parties whom he/she represents to enter into the terms and conditions of this Decree and to legally bind the party or parties to it.

3. This Decree shall apply to and be binding upon the parties to this action, and upon the successors and assigns of the parties.

4. Stone operates container board manufacturing facilities located in Frenchtown, Montana, near Missoula.

5. This Decree constitutes a full and complete settlement of the claims contained in the Amended Complaint filed in this case and is determined to be in the public interest and an

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appropriate resolution of the allegations in Plaintiffs' Amended Complaint.

6. This Decree shall not constitute evidence in any proceeding, an admission or adjudication with respect to any allegation of the Amended Complaint, any fact or conclusion of law with respect to any matter alleged in or arising out of the Amended Complaint, or the admission or evidence of any wrongdoing or misconduct on the part of the Defendant, any director, officer or any affiliated person.

7. In full and complete satisfaction of the claims covered by the Amended Complaint filed in this case, Stone shall make payments to the following named recipients in the amounts, and for the periods described, and Stone shall implement and perform the following substantive programs, subject to the following terms and conditions:

A. Penalties and Payments

1. Stone shall pay a penalty of fifty thousand dollars ($50,000.00) within thirty (30) days of the entry of this Consent Decree to the United States Treasury, c/o Saundra Doyle, United States Department of Justice, Executive Office, Room 6732, P.O. Box 7754, Washington, D.C. 20044-7754. A copy of this Consent Decree shall be sent with the payment. A copy of the check and covering letter shall be sent simultaneously to Plaintiffs.

2. Stone shall provide funding in the amount of three hundred thousand dollars ($300,000.00) over a five (5) year period commencing with the entry of this Consent Decree for the projects specified below. Approximately $60,000 per year will be apportioned among a) the Missoula City-County Air Pollution Control Board, b) the Missoula Water Quality District Board, and c) the Missoula County Local Emergency Planning Committee, such that at

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least $150,000 shall be paid within thirty (30) months of the date of entry of this Consent Decree. It is the parties' intent that over the five-year period the Missoula City-County Air Pollution Control Board and the Missoula Water Quality District Board shall each receive approximately $120,000 and the Missoula County Local Emergency Planning Committee shall receive approximately $60,000. A copy of this Consent Decree shall be sent with the first payment made to each of the respective entities. Payments shall be sent to:

For the Missoula City-County Air Pollution Control Board: Chairman, Missoula City-County Air Pollution Control Board, 301 W. Alder St., Missoula, MT 59802-4123;

For the Missoula Water Quality District Board: Chairman, Missoula Water Quality District Board, 301 W. Alder St., Missoula, MT 59802-4123;

For the Missoula Local Emergency Planning Committee: Bill Silverman, Missoula County Office of Emergency Management, 200 W. Broadway, Missoula, MT 59802-4292.

A copy of the check and covering letter for each payment made shall be sent simultaneously to Plaintiffs. The money shall be used by the above-named entities to fund the projects described below:

- Approximately $90,000 over five (5) years to assist the Missoula City-County Air Pollution Control Board in performing source characterization and ambient level studies of PM-2.5 and PM-10 in the Missoula valley airshed.
- Approximately $30,000 over two (2) years to assist the Missoula City-County Air Pollution Control Board in performing source characterization and ambient level studies of volatile organic compounds in the Missoula valley airshed. These studies may also include hazardous air pollutants, to the extent that the Missoula City-County Air Pollution Control Board determines such expansion of the studies is appropriate and will not impair adequate assessment of volatile organic compounds with the available funds.
- Approximately $70,000 over five (5) years to perform or enhance a study or studies to

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better define, quantify, and interpret nonpoint source contribution of nutrients (nitrogen and phosphorus) into the Clark Fork watershed. This study or studies may also include nonpoint source contributions of other pollutants, if the Missoula Water Quality District Board determines such expansion of the study is appropriate and will not prevent adequate assessment of nutrients with the available funds.

- Approximately $10,000 per year over five (5) years to expand the annual household hazardous waste collection weekend to extend to more days and/or to cover a wider range of wastes, and for public education to prevent or minimize release or generation of household hazardous wastes.
- Approximately $2,000 per year over five (5) years to the Local Emergency Planning Committee to assist it in implementing programs consistent with its statutory mandate.
- Approximately $10,000.00 per year over five (5) years to pay for professional trainers to put on programs throughout Missoula County, or for selected individuals to travel from Missoula for professional training, to better prepare the Local Emergency Planning Committee to respond to releases of hazardous substances; and to purchase emergency response and communication equipment identified by the Local Emergency Planning Committee as needed for emergency responders throughout Missoula County to be better prepared to respond to releases of hazardous substances.

The money is intended to be for additional work, rather than replacing existing funding or for expenditures required by law.

3. Habitat Restoration and Creation

a. Stone shall spend one hundred thousand dollars ($100,000) over a maximum five (5) year period commencing with the entry of this Consent Decree for habitat restoration and creation projects adjacent to the Clark Fork River between Harper's Bridge and Alberton. Regarding the identification of project areas along the Clark Fork River

adjacent to Stone's property that are suitable for habitat restoration and creation projects, Stone shall consult with Bitterroot Restoration, Inc. ("BRI") and the Wildlife Habitat Council ("WHC") to identify areas that will provide lasting benefits to the Clark Fork River riparian zone. At least half of the $100,000 (i.e., $50,000) shall be spent on projects on the Clark Fork River not adjacent to Stone's property. With respect to areas not adjacent to Stone's property but between Harper's Bridge and Alberton, Stone shall spend money on projects that are among those identified as suitable for habitat restoration and creation projects by BRI and WHC after consultation with the parties. At least $60,000 shall be expended by the end of three (3) years after entry of the Consent Decree, with at least $30,000 having been spent in areas not adjacent to Stone's property.

b. Stone shall, after consultation with Plaintiffs, spend fifty thousand dollars ($50,000) over a maximum of three years, commencing with entry of this Consent Decree, on habitat restoration and creation projects to enhance the recovery of Bull Trout in the Clark Fork Basin within the Western Montana region.

B. Pollution Prevention Program

1. Stone shall retain as a consultant Dr. Robert Pojasek to assist in developing and implementing a five (5) year Pollution Prevention Program ("P2 Program"), the criteria of which are set out in Addendum A. An initial Pollution Prevention Plan ("P2 Plan") shall be completed and provided to Plaintiffs no later than six (6) months after the entry of this Consent Decree.

2. The P2 Plan shall address and begin to prioritize for activities actual and potential pollution sources at Stone's facility, including chemicals transferred, stored, used, produced, generated, or released into the environment, and be based upon pollution prevention priorities identified in Addendum A and in this Consent Decree.

3. Stone shall produce and provide to Plaintiffs an annual report detailing and updating Stone's implementation of the P2 Program. Dr. Pojasek (or another expert acceptable to Plaintiffs) shall

provide annual certification as to whether Stone is complying with the P2 Program, which shall be appended to Stone's annual report. The first annual report shall be due on or before the date 12 months after the P2 Plan is submitted to Plaintiffs and annually thereafter on or before the succeeding four anniversary dates of submission of the initial P2 Plan.

4. Stone shall provide Plaintiffs, Montana DEQ, US EPA, and the Missoula County Health Department with a copy of the P2 Plan described in subsection B.1. above and the annual reports described in subsection B.3. above upon their completion.

5. Stone's P2 Program shall be consistent with the criteria described in Addendum A, which are incorporated herein by reference.

6. Stone shall designate Bleach Plant Effluents ("BPE") as a priority pollution prevention item for its P2 Program, including the separation of the BPE from the general wastewater treatment system to eliminate mixing of BPE with effluent from other wastewater processes until after those other wastewaters have undergone primary clarification.

7. Stone shall designate Old Corrugated Container ("OCC") rejects as a priority pollution prevention item for its P2 Program as more specifically set forth in subsection E below.

C. Risk Management Program

1. As part of Stone's implementation and compliance with the U.S. Environmental Protection Agency's Risk Management Program ("RMP") regulations promulgated pursuant to Section 112(r) of the Clean Air Act, Dr. Pojasek (or another expert acceptable to plaintiffs) shall review any draft accident prevention program prepared by the Missoula Mill under the RMP regulations to assess whether pollution prevention opportunities have been or could be considered as part of the accident prevention program. In addition, Stone will provide an opportunity for Dr. Pojasek to discuss Stone's implementation of the hazard assessment portion of the RMP regulations with Stone personnel and/or consultants performing the RMP hazard assessment, to be sure that the

information Dr. Pojasek has obtained during his work with the Missoula Mill on its P2 Program is taken into account in structuring the hazard assessment, to the extent appropriate and consistent with the RMP regulations. Likewise, Dr. Pojasek will assist Stone in developing a mechanism so that information about hazards identified through Stone's activities to comply with the RMP regulations are taken into account in Stone's P2 Program. Dr. Pojasek will have access to all Stone personnel and information necessary to perform his role.

2. Dr. Pojasek's annual report certifying Stone's implementation and compliance with the P2 Program, discussed in subsection B.3, will include a section which indicates how pollution prevention opportunities were considered in the RMP program, if any relevant activity occurred in that year.

D. Conversion to Alternative Bleaching Process

1. Stone has already included Dr. Pojasek in Stone's ongoing evaluation of alternatives to its current bleaching technology. Dr. Pojasek shall discuss, with the officials responsible for that analysis, the factors that Stone is evaluating, including the process Stone used to identify TCF technologies for further evaluation and the extent to which environmental costs and benefits of the various technology options are being included in the analysis. Dr. Pojasek shall submit to Stone a written review of the process Stone is using to identify and evaluate alternative technologies and shall make suggestions for including pollution prevention considerations, as identified in Addendum A, into that process. Stone will take Dr. Pojasek's comments and suggestions into account and will reflect or respond to those comments, as appropriate, in its discussion of its analysis of bleaching alternatives with the Plaintiffs described in subsection D.2. below. Dr. Pojasek will have access to all Stone personnel and information necessary to perform his role.

2. Subject to subsection I., Stone shall provide the results of its completed analysis of alternatives to its current bleaching technology, as well as the results of Dr. Pojasek's review, to the Plaintiffs as soon as it is available and at

least thirty (30) days prior to any final decision on technologies is made. Stone shall schedule a meeting with Plaintiffs within twenty-five (25) days after the results of Stone's analyses of alternative bleaching processes have been provided to Plaintiffs to discuss the analyses with Plaintiffs and review any comments provided by Plaintiffs.

3. Stone will continue to evaluate any new information that might further reduce the environmental impact of the pulp bleaching technology chosen above as part of its P2 Program described in subsection B.

E. OCC Rejects

1. Stone shall assess technologies and processes for handling OCC rejects with the goal of eliminating the burning of OCC rejects containing chlorinated plastics. Stone shall continue to work with Philip Environmental Services, Inc., or any other presently identified entities, to identify, evaluate, and implement, where determined to be technically and economically feasible, processes to handle OCC rejects such that burning would be reduced or eliminated.

2. Stone shall commit at least $150,000, to be spent as needed over the term of this Consent Decree, to the OCC alternatives identification and assessment process.

3. Stone shall work with Dr. Pojasek (or another expert acceptable to plaintiffs), to identify and prioritize potential alternative processes for handling the OCC reject waste stream and to establish schedules and costs for exploring potential alternatives.

4. Stone shall provide a written report to Plaintiffs by August 1, 1998 and February 1, 1999, detailing the status of the OCC alternatives review processes. Thereafter, Stone shall provide a detailed status report as part of the annual pollution prevention report required by this Consent Decree, unless burning of OCC rejects containing chlorinated plastics has been eliminated.

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5. If Plaintiffs should identify a third party that will take or purchase the OCC rejects, and Stone concludes that transferring the OCC rejects to that third party would not entail significant risk to Stone in light of the planned use of the OCC rejects, the experience and record of the third party, the reliability of the technology to be used, and the like, then Stone will use any net savings achieved by avoiding landfilling the OCC rejects to fund projects Stone identifies in the Missoula area that would help improve recycling of paper and paperboard.

F. Alternative and Recycled Fibers

1. Within one year after entry of the Consent Decree, and again no later than the third and fifth anniversary dates of entry of the Consent Decree, Stone shall update its analysis of the economic and technical feasibility, including issues of fiber availability, of incorporating alternative fibers into its production processes. As part of this analysis, Stone will retain Dr. Pojasek (or another expert acceptable to Plaintiffs) to assist Stone in identifying and accounting for any pollution prevention benefits that might accompany the use of an alternative fiber.

2. Subject to the provisions of subsection I.1., Stone shall provide Plaintiffs with a report on these biennial updates of its analysis of the feasibility of incorporating alternative fibers into its production processes, by the dates provided in the preceding paragraph. That biennial report, as well as an update on Stone's use of recycled fibers in its production processes, shall be included as part of Stone's P2 Program annual reports required under subsection B.3. above.

G. Mill Operations Environmental Committee

1. Stone shall establish a Mill Operations Environmental Committee ("MOEC") consisting of equal numbers of Stone's salaried and hourly employees, with at least three (3) members from each group.

2. The MOEC shall meet at least bimonthly, during working hours, for the purpose of

identifying and addressing environmental issues at Stone's facility, including but not limited to the implementation of the P2 Program, discussed in subsection B, and subsections C-F. Dates such meetings took place shall be listed as part of the P2 Program annual reports.

H. Community Advisory Panel

1. Stone has established a Community Advisory Panel ("CAP") to provide a forum for dialogue with the community regarding Stone's facility and processes. One of Plaintiffs' representatives has been invited to participate as an initial member of the CAP.

2. Stone shall provide the CAP with each completed report or similar document required to be prepared by this Consent Decree; except that parts of reports or documents required under this Consent Decree revealing confidential information may be withheld from the CAP.

I. Plaintiffs' Access to Stone's Facility, Management Personnel, and Documents Required to be Produced Under this Consent Decree

1. Stone shall make available for Plaintiffs' review each report or similar document, upon completion, required to be prepared by this Consent Decree; parts of reports or documents required under this Consent Decree to be released to Plaintiffs may contain proprietary, trade secret, or other non-public information, the disclosure of which might cause substantial harm to Stone's competitive position, market share, customer base, and the like. Such information shall be handled in accordance with a Stipulation and Protective Order of the form attached as part of Addendum B to this Consent Decree. Each representative of Plaintiffs shall execute and provide to Stone an Oath of Confidentiality, such as that included in Addendum B attached hereto, prior to receiving information so designated by Stone.

2. After each completed report or document required by this Consent Decree to be generated by Stone and submitted to Plaintiffs is received by Plaintiffs, Stone shall schedule, within thirty (30) days of Plaintiffs' request, a meeting

between Plaintiffs' representatives and Stone's management personnel responsible for implementing the provisions of this Consent Decree, whereby Plaintiffs will be able to ask questions about and discuss the report or document with Stone's management personnel responsible for implementing the provisions of this Consent Decree. In addition, where such meeting is to discuss the annual report on the P2 Program required by subsection B.3., Stone will arrange for Dr. Pojasek (or the other expert described in subsection B.3.) to participate in the meeting to answer questions about his review of Stone's implementation of the P2 Program.

3. Stone shall give an annual tour of its facilities, if requested, for up to three (3) Plaintiffs' representatives. Such tour shall take place within ninety (90) days of the annual reports required in subsection B.3. above and shall include any portion of the Missoula Mill where activities covered by this Consent Decree have taken place in the preceding year.

8. The sums to be paid and the substantive programs to be developed and implemented under the terms of this Consent Decree shall constitute full settlement of the allegations in the Amended Complaint and, with regard to the allegations in the Amended Complaint, shall completely discharge Defendant, with respect to the Defendant's facilities located in Frenchtown, Montana, from any and all liability to the Plaintiffs under the CWA concerning the allegations in Plaintiffs' Amended Complaint through the date of December 10, 1996, from any and all liability to the Plaintiffs under the CAA concerning the allegations in Plaintiffs' Amended Complaint through the date of December 10, 1996, and from any and all liability to the Plaintiffs under EPCRA concerning the allegations in Plaintiffs' Amended Complaint through the date of December 10, 1996.

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9. Neither Plaintiffs nor any other person or entity acting with, by or through Plaintiffs, in either their own or in a representative capacity, shall file or cause to be filed any suit in any court under the CWA, CAA or EPCRA or participate in any administrative enforcement proceeding or hearing concerning enforcement of the same alleged violations or exceedances referred to in paragraph 8 above. In addition, prior to June 10, 1999, neither Plaintiffs nor any other person or entity acting with, by or through Plaintiffs, in either their own or in a representative capacity, shall file or cause to be filed any suit in any court under the CWA, CAA or EPCRA or participate in any administrative enforcement proceeding or hearing concerning any other alleged violation or exceedances of the same requirements referred to in paragraph 8 above that may occur between December 10, 1996 and June 10, 1999; provided, however, that nothing in this paragraph shall preclude Plaintiffs or any other person or entity acting with, by or through Plaintiffs, in either their own or in a representative capacity, from filing or causing to be filed any suit in any court, or participating in any administrative proceeding or hearing, concerning enforcement of regulatory requirements not covered in Plaintiffs' Amended Complaint, or for violations of the requirements referred to in paragraph 8 that occur after December 10, 1996 and are fundamentally different in magnitude or duration from the alleged violations or exceedances referred to in paragraph 8. In

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addition, during the term of this Consent Decree, at least sixty (60) days before Plaintiffs or any one of them serves a sixty-day notice of intent to sue Stone for any alleged violation of environmental law of the type covered by Plaintiffs' Amended Complaint, they shall send a written notice to Stone outlining the nature of the alleged violations and offering to meet with Stone to discuss the matter within thirty (30) days of the letter.

10. Stone agrees to provide Plaintiffs with its monthly air and water Compliance Reports, Quarterly Excess Emission Reports, and annual Form Rs submitted under EPCRA for the term of this Decree at the same time as such documents are submitted to the United States Environmental Protection Agency and/or the Montana Department of Environmental Quality pursuant to Stone's MPDES permit, CAA permits and Section 313 of EPCRA.

11. Notwithstanding the provisions of paragraph 8 and paragraph 9 above, if Stone should fail to make any payment, or fail to implement or comply with any of the substantive provisions required by this Consent Decree, Plaintiffs shall have the right to bring suit, to intervene in any other suit, or to take any other action they desire to effectuate or enforce this Consent Decree. Before a party invokes the Court's jurisdiction to interpret, enforce or modify this Decree, the party shall send a written notice to the other party outlining the nature of the matter and requesting informal negotiations to resolve the

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matter. If the parties are unable to resolve the matter within thirty (30) days from the date of the notice (or within an additional period of time agreed to by the parties), any party may request the Court to resolve the matter.

12. Stone recognizes that reasonable attorney and expert witness fees are available to Plaintiffs as authorized by § 505(d) of the CWA, 33 U.S.C. 1365(d); § 304(d) of the CAA, 42 U.S.C. § 7604(d); and § 326(f) of EPCRA, 42 U.S.C. 11046(f). After determining the hours expended in preparation and prosecution of this litigation, as well as the time anticipated to be required to monitor Defendant's compliance with the terms of this Consent Decree, Defendant and Plaintiffs agree that the sum of one hundred twenty-four thousand eight hundred seventy-three dollars ($129,373.00) will be paid to the Western Environmental Law Center, 1216 Lincoln Street, Eugene, Oregon 97401, Attention: Charles M. Tebbutt, as attorneys for the Plaintiffs, within thirty (30) days of the entry of this Decree, in full and complete payment of an award of such costs and fees.

13. Plaintiffs agree to dismiss any claims asserted in their Complaint covering conduct which is the subject of claims asserted by the United States in United States v. Stone Container, CV-96-003-BLG, upon their intervention in that case.

14. Whenever this Decree requires notice to, or service of documents on, either party, the communication to Plaintiffs shall be directed to President, Cold Mountain, Cold Rivers, P.O. Box

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7941, Missoula, MT 59807, and the communication to Stone shall be directed to General Manager, Missoula Mill, Stone Container Corporation, P.O. Box 4707, Missoula, MT 59806-4707.

15. The parties recognize that no consent judgment can be entered in Clean Water Act or Clean Air Act suits in which the United States is not a party prior to 45 days following the receipt of a copy of the proposed consent judgment by the United States Attorney General and the Administrator of the United States Environmental Protection Agency pursuant to § 505(c)(3) of the Clean Water Act and § 304(c) of the Clean Air Act. Therefore, upon the signing of this Consent Decree by the parties, Plaintiffs shall serve copies of it upon the Administrator of the U.S. EPA and the Attorney General and provide notice to the Court, as required by applicable regulations.

16. The Court shall retain jurisdiction over this matter for the purpose of enabling the parties to this Decree to apply to the Court for any further order that may be necessary to construe, carry out or enforce compliance with the terms of this Decree. This Decree shall terminate upon completion of the requirements set forth in section 7.

E00011203

Dated and entered this _____ day of _____, 1998

_____

UNITED STATES DISTRICT JUDGE

MONTANA COALITION FOR HEALTH, ENVIRONMENTAL AND ECONOMIC RIGHTS, INC.

Signature: Hope Sieck

Title: Secretary

Dated: 3/11/98

COLD MOUNTAIN, COLD RIVERS, INC.

Signature: Darrell Geist

Title: President

Dated: March 11, 1998

NATIVE FOREST NETWORK, INC.

Signature: Jake Kreilick

Title: Campaign Coordinator

Dated: 3/11/98

STONE CONTAINER CORPORATION

Signature: Bob Bosche

Title: General Manager

Dated: 3/11/98

E00011204

Exhibit B

CHADBOURNE & PARKE LLP

FACSIMILE TRANSMISSION

1101 VERMONT AVENUE N.W. • WASHINGTON, DC 20005-3521 • TELEPHONE: (202) 289-3000 • FACSIMILE: (202) 289-3002

To:

NAME/COMPANY	FACSIMILE NO.	VERIFICATION PHONE NO.
1. Charles Tebbutt/Western Env. Law Ctr.	(541) 485-2457	(541) 485-2471

From: Russell Frye **Date:** January 22, 1996

Phone: (202) 289-3036

NUMBER OF PAGES (including this page): 13

MESSAGE:

The Department of Justice called Monday afternoon, 22 Jan. 1996, to tell me they were filing the attached complaint. This was unexpected, as we were scheduled to meet with EPA this Thursday to discuss their NOV. I believe this means that the alleged violations in your notice letter on page 6, para. (1) for the #4 recovery, pages 6-7, para. (2), the NCG venting on pages 30-33, and the alleged #5 recovery opacity monitor span problem on page 33 are not subject to citizen suit under CAA section 304(b)(1)(B) and may not be included in any citizen suit complaint you might file against Stone.

THIS FACSIMILE IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY TO WHICH IT IS ADDRESSED AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL, AND EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW. IF THE READER OF THIS FACSIMILE IS NOT THE INTENDED RECIPIENT OR THE EMPLOYEE OR AGENT RESPONSIBLE FOR DELIVERING THE FACSIMILE TO THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT ANY DISSEMINATION, DISTRIBUTION, OR COPYING OF THIS COMMUNICATION IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS COMMUNICATION IN ERROR, PLEASE NOTIFY US IMMEDIATELY BY TELEPHONE AND RETURN THE ORIGINAL FACSIMILE TO US AT THE ABOVE ADDRESS VIA THE U.S. POSTAL SERVICE. THANK YOU.

PLEASE CALL US IMMEDIATELY IF THE FACSIMILE YOU RECEIVE IS INCOMPLETE OR ILLEGIBLE. OUR FACSIMILE OPERATOR CAN BE REACHED AT (202) 962-4584.

Exhibit C

U.S. Department of Justice

Environment and Natural Resources Division

KS
90-5-1-2-1975

Kathryn Schmidt
Environmental Enforcement Section
999 18th Street
Suite 945 North Tower
Denver, CO 80202

Telephone (303) 312-7327
Facsimile (303) 312-7331

February 6, 1998

CONFIDENTIAL SETTLEMENT COMMUNICATION
SUBJECT TO FED. R. EV. 408

VIA FEDERAL EXPRESS

Russell S. Frye, Esq.
Chadbourne & Parke LLP
1200 New Hampshire Ave., N.W.
Washington, D.C. 20036

Re: United States v. Stone Container Corporation, CV-96-003-BLG (D. Mont)

Dear Russ:

Enclosed is a final consent decree for signature, incorporating the changes we have discussed.[1] Also enclosed for your reference is a redlined comparison of the provisions that have been changed from the last draft (provided to you on September 19, 1997). We trust that these changes are not controversial and request that Stone provide a signed original of the consent decree by February 13, 1998 so that we can lodge the settlement by February 23, 1998.

In your review of the final consent decree, please note that Paragraph 62 has been edited to correct an inadvertent error. Specifically, in the September 19, 1997 draft, the termination provision relating to the lime kilns should have been limited to Stone's obligations under Paragraph 16 (which is Paragraph 17 in the enclosed draft) and should not have encompassed the entire Section. Because Stone represented that it was impossible to achieve consecutive compliance with the TRS limits, we agreed to a finite limit with respect to that obligation only.

As I mentioned to you during our telephone discussion yesterday, the United States' position regarding Montana CHEER, et al. remains unchanged, in that Montana CHEER et al. should be parties to this settlement. We are hopeful that whatever issues remaining in the separate settlement between Stone and Montana CHEER, et al. will be resolved such that both settlements will be lodged simultaneously.

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[1] As you know, any final settlement with the United States is subject to the approval of the appropriate government officials.

I will be out of the office conducting depositions until February 18, 1998. If you should wish to discuss the enclosed draft or any other matter relating to this case, please call Marc Weiner or leave me a detailed voicemail.

Sincerely,

Kathryn Schmidt
Trial Attorney

cc: Marc Weiner, Esq.
Betsy Wahl (EPA/Montana)
Sherry Scheel Matteuci, Esq.
Charles Tebbutt, Esq.

UNITED STATES DISTRICT COURT
MISSOULA DIVISION, DISTRICT OF MONTANA

UNITED STATES OF AMERICA, Plaintiff, v. STONE CONTAINER CORPORATION,	)	Civil No. CV 96-017-M ORDER DENYING INTERVENORS-PLAINTIFFS MOTION FOR ATTORNEY AND EXPERT FEES AND EXPENSES

ORDER

Upon review of the Intervenors-Plaintiffs' opposed Motion for Attorney and Expert Fees and Expenses, and the Parties' memoranda related thereto,

IT IS HEREBY ORDERED that Intervenors-Plaintiffs' Motion is DENIED.

ORDERED this _____ day of _____, 1998.

_____
UNITED STATES DISTRICT JUDGE

DC1: 93357.01

OCT 1 9 1998

FILED

OCT 1 9 1998

LOU ALEKSICH, JR., Clerk
By [signature]
Deputy Clerk

XC: Boschee
Willhite

To Co Io
Gd

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF MONTANA

MISSOULA DIVISION

UNITED STATES OF AMERICA,

Plaintiff,

CV 96-017-M-CCL

MONTANA COALITION FOR HEALTH ENVIRONMENTAL AND ECONOMIC RIGHTS, INC., COLD MOUNTAIN, COLD RIVERS, INC., AND NATIVE FOREST NETWORK, INC.

Intervenor-Plaintiffs,

vs.

ORDER

STONE CONTAINER CORPORATION,

Defendant.

****

This case is before the court on the motion by Intervenor-plaintiffs Montana Coalition for Health Environmental and Economic Rights, et al. (hereinafter CHEER) for attorneys and expert fees and expenses incurred by CHEER during the course of plaintiffs' suit against defendant Stone Container Corporation (hereinafter Stone) which alleged violations of federal environmental protection legislation including the Clean Air Act,

42 U.S.C. §§ 7401 *et seq.*

Background

On August 19, 1994, the Environmental Protection Agency (EPA) sent a Notice of Violation to Stone which outlined alleged civil and criminal violations of the Clean Air Act dating back to September, 1992. Through the fall of 1995, however, no enforcement action had been taken against Stone by EPA. On November 22, 1995, CHEER filed an Intent to Sue letter, pursuant to the requirements of 42 U.S.C. § 7604(b). Under the terms of the Clean Air Act, CHEER was precluded from filing suit against Stone until 60 days after it filed its Intent to Sue letter. See 42 U.S.C. § 7604(b)(1)(A). On the final day of the statutory notice period, the United States brought suit against Stone (hereinafter United States v. Stone), pursuant to 42 U.S.C. § 7613, alleging three counts of Clean Air Act violations. On January 29, 1996, CHEER also filed a complaint against Stone (hereinafter CHEER v. Stone), which it amended on February 7, 1996. CHEER's complaint alleged: one count of Clean Water Act violations, under 33 U.S.C. § 1365(a)(1)(A); 21 counts of Clean Air Act violations, under 42 U.S.C. § 7604(a)(1)(A); and one

count of Emergency Planning and Community Right to Know Act violations, under 42 U.S.C. § 11023. Some of CHEER's Clean Air Act claims in CHEER v. Stone overlapped those alleged by the United States in United States v. Stone.

Settlement negotiations between the parties as to both suits commenced in March, 1996, and continued for quite some time. On March 10, 1998, CHEER filed an unopposed motion to intervene in the matter of United States v. Stone. On March 11, 1998, CHEER and Stone entered into a consent decree covering all of the claims in CHEER v. Stone that did not overlap those brought by the United States in United States v. Stone. This consent decree provided for CHEER to dismiss its claims that overlapped with those in United States v. Stone upon approval of CHEER's intervention in that matter. CHEER v. Stone Consent Decree, ¶ 13. It also provided that Stone would pay the attorneys fees and costs incurred by CHEER during the prosecution of the non-overlapping claims included in the CHEER v. Stone suit. CHEER v. Stone Consent Decree, ¶ 12. On March 12, 1998, the United States, CHEER and Stone entered into a consent decree in the matter of United States v. Stone. In relevant part, that consent decree stated that the question of Stone's liability for CHEER's

attorneys fees and costs incurred in the prosecution of the overlapping claims could be resolved by a fee petition filed by CHEER. United States v. Stone Consent Decree, ¶ 58. Both consent decrees were entered by this court on May 19, 1998. CHEER filed its fee petition regarding the overlapping claims on June 24, 1998.

Standard of Review

As the United States Supreme Court has stated, a "prevailing litigant is ordinarily not entitled to collect a reasonable attorneys fee from the loser." Pennsylvania v. Delaware Valley Citizens Council for Clean Air, 478 U.S. 546, 561 (1986). One major exception to this rule, however, occurs when Congress specifically authorizes fee shifting by statute. Id. at 562.

Express statutory authority for the shifting of attorneys' fees in citizen suits brought pursuant to the Clean Air Act is found at 42 U.S.C. § 7604(d). In relevant part, that section provides:

> The court, in issuing any final order in any action brought pursuant to subsection (a) of this statute [42 U.S.C. § 7604(a)], may award costs of litigation (including reasonable attorney and expert witness fees) to any party, whenever the court determines such an

award is appropriate.

Regarding Clean Air Act cases, the Ninth Circuit has held that "[a]n award of attorneys fees is appropriate where [a party has]: (1) attained some success on the merits; and (2) contributed substantially to the goals of the Clean Air Act in doing so." Western States Petroleum Association v. Environmental Protection Agency, 87 F.3d 280, 286 (9th Cir. 1996).[1]

Where an award of attorneys fees is appropriate, the amount awarded must be reasonable. Pennsylvania v. Delaware Valley Citizens Council for Clean Air, 478 U.S. at 562. The assessment of reasonableness is necessarily case and fact specific, and thus a district court has wide discretion in determining the propriety of the size of an award of attorneys' fees. Hensley v. Eckerhart, 461 U.S. 424, 437 (1983). However, "it remains important . . . for the district court to provide a concise but clear explanation of its reasons for the fee award." ; Id.; United States v. Chapman, 146 F.3d 1166, 1176 (9th Cir. 1998).

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[1]Although Western States Petroleum Association is specifically concerned with the fee award language of 42 U.S.C. § 7607(f), its interpretation extends to 42 U.S.C. § 7604(d) as well. See Ruckelshaus v. Sierra Club, 463 U.S. 680, 682 n. 1 (1983).

Discussion

Resolution of the matter at hand turns on the question of whether CHEER's claims that overlap the ones alleged by the United States in United States v. Stone were brought pursuant to 42 U.S.C. § 7604(a).[2] This is so because the fee-shifting authorization contained in 42 U.S.C. § 7604(d) only applies to citizen suits brought pursuant to § 7604(a). There is no question that the claims which were the subject of CHEER v. Stone were brought pursuant to that section, and those claims are not in dispute here. The claims which overlap those brought by the United States in United States v. Stone, and are the subject of the instant action, were included in the complaint in CHEER v. Stone. On their face, therefore, these claims also appear to have been brought under 42 U.S.C. § 7604(a), and thus seemingly merit an award of attorneys fees. However, a closer examination of the statutory scheme authorizing citizen suits to enforce the Clean Air Act undercuts this conclusion.

Section 7604(a) authorizes "any person" to "commence a civil

[2]Although CHEER does not so specify, the court finds that the CHEER v. Stone suit is brought pursuant to 42 U.S.C. § 7604(a)(1), as no other subsection of § 7604(a) authorizes a suit against Stone.

action on his own behalf against any person . . . who is alleged to have violated" the Clean Air Act. 42 U.S.C. § 7604(a)(1)(A). But section 7604(a) also notes that certain limitations exist on this right to sue, as codified at 42 U.S.C. § 7604(b). Section 7604(b)(1) places two limitations on the right to sue pursuant to 42 U.S.C. § 7604(a)(1). Section 7604(b)(1)(A) bars a private party from bringing suit "prior to 60 days after the plaintiff has given notice of the violation" to EPA, to the state in which the alleged violation occurred, and to the violator. CHEER clearly complied with this requirement.

Section 7604(b)(1)(B) prohibits a private party from bringing suit if the government "has commenced and is diligently prosecuting a civil action . . . to require compliance with the" Clean Air Act. Although CHEER filed its Intent to Sue letter on November 22, 1995, it did not actually file suit until January 29, 1996. The United States filed its suit on January 22, 1998, which is (obviously) before CHEER's suit was filed. No allegation has been made that the government failed to prosecute its suit diligently. Consequently, CHEER's overlapping claims cannot properly be brought under 42 U.S.C. § 7604(a), since prior to the filing of that suit, the government had commenced and was

diligently prosecuting its own action. As a result, CHEER is not eligible for an award of attorneys fees and costs under 42 U.S.C. § 7604(d) because it is not a 42 U.S.C. § 7604(a) plaintiff as to these claims.

Although CHEER clearly provided substantial assistance to the government in the prosecution of United States v. Stone, its claim of "joint prosecution" is insufficient to justify an award of attorneys fees. Not only does CHEER fail to cite any authority in support of this argument, but to accept it would run wholly contrary to the intent underlying the citizen suit scheme. The notice provision and the government preemption provisions of 42 U.S.C. § 7604(b) work hand in hand, and both privilege government enforcement over private citizen action. As the Ninth Circuit has explained:

> This notice requirement is designed to balance the value of citizen enforcement of federal environmental policies against the burdens that such enforcement places on the EPA and the federal courts. By notifying the EPA and the state of potential legal action, the citizen plaintiff allows them to avoid litigation by investigating and correcting the alleged violation through non-judicial means.

Hallstrom v. Tillamook County, 844 F.2d 598, 600 (9th Cir. 1988).[3]

---

[3]Hallstrom specifically involves an interpretation of the notice provision requirement of the Resource Conservation and

Even when non-judicial means fail to resolve a dispute, citizen suits are intended "to supplement rather than to supplant governmental action." Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Foundation, Inc., 484 U.S. 49, 60 (1987).[4] To allow CHEER to claim § 7604(a) status for itself by virtue of volunteering its services to the United States during the course of a governmental enforcement action is to elide this clear distinction. Such a decision would also risk encouraging future intervenor-plaintiffs to seek to blur this line still further in hopes of recovering attorney fees not contemplated by the Clean Air Act. This court is not willing to countenance that possibility.[5] Accordingly,

---

Recovery Act (RCRA), codified at 42 U.S.C. §§ 6901, et seq. However, RCRA's notice provision language is substantially similar to the Clean Air Act's, and has been interpreted identically. See Hallstrom v. Tillamook County, 844 F.2d at 600.

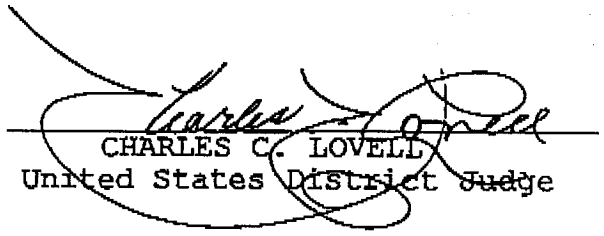
[4]Gwaltney specifically involves an interpretation of the Clean Water Act, but the citizen suit provisions of that Act were heavily modeled on the Clean Air Act.

[5]The court notes that had CHEER, as an intervenor, appended its non-overlapping claims to United States v. Stone by means of this court's pendant jurisdiction rather than bringing its own action, it would likely have been entitled to recover reasonable attorney fees incurred in the prosecution of those non-overlapping claims. Moreover, reasonable attorneys fees for the overlapping claims likely would have been available had the United States filed its action only *after* CHEER had brought suit on the overlapping claims. See, e.g., Armstrong v. Asarco, Inc., 138 F.3d 382, 387 (8th Cir. 1998); Public Interest Research Group

IT IS HEREBY ORDERED that the motion for attorneys and expert fees and expenses DENIED.

The clerk is directed to notify the parties of entry of this order.

Done and dated this 19 day of October, 1998.



CHARLES C. LOVELL
United States District Judge

---

of New Jersey v. Windall, 51 F.3d 1179, 1189 (3d Cir. 1995); Atlantic States Legal Foundation, Inc., v. Eastman Kodak, Co., 933 F.2d 124, 128 (2d Cir. 1991). That is not the posture of the instant action, however.

S Form 3811, July 1983

DOMESTIC RETURN RECEIPT

SENDER: Complete [illegible] and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. ☒ Show to whom, date and address of delivery.

2. ☐ Restricted Delivery.

3. Article Addressed to:

WESTERN ENVIRON. LAW CENTER
1216 LINCOLN STREET
EUGENE, OR 97401

4. Type of Service:

☐ Registered ☐ Insured
☒ Certified ☒ COD
☐ Express Mail

Article Number

P168580183

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee

X Marilyn L. Krupp

6. Signature – Agent

X

7. Date of Delivery

6-18-98

8. Addressee's Address *(ONLY if requested and fee paid)*

E00011219

UNITED STATES POSTAL SERVICE

OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- **Complete items 1, 2, 3, and 4 on the reverse.**
- **Attach to front of article if space permits; otherwise affix to back of article.**
- **Endorse article "Return Receipt Requested" adjacent to number.**

U.S. MAIL

PENALTY FOR PRIVATE USE, $300

RETURN TO

ED SCOTT STONE CONTAINER CO.

(Name of Sender)

P.O. BOX 4707

(No. and Street, Apt., Suite, P.O. Box or R.D. No.)

MISSOULA, MT 59807

(City, State, and ZIP Code)

E00011220

Ed

P 168 580 183

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to, Western Environ Law Center	
Street and No. 1216 Lincoln Street	
P.O., State and ZIP Code Eugene, OR 97401	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

★ U.S.G.P.O. 1984-446-014

PS Form 3800, Feb. 1982

E00011221

Stone Container Corporation
Containerboard and Paper Division
Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707

Missoula Mill

406.626.4451
406.626.5986 Fax

June 10, 1998

Western Environmental Law Center
1216 Lincoln Street
Eugene, Oregon 97401

Attention: Charles M. Tebbutt

(VIA: Certified Mail)

Re: Montana Coalition For Health,
Environmental And Economic Rights, Inc.,
Cold Mountain, Cold Rivers, Inc. and
Native Forest Network, Inc.,

Plaintiff,

vs.

Stone Container Corporation,
Defendant

Civil Action No. CV 96-24-M-CCL

Dear Mr. Tebbutt:

Pursuant to paragraph 12 of the Consent Decree between Stone Container Corporation (Stone), and the citizen groups, Stone is enclosing a check for $129,373.

If you have any questions, please contact me at (406)626-4451.

Sincerely,

Ed Scott
Environmental Manager

Stone Container Corporation

IQS

Invoice Date / Account	Invoice Reference	Invoice Amount	Discount	Net Amount
6/10/1998	LGLFEE0698	129,373.00		129,373.00
				129,373.00

ch Before Presenting Check For Payment

Stone Container Corporation

Containerboard and Paper Division
P.O. Box 4707
Missoula, MT 59806-4707

Check Number 192140

70-2328 / 719

BANK OF AMERICA ILLINOIS
CHICAGO, ILLINOIS 60697

Date			Amount
6/10/1998	PAY	****129,373 dollars and ******00 cents	$129,373.00

To the order of

WESTERN ENVIRONMENTAL LAW CTR
1216 LINCOLN ST
ATTN: CHARLES M ~~TIBBETT~~ Tebbutt E.S.
EUGENE OR 97401

Stone Container Corporation

⑈192140⑈ ⑆071923284⑆ 79⑈45841⑈

E00011223

Penalty

E00011224

Meet Specifications
Stone
Missoula
Customer Satisfaction
MS/CS

Express Mail
to U.S. Treasury
c/o Saundra Doyle
P.O. Box 7754
Ex. Ofc. Rm 6732
Wash. D.C. 20044 7754
Mailed 6/11/98
RB148870898 US

P 168 580 181

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to DARRELL GEIST	
Street and No. P.O. BOX 7941	
P.O., State and ZIP Code MSLA MT 59807	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

★ U.S.G.P.O. 1984-446-014

PS Form 3800, Feb. 1982

E00011226

PS Form 3811, July 1983

DOMESTIC RETURN RECEIPT

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. ☒ Show to whom, date and address of delivery.

2. ☐ Restricted Delivery.

3. Article Addressed to:
DARRELL GEIST
MT. COALITION FOR HEALTH,
ENVIRON. & ECON. RIGTS, INC
P.O. BOX 7941
MISSOULA, MT 59807

4. Type of Service:

☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee
X Darrell Geist CHEP

6. Signature – Agent
X

7. Date of Delivery
6-12-98

8. Addressee's Address *(ONLY if requested and fee paid)*

E00011227

UNITED STATES POSTAL SERVICE

OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- **Complete items 1, 2, 3, and 4 on the reverse.**
- **Attach to front of article if space permits, otherwise affix to back of article.**
- **Endorse article "Return Receipt Requested" adjacent to number.**

U.S.MAIL

PENALTY FOR PRIVATE USE, $300

RETURN TO

ED SCOTT
(Name of Sender)

STONE CONTAINER CORP.
P.O. BOX 4707
(No. and Street, Apt., Suite, P.O. Box or R.D. No.)

MISSOULA MT 59807
(City, State, and ZIP Code)

E00011228

Stone Container Corporation
Containerboard and Paper Division
Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707

Missoula Mill

406.626.4451
406.626.5986 Fax

June 10, 1998

United States Treasury, c/o Saundra Doyle
United States Department of Justice
Executive Office
Room 6732
P.O. Box 7754
Washington, D.C. 20044-7754

(VIA: Express Mail)

Re: Montana Coalition For Health,
Environmental And Economic Rights, Inc.,
Cold Mountain, Cold Rivers, Inc. and
Native Forest Network, Inc.,

Plaintiff,

vs.

Stone Container Corporation,
Defendant

Civil Action No. CV 96-24-M-CCL

Dear Ms. Doyle:

Pursuant to paragraph 7A of the Consent Decree between Stone Container Corporation (Stone), and the citizen groups, Stone is enclosing the following:

1. Penalty of fifty thousand dollars ($50,000)
2. A copy of the Consent Decree

If you have any questions, please contact me at (406)626-4451.

Sincerely,

Ed Scott
Environmental Manager

Distribution: Darrell Geist
Montana Coalition for Health, Environmental and Economic Rights, Inc.
P.O. Box 7941
Missoula, MT 59807
(VIA: Certified Mail)

Stone Container Corporation

IQS

Invoice Date / Account	Invoice Reference	Invoice Amount	Discount	Net Amount
6/10/1998	PENALTY698	50,000.00		50,000.00
				50,000.00

Detach Before Presenting Check For Payment

Stone Container Corporation

Containerboard and Paper Division
P.O. Box 4707
Missoula, MT 59806-4707

Check Number 192127

70-2328
719

BANK OF AMERICA ILLINOIS
CHICAGO, ILLINOIS 60697

Date			Amount
6/10/1998	PAY	*****50,000 dollars and ******00 cents	$50,000.00

To the order of

UNITED STATES TREASURY
%SAUNDRA DOYLE/US JUSTICE DEPT
EX OFC,RM 6732,PO BOX 7754
WASHINGTON DC 200447754

Stone Container Corporation

⑈192127⑈ ⑆071923284⑆ 79⑈45841⑈

OCC Rejects

E00011232

P 168 580 204

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Cold Mountain Cold Rivers	
Street and No. PO Box 7941	
P.O., State and ZIP Code Missoula MT 59807	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	

★ U.S.G.P.O. 1984-446-014

PS Form 3800, Feb. 1982

E00011233

PS Form 3811, July 1983

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. ☑ Show to whom, date and address of delivery.

2. ☐ Restricted Delivery.

3. Article Addressed to:

President
Cold Mountain Cold Rivers
PO Box 7941
Missoula MT 59807

4. Type of Service:

☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail

Article Number

P 168 580 204

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature – Addressee

X Paul Gt

6. Signature – Agent

X

7. Date of Delivery

8. Addressee's Address *(ONLY if requested and fee paid)*

HELLGATE STA. MISSOULA, MT. 59802-4598
USPS
FEB 1999

DOMESTIC RETURN RECEIPT

E00011234

UNITED STATES POSTAL SERVICE

OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- **Complete items 1, 2, 3, and 4 on the reverse.**
- **Attach to front of article if space permits, otherwise affix to back of article.**
- **Endorse article "Return Receipt Requested" adjacent to number.**

U.S. MAIL

PENALTY FOR PRIVATE USE, $300

RETURN TO

Ed Scott

(Name of Sender)

Stone Container PO Box 4707

(No. and Street, Apt., Suite, P.O. Box or R.D. No.)

Missoula MT 59807

(City, State, and ZIP Code)

E00011235

Stone Container Corporation
Containerboard and Paper Division
Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707

Missoula Mill
406.626.4451
406.626.5986 Fax

327-1209
VIA FAX (~~728-0867~~)

February 1, 1999

President
Cold Mountain, Cold Rivers
P. O. Box 7941
Missoula, MT 59807

Dear President:

This is the second report to plaintiffs due February 1, 1999 regarding the status of the OCC alternatives review process. As directed in the Consent Decree, Stone Container Corporation (SSC) continues to work with Philip Services Corporation to help identify, evaluate and implement, where determined to be technically and economically feasible, processes to handle OCC rejects such that burning of the OCC rejects would be reduced or eliminated.

The Philip Services Corporation personnel that SSC has been working with have under gone several changes. At the present time, SSC is working with Mr. Gary Hanson.

The research being conducted by All Paper Recycling is continuing with an example of a finished pallet expected soon. Samples and a finished pallet will be evaluated for marketability. Depending on the outcome of the evaluation, All Paper Recycling will prepare enough pallets for an active facility trial. The attachments from Philip Service Corporation dated August 21, 1998 and September 18, 1998 and the All Paper report dated September 10, 1998 provide additional details of activities performed by each participant.

SSC has decided to supplement the research of All Paper Recycling by contacting additional companies that have processes for converting recycled plastic into finished products. The most promising contact is the process at Atlon Corporation, Wellington Park, 82R Herbert Street, Framingham, MA (attached material from Atlon Corporation). A facility visit to Atlon was made to see their process and to discuss the feasibility of producing a marketable product from OCC rejects. Atlon has made a pallet from OCC rejects supplied from another Stone facility.

Both processes (All Paper Recycling and Atlon Corporation) appear to be able to produce pallets from OCC rejects. SSC will continue working with Philips Service Corporation to help with the economics of the two processes and with the details of scale up to process the quantity of OCC rejects available at the Missoula mill.

I trust this report adequately summarizes the status of the reject project. A copy of the report will be sent via certified mail.

Sincerely,

(for) Edgar C. Scott
Director of Environmental Affairs

sp

Enclosures

PHILIP SERVICES CORP.

Mr. Curtis Barton
Director, Environmental Affairs
Stone Container Corp.
1979 Lakeside Parkway
Suite 3000
Tucker, Georgia 30084

August 21, 1998

Re: OCC Reject Recycling Project Status

Dear Mr. Barton,

As formal update of the activities in the OCC pulp reject recycling project with All Paper Recycling (APR), I am sending you this letter. I have kept in contact with Stanley Shetka of APR and monitored progress in the research to develop an OCC pulp reject recycling process. Below is a summary of the past month's activities and conversations with APR and Stone Container Corp.(SCC).

- APR has determined the best size and consistency at which the pulp rejects must be used in order to produce new board product for pallets.
- APR has ordered full-scale equipment to produce boards to build full size pallets. Delivery is expected in early September.
- APR has produced samples of board product made from OCC pulp rejects through their patented process. The samples will be shipped to SCC for inspection.
- A trip by Mr. Van Horn and myself to APR was scheduled for August 24 to APR to observe progress and discuss future work. This trip was cancelled due to the feeling that there would be more to discuss and observe at APR if the trip was made a week or two later.

If the full-scale equipment is received in early September, the project would be basically on schedule as outlined by my letter dated July 21, 1998. Production of full-size boards for pallets should begin in early or mid-September. I believe it would be best if our trip to APR was made in early September. During this time we would be able to

- observe preferred OCC reject consistency,
- observe pressed board samples,
- observe full-sized board production equipment,
- discuss production of board for full-size pallet prototypes and
- discuss marketing of pallets and full-scale pallet production.

I will keep you informed of any important activities as needed.

Sincerely,

Philip Services Corp.

Frank R. Ewing
Project Manager
Strategic Resource Management

cc: M. Scott Bryll-SCC
Jim Van Horn-SCC
Don Juiliano-PSC
File: 16167

FOUR GATEWAY CENTER, 12TH FLOOR, PITTSBURGH, PA 15222, (412) 765-5645 FAX (412) 765-0905

PHILIP SERVICES CORP.

September 18, 1998

Mr. M. Scott Bryll
Cordeck Manager
Stone Container Corporation
Cordeck Marketing and Technical Center
910 Pasquinelli Drive
Westmont, IL 60559

Dear Mr. Bryll:

To perform a preliminary evaluation of whether the OCC reject boards have the physical properties to enable use as pallets, testing of the flexural strength, water resistance and glue-ability will be done by Philip Services. We have procured the use of the structural testing laboratory in the Civil Engineering Department of Carnegie Mellon University to perform the following tests:

- Flexural Strength Test	ASTM Standard D-3043-95
- Swell Test for Water	ASTM Standard D-4446-84
- Adhesive Strength Test	ASTM Standard D897-95a

The flexural strength test will be done on four samples of OCC reject board made by All Paper Recycling (APR). The results of this test will show what thickness is needed for the pallet to carry the necessary loads in actual use. Discussion of the targeted maximum load for a 40" x 48" pallet is needed between Stone and Philip before this test can be performed. I will be in contact with APR very soon to discuss the specific dimensions needed for the samples.

The swell test in water will be done on one sample of OCC reject board to determine the water resistance and the swelling potential when submerged in water. The test will also be done with an OCC sample and a wood pallet slat sample for comparison to the OCC reject board.

The adhesive strength test, or glue ability test, will be performed to determine the tensile strength of two OCC reject pieces glued together with polyvinyl acetate glue or "white" glue. Three separate trials will be performed for this test.

The results of the tests will be reported in a report as soon as possible so the decision of whether the OCC reject board made through APR's patented process is feasible for use in pallets and, if feasible, what the optimal thickness is for the top and bottom pallet platforms.

FOUR GATEWAY CENTER, 12TH FLOOR, PITTSBURGH, PA 15222, (412) 765-3643 FAX (412) 765-0905

Philip Services proposes testing full-size prototypes of the OCC reject pallets, when available, according to ASTM Standard D1185-4, Standard Test Methods for Pallets and Related Structures Employed in Materials Handling and Shipping. Using the ASTM standard testing methods will lend more validity and familiarity to the standards to which this pallet product was designed. Having a list of the ASTM standards used to test this new product on sales literature could only help in promotion of an unfamiliar item such as this.

Very truly yours,

Philip Services

Frank R. Ewing
Project Engineer

FRE/mc

cc: Jim Van Horn
Curtis Barton
Stanley Shetka
File 16167-3.4

Stanley J. Shetka
All paper Recycling, Inc.
502 4th Avenue North West Ste. #7
New Prague, Minnesota 56071

September 10, 1998

The following information was presented to James T. Van Horn of Stone Container Corporation and Frank Ewing of Philip Services Corporation by Stanley Shetka in a meeting which took place at All Paper Recycling, Inc., located in New Prague, Minnesota. All paper Recycling updated all present on the research it conducted on Converting Missoula OCC rejects into a pallet. All of the information presented in writing and verbally at this meeting is privileged, confidential or trade secret.

Others Present:

Particle Size:

APR found the Missoula OCC rejects (OCCRs) contained approximately fifty percent fiber and fifty percent foreign objects made up of many different types of mixed plastics. APR tried chopping the material to size with knives but found the material would dull and clog the test equipment. Chopping or shredding was not cost effective and not efficient. After several weeks of experiments APR determined that example_A was the best size and shape for the the OCCRs. Next research needs to center around the best way to produce the ground mix in high volume.

Grinding the OCCRs approximately 900 revolutions produced a particle size for the process to work correctly. APR believes that heating and grinding the material would produce a continuous flow of consistent material and a more efficient plastic and fiber blend. Heat would speed up the blending process and throughput per hour considerably. An ideal blending temperature has yet to be determined.

Pallet production: APR has produced several examples of materials made from OCCRs in search for the most efficient and durable pallet material. Currently APR is producing eight inch by twelve inch sample sizes. Once the perfect pallet material is produced APR will step up in size to a forty inch by forty eight inch size. APR needs to know what the perfect material will be??

Time line for getting pallets to Stone Container Corporation: APR was informed that in approximately two week the pressing unit that will produce the pallet size material

should be finished. Once that unit is received APR will rig the unit with the proper attachments for producing the pallet size material. At that point APR should be able to give an accurate estimate on the date it hopes to deliver pallet material to Stone Container Corporation.

Heat Process: APR determined that approximately three hundred to three hundred fifty degrees F melted all the plastics in the the OCCRs mix. Once the plastics in the mix become flexible the processing time was shortened. Several samples have been processed using the ground material (sample a) and heat in combination with the APR process.

Samples:

A. Ground OCC rejects

B. OCC rejects before grinding

C. Ground OCC rejects processed with heat and 200 - 400 psi.

C-2 Ground OCC rejects processed with increased heat and decreased pressure(approximately 200 psi).

D. 100% waste paper processed with no heat.

D-2, 100% waste paper pressed and dried with heat.

D-3, 50% cardboard fiber and 50 % OCCRs processed with no heat.

E. Mixed waste paper processed with a binder

E-2 Mixed waste paper processed with fifty percent OCC rejects and binder.

What's the new ATlon paradigm for plastics recycling?

For over 20 years our founding team at ATlon Laboratories has studied issues related to recycling plastic materials. We have established a unique model for a business which addresses the abundant opportunities and problems that exist.

Source materials for our processes come from industrial, consumer and institutional waste streams with particular attention to mixed resins.

Our proprietary ATlon Planar Process eliminates most conventional reclamation steps. APP accepts commingled plastics (Nos. 1→7) and tolerates a wide spectrum of contaminates and fillers.

Indeed, our marketing and design staff targets end-products that can *benefit* from the ATlon agglomerate materials and APP "appropriate technology" molding.

We are building a distributed manufacturing network of geographically separated nodes. Each strives for *symmetry* of locally generated source resins with local sales of end-products. In addition to creating local environmental rewards, this minimizes input and output shipping costs.

This strategy of "balance" permeates our entire concept. With small, local plants we keep facility costs low. APP techniques require innovative low-cost equipment and tooling.

We emphasize creation of manufacturing jobs over a dependence on total automation.

Marketing concentrates on large items (typically 10 to 100 pound each) that are widely used. For example, pallets, skids and chemical containment platforms represent vast and growing markets which today can consume significant quantities of mixed resins. Another environmental bonus: Currently these products are made from virgin wood or plastic.

At ATlon we want to make a difference and make a profit.

Mixed Materials Recycling

ATLON Laboratories, Inc.
251 West Central Street
Natick, Massachusetts 01760
(508) 647-0077 (tel)
(508) 650-5866 (fax)

"ATlon Planar Process" and "APP" are Trademarks of ATlon Laboratories, Inc.

P 168 580 187

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Cold Mt, Cold Rivers	
Street and No. P.O. Box 7941	
P.O., State and ZIP Code Missoula MT 59807	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date 7/28/98	

★ U.S.G.P.O. 1984-446-014

PS Form 3800, Feb. 1982

E00011244

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

PRESIDENT
COLD MOUNTAIN, COLD RIVERS
P.O. BOX 7941
MISSOULA, MT 59807

4a. Article Number

P 168 580 187

4b. Service Type

☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

7/30/98

5. Received By: *(Print Name)*

6. Signature: *(Addressee or Agent)*

X

8. Addressee's Address *(Only if requested and fee is paid)*

PS Form **3811**, December 1994 102595-98-B-0229 Domestic Return Receipt

Thank you for using Return Receipt Service.

E00011245

UNITED STATES POSTAL SERVICE

First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

• Print your name, address, and ZIP Code in this box •

MR. ED SCOTT
STONE CONTAINER CORP.
P.O. BOX 4707
MISSOULA, MT 59806

E00011246

Stone Container Corporation

Missoula Mill

Mullan Road
P.O. Box 4707
Missoula, Montana 59806-4707

Containerboard and Paper Division

406 626-4451

July 28, 1998

President
Cold Mountain, Cold Rivers
P.O. Box 7941
Missoula, MT 59807
(Via Certified Mail)

Dear President:

This is the first report to plaintiffs due August 1, 1998 regarding the status of the OCC alternatives review process. As directed in the Consent Decree, Stone Container has asked Phillips Environmental Services to help identify, evaluate and implement, where determined to be technically and economically feasible, processes to handle OCC rejects such that burning of OCC rejects containing chlorinated plastics would be reduced or eliminated. Please see attached purchase order and proposal letter from Phillips Environmental Services.

In addition, through Phillips, Stone has located a process which may be able to use OCC rejects to produce useable products that have some market value. The company, All Paper Recycling, New Prague, MN have conducted experiments with small samples of Missoula OCC rejects and All Paper believes that their process will be able to utilize OCC rejects.

Stone has contracted through a purchase order for All Paper to conduct a larger scale trial and to produce a product for evaluation. Please see that attached purchase order end letter proposal from All Paper. The most likely product that All Paper would produce from OCC rejects is pallets although it is our understanding other uses may be identified. A large sample of Missoula OCC rejects, approximately 1,000 pounds, has been received by All Paper for conducting the large scale trial.

We cannot tell Plaintiff anything about the details of the All Paper process at this time because All Paper will not disclose such details to Stone until a new patent application has been prepared and sent to the U.S. Patent Office.

We have also discussed the All Paper activities with Dr. Pojasek and will continue to seek his input on this and other potential uses for OCC rejects.

Sincerely,

Ed Scott
Environmental Manager
Stone Container Corporation
Missoula Mill

Attachments

c: Bob Boschee
James T. Van Horn
Dr. Bob Pojasek
CAP (9/23/98)

Stanley J. SHETKA
ALL PAPER RECYCLING, INC.
502 4TH Ave. N.W. #7
New Prague, Minnesota 56071

May 18, 1998

James T. VanHorn
Stone Container Corporation
Technology and Engineering
1979 Lakeside Parkway Suite 300
Tucker, Georgia 30084

Dear James T. VanHorn:

It was a pleasure meeting you, Curtis Barton, Jim LaDue, and Scott Bryll on your recent and second visit to All Paper Recycling, Inc., (APR), in New Prague, Minnesota. As stated, All Paper Recycling, Inc. is interested in further exploring the possibility of working with Stone Container Corporation in order to research commercial avenues for OCC Rejects.

Based on last weeks meeting, it is my belief that you would like APR to research and explore commercial possibilities that will convert OCC Rejects into commercially feasible and marketable materials and or products. APR has agreed to work on this project and by your request is providing the following outline of proposed research and actual costs related to that research. It is my understanding that you are interested in APRs technology related to APRs one step production of pallets using OCC Rejects. APR plans to develop materials made from your OCC Rejects to be used in its pallet production. APR also plans to look into other possibilities for the OCC Rejects that are commercially feasible. We will search for possibilities that will utilize the quantities of OCC rejects that your company(s) currently produces.

A. Step One(2 -4 weeks)$3,000. : Stone container will provide APR with 500 pounds of OCC Rejects. APR will research several avenues and uses, for the OCC Rejects provided.

1. Waste material research
   a. Investigate avenues and possible uses for the OCC Rejects.
   b. Process the OCC Rejects through several possibilities that currently exist in the APRs facility.
   c. Determine the best size and shape of the OCC Rejects.

d. With Stone Container Corporation determine the most efficient process for converting the OCC Rejects into the best size and shape for processing.

2. processing of waste materials -
   a. Determine prototype systems for specialized processing related to OCC Rejects.
   b. Tooling of prototype systems

3. Prototype materials
   b. Process materials made form OCC Rejects.

4. Testing
   a. Basic in-house testing of prototype materials to determine capabilities and performance.

B. Production outline (8-10 weeks) $6,500.00 Stone Container Corporation will provide APR with additional OCC Reject material if necessary.

1. Standard size pallet prototype.
   a. Tooling of a 40" by 48 inch system.
   b. Produce materials that will allow 40" by 48" pallets to be constructed.
   c. Added Tooling to the larger system in order to produce 40" by 48" parts that will assemble into 40" by 48" pallets that will be equivalent in design to the "cordeck " pallet or European pallet.
   d. Produce twenty-five to thirty forty inch by forty eight inch pallets for Stone Container Corporation.

C. Feasibility of production (8-10 weeks (+)

1. Market needs
   a. APR will provide Stone Container corporation with samples of materials and products made from OCC Rejects to be tested and inspected by their engineers.
   c. APR will provide necessary information and demonstrations needed for Stone Container to properly evaluate commercialization of the pallet project.
   d. APR will provide Stone Container corporation with information related to other possible uses of the OCC Rejects and commercialization.

The total cost of the project is $9,500. APR will begin work on the project once Stone Container Corporation provides APR with the necessary funds (total cost of project) to cover the entire cost of the project. APR will begin work on section A, B and C at the same time.

James T. VanHorn thank you for your visit and continued interest in APR. I look foreword to working with you and I feel very excited about this project.

Sincerely,

Stanley J. Shetka
President

cc: James F. LaDue
M. Scott Bryll

PAGE 1

Seller 0200
ALL PAPER RECYCLING INC
502 4TH AVE NW
STE 37
NEW PRAGUE MN 56071

[X] Purchase Order

No. 1998-00108

Date 7/06/1998

INVOICE IN TRIPLICATE TO ADDRESS BELOW

Terms NET 30

Ship via BEST WAY

Delivery required at destination 7/01/1999

F.O.B. SHIPPING POINT

SHOW OUR PURCHASE ORDER NUMBER ON ALL INVOICES AND PACKING LISTS!

Item	Quantity	Unit	Description	Unit Price
			*** BLANKET ORDER FOR CURRENT YEAR ***	
001	1	LT	THIS BLANKET PURCHASE ORDER IS ISSUED TO PROVIDE THE SERVICES OF ALL PAPER RECYCLING TO CONDUCT THE SECTION "A" STUDY AND FOR THE PRODUCTION SECTION "B" AND "C" OF NOT LESS THAN 25 PALLETS FROM THE MISSOULA OCC REJECTS AS PER 5/18/98 PROPOSAL. PAYMENTS AS OUTLINED BELOW: 1. $3000 ON SHIPMENT OF OCC REJECTS TO APR 2. $3,500 ON COMPLETION OF SECTION "A" WITH A DEMONSTRATION TO STONE THAT THE USE OF OCC REJECTS IN MAKING PALLETS IS A VIABLE PROJECT 3. $3,000 AFTER TOOLING UP TO PRODUCE A LARGER SYSTEM NEEDED TO PRODUCE PALLET ** ALL INVOICES FOR PAYMENT OF STEPS 2 & 3 WILL BE SENT TO: JAMES T. VANHORN STONE CONTAINER CORP 1979 LAKESIDE PARKWAY SUITE 3000 TUCKER GA 30084 ** COPY TO: JAMES F. LADUE PHILIP SERVICES CORP 495 COMMERCE DR. SUITE 7 AMHERST NY 14228	

[X] Subject to State Sales Tax

[X] Tax Exempt-S.C.C. Resale or Exemption Certificate on File With Buyer

Certificate Number 36-2041256

A packing slip must accompany all shipments

Requisitioned by ED SCOTT

Account Number 7600-7574659-000

Stone Container Corporation
Containerboard, Paper and Pulp Division
14377 Pulp Mill Rd
Missoula, Montana 59802 *(Shipping ONLY)*
P.O. Box 4707
Missoula, Montana 59806-4707
406 626-4451
FAX 406 626-5986

Buyer: _____

REQUISITIONER

Immediate attention:
Acceptance of this order is subject to the Terms and Conditions on the reverse side.

PR220.F06 (Issue 1 4/98)

E00011252

PSC
PHILIP SERVICES

Mr. Curtis Barton
Director, Environmental Affairs
Stone Container Corp.
Technology and Engineering
1979 Lakeside Parkway
Suite 3000
Tucker, Georgia 30084

Subject: OCC Reject Recycling Project Status

Dear Mr. Barton,

I would like to take this opportunity to introduce myself and inform you that Philip Services continues to be very enthused about the potential of this project and its relationship with Stone Container. I am assuming responsibility as project manager for Philip due to Jim Ladue's unfortunate illness and any communication to Philip should be directed to me.

To keep all parties involved in this project informed of the goings-on during the previous week, I will be sending weekly or biweekly status reports, depending on progress.

After speaking with Mr. Van Horn of Stone Container and Mr. Shetka of APR last week, the following information was confirmed:

- Stone Container Corp. (SCC) was in the process of sending 500 lbs. of OCC rejects to All Paper Recycling (APR) as outlined in Jim Ladue's letter to you dated 5/29/98.
- Mr. Van Horn, project coordinator for SCC, was unclear about the necessary physical characteristics (size and shape) APR requires for the OCC rejects to perform its research and recommends a visit to APR to confirm this information with Mr. Shetka when the 500 lb. sample is received.
- Mr. Shetka has received the first payment installment of $3,000 from SCC for research and testing.
- According to APR, research and testing of the OCC rejects will take 4 – 6 weeks in order to determine the feasibility of making pallet material.
- Mr. Shetka will contact me upon APR's receipt of the 500 lb. OCC rejects. At this time, a visit to APR with Mr. Van Horn will be scheduled in order to discuss the above-raised issues.
- PSC has received the purchase order dated 7/7/98 from SCC for OCC reject project oversight services.

Based on the preceding items and Jim Ladue's letter to you dated 5/29/98 outlining the tentative project schedule, I have attached a revised project timeline.

If you have any questions regarding this correspondence, please call me right away.

Sincerely,

PHILIP SERVICES CORP.

Frank R. Ewing
Project Manager
Strategic Resource Management Group

Attachment

CC:
M. Scott Bryll – SCC
James Van Horn – SCC
Stanley Shetka – APR
Don Juiliano – PSC
Tom Stanczyk – PSC

Stone Container OCC Reject Recycling to Pallets
Tentative Project Timeline

July21 – August 31

- F. Ewing and J. Van Horn visit APR to confirm physical characteristics of OCC reject necessary for processing at APR.
- APR to complete research and testing and produce material feasible for pallet production.
- F. Ewing to research markets for pallet product and communicate progress to SCC's Missoula, MT facility.

September 1 – September 25

- Upon successful completion of feasibility study, APR to produce 25 prototype pallets for the purpose of sales and marketing presentations to potential customers; F. Ewing to coordinate APR's proposed prototype production program.
- Develop product marketing plan with potential government agencies (state and federal) mandated to purchase a percentage of recycled products as well as private commercial customers; preliminary progress report to Stone Container; travel to meet with potential product customers, where necessary, and with SCC's prior approval.

September 28 – October 16

- Finalize marketing information and initiate the development/compilation of draft business plan (transportation costs included) as part of feasibility study; provide Missoula, Montana plant process flow diagram and facility layout surrounding pulper reject operation; initiate draft of feasibility study final report including selection of manufacturing location alternatives; meet with Missoula plant management to review progress.

October 19 – November 27

- Complete overall timeline for full production start-up at selected manufacturing location; complete all cost and revenue detail to finalize feasibility study and final recommendations; continue to coordinate APR's R&D program on behalf of Stone.
- Develop and implement detailed project controls and scheduling; begin equipment pricing process where necessary; refine transportation network detail, including rail, LTL, and local transportation needs for raw material delivery as well as final product; initiate facility layout for processing/grinding of OCC pulper rejects.

Seller 51607
PHILIP SERVICES CORP
495 COMMERCE DR
SUITE 7
ATTN: JAMES LA DUE
AMHERST NY 14228

[X] **Purchase Order**

No. 1998-00107

Date 7/07/1998

INVOICE IN TRIPLICATE TO ADDRESS BELOW

Terms NET 30

Ship via BEST WAY

Delivery required at destination 7/01/1999

F.O.B. SHIPPING POINT

SHOW OUR PURCHASE ORDER NUMBER ON ALL INVOICES AND PACKING LISTS!

Item	Quantity	Unit	Description	Unit Price
			*** BLANKET ORDER FOR CURRENT YEAR ***	
001	1	LT	THIS BLANKET ORDER IS ISSUED TO PROVIDE THE MISSOULA MILL WITH THE SERVICES OF JAMES F LADUE TO COORDINATE THE WORK EFFORT OF ALL PAPER RECYLING INC IN STUDYING THE USEABILITY OF THE MILL'S OCC REJECTS IN MAKING PALLETS. PER PROPOSAL DATED 5/28/98.	

7/8/98

Scott

Jim VAN AD

[ ] Subject to State Sales Tax

[X] Tax Exempt-S.C.C. Resale or Exemption Certificate on File With Buyer

Certificate Number 36-2041256

A packing slip must accompany all shipments

Requisitioned by ED SCOTT

Account Number 7600-7574659-000

Stone Container Corporation
Containerboard, Paper and Pulp Division
14377 Pulp Mill Rd
Missoula, Montana 59802 *(Shipping ONLY)*
P.O. Box 4707
Missoula, Montana 59806-4707
406 626-4451
FAX 406 626-5986

Buyer: _____

REQUISITIONER

Immediate attention:
Acceptance of this order is subject to the Terms and Conditions on the reverse side.

PR220.F06 (Issue 1 4/98)

E00011256

Jul. 22. 1998 7:28AM STONE ATLANTA TECH No. 1451 P. 11/12

CORPORATE REPORT MINNESOTA

September 1995
$2.95

DOING BUSINESS IN GREATER MINNESOTA

STATEWIDE

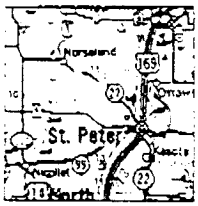
BY JANE E. BRISSETT AND JOE SPEAR

Photography by Mike Burian and Jack Rendulich

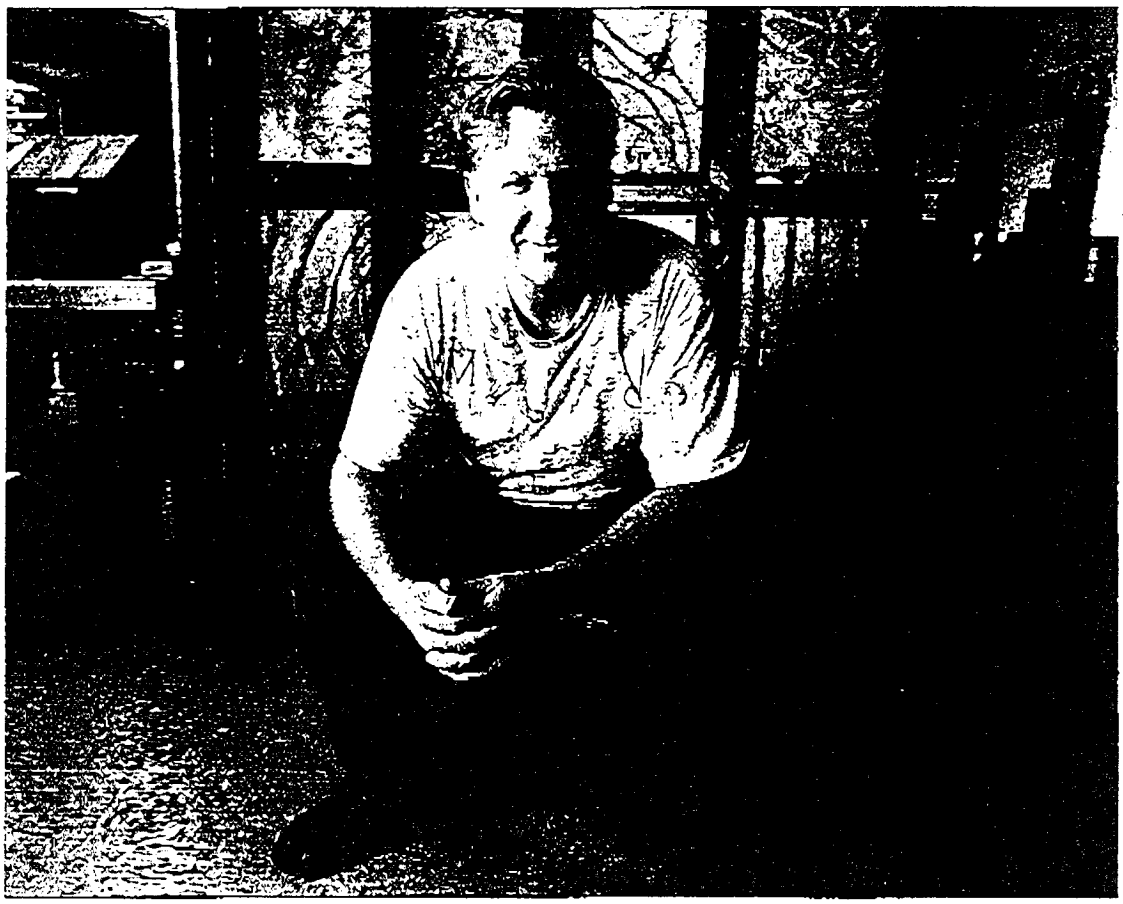
Stan Shetka: Artist and alchemist

ALL PAPER RECYCLING, INC.
502 4th Ave. N.W. Ste. #7
New Prague, MN 56071
(612) 758-6577 phone
(612) 758-6751 fax

—Stan Shetka's business looks like something out of a surrealistic painting. His sample products include books that don't open. His prototype product was a kinetic sculpture that ate garbage and spit out hard paper blocks. Even so, major corporations are so impressed with his concept that they are seeking out the former farm boy-turned-Gustavus Adolphus College art professor.



Shetka has developed a patented process that turns waste paper into a hard, wood-like substance that can be made into blocks or stamped out of molds. His signature decorative books—suitable for creating a faux library—are made from newspapers, potato chip boxes, and old telephone directories. He mashes paper



Shetka turns waste paper into a hard, wood-like substance

and water in a pulping process and then presses the mixture into "Shetkaboard," the raw material for his creations.

Minnetonka-based Fingerhut, a major catalog company, is paying Shetka $45,000 to experiment with turning its waste paper

into shipping pallets. Warner Bros. Studios has flown Shetka to California to discuss making its sets with Shetkaboard instead of fiberglass. He is building a three-bedroom home out of Shetkaboard with a grant from the Charles Lindbergh Foundation. "All of this is art for me," he says. "It's so big. I can't even comprehend it. When you get $4 billion-a-year companies coming to you, you start thinking."

Shetka formed All Paper Recycling Inc. in 1992. The city of St. Peter recently loaned him $10,000 to set up his St. Peter studio/factory, and he has begun installing a large-scale Shetkaboard "masher" there to start production of Shetkaboard by September.

The corporate interest Shetka has received comes in part from the cost savings associated with using Shetkaboard. A paintbrush maker estimates its pine brush handles cost 20 cents a piece. Shetkaboard handles would cost about a penny a piece, Shetka says.

Shetkaboard was born about five years ago with a kinetic sculpture Shetka crafted as an art project. "It was a garbage eater," he says. The sculpture devoured waste paper provided by visitors to the art gallery where it was located, and in return, churned out a nice little block of hard, pressed, molded paper. "When you think of paper, you think of something flimsy," Shetka says. "We're changing the consciousness of paper."

Shetka recognized that fiber was the ultimate binder of materials and that paper is nothing but fiber. His process works with other fibrous materials, too, including shredded plastic.

A board of directors that includes a former computer executive, an engineer, and a lawyer advises the New Prague native. He has also hired a production manager with a master's degree in art and a degree in biology. Production manager Kiersten Dahl says this is a recycling business that won't run into limited markets or slack demand. In addition, the technology itself could be licensed.

"Every city would be able to collect its waste and turn it into something it needs," Dahl says. All Paper hopes to sell to the specialty knickknack market also, where Dahl says the gains are enormous. A small decorative box made from molded Shetkaboard might sell for $5 to $7. The waste paper that it consists of costs virtually nothing. "All of a sudden, a ton of garbage is worth $20,000," Dahl says. "We don't care if paper goes up to $200 a ton. We use the papers that are free. We can generate a high-end product for it." In addition, should there be products that don't pass muster, they can be thrown back into the pulping unit, Shetka says. He says Shetkaboard is an example of art meeting industry—of art becoming utilitarian. "I keep telling everybody this is what artists do."—JS

ALL PAPER RECYCLING, INC.
502 4th Ave. N.W. Ste. #7
New Prague, MN 56071
(612) 758-6577 phone
(612) 758-6751 fax

Kiersten Dahl-Shetka
Vice President

SHETKABOARD©
SHETKASTONE©
Table Tops
Award Plaques

Turning Paper back into Wood.

ALL PAPER RECYCLING, INC.
502 4th Ave. N.W. Ste. #7
New Prague, MN 56071
(612) 758-6577 phone
(612) 758-6751 fax

Stanley J. Shetka
President

Professor, Gustavus Adolphus College
Originator, World Art Projects
Founder, The Center of Collaborations
Artist • Inventor • Patent holder

Turning Paper back into Wood.

LWQB

E00011259

Fiber

E00011260

NATIVE FOREST NETWORK
PO Box 8251 Missoula, MT 59807 USA
406-542-7343 • FAX 406-542-7347 • nfn@wildrockies.org
www.nativeforest.org

June 8, 1999

6/10/99

XC: Willhite
FRYE*

Bob Boschee
Mill Manager
Smurfit-Stone Container Corporation
Box 4707
Missoula, Montana 59806

(*) Russ are we required to comply with their request?

Dear Mr. Boschee,

This letter is a formal request to meet with representatives from your company regarding the recently completed update of your analysis of the economic and technical feasibility of incorporating alternative fibers and higher recycled content into your product. The report was produced as part of the lawsuit settlement.

I will be out of town until at least June 20, so I am hoping for a meeting during the last week of June or first week of July. I foresee the meeting lasting about one hour, but I am hoping that you could schedule two hours for it, in case a more in depth discussion ensues. I see no need to fly anyone in for this meeting, but I hope you could include Mr. Replogle and possibly Dr. Pojasek via speakerphone.

Please advise,

Ed

Please leave a message for me on my voicemail at 406-542-7343, to suggest meeting dates and I will return your call.

Sincerely,

Bill Stern

Billy Stern

Cc: Scott
Pojasek
Geist
Tweedale
Kreilick
Sieck
Tebbutt

Troy, Replogle

June - 21, 22, 23

July - 7/6, 7/7

Jim Replogle 630-260-3558
June 22, June 23

Called B. Stern 6/17/99 and proposed 6/22 @ 9AM @ Mill.

This paper is made from 45% totally chlorine-free wheat straw pulp, 40% processed chlorine free post-consumer waste and 15% calcium carbonate filler

Alternative Fiber Report

Jim Replogle - R+D in Chicago
Chicago (630) 260-3558

P 168 580 224

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Cold Mt. Cold Rivers	
Street and No. PO Box 7941	
P.O., State and ZIP Code Missoula MT 59807	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date Free Report.	

★ U.S.G.P.O. 1984-446-014

PS Form 3800, Feb. 1982

E00011263

PS Form 3811, July 1983

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. **The return receipt fee will provide you the name of the person delivered to and the date of delivery.** For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. ☒ Show to whom, date and address of delivery.

2. ☐ Restricted Delivery.

3. Article Addressed to:

President
Cold Mountain Cold Rivers
PO Box 7941
Missoula MT 59807

4. Type of Service:

☐ Registered ☐ Insured
☐ Certified ☐ COD
☐ Express Mail

Article Number

P168580224

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature – Addressee

X [signature]

6. Signature – Agent

X

7. Date of Delivery

5.19.99

8. Addressee's Address *(ONLY if requested and fee paid)*

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E00011264

UNITED STATES POSTAL SERVICE

OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- **Complete items 1, 2, 3, and 4 on the reverse.**
- **Attach to front of article if space permits, otherwise affix to back of article.**
- **Endorse article "Return Receipt Requested" adjacent to number.**

U.S. MAIL

PENALTY FOR PRIVATE USE, $300

RETURN TO

Ed Scott, Smurfit-Stone Cont.
(Name of Sender)

P.O. Box 4707
(No. and Street, Apt., Suite, P.O. Box or R.D. No.)

Missoula, MT 59806
(City, State, and ZIP Code)

E00011265

Smurfit-Stone
Containerboard and Paper Division

May 18, 1999

President
Cold Mountain, Cold Rivers
P.O. Box 7941
Missoula, MT 59807
(VIA Certified Mail)

Dear President:

Attached please the first report to plaintiffs due May 19, 1999 regarding Stone's updating of its analysis of the economic and technical feasibility, including issues of fiber availability, of incorporating alternative fibers into its production processes.

Sincerely,

[redacted]
Environmental Manager

cc: Boschee
Replogle
Savage
Willhite
Pojasek
Community Advisory Panel

Smurfit-Stone Container Corporation
Missoula Mill
14377 Pulp Mill Road P.O. Box 4707 Missoula, Montana 59806-4707 phone 406-626-4451 fax 406-626-5986

Summary

Straw for pulping to provide paper furnish is widely available in Montana, but associated costs are too high for straw pulp to compete with existing furnishes. Transportation and processing costs contribute significantly to this result.

Introduction

In accordance with the Consent Decree, an update to our economic and technical feasibility analysis of incorporating alternative fibers into the production process is being provided.

Recent developments in fiber furnish related matters are 1) completion of an upgrade to the old corrugated (OCC) pulping facility to increase throughput from 400 to 525 tons per day in May, 1998, and 2) Troy Savage, Process Engineer at the Missoula mill, will be a participant in a proposed Federal grant through the DOE titled "Bio-upgrading of Wheat Straw to an Industrial Feedstock [1]". The increased OCC production reflects our commitment to use other than virgin fiber to the fullest extent consistent with quality and market considerations. Likewise, the participation of Mr. Savage in the grant project illustrates our desire to remain technically in tune with developments within the industry.

The feasibility of alternative fiber (straw) pulping at the Missoula mill is tied to the availability of the resource, the costs associated with processing and transportation, and the quality of the pulp produced. Also, any additional costs incurred due to inclusion of a new fiber source have to be considered.

Fiber length of the straw pulp is 1.0 to 1.5 mm, with a fiber width of 15 microns. This is comparable in length to hardwood pulp, but with considerably more variability. The fiber is more slender than hardwood or softwood. The quality of the pulp is probably comparable to sawdust or OCC (old corrugated) pulp. It is expected that up to 30% alternative fiber (straw, sawdust, or OCC) pulp could be included in a linerboard paper furnish from a quality standpoint.

Technical Feasibility

Expectations are that a 65 to 70% yield pulp could be produced from straw with the equivalent of a soda ash cook (6% Na_2O on pulp) in a horizontal digester with a 5 to 10 minute cook time. Strength properties are expected to be only about 70% that of kraft softwood pulp.

[1] - This is a three-year project to study the development of straw to be used to supply the strawboard and paper industry as a useable raw material. The proposal is for $912,000 grant with a projected start day of September 1999. Other collaborators include a representative from the straw board industry, a well known non-wood pulping consultant, the Idaho Wheat Commission, Washington State University, the Idaho National Engineering and Environmental Laboratory and the Grant 4D Farms. Approval of this grant proposal is expected in the next couple of months.

Since transportation costs for bringing straw to the mill site would be prohibitive, the only feasible scenario for straw pulp production would be a regional pulping facility. This would be in the center of the straw growing region producing wet lap which would be shipped to the mill. Even if straw transportation costs to the mill were reasonably low, this furnish could not be co-processed with chip or sawdust furnishes due to unacceptably low yields (the straw would be consumed by the cooking liquor), and high silica levels causing slagging in the lime kilns.

Liquor desilication and recovery techniques for spent liquor from straw pulping are not well developed, cumbersome, and expensive. It is proposed that the straw would be pulped with a potassium based liquor, and the spent liquor spread on farmers' fields (from Wong).

Economic Discussion

The regional facility would store bales (up to a year). The process would consist of wet or dry cleaning, chopping, cooking and spent liquor storage.

Capital and operating cost summaries for a 100 ADT/day regional facility are shown below:

Capital Cost, $000

Receiving	300
Handling	500
Pulping	600
Spent Liquor Storage	1000
Subtotal	2400
Piping	125
Instr. & Elec.	345
Contingency	480
Total	3350

$9.57/ADT @ 10% cost of capital

Operating Costs, $/ADT

Straw	25
Baling	25
Transp., up to 60 mi.	25
Stg., Pre-processing	25
	100
Utilities	24
Chemicals	20
Labor	15
Capital	10
Maint.	24
	93
Wet lapping	20
Transp. to mill	40
Total	$253/ADT

This $253/ADT cost is considerably more expensive than sawdust or OCC pulp at the headbox, even if capital costs are excluded from consideration.

Another adverse impact of straw pulp in linerboard furnish besides reduced strength would be slow drainage of the pulp on the washers. Additional washer drums would be required at the same production level. Slower drainage on the fourdrinier would reduce machine speeds or require fourdrinier table upgrades. An additional saveall would be needed to handle excess fines. All of these issues would result in yet additional expense.

James W. Replogle
Project Manager
Smurfit-Stone World Research Center
Carol Stream, IL

References

1) Memorandum, T. Savage to L. Weeks, "Wheat Straw Pulping," 1/4/90.
2) Wong, A., R. Krzywanski, and C. Chui, *"Agriculture-Based Pulp as Secondary Papermaking Fibers,"* TAPPI Pulping Conference, Atlanta, GA, Nov., 1993.
3) Stern, B., *"Making Paper from Montana's Straw,"* Montana Dept. of Agriculture. Contains and extensive and current bibliography.

From: Robert B. Pojasek@rpojasek on 03/04/99 10:25 PM CST

To: Ed Scott/MISSO/Mill/STO@STO
cc:
Subject: Nontree Fiber Study

Ed,

I believe the Settlement Agreement gives the mill until May 12th to do a study on the use of nontree (wood) fiber in making paper. I have an open purchase order to review work on this task. You have not told me that you have anything underway to meet this requirement. Please advise. Thank you.

Bob

Dr. Robert B. Pojasek
Pojasek & Associates
P.O. Box 1333
E. Arlington, MA 02474-0071
(781) 641-2422
(617) 788-0288 (FAX)

http://www.PollutionPrevention.com
rpojasek@PollutionPrevention.com

Received 3/4/99
XC: Boschee
Barton.

The Consent Decree Requires that within one year of entry and no later than the 3RD and 5th anniversary dates Stone Shall update its analysis of the feasibility of using alternative fibers. Dr. Pojasek is to assist Stone in identifying P2 Benefits. Curt, is Guyton Wilkerson still responsible for this? Ed

E00011270

INDUSTRA

Industra Inc.
Engineers & Consultants

15055 SW Sequoia Parkway
Suite 100
Portland, OR 97224
Tel: 503-620-5333
Fax: 503-620-0102

4 May 1998

Received 5/6/98
XC: Boschee
Barton *
* Curt -
Guyton May Find their Services useful
Ed.

Mr. Ed Scott
Manager of Environmental Affairs
Stone Container Corporation
PO Box 4707
Missoula, MT 59806-4707

Subject: Evaluation of Nonwood Fibers

Dear Ed,

I appreciated the update on the consent decree when I was in Missoula last week. We understand action on the required measures won't begin until the decree is final and terms are set.

We would like to offer Industra's services to evaluate the potential for use of nonwood fiber at Missoula as part of your decree requirements. Industra has maintained a current and extensive portfolio of nonwood activity in the Pacific Northwest. We designed the grass straw pilot plant in Springfield, Oregon, developed a scope and estimate for the use of wheat straw in board, and developed a study program with the University of Washington and Washington State University for the use of wheat straw in papermaking.

Our contacts extend not only to vendors, but to other developers of nonwood projects (e.g., Heartland Fiber) and special interest groups promoting nonwood fiber utilization (e.g., Billy Stern of the Native Forest Alliance and the principals of Tierra Madre) as well. We have the confidence of both the advocates of nonwood fiber use and Stone Container – a combination that should satisfy both parties' interest in satisfying the decree.

We will remain in touch on this issue. Should you require any additional information or have any questions, please call me at 503-620-5333.

Sincerely,

Michael A. Roberts
by TJH

Michael A. Roberts
Vice President

MAR/tjh

cc: Bill Kohl, Stone Container Corporation

10998/0504TH01

Fiber - Financial

E00011272

Pojasek & Associates
P.O. Box 1333
E. Arlington, MA 02474-0071

File P2

6/14/99
O.K. to Pay
E. Scott

INVOICE Submitted To:

Ed Scott
Smurfit-Stone Container
P.O. Box 4707
Missoula, MT 59806

June 1, 1999

In Reference to: P.O. 1999-00139 (Alternative Fiber Study) (B-023)

Invoice # 1090

5/5/99 Telephone briefing on draft report and review of report 4 hrs. @$150	$ 600.00
5/14/99 Prepare comments, telephone call 4 hrs.	$ 600.00
TOTAL DUE	$ 1,200.00

PLEASE MAKE CHECK PAYABLE TO: POJASEK & ASSOCIATES

Payment Terms Net 30 Days. Please contact Dr. Robert Pojasek if there are any problems with this invoice at (781) 641-2422. Thank you.

Bull Trout

E00011274

CAP MEETING MINUTES
08/24/99

Attendees:

Garon Smith	Ginney Morey	
Hope Sieck	Phil Barney	
Kim Liles	Anna Weaver	
Matt Stergios	Ed Scott	
Mike McInally	Nick Kaufman	
Bob Boschee	Troy Savage	

Guests:
Ron Pierce
Billy Stern
Greg Schildwachter
Tracy Sealty

Moderator:
Sheila Callahan

Secretary:
Stacy Kohl

As part of the Consent Decree, Smurfit-Stone Container is required to spend $50,000 over three years for Bull Trout Restoration. The CAP was asked to listen to two presentations and then make a recommendation to the Mill regarding the best way to invest the money.

Ron Pierce from Fish, Wildlife and Parks gave information on the Dunham Creek Project. This project needs $300,000 to get under way. This stream is an established migratory spawning route for Bull Trout with no evidence of whirling disease or T-Tubifex. This project entails stabilizing the banks and defining the river channel.

Billy Stern presented for Native Forest Network. They reviewed several proposals broken down into the following:

$3,000	To fund T-Tubifex study proposed by Bill Graneth
$10,000	For a fish ladder for Rattlesnake Creek presuming that the ladder is approved and no other funding is found
$8-10,000	For an electronic fish counter on the fish ladder for Rattlesnake Creek, presuming that the ladder is approved and not enough money is found for the counter.
$3-7,000	To fund a bull trout trunk and educational projects
$7-15,000	To support studies by faculty and students at the U. Of M. to study the effects a fish ladder has on bull trout and westslope cutthroat trout populations in R.C.

(See attached for the complete listing)

The CAP first decided that the three most important things to look for in order to make a recommendation were:

1. Validity of Project
2. Measurability of progress
3. Amount of money to make a measurable difference.

The other important things to look for were:

Timing. (The money needs to be spent within 3 years.)
Overall Environmental impact
Opportunity Cost.
Long term cost. (Continual Maintenance costs)
Short term effect.

Greg Schildwachter, Intermountain Forest Industry Association, provided a form to help make an informed decision and recommendation. (See attached form)

The CAP discussed the options and decided on the following seven possible recommendations:

1. 50/50 split between Dunham and Rattlesnake.
2. $3,000 to perform testing on Rattlesnake and the remaining $47,000 to Dunham.
3. $3,000 to perform testing, $20,000 for ladder and counter, $7,000 for educational projects, remaining $20,000 to Dunham.
4. $3,000 to perform testing, $3,000-$7,000 for Natural History, $7,000-$15,000 for U. of M. Studies and $25,000 to Fish, Wildlife and Parks.
5. $50,000 to Dunham Creek
6. $50,000 to Native Forest Network proposed projects
7. $3,000 to perform testing, if the test comes back negative then proceed with fish ladder, counter, and 3-7,000 for educational purposes, if the test comes back positive then the remaining $47,000 should go to Dunham Creek.

The votes were 5 for option 3, 2 for option 7, 1 for option 2, and 2 passed.

The consensus was to commit $3,000 for testing for tubifex in Rattlesnake Creek, $10,000-$20,000 to Dunham Creek, and the remainder depending on the outcome of the tests on Rattlesnake creek.

The next meeting will be October 5, 1999.

David Ledford 803 957 3239

Stone Container Corporation

INTERNAL CORRESPONDENCE

DATE: 21 July 1998

To: See Distribution

Location:

From: David L. Ledford

Location: Columbia

CC: Corky Lee

Subject: Bull Trout and Clark Fork

Distribution: Bob Bosche, Ed Scott, Curt Barton, Rich Lane

Update on executing Sections 3.a. and 3.b. of consent order

1. Fulfilling obligations of Section 3.b. relating to spending $50,000 on Bull Trout will pose no problems. We can partner with Montana Fish, Wildlife, and Parks, and the USFWS on some projects they have ongoing. I spent a day in the field with them, looking at stream restoration projects they are doing, and we can get a lot of good things accomplished with them.

2. We are going to spend $50,000 of the $100,000 required in Section 3.a. at the Missoula mill site. I can work with BRI, and the WHC to come up with projects. I also want to include Montana Fish, wildlife and Parks. I have to be careful with BRI as they might spend half the money planning the project instead of doing something.

3. We should consider spending the remaining $50,000 from section 3.a. somewhere other than adjacent to the Clark Fork River between Harper's Bridge and Alberton. After visiting there, I am not sure what we can do that is significant for wildlife. I want to copy Section 3.a. of the consent order, and share it with some 3rd parties to get outside opinions as to if there are other places we could better spend the money. The 3rd parties would be individuals with Montana Fish, Wildlife and Parks, Trout Unlimited, and the U.S. Fish and Wildlife Service. If these parties determine that the $50,000 could be better spent somewhere else, I would ask them to approach CHEER and ask that we be allowed to spend the money elsewhere.

It would be better to spend the money on assisting in endangered species recovery than on butterfly gardens in Missoula. Hopefully, the chosen 3rd parties could help put us on the offensive with CHEER. Once we get the consent of CHEER to spend the money elsewhere, we could get another local NGO to take the point with us. A group like the Clark Fork Coalition might be a good choice. CHEER would be in the background while the Clark Fork Coalition was doing things with Stone Container Corporation to save endangered species.

→ Meeting w/ Ledford / Rich Lance 7/14/98

→ Matching Funds w/ Varying Regs agencies (Stone Seed II)

→ Control of Program would be Rich & David

→ Rich + David explore Matching Funds w/ Trout Unlimited etc.

→ Ledford / Lance will also Assist w/ Habitat Work.

- Meet w/ Driscol
- Meet w/ BRI
- Meet w/ Wildlife Habitat Council.

cc: → Ed Scott

Stone Container Corporation

Forest Products Division

217 Cedar Road, Lexington, South Carolina 29073-8871
Mailing Address: P.O. Box 21607, Columbia, South Carolina 29221

803-359-7232
803-356-4057 Fax

4 May 1998

Bob Bosche
Stone Container Corp.
P. O. Box 4707
Missoula, MT

Bob:

My name is David Ledford, and I am the Wildlife Biologist for the Forest Products Division. I have been talking to Curt Barton regarding my participation in the Bull Trout habitat portion of the settlement with the plaintiffs. I have contacted Montana Fish, Wildlife and Parks, requesting their assistance in developing projects to improve and/or create habitat for Bull Trout. Attached is a letter I sent to them via Fed-ex last week. I hope to have something together by the end of May.

If you have any questions/comments on what I am doing or what I need to do, call me at 1-803-957-3239. I will be in Costa Rica from 12 May to 26 May working on a bird research project in our gmelina plantations. If you call during that time, leave a message on my voice-mail, and I will get back to you, as I will be checking my messages from Costa Rica. Thanks, and I look forward to working with you.

Sincerely:

Dave

David Ledford
Wildlife Biologist
Forest Products Division

cc: Curt Barton
Rich Lane
Corky Lee

Stone Container Corporation
Forest Products Division

217 Cedar Road, Lexington, South Carolina 29073-8871
Mailing Address: P.O. Box 21607, Columbia, South Carolina 29221

803-359-7232
803-356-4057 Fax

28 April 1998

Ron Pierce and Don Peters
Montana Fish, Wildlife & Parks
3201 Spurgin Road
Missoula, MT 59801

Ron & Don:

As I communicated to you guys about a week ago, Stone has to spend $50,000 on Bull trout habitat restoration and/or creation over the next 3 years, as a result of a lawsuit related to the mill operations in Missoula. I have been talking to Stone's environmental control folks and attorneys, and have learned that I have to get the blessing of the plaintiffs for any Bull trout projects I come up with. The mill folks have to present the plaintiffs with a proposed list of activities in early June, and Bull trout work is only a portion of what we have agreed to do. I have been volunteered/drafted to handle the Bull trout portion of this settlement, so I have to have a rough list of proposed projects by late May.

I need you guys to come up with a rough list of locations and descriptions of potential projects. I do not need very specific information at this time. An example of what will suffice is below:

1. Location: Rock Creek. Activity: Riparian vegetation restoration.
2. Location: Blackfoot drainage. Activity: Remove an irrigation dam.
3. Location Blackfoot drainage. Activity: Install culvert, or simply, remove stream obstruction.

If you guys could get me a 1 page letter on agency letterhead stating that Stone Container and your agency will cooperate on these activities, I would dearly appreciate it. I just need something that we can show to the plaintiffs that demonstrates we are going to spend the money on real projects in the creeks, and that you guys are going to be the lead cooperators. Call me when you get this letter. I am leaving for 2 weeks of field work in Costa Rica on 12 May, so call me before then. Thanks, and I look forward to coming to MT.

Sincerely:

Dave

David L. Ledford
803-957-3239
dave@scsn.net

Montana Fish, Wildlife & Parks

3201 Spurgin Road
Missoula, MT 59804
May 4, 1998

Bob — Ledford asked me to copy you on this. I told him we planned to leverage this investment to generate good P.R. as well as possible timber from USFS. Rich

FYI

David Ledford
Stone Container Corporation
Forest Products Division
PO Box 21607
Columbia, SC 29221

Concerning: $50,000.00 for bull trout habitat restoration

Dear Mr. Ledford:

Our department has been actively pursuing opportunities for bull trout and cutthroat trout restoration in the Missoula area for the last 8 years. Both native fish species are currently under consideration for federal protection under the Endangered Species Act both have seen substantial decline in range over the last 100 years. Our efforts target the problems plaguing these species but also seek to educate and promote practices that will provide for long term habitat maintenance. This is accomplished by working one-on-one with landowners that have critical habitats on their property. This is accomplished by our seeking individual contacts and landowners that invite us. Our work is done in a cooperative manner with the private land owners. and projects are developed continuously throughout the year. Our knowledge of available funding sources, knowledge of identifying problems and corrective solutions has resulted in a very successful and active program.

We see no problem with incorporating your available funds into our program since we have spent several times that amount annually for the last 6 years. However we prefer to have projects drive funding rather than funding drive the projects. The dollars are spent much wiser and our program maintains integrity with lowest possible costs. All we really need to know is who to send our project proposals to and how funds are to be disbursed for keeping our contractors informed.

To Mike Mill

Our restoration staff and administrative staff are the same person, so we would appreciate keeping the administrative overhead work to a minimum.

PROJECTS: **Blackfoot River & Rock Creek Drainages**: Riparian area improvement including: fencing and grazing management planning, vegetative plantings, streambank erosion control with native materials, large woody debris placement, water conservation (ditch lining, flood to sprinkler irrigation, ditch screening, alternative irrigation, and off stream water development) some fish passage barrier removal work remains, and stream channel restorations.

Thank you for contacting our Department and giving us this opportunity to participate in the process of developing this native fish funding initiative.

Sincerely,

Don Peters
Acting Fisheries Manager

cc.
Larry Peterman
Bill Thomas

LEPC

E00011283

MISSOULA COUNTY

OFFICE OF EMERGENCY MANAGEMENT
200 WEST BROADWAY
MISSOULA MT 59802-4292

(406) 523-4758
Fax (406) 549-5889

$12,000

February 16, 1999

Lisa Phillips
C/o Smurfit-Stone Container Company
14377 Pulp Mill Road
Missoula, MT 59802

→ Lisa P.
OK
Bob B

Dear Lisa:

After soliciting grant applications from emergency response providers in Missoula County, the Local Emergency Planning Committee (LEPC) determined that the Smurfit-Stone Container settlement money for 1999 should be distributed to three applicants. The LEPC appreciates the opportunity to fund the projects recommended on page 2 for the betterment of the hazardous materials response community and the Missoula community as a whole.

Missoula County has set up a special account for receiving and disbursing funds related to the Smurfit-Stone settlement. As discussed, I can manage the disbursement procedure through the Office of Emergency Management program if that works for you.

Thank you again for contributing to the emergency management community of Missoula County.

Sincerely,

Bill Silverman

Bill Silverman
OEM Coordinator

→ Bob B

Consent Decree Requirements

Ed → Bob

Please review the proposed projects on the attached page. If you are interested in more extensive details, I can have Bill send us the grant applications. If these projects are acceptable, please let me know how to proceed.

Thanks,
Lisa

① $2,000/YR for 5 yrs
total = $10,000
For LEPC type work which is consistant w/ 1+3 Statutory Mandate.

② $10,000/YR for 5 yrs
For Equip/Training.

Total ($) = $60,000

Bob B -
I Recommend that the Fund $12,000 as outlined on attached page

Ed. = $12,000/YR

E00011284

SMURFIT-STONE GRANT TO LEPC - FUNDING RECOMMENDATIONS FOR FY99

(FUNDS AVAILABLE FOR AWARD IN FY99 TOTAL **$12,000**:
$2,000 FOR PUBLIC INFORMATION & EDUCATION PROJECTS
AND
$10,000 FOR EMERGENCY RESPONSE AGENCY TRAINING & EQUIPMENT)

	APPLICANT	PROJECT SUMMARY	REQUESTED	SUBCOMMITTEE RECOMMENDATION	FULL COMMITTEE ACTION
	LEPC Right-To-Know subcommittee	Variety of RTK and community risk management projects including information center at public library, brochures, displays, and facility coordination efforts	$2,000	**Award $2,000**	Support 1/5/99
	Frenchtown Rural Fire District	Model project: Facility site mapping for emergency response agencies (joint with Smurfit-Stone)	$3,250	**Award $3,000**	Support 1/5/99
	Missoula Regional Hazmat Team	Interagency response training for transportation containers of petroleum products (including LPG)	$9,000	**Award $7,000**	Support 1/5/99
	Arlee Volunteer Fire Department	Purchase two (2) portable radios programmed for interagency (mutual aid)communication	$1,200	**Do Not Fund**	Agree not to fund 1/5/99
		TOTALS:	$15,450	**$12,000**	Support 1/5/99

E00011285

STONE SETTLEMENT AD-HOC LEPC COMMITTEE MEETING

May 8, 1998

ATTENDING: Lisa Phillips (Stone), Wayne Van Meter, Susan Bomstad (911), Jane Ellis (CFO), Bill Silverman, Chris Newbold, Peter Neilson, Chuck Gibson, Scott Waldron, Tony Tweedale (observer)

Lisa Phillips reported that Stone may be willing to provide settlement in lump sum if that is what the LEPC requests, pending attorney approval.

Jane Ellis stated that the county can set up a trust fund account for the LEPC if they desire to go that route.

Committee discussed possibly dividing the settlement into two accounts: one as an on-going interest accruing trust account and the other for immediate grant expenses. Scott Waldron motioned to set 50 K aside in a trust fund and make 10K available for FY99 projects. Chuck Gibson seconded.

Peter Neilson suggested setting up criteria for project selection before determining trust fund amount.

Scott Waldron withdrew his motion.

Committee recommends that LEPC set as a limit 10K for grant expenditures during FY99.

Bill Silverman agreed to develop a draft grant proposal format (attached) including criteria and evaluation criteria.

Please direct any feedback on draft form to Bill Silverman, 523-4758.

Received 5/15/98

XC: Bob B

F.Y.I.

Ed.

DRAFT

MISSOULA CITY/COUNTY LOCAL EMERGENCY PLANNING COMMITTEE GRANT APPLICATION

APPLICATION CRITERIA:

- **Project cannot otherwise be required by law.**
- **Project must enable responders to better prepare, plan and respond to hazardous materials incidents in Missoula city/county.**
- **The public must benefit from the project.**
- **The project must meet the LEPC and Right to Know statutory mandates.**

USE ADDITIONAL SHEETS IF NEEDED

NAME AND ADDRESS (Street, City, State and ZIP code):

name:_____
address:_____
city, state, zip:_____

NAME AND TYPE OF ORGANIZATION:

_____
_____
_____

PLEASE STATE THE PURPOSE OF THE PROJECT:

_____
_____
_____

PLEASE DESCRIBE THE GOAL OF THE PROJECT:

_____
_____
_____

LIST PERSONNEL WHO WILL PARTICIPATE IN PROJECT:

_____
_____
_____

PLEASE CONTINUE ON THE BACK

DRAFT

Describe the project budget:

_____
_____
_____
_____
_____

List the time frame for the project:

_____
_____
_____

If this project involves matching funds, please describe them:

_____
_____
_____

The Missoula LEPC will use the following questions when evaluating the merit of each project application:

- **To what extent will the project enable responders to plan or prepare for local hazardous materials emergencies?**
- **Does the project meet the minimum LEPC/RTK statutes?**
- **Will the public and local responders benefit from the project?**
- **Does the project involve a match for funding?**
- **What is the cost versus the benefit for the community?**

This money is specifically designated "to the Local Emergency Planning Committee to assist it in implementing programs consistent with its statutory mandate," and "to pay for professional trainers to put on programs throughout Missoula County, or for selected individuals to travel from Missoula for professional training, to better prepare the Local Emergency Planning Committee to respond to releases of hazardous substances; and to purchase emergency response and communication equipment identified by the Local Emergency Planning Committee as needed for emergency responders throughout Missoula County to be better prepared to respond to releases of hazardous substances. Also, "the money is intended to be for additional work, rather than replacing existing funding or for expenditures required by law."

- from Civil Action No. CV 96-24-M-CCL settlement

_____ Applicant signature

_____ Date

MISSOULA COUNTY

DES COORDINATOR
200 W BROADWAY ST
MISSOULA MT 59802-4292

(406) 721-5700

XC: Boschee
Barton → Willhite.

February 19, 1998

Lisa Phillips
Stone Container Corp.
Drawer 4707
Missoula, MT 59806

→ Interesting Timing Ed

Dear Lisa:

Last fall, I purchased a new 20 foot trailer which replaced the medical triage bus. The new trailer will house medical supplies and equipment to be used by local responders in the event of a mass casualty incident.

The cost of the trailer was $5000 (five thousand dollars). To date, I have received $4150 (four thousand and one hundred and fifty dollars) in donations. The donations came from the following sources:

St. Patrick Hospital	***$200.00***
Montana Power Co.	***$200.00***
Yellowstone Pipeline Company	***$1000.00***
Missoula International Airport	***$500.00***
Missoula County	***$2000.00***
Missoula Community Medical Ctr.	***$250.00***

($850)

As you can see, I came up short on donations to cover costs. You can help by donating either cash or any of the following items in order to make the trailer fully functional.

• 30 large fannie pack jump kits	???? (Donated From Forest Serv.
• 1 Bendix/King field programmable radio	$900
• 1 Honda generator (ES 6500)	$4000
• 2 Portable light kits (Valley Supply)	$150
• 1 Awning	$800
• 1 Folding table	$50
• 5 Large tarps	$100
• 1 Wall tent (internal frame)	$1000
• 50 Orange vests (Valley Supply)	$500

$7,500

If you are inclined, I will graciously accept any donation from your organization toward the cost of this important community resource. Please write the check to: **Missoula County** and send it to the:

Office of Emergency Management
200 West Broadway
Missoula, MT 59802

Sincerely,

Bill S

BILL SILVERMAN
Coordinator

WILDLIFE HABITAT COUNCIL℠
© 1988 WHC
MAIN OFFICE: 1010 Wayne Avenue, Suite 920, Silver Spring, Maryland 20910
Tel: 301-588-8994 • Fax: 301-588-4629

February 23, 1999

Received 2/23/99
XC: Boschee
Initial/Date

Ed Scott
Smurfit-Stone
PO Box 4707
Missoula, MT 59806-4707

The Cheer Content Deal
Requires us to "Consult" with
WHC - Here is the Cost
Ed.

Dear Mr. Scott:

Bill Howard, WHC President, told me about your recent conversation with him regarding your interest in getting WHC to review your habitat-related plans for the Missoula Mill. He also forwarded to me your fax that provided an overview of these plans.

As Bill noted, WHC would like to be involved in the review of your efforts and plans, and believes that such a review would be valuable for Smurfit-Stone Container. WHC has worked with over 600 corporate-owned facilities in nine countries to develop habitat management efforts that involve employees and the community. We have also, through our Certification program, reviewed the efforts of over 230 facilities and have publicly recognized facilities that meet designated criteria. We are proud of our work to date towards our mission of increasing the amount of quality wildlife habitat on corporate, private, and public land.

To maintain our credibility as a conservation organization, and to accurately represent and support your efforts and plans, we need to view first hand the projects, plans, and site. As Bill noted, the costs associated with such a project would be dependent upon your membership status with WHC. Following is an overview of the two options.

	Non-member	Member
Site Visit	$1570	$965
Travel Expenses	~$1,000	~$1,000
Time on Followup Letter	$1440	$997
Sub Total	**$4,010**	**$2,962**

We certainly recommend that Smurfit-Stone Container become members of the Wildlife Habitat Council (WHC) to allow you to receive the benefits of membership, which include the lower site services rates. Becoming a WHC member will allow each and every Smurfit-Stone Container site to become involved at the discounted member rates. Membership is normally and most effectively paid for at the corporate level, and usually out of the environmental, public relations, community affairs, or foundation budgets. I am aware of one other Smurfit-Stone Container facility in Pennsylvania that is interested in beginning a Wildlife at Work program with WHC. Perhaps by combining efforts, the Missoula Mill and the facility in Pennsylvania can work with us to obtain membership

APPALACHIAN REGIONAL OFFICE
c/o AEP-KY, P.O. Box 1428
1701 Central Avenue
Ashland, Kentucky 41105

GREAT LAKES REGIONAL OFFICE
c/o Detroit Edison, 2000 Second Avenue
Room 742, WCB
Detroit, Michigan 48226

SOUTHEAST REGIONAL OFFICE
EH&S Dept., 1306 Amoco Drive
Wando, South Carolina 29492-7879
Tel: 843-881-5395 • Fax: 843-881-5191

PITTSBURGH REGIONAL OFFICE
c/o U.S. Steel, Env. Affairs
600 Grant St., Room 2287
Pittsburgh, Pennsylvania 15219-4776

from the corporate level. Bill Howard will be in Chicago on March 18 and 19, and could meet with the appropriate people at the corporate office to help this process.

If your timeframe for work on your site precludes waiting for membership to become reality, we would be willing to grant you the discounted membership rates as long as a letter is sent to WHC from Smurfit-Stone Container that documents an intention to join as members within 90 days of the site visit. Of course, if membership does not come through as planned, we would invoice you for the difference between member and non-member rates for the services provided.

While we are discussing ideas on collaboration, I wanted to share more information about WHC Certification, our mode of recognizing on an international level the good work that particular sites are doing for wildlife habitat. We encourage you to move towards certification for any projects that Smurfit-Stone Container employees do that exceed the requirements of your consent decree. Pursuit of the WHC Certified designation would bring you recognition on a local level, on an international level, and on an employee level. It shows that the company is willing to go beyond what is expected of them to become good land stewards. We've found that even the pride generated by employees of their WHC Certified designation is often reward enough! Because the criteria for WHC Certification entail a bit more time and effort on both your part and our's, following is an addenda to the above proposal.

	Non-member	Member
Time on F/u Recommendations	$915	$622
Certification Application	$1,400	$700
Grand Total (including services in both this and the above proposal)	**$6,325**	**$4,284**

If you would like to move forward with any or all of this proposal, my schedule allows me to visit your site in mid-March. Either March 16 or 17 would be good dates to pencil in. We can communicate via phone or on e-mail (jbrinck@wildlifehc.org) to coordinate this further or discuss other possibilities.

The Wildlife Habitat Council (WHC) can bring some significant benefits to Smurfit-Stone Container, especially at the Missoula Mill. Thank you again for calling, and I look forward to working with you through this proposal to answer any questions you may have.

Sincerely,

Jeffrey C. Brinck
Director of Field Programs

C: Evan Verbanic, WHC
Bill Howard, WHC

WHC Membership Categories

(All fees are in US$)

	1 YEAR	3 YEARS
CORPORATE MEMBERS		
OAK		
Revenue exceeds $5 billion	$ 4,250	$11,475
REDWOOD		
Revenue between $501 million-$5 billion	$ 3,750	$ 10,000
SPRUCE		
Revenue between $5 million-$500 million	$ 1,750	$ 4,725
HOLLY		
Revenue less than $5 million	$ 850	$ 2,295
CONSERVATION MEMBERS		
National	$ 550	$ 1,250
Local	$ 50	$ 125
SPONSORS		
(Retailers, trade associations, public agencies)		
National	$ 1,500	
State/Local	$ 250	
CONTRIBUTORS		
(Individuals/Yearly)		
Great Bear Society (Receives newsletter, special reports, WHC calendar)	$500	
Red Fox Circle (Receives newsletter, WHC calendar)	$250	
Supporter (Receives newsletter and WHC calendar)	$100	
Subscriber (Receives newsletter)	$ 25	

Restoration

E00011293

Smurfit-Stone

Missoula Mill
Containerboard and Paper Division

14377 Pulp Mill Road (shipping only)
PO Box 4707
Missoula MT 59806-4707

Phone: (406) 626-4451
Fax: (406) 626-5986

FROM: Ed Scott

TO: Bill Howard

COMPANY: MHC

NUMBER OF PAGES (including cover sheet): 4

MESSAGES OR SPECIAL INSTRUCTIONS:

better define, quantify, and interpret nonpoint source contribution of nutrients (nitrogen and phosphorus) into the Clark Fork watershed. This study or studies may also include nonpoint source contributions of other pollutants, if the Missoula Water Quality District Board determines such expansion of the study is appropriate and will not prevent adequate assessment of nutrients with the available funds.

- Approximately $10,000 per year over five (5) years to expand the annual household hazardous waste collection weekend to extend to more days and/or to cover a wider range of wastes, and for public education to prevent or minimize release or generation of household hazardous wastes.
- Approximately $2,000 per year over five (5) years to the Local Emergency Planning Committee to assist it in implementing programs consistent with its statutory mandate.
- Approximately $10,000.00 per year over five (5) years to pay for professional trainers to put on programs throughout Missoula County, or for selected individuals to travel from Missoula for professional training, to better prepare the Local Emergency Planning Committee to respond to releases of hazardous substances; and to purchase emergency response and communication equipment identified by the Local Emergency Planning Committee as needed for emergency responders throughout Missoula County to be better prepared to respond to releases of hazardous substances.

The money is intended to be for additional work, rather than replacing existing funding or for expenditures required by law.

3. Habitat Restoration and Creation

a. Stone shall spend one hundred thousand dollars ($100,000) over a maximum five (5) year period commencing with the entry of this Consent Decree for habitat restoration and creation projects adjacent to the Clark Fork River between Harper's Bridge and Alberton. Regarding the identification of project areas along the Clark Fork River

adjacent to Stone's property that are suitable for habitat restoration and creation projects, Stone shall consult with Bitterroot Restoration, Inc. ("BRI") and the Wildlife Habitat Council ("WHC") to identify areas that will provide lasting benefits to the Clark Fork River riparian zone. At least half of the $100,000 (i.e., $50,000) shall be spent on projects on the Clark Fork River not adjacent to Stone's property. With respect to areas not adjacent to Stone's property but between Harper's Bridge and Alberton, Stone shall spend money on projects that are among those identified as suitable for habitat restoration and creation projects by BRI and WHC after consultation with the parties. At least $60,000 shall be expended by the end of three (3) years after entry of the Consent Decree, with at least $30,000 having been spent in areas not adjacent to Stone's property.

b. Stone shall, after consultation with Plaintiffs, spend fifty thousand dollars ($50,000) over a maximum of three years, commencing with entry of this Consent Decree, on habitat restoration and creation projects to enhance the recovery of Bull Trout in the Clark Fork Basin within the Western Montana region.

B. Pollution Prevention Program

1. Stone shall retain as a consultant Dr. Robert Pojasek to assist in developing and implementing a five (5) year Pollution Prevention Program ("P2 Program"), the criteria of which are set out in Addendum A. An initial Pollution Prevention Plan ("P2 Plan") shall be completed and provided to Plaintiffs no later than six (6) months after the entry of this Consent Decree.

2. The P2 Plan shall address and begin to prioritize for activities actual and potential pollution sources at Stone's facility, including chemicals transferred, stored, used, produced, generated, or released into the environment, and be based upon pollution prevention priorities identified in Addendum A and in this Consent Decree.

3. Stone shall produce and provide to Plaintiffs an annual report detailing and updating Stone's implementation of the P2 Program. Dr. Pojasek (or another expert acceptable to Plaintiffs) shall

SUMMARY OF REQUEST (Describe Present Basis, Nature of Proposal and Anticipated Benefits, Attach Additional Pages if Necessary)

In 1998, Stone Container signed a consent decree with several local environmental groups to spend $50,000 to improve the habitat of mill property adjacent to the Clark Fork River. To fulfill this requirement, Smurfit-Stone is planning to fence riparian areas and to plant vegetation where necessary to restore the natural habitat which has been impacted by cattle grazing.

We propose to make improvements over a period of three years starting with 1999. The first year's work would include the river island complex bordered by the Marcure Slough, and the Fairbanks Slough on the southern edge of the mill property. Both areas will be fenced using 4-strand barbed-wire with metal posts and necessary bracing. The grassland near the Fairbanks Slough would be sprayed for weeds. We plan to allow both areas to revegetate naturally during the first year. The planting of trees and shrubs will be limited to those areas where recovery is expected to be slow.

The second year will involve the fencing of LaValle Creek from Fairbanks Lane to the roadway to deepwell No. 21, and the Lucier Slough at the end of Marcure Lane. The low areas north of the Lucier Slough and west of the old Milwaukee railroad tracks will be connected with a ditch to expand the wetlands. Revegetation will be done in those areas where it is deemed appropriate.

The third year would include the fencing of the river island complex between the well field and pond No. 2. The riparian area along LaValle Creek would also be included. This area will require some cottonwood and willow revegetation.

MIS EXPENDITURES	LEASING: MASTER LEASE	OTHER (attach lease)
Director of MIS	Purchasing (if under Master Lease)	
VP-Corp. Controller	Treasury Operating Capital	
	2-9-99	
Recommended By Scott	Capital Admin.	
Location Controller	Division Manuf./Engineering	
Location Plant Manager	Division Controller	
General Manager	Senior VP	
Div. VP/Regional Manager	CEO	

301 588
4629

2/23/99

(1) Bill Howard w/ MT Wildlife

(2). Biologist Come out visit w/ Larry - Include Report. of intimidation.

2 $3,000

Jeff Brink.

XC: SAVAGE
DRISCOLL

Stone Container Corporation
Missoula Mill
Containerboard and Paper Division

To: Bob Boschee

Date: December 30, 1998

From: Ed Scott

Subject: Habitat Restoration and Creation Proposed Projects

As you are already aware, the consent decree with Montana CHEER requires the Mill to fund various habitat restoration projects over the next three to five years. As outlined in the consent decree, the Mill is required to spend $100,000 over the next five years for habitat restoration and creation projects adjacent to the Clark Fork River between Harper's Bridge and Alberton. In addition, over the next three years the Mill is required to fund habitat restoration and creation projects to enhance the recovery of Bull Trout in the Clark Fork Basin within Western Montana. Therefore, the total spending required for habitat restoration over the term of the consent decree is $150,000.

Rich Lane, David Ledford, and myself have spent the last few months discussing various restoration projects with a number of different organizations including Montana Fish, Wildlife and Parks, Five Valleys Land Trust, Bitterroot Restoration, Ducks Unlimited, the Owl Research Institute, and the Clark Fork Coalition. Based on those discussions and the Mill's goals of spending the monies on worthwhile projects that are relatively easy to manage, I have outlined the following recomendations.

The specific consent decree requirements and my recommended compliance plans are as follows:

I. Habitat Restoration Projects Not Adjacent to the Mill

Requirements/Conditions

At least half of the $100,000 (i.e. $50,000) is to be spent on projects not adjacent to the Mill's property. The consent decree also requires that these projects be identified by Bitterroot Restoration ("BRI") and the Wildlife Habitat Council ("WHC"). And finally, the consent decree requires that the projects not be completed without first consulting CHEER.

Recommendation

Five Valleys Land Trust (FVLT), a local not-for-profit organization that focuses on the conservation and acquisition of land easements has provided the Mill the attached proposal which outlines how they would use the funds to improve riparian habitat in the Clark Fork River corridor.

Following a legal review of the FVLT's proposal, we were advised by counsel that the proposal did not sufficiently comply with the language in the consent decree. Therefore, it became necessary to convince representatives from CHEER that FVLT's proposal was worthwhile and to convince CHEER to agree to sign an addendum to the original consent decree. CHEER has already indicated their support for the proposal and is presently reviewing our proposed addendum to the original consent decree (Please see attached addendum).

Assuming CHEER signs the addendum, I would recommend that we agree to fund FVLT's project as proposed. The funding schedule would be as follows:

Date	Amount ($)	Purpose
January 1999	$15,000	Staff Time and Contract Expenses For Mapping & Prioritizing Projects Conservation Easement Procurement
January 2000	$10,000	Conservation Easement Procurement
January 2001	$10,000	Conservation Easement Procurement
January 2002	$10,000	Conservation Easement Procurement
January 2003	$10,000	Conservation Easement Procurement
Total =	$55,000 (Note: $5,000 deducted from on site project spending)	

II. Habitat Restoration Projects Adjacent to the Mill

Requirements/Conditions

The consent decree allows for up to $50,000 (i.e. half of the $100,000) to be spent on projects along the river that are adjacent to mill property. Regarding the identification of these project areas, the consent decree requires the Mill to consult with Bitterroot Restoration ("BRI") and the Wildlife Habitat Council ("WHC") to identify areas that will provide lasting benefits to the Clark Fork River riparian zone. BRI has already been consulted, however, we are still in the process of consulting with WHC. My interpretation of the consent decree indicates that the Mill is not required to consult with CHEER regarding projects that are adjacent to our property.

Recommendations

Over the past few months, a number of different parties (Montana Fish, Wildlife and Parks, Ducks Unlimited, Owl Research Institute, and representatives of the local Audubon Society) have visited the Mill and toured our water storage ponds. The purpose of their visits were to offer ideas/projects which would further enhance and protect the habitat around our water storage ponds. Some of the ideas/projects that resulted from their visits included the following:

1. Fencing and/or reduced livestock use to increase nesting cover for nesting waterfowl
2. When possible, manage water levels in storage ponds to allow for the development of aquatic vegetation.
3. Modify islands in storage ponds to allow for nesting cover for ducks and geese.
4. Plant cotton wood seedings in specific areas to add additional cover for various wildlife.

Larry Weeks, retired Technical Director and member of the Audubon Society, has volunteered to coordinate the on-site projects. Larry is very familiar with the Mill's water storage ponds (after 30+ years of service to the Mill) and is very knowledgeable of habitat protection and restoration. In addition, he has good working relationships with the organizations we would be working with (i.e. Fish, Wildlife & Parks, BRI, etc.).

Therefore, I would recommend that we consult with HWC, as required by the consent decree and allow Larry Weeks to coordinate the project according to the following spending schedule:

Date	Amount ($)	Purpose
March 1999	$25,000	Fencing and Miscellaneous Habitat Restoration Projects
March 2000	$10,000	Miscellaneous Habitat Restoration Projects
March 2001	$10,000	Miscellaneous Habitat Restoration Projects
Total =	$45,000	

III. Habitat Restoration/Creation To Enhance Bull Trout

Requirements/Conditions

The consent decree requires that $50,000 be spent over a maximum of three years on habitat restoration and creation projects to enhance the recovery of Bull Trout in the Clark Fork Basin. Regarding the identification of these project areas, the consent decree requires the Mill to consult with CHEER.

Recommendations

David Ledford has discussed this issue with experts from Montana Fish, Wildlife and Parks and they have proposed a project for the Dunham Creek watershed (Please see attached proposal). As required by the consent decree I have consulted CHEER regarding this proposal and I am still awaiting their response. In addition, I have notified CHEER that I would request input from the Clark Fork Coalition regarding this proposed project.

Recently, CHEER has proposed their own project which I have enclosed for your review. In addition, I have forwarded a copy of their proposal to both David Ledford and the Clark Fork Coalition (CFC) for review.

At the present time, I would lean towards recommending the completion of the project proposed by Montana Fish, Wildlife and Parks. I am hoping and anticipating that the CFC will agree with my assessment.

Assuming that the CFC and David Ledford agree with my assessment, I would propose the following funding schedule:

Date		Amount ($)
Jan 2000		$25,000
Jan 2001		$25,000
	Total =	$50,000

I look forward to your response regarding these recommendations. In the meantime, if you have any questions please contact me.

Ed Scott

Distribution: Curt Barton
Paul Willhite
David Ledford
Rich Lane
Russ Frye

FIVE VALLEYS LAND TRUST

P.O. Box 8953 • Missoula, Montana 59807 • (406) 549-0755 • Fax (406) 542-1652

Received 12/21/98
XC: Boschee
Willhite
Frye
Lane

Ed Scott, Smurfit-Stone Container
Billy Stearn, CHEER
PO Box 4707
Missoula, MT 59802

December 18, 1998

Dear Ed and Darrell,

Please find enclosed a final proposal to Stone Container and CHEER to create a program which will significantly and permanently improve riparian habitat in the Clark Fork River corridor. This partnership will affect hundreds of acres of land and many miles of rich riparian habitat between the west edge of Missoula and Alberton, while providing widespread public benefit by improving the quality of life for us all. We are confident that this proposal achieves the goal set by Stone and CHEER to provide extensive restoration and protection for many miles of critical river frontage and wildlife corridors. I have incorporated the agreed upon changes into our proposal and believe all concerns have now been adequately addressed. I appreciate both parties willingness to work with Five Valleys Land Trust in our effort to come up with a project that works for us all.

We think our proposal has the potential to impact a significantly large geographic area by spreading funds among a number of important riparian conservation projects and plan on making use of several well-established partnerships in order to bring additional funding and expertise to our conservation projects. Using the donated conservation easement as our main tool, Five Valleys Land Trust can create the ultimate "win-win" situation - voluntary agreements between landowners and the Land Trust which leave valuable riparian conservation lands in private ownership, yet safe from development. The out-of-pocket expenses involved in this process are relatively low, maximizing the results from each dollar that is spent.

We look forward to the opportunity to work with Stone Container and CHEER on such an interesting and valuable community project. If you have any questions or comments, please don't hesitate to call.

Best Regards,

Wendy Ninteman

Wendy Ninteman
Executive Director

Board of Directors: Betty duPont · Mae Nan Ellingson · Elmer Frame · Tom France · Dale Harris · Marcia Hogan · Scott Hollenbeck
Susan Masar · Phil O'Connell · Bob Precht · Kim Reineking · John Talbot · Chuck Tribe · Pam Volkmann · Bob Whaley · Jack Wright

Executive Director: Wendy Ninteman **Development Director:** Noreen Humes
Rock Creek Trust Project Director: Ellen Knight **Rock Creek Trust Assistant:** Amy Winninghoff

PROPOSAL ABSTRACT

SUBMITTED TO: **CHEER/STONE CONTAINER CORPORATION**
DATE: **December 18, 1998**
APPLICANT NAME: **Five Valleys Land Trust**
PROJECT NAME: **Clark Fork River Corridor Conservation Easement Program**

PROJECT DESCRIPTION:

This is a proposal submitted to CHEER/Stone Container Corporation for the cooperative use of designated funds totaling $55,000 to protect and enhance the Clark Fork River corridor between the Reserve Street Bridge in Missoula and Alberton and to provide the community of Missoula, the residents of Montana and the citizens of the United States protected and improved riparian resources and wildlife habitat for generations to come.

This proposal would engage Stone Container Corporation in collaboration with the Five Valleys Land Trust (FVLT) to provide conservation easement opportunities to private property owners who own land along the Clark Fork River between Reserve Street and Alberton with significant wildlife and riparian values. Many of these landowners do not have the financial means to help underwrite the direct costs associated with placing a conservation easement on their property. The funds from Stone Container Corporation would be used specifically to cover the direct costs of easements, including title work, baseline studies, and long-term stewardship and monitoring.

Participating landowners will be asked to make a commitment to an active restoration component on each project receiving financial assistance through this program.

FVLT HISTORY AND MISSION

The Five Valleys Land Trust got its start in 1972 with the formation of the Five Valleys River Parks Association, a group that worked quietly, but effectively, for more than fifteen years to protect much of what has become the system of riverfront parks and functional riparian habitat that the community enjoys today. In 1989, the Association expanded its conservation capabilities and mission beyond the City of Missoula and into Western Montana. At that time Five Valleys Land Trust was born.

In 1995 FVLT expanded again, this time with the addition of the Rock Creek Trust - a special project with focus solely on the well known and highly regarded Rock Creek drainage east of Missoula. Rock Creek is home to western Montana's only "Blue Ribbon" trout stream.

Five Valleys Land Trust is a not-for-profit community-based and community-supported organization with a mission and purpose to engage in land conservation, stewardship, and educational activities resulting in widespread public benefit. This includes the conservation and acquisition of land in order to preserve, protect, and enhance stream corridors, wildlife habitat, recreational opportunities, scenic open space, agricultural land and historic sites. Our primary tool is the donated conservation easement, a voluntary legal agreement between a landowner and land trust which permanently limits a property's uses in order to protect its conservation values.

FVLT now holds 33 conservation easements and has helped protect more than 10,000 acres of prime

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wildlife habitat, riparian areas, agricultural lands, scenic and historic places in Missoula County, Ravalli County, Lake County, Mineral County, Granite County, and Sanders County.

FVLT PROGRAMS AND ACTIVITIES

With phenomenal population growth rates in western Montana (Ravalli County up more than 30%, Missoula County up 17%, Granite County up 10% since 1990) the interest in and demand for conservation easement services continues to grow. FVLT currently has more than 20 conservation easement projects at various stages of negotiation. Conservation easements offer several advantages to landowners: 1) they leave the property in the ownership of the landowner, who may continue to live on it, sell it, or pass it on to heirs; 2) they can significantly lower estate and income taxes, sometimes making the difference between heirs being able to keep land in the family and needing to sell it; 3) they are flexible, written to meet the particular needs of the landowner; and 4) they are permanent, remaining in force when the land changes hand.

Once obtaining a conservation easement, the Land Trust provides long-term stewardship and monitoring so that the land's natural or historic values are preserved in accordance with landowner wishes and the terms of the easement.

In addition to our role of holding easements, FVLT also helps provide focus for a number of grass roots conservation initiatives seeking to protect open space and natural areas at the community level. Our biggest and most visible effort culminated in 1997 with the acquisition of some 1600 acres on Mount Jumbo, one of Missoula's cornerstone conservation lands. This project, initiated by FVLT, was done with the help and cooperation of the Rocky Mountain Elk Foundation, the MT. Dept. of Fish, Wildlife & Parks, the US Forest Service, the City of Missoula, Missoula County and hundreds of Missoula citizens and volunteers.

Financially, FVLT has a reputation for stability and dependability. About 80% of the funding for the work of the Land Trust comes from individuals and businesses within the community and beyond who share our goals. The remaining 20% coming from foundations in the form of grants. To ensure that we are here to stay, FVLT has established a stewardship fund to address long-term monitoring and enforcement of easements, and an endowment with the Montana Community Foundation that will eventually provide a stable source of funding. However, in a relatively small area, with immediate concerns and objectives that may not generate regional or nationwide enthusiasm, funding our day-to-day efforts remains a constant challenge. We must ask easement donors to share in the costs of developing and providing for the perpetual stewardship of their easement.

FVLT is a member of the Land Trust Alliance, a national organization of land trusts. This group provides much assistance to FVLT through their staff, publications, and training sessions. The Land Trust Alliance has developed "Standards and Practices" for the operations of a land trust, which Five Valleys has adopted.

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THE COMMUNITY AND FVLT

FVLT enjoys a wide level of community support. We are not an anti-development organization, rather, we believe that development has a certain place within our communities in order to maintain a healthy balance of open space and economic viability. In fact, we believe that a community's economic capacity is enhanced dramatically when view sheds, riparian areas, agricultural lands, and wildlife values are kept intact.

However, along with growth comes the responsibility of understanding what it means to provide healthy lifestyles within a community setting. There is no doubt that population numbers will continue to rise in Western Montana. What is often times left out from growth and planning discussions is the effect that open and natural areas have on us individually and as a community. Natural landscapes provide people with shared space in forms of physical, biological, social, and harmonic links to their communities as a whole. Five Valleys Land Trust's work is in part keeping people rooted in the context of their community. People who are rooted in their community will care for and provide direction to those in need and to the youth of their community. The work of Five Valleys Land Trust serves to enrich the life of the community, and to expand opportunities for residents to live healthier, more secure and productive lives.

Historically, FVLT has maintained excellent working relationships with local governments, state government, regional and national land trusts, and other conservation organizations, to assure that mutual goals and objectives can be achieved without duplication of effort and with the most efficient use of the resources available. The projects that would be funded by this proposal would complement the efforts of those groups, and benefit from their direct involvement as appropriate.

Even though FVLT doesn't take political stances, the organization's mission is directly tied to community involvement and solution oriented partnerships. FVLT remains focused on the task of encouraging sound conservation practices with respect to land, water, wildlife and scenic resources within Western Montana. The work of the land trust is a non-threatening, non-governmental tool that landowners can use to address their concerns.

CURRENT PROJECTS ALONG THE CLARK FORK RIVER

Five Valleys Land Trust is currently involved in several projects in the area along the Clark Fork River between Missoula and Alberton. One of these projects - a donated conservation easement just east of Harper's Bridge - permanently protects 200 acres and approximately two miles of winding Clark Fork River frontage. Jim Cusker's family has provided excellent stewardship of this prime Montana landscape, having lived and worked on this land for several generations. Due to a relationship based on trust, Five Valleys has been able to introduce Mr. Cusker and his family to resources available through the NRCS and Fish, Wildlife and Parks which are helping him restore and improve his land's riparian resources. The easement gives a family with a *demonstrated interest* in preserving and protecting the riparian health of the Clark Fork River corridor the opportunity to keep what would otherwise be highly subdividable property. Whether flying into Missoula, sightseeing on Big Flat Road, or floating by - the expansive, scenic view of the Cusker property along the Clark Fork River serves as a reminder for all of us about why we live here.

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In addition, FVLT is involved in discussions with several landowners adjacent to the Cusker property who are interested in taking similar steps to protect their own riparian-rich resource. A grant to help landowners cover their out-of-pocket expenses could make the difference in these types of decisions. This type of community-oriented project typifies what Five Valleys Land Trust is all about.

PURPOSE OF THIS PROPOSAL

The continued development of riparian lands along the Clark Fork River between Missoula and Alberton poses a significant threat to water resources, wildlife habitat, and recreational opportunities. Many landowners in this area would like to protect their lands and improve the health of their riparian resources but don't have the financial resources to cover the direct expenses involved with the conservation easement process.

Five Valleys Land Trust proposes to address this problem by establishing a funding source to provide the owners of these critical parcels of riparian land along the Clark Fork river corridor with the financial resources they need to pay for out-of-pocket expenses such as a baseline study, title report, mineral reviews and long-term stewardship and monitoring costs. Each of these steps is required by law and will help permanently protect the natural values of these resource rich properties for the benefit of the entire community. Restoration activities are also eligible for funding from this project.

A typical easement requires about $7,000 to complete, not including the appraisal or the staff time spent crafting and negotiating the document with the landowner. This breaks out as follows.

- $1,000 for the baseline study - This scientific report is completed by a qualified naturalist before the easement is signed, and documents the condition of the land at the time of the easement. Annual monitoring visits use the baseline study as a benchmark to gauge the condition of the conservation resource protected by the easement. Legal acceptance of the baseline report by the landowner and FVLT becomes a recorded document along with the easement. FVLT has developed a state-of-the-art format which is used by many land trusts around the country.
- $1,000 for title work, mineral searches, and easement recording costs.
- $5,000 for long-term stewardship and monitoring. In accepting an easement, FVLT accepts the responsibility for upholding the terms of the easement in perpetuity. In order to meet this responsibility, FVLT makes annual monitoring visits to each site to ensure that the conditions of the easement are being met.

$50,000 of the grant funds received from Stone Container would be used to fund landowner out-of-pocket expenses for at least seven conservation easement projects over a five-year period along the Clark Fork River corridor that otherwise may not be completed. In addition, it would be our intent to maximize the benefit of this grant by requesting that easement donors who do have the necessary financial means supplement the fund with additional contributions.

Participating landowners will be asked to make a commitment to an active restoration component on each project receiving financial assistance through this program. This might include riparian fencing,

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revegetation using native plants, protective management, streambank stabilization and erosion control, and habitat improvement. Preventive measures or managment adjustments are also important tools in lessoning the impact to these sensitive riparian areas. Stream degradation is much easier and cheaper to avoid than to fix.

$5,000 of the grant funds received from Stone Container would be used to pay for the Land Trust's staff time and contract expenses relating to researching, mapping, and prioritizing the projects according to their riparian resource value. Specifically this includes working with the University of Montana's Riparian Wetland Research Program, Fish, Wildlife and Parks, Natural Resource Soil Conservation Service, the Clark Fork Coalition, Montana Natural Heritage Program, and the Missoula County Office of Planning and Grants. In prioritizing projects, we will look for lands with high restoration needs, critical habitat, or unique features. An example of this would be a mature cottonwood forest threatened by excessive erosion or livestock grazing.

Five Valleys also proposes to involve other appropriate agencies and organizations, such as Natural Resources Conservation Service (NRCS), Bitterroot Restoration, and Fish Wildlife & Parks in individual projects as appropriate. As the new chief of the NRCS put it "Partnerships are everything to our future.....there's no one agency, no one organization that can do the job alone." FVLT shares the NRCS desire to achieve maximum conservation benefits for the money spent, favoring projects "that provide permanent protection over those offering only temporary protection and to prefer consolidated projects that focus on systems to disparate projects with no collective impact.

CHEER and Stone Container can be assured that any partnership funds from the Corporation would be well accounted for and go solely towards projects in a specific geographical area along the Clark Fork River as designated in this grant proposal. CHEER and Stone Container could expect bi-annual updates reporting on the progress of all activities associated with the use of these grant funds. FVLT's Development Director, Noreen Humes, has been with us since she was hired in 1996 to raise the remaining $1.3 million to secure the protection of Mount Jumbo. Her work includes the oversight and management of grant funds.

PAYMENT SCHEDULE

Payment of the $55,000 grant funds will be disbursed from Stone Container to Five Valleys Land Trust as follows:

January 1, 1999 - $15,000 will be released to Five Valleys Land Trust. $10,000 will be released for conservation easement procurement. $5,000 will be released to cover staff time and contract expenses for researching, mapping, and prioritizing projects.

January 1, 2000 - $10,000 will be released to Five Valleys Land Trust for conservation easement procurement.

January 1, 2001 - $10,000 will be released to Five Valleys Land Trust for conservation easement procurement.

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January 1, 2002 - $10,000 will be released to Five Valleys Land Trust for conservation easement procurement.

January 1, 2003 - $10,000 will be released to Five Valleys Land Trust for conservation easement procurement.

SUMMARY

A $55,000 grant from the Stone Container Corporation would result in the protection of hundreds of acres of riparian resource and wildlife habitat and corridors and help establish the beginning of a long-term funding source that could benefit a number of important conservation projects on the Clark Fork between Missoula and Alberton. We also believe that the conservation achieved could have the effect of broadening interest in the use of easements, and the accomplishment of further conservation surrounding the Clark Fork River that would not require funding assistance.

The purpose of this grant proposal is to assist non-commercial, private property owners interested in donating conservation easements on riparian-rich lands along the Clark Fork River between Missoula and Alberton. This proposal presents a model for establishing a successful partnership between business and conservation interests in the Missoula community which is aimed at preserving critical private lands for the benefit of all.

FVLT views this issue as important as affordable housing, land use planning, and overall community vitality. We are confident that CHEER and Stone Container will see this project as a valuable opportunity to benefit future community projects and collaborations, and the Clark Fork River corridor. We appreciate your support of our request.

Best regards,

Wendy Ninteman

Wendy Ninteman
Executive Director

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AGREEMENT CONCERNING HABITAT CREATION AND RESTORATION PROJECTS

WHEREAS, On January 29, 1996, Montana Coalition for Health, Environmental and Economic Rights, Inc., Cold Mountain, Cold Rivers, Inc., and Native Forest Network, Inc. (collectively, "CHEER") filed an action in the U.S. District Court for the District of Montana, alleging that Stone Container Corporation's ("Stone's") Missoula Mill violated various environmental laws; and

WHEREAS, The parties negotiated a Consent Decree, which was entered by the court on May 19, 1998; and

WHEREAS, Section 7.A.3. of the Consent Decree specifies how Stone will spend $100,000 over the ensuing five-year period for habitat restoration and creation projects; and

WHEREAS, the parties have recently engaged in discussions with an independent organization, Five Valleys Land Trust ("FVLT"), about how that money might be spent most effectively to further the riparian wildlife protection goals behind Section 7.A.3.; and

WHEREAS, the parties have reviewed a proposal, dated December 18,1998, from FVLT to collaborate with Stone and CHEER to provide conservation easement opportunities to private property owners who own land along the Clark Fork River between Reserve Street and Alberton with significant wildlife and riparian values, which the parties agree would be an effective and desirable mechanism for creating, protecting, and restoring riparian wildlife habitat, but which might not literally meet each and every one of the specifications in Section 7.A.3. of the Consent Decree; and

WHEREAS, the parties would like for Stone to implement the FVLT proposal, without fear that neither Stone or CHEER will assert that Stone has failed to comply with the Consent Decree because the FVLT proposal departs in some way from Section 7.A.3. of the Consent Decree;

NOW, THEREFORE, The parties CHEER agrees not to assert to the court or in any other forum, whether written or oral, that Stone has failed to comply with the Consent

Decree because Stone has implemented the FVLT proposal. Without limiting the generality of the foregoing, CHEER agrees that it will not assert that Stone's implementation of the FVLT proposal fails to satisfy the requirements of Section 7.A.3. of the Consent Decree because it:

A. Uses $50,000 that had been designated in the Consent Decree for habitat restoration and creation projects to fund landowner out-of-pocket expenses for at least seven conservation easement projects over a five-year period along the Clark Fork River corridor that might otherwise not be completed.

B. May involve projects between Reserve Street and Alberton (i.e., one or more easements could be all or partially upstream of Harper's Bridge but downstream of Reserve Street).

C. Uses $5,000 of the up to $50,000 set aside in the Consent Decree for habitat restoration and creation projects on the Clark Fork River adjacent to Stone's property for in 1999 FVLT staff time and contract expenses for researching, mapping, and prioritizing conservation easement projects according to their riparian resource value.

D. Will not necessarily consult with Bitterroot Restoration Inc. and the Wildlife Habitat Council about the FVLT proposal in general or about specific conservation easement projects to be funded by Stone, in particular.

CHEER does not contend that the above-listed issues necessarily are inconsistent with the Consent Decree, but, to the extent that they are, CHEER believes that such deviations are desirable because the FVLT proposal will allow substantially greater habitat benefits, by leveraging Stone's committed expenditures to assist others with the expenses of donating easements that have substantially more value.

AGREED this _____ day of December, 1998.

_____
for Stone Container Corporation Missoula Mill

_____
for Montana Coalition for Health, Environmental and Economic Rights, Inc.

_____
for Cold Mountain, Cold Rivers, Inc.

_____
for Native Forest Network, Inc.

DC1: 104167.01

Montana Fish, Wildlife & Parks

Received 12/28/98

XC: Boschee
Willhite
Steed (NFH)
Smith (CFC)

To: Ed Scott, Environmental Manager, Stone Container

From: Ron Pierce, Montana Fish, Wildlife and Parks

Date: 12/18/98

Subject: Dunham Creek Bull Trout Restoration Proposal

As outlined at our 12/14/98 meeting, the Blackfoot restoration team would like to apply for the $50,000 in available funds to help cost-share a major bull trout restoration effort in the Dunham Creek watershed. If acceptable to all involved parties, we hope you would agree to commit the $50,000 to a Big Blackfoot Chapter of Trout Unlimited account no later than January 1, 2000. In addition to Stone Container and the plaintiffs, other cooperators in this restoration effort would include the U.S. Forest Service, U. S. Fish and Wildlife Service, Partners for Fish and Wildlife Program, Montana Fish, Wildlife and Parks, Big Blackfoot Chapter of Trout Unlimited, Blackfoot Challenge and donations from private individuals. This money would be used as "seed" money and would help generate additional dollars required to fund the project. This restoration project is currently in the design phase with the project implementation phase scheduled for the year 2000 field season.

Thank you for your consideration of this proposal. We look forward to meeting with Stone Container and all interested parties in an effort to commit these funds to this project.

Ron Pierce

Please get this to Ed Scott!

Ed:

The following is a study proposal outline. Some professors have been approched regarding their interest, which is high. A student or students would certainly be available, and for $50,000 this project could certainly be carried out in its entirety with highly valuable results and information. It would also be possible to get numerous volunteers to work on the project as the Rattlesnake is a local Missoula icon and many people are interested in helping bull trout. We could get a lot of work and products cheaply from this project since much of the field work is condensed in a short period each fall and there really are no travel costs, since it is in our backyard. It is a good "community" project.

Billy Stern

Native Forest Network

PS: Appearently, the dam is either owned or contolled by Mountain Water.

REVISED STUDY PROPOSAL OUTLINE

RATTLESNAKE CREEK BULL TROUT PROJECT

Purpose

The purpose of this study would be to determine actual current use of Rattlesnake Creek by bull trout both below and above the short dam as well as an analysis of its biological potential in supporting spawning migrations by bull trout from the middle Clark Fork River. There are four distinct components of this research project with a study lifetime of 3-5 years. Much of the data collection would take place during a three week period each fall. Part III of the study would gather information throughout the summer and fall months. It is anticipated that this study can be carried out by graduate student researchers in the fisheries biology program at the University of Montana.

Rattlesnake Creek may have great potential for supporting a larger population of bull trout since it has consistent flows of the highest quality cold water and is a wilderness drainage. Recreating a migratory population of fluvial bull trout in the middle Clark Fork River, using Rattlesnake Creek as a spawning and rearing habitat, could possibly create a significant boost in the middle Clark Fork bull trout population and create a more genetically diverse population. Rattlesnake Creek could also serve as a source of bull trout to recolonize the middle Clark Fork in the event of habitat fluctuations in the river that are detrimental to bull trout.

Part I

There have been consistent reports over the years of bull trout "stacking up" against the short dam on Rattlesnake Creek during the fall spawning migration period. Little is known about where these fish are from, but presumably they are either bull trout from the middle Clark Fork River attempting to pioneer new spawning habitat and/or they are resident bull trout from upper Rattlesnake Creek which either swim or wash over the dam downstream and then attempt to return to their spawning grounds in the fall. Fish shocking surveys by Montana Fish, Wildlife & Parks have also turned up several bull trout in the section of the creek between the Clark Fork and the short dam.

In this segment of the study, adult bull trout would be captured near the mouth of Rattlesnake Creek in early spring or early summer and radiotracked. Their movements would then be monitored to see where they go and if they spawn in Rattlesnake Creek somewhere below the dam.

In addition, active cooperation with MTFWP and/or USFWS would be sought so that during the spawning season bull trout would be captured near the short dam and fitted with radio transmitters and then manually passed over the dam. Their movements would then be monitored to see where they go and if they engage in spawning activity and whether or not they return to the dam area the following seasons. The results would help determine the origin of these fish. Currently the cooperation of at least one of these agencies is necessary before initiating any fish movement projects. To get this cooperation, during the first or second year of the study, it may be necessary to initiate disease surveys by MTFWP above and below the dam.

Brook-bull hybridization may also be an issue both below and above the dam. Budget permitting, some DNA and possibly allozyme data might be gathered to examine genetic differences between populations below and above the dam, as well as with other Upper Columbia populations. There is some possibility that the lower Rattlesnake is "swamped" (demographically & genetically) by displaced bull trout from the Blackfoot and Upper Clark Fork that cannot get back over the Milltown Dam.

Part II

In this segment of the study, a search for juvenile bull trout would be made in the segment of Rattlesnake Creek from its juncture with the Clark Fork to the short dam to see if this section of Rattlesnake Creek currently supports any spawning activity. This may best be done through dive counts, probably at night. Redd counts can also be done at this time, but there are large brown trout that run out of the Clark Fork and spawn in the Rattlesnake, as well as some rather hefty brook trout in the stream, and their redds could easily be confused with bull trout redds.

Part III

In this segment of the study, a foot survey of the entire stretch of Rattlesnake Creek from the headwaters to the short dam would document and map potential spawning and rearing habitat. GPS technology would be used for mapping purposes. Core sediment samples and stream temperatures would be gathered from each stream segment. Bank stability and cobble embeddedness would be measured for each stream segment. Of particular interest would be documentation of the amount of upwelling that occurs within potential spawning habitat. Groundwater influences could be assessed over a scale of miles by establishing a network of temperature monitoring stations. Anomalously cool (or nonwarming) reaches can be targeted for more

detailed field surveys (piezometric surveys of vertical hydraulic gradient, local thermal mapping to identify upwelling locations). Information on sedimentation levels would be gathered for each stream segment at least once a month from spring through fall. Any obstructions to migrations, either natural or man-made, would be documented and mapped. Potential spawning areas would be visited at least once during the winter each year to document whether or not there is a solid freeze in these areas.

This information would then be used for computer modeling efforts to estimate the potential number of redd sites this watershed could support. One product of Part III would be a GIS map of the entire drainage showing spawning and rearing habitat along with ranges of estimated numbers of potential redds in each segment of the creek and its tributaries, fine sediment percentages in the spawning substrate, and other indices of bull trout habitat.

Part IV

This segment of the study would analyze the information gathered in the 3-5 year period of the study and based upon the overall profile of Rattlesnake Creek determine the desirability and feasibility of creating and maintaining a permanent fish passage strategy to facilitate a migratory population of fluvial bull trout using this drainage as a spawning and rearing area.

Montana Fish, Wildlife & Parks

3201 Spurgin Road
Missoula, MT 59804
December 1, 1998

→ EDS
Lets Pursue Fencing
Discuss Bb.

XC: Boschre
Driscoll

David Ledford
Wildlife Biologist
Stone Container Corporation
P.O. Box 21607
Columbia, SC 29221

Dear David:

Jeff Herbert and I toured the mill property on November 24, 1998, and discussed opportunities to improve waterfowl and pheasant habitat. Water is certainly in ample supply, but improved water level and upland vegetation management should go a long way to improving waterfowl habitat. I have enclosed a list of activities we believe are important to improving the situation at the mill property. If you have any questions, please call.

Sincerely,

John Firebaugh

John Firebaugh
Regional Wildlife Manager

c: Ed Scott

Do this w/ 1st yrs money? Get cost

STONE CONTAINER FIELD REVIEW, 11/24/98

1. The first priority would be adequate fencing and fence repair to reduce livestock use, which will result in a much improved situation for upland cover for nesting ducks. Nesting cover appears to be quite limiting due to the amount of livestock grazing. In addition, more emergent vegetation should result with the exclusion of livestock from the wetlands.

2. In those ponds with better water quality, the water level fluctuations should be minimized as much as possible to allow for the development of aquatic vegetation. Shallow ponds will provide better vegetation and an invertebrate food source for waterfowl. Water levels between 6 inches and 3 feet are more productive than water levels between 3 feet and 6 feet.

3. Islands can be enhanced by providing topsoil and planting rose and snowberry to provide nesting cover for ducks.

4. Goose brood rearing habitat (grazing areas) should be evaluated, and if necessary, expanded to hold goslings on the area so they don't need to move to private land or down river to the King Ranch Golf Course, where damage problems can occur.

5. Consider seeding dense nesting cover in the uplands to improve duck nesting potential and security..

✓ 6. Pheasant habitat in the large grain fields can be improved by planting woody cover and shelter belts. In addition, leaving uncut grain along the edges and corners of the fields will provide winter food for pheasants and waterfowl.

? 7. This area appears to have great potential to provide some youth waterfowl hunting opportunities. Whether it would be for the traditional youth waterfowl hunting day, or during the entire season, the potential should be explored. Hunter numbers and time periods could be regulated through the FWP Block Management Program. Such a program would result in some very positive feedback for Stone Container.

stone

DUCKS UNLIMITED, INC.
GREAT PLAINS REGIONAL OFFICE

3502 FRANKLIN AVENUE
BISMARCK, NORTH DAKOTA 58501-0761
(701)258-5599
(701)258-8364 Fax

DUCKS UNLIMITED INC.®

12/16/98

David L. Ledford
P.O. Box 21607
Columbia, SC 29221

Dear David:

Thank you, for giving us the opportunity to visit your pulp mill in Missoula. The area was attracting quite a number of migrating waterfowl and there was a good number of deer using the area. The security personnel seemed quite excited about the area and were very cordial. I have been in communication with Jeff Herbert form the MT Fish, Wildlife and Parks since he visited the site and have decided to coordinate our recommendations, which are outlined in this letter. There are a few things that can be done to improve the habitat on the property.

The biggest problem is the condition of your upland habitat. The area looked to be grazed very heavily. Most areas looked like they would not provide any residual cover for upland nesting birds. The residual cover is very important for upland nesting ducks such as mallards, pintails, gadwalls, and teal. The riparian area along the river has been severely impacted by the grazing. We suggest that you fence out the riparian area along the river and keep the cows out completely, it may take a number of years for this area to recover. We would also remove the cattle off of the remaining grassland and leave it idle for a few years and then use grazing as a management tool to keep the vigor in the stand. Grazing should be done using a rotational system and should not start until after the first of June. This allows the native grasses to get a start and grazing will not hurt the plant after they reach a sufficient growth stage.

The potential of some of the area to grow good quality nesting might be limited due to the soils being dominated by gravel. Seeding may be an option on some of the area that has more organic material in the soil. You could also add additional habitat by planting some of your cropland that is closest to some of the ponds with a grass legume mix that is designed as wildlife cover. I would stay away from crested wheatgrass in the mix. This area should be left idle and then hayed every 5 to 6 years after July 15th of that year. The haying could be set-up under a rotational system where a cooperator could take a different 20% each year.

Regardless of how cover is improved on the site, the net result may only be minor changes in nest success rates. The area should be more attractive to nesting hens with some of these improvements but because it is a linear piece of land along a riparian corridor, predation rates will likely remain high. Coyotes are less detrimental to ground nesting birds than red fox and are currently more common on the site. We encourage you to do as much as you can to keep it that way by discouraging the removal of coyotes. There are a number of intensive management treatments that can be used to provide more secure nesting habitat.

First, you have islands that have been constructed in some of the settling ponds, which will provide secure habitat for nesting waterfowl, but many of them are too conical in shape. Flattening the tops of the islands, using a 12" layer of topsoil to cover the islands, seeding a grass legume mix and planting shrubs such as western snowberry and/ or wood's rose, would all make a positive contribution to the production potential of the islands. The islands are currently more attractive to nesting geese than to ducks.

If you seed an area of cropland to grass, you can protect the nesting habitat by erecting a predator exclosure fence around the planted cover. Ducks Unlimited has built quite a number of them across the prairies. They are costly but very effective. We have one erected in North Dakota near Jamestown at the Ladish Malting Plant. It has averaged over a nest per acre and around 90% nest success. The Ladish plant is similar to yours, having some large water treatment ponds, but they also are in an area of high wetland density. We do not know if the area attracts enough breeding pairs to have both islands and an exclosure, but it is something we need to consider since they will be competing with each other for nesting hens.

The other main concern we have is the water management. Waterfowl benefit primarily from wetlands managed as shallow basins, with water depths less than 3' in depth. To encourage the growth of emergent and submergent vegetation the water fluctuations during the growing season need to be minimized. Development of these vegetation communities will definitely enhance the site for waterfowl. We also wonder about the water quality, but we imagine most of what effects the water is solid and cellulose in nature. Certain chemicals can affect the thickness of the eggshell causing problems that make it difficult for them to hatch.

You might consider hosting a youth waterfowl hunt on the property. It could be great for public relations with the community. You may be able to get the local Ducks Unlimited Chapter involved and promote it as a greenwing event. If you are interested we can get you in touch with the right people in Missoula.

Ducks Unlimited Inc. has a full staff of engineers and biologists that deliver projects in the United States. If you would like DU to provide more technical assistance or help deliver some of the enhancement. Please feel free to give us a call.

Sincerely yours,

Randy W. Renner

Randy W. Renner
Regional Biologist

Cc: Ed Scott
Jeff Herbert
John Firebaugh

FIVE VALLEYS LAND TRUST

P.O. Box 8953 • Missoula, Montana 59807 • (406) 549-0755 • Fax (406) 542-1652

Ed Scott, Stone Container
Darrell Geist, CHEER
PO Box 4707
Missoula, MT 59802

October 14, 1998

Dear Ed and Darrell,

Five Valleys Land Trust appreciates the opportunity to present this proposal to Stone Container and CHEER to create a program which would significantly and permanently improve riparian habitat in the Clark Fork River corridor. This is truly a community partnership which, if approved, will affect hundreds of acres of land and many miles of rich riparian habitat between Harper's Bridge and Alberton, while providing widespread public benefit by improving the quality of life for us all. Enclosed you will find an outline of Five Valley's proposed Clark Fork River Conservation Easement Program.

We think our proposal has the potential to impact a significantly large geographic area by spreading funds among a number of important riparian conservation projects. Currently, Five Valleys is working with Natural Resources Conservation Service (NRCS) and Fish, Wildlife, & Parks on a number of projects involving riparian restoration and habitat creation and improvement. We are in prime position to make good use of these partnerships which have the potential to bring additional funding and expertise to our conservation projects. Using the donated conservation easement as our main tool, we can create the ultimate "win-win" situation - voluntary agreements between landowners and the Land Trust which leave valuable riparian conservation lands in private ownership, yet safe from development. The out-of-pocket expenses involved in this process are relatively low, maximizing the results from each dollar that is spent. We are confident that this proposal would achieve the goals set by Stone and CHEER by providing extensive protection for many miles of critical river frontage and wildlife corridors. In summary, we feel strongly that the potential long-term riparian benefits offered through the Clark Fork River Conservation Easement Program would greatly outweigh those which would result from one or two isolated restoration projects.

FVLT views this project as a perfect match for all parties considering the Land Trust's current focus on the Clark Fork River corridor west of Missoula and our overall mission to preserve wildlife habitat and rich riparian resources in and around the Missoula Valley. The project, like the Mount Jumbo Campaign, would be another excellent example of how businesses and organizations can enhance their communities by creating strong partnerships to get the work done. We look forward to the opportunity to work with Stone Container and CHEER on such an interesting and valuable project. If you have any questions or comments, please don't hesitate to call.

Best Regards,

Wendy Ninteman

Wendy Ninteman
Executive Director

Board of Directors: Betty duPont · Mae Nan Ellingson · Elmer Frame · Tom France · Dale Harris · Marcia Hogan · Scott Hollenbeck
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Executive Director: Wendy Ninteman **Development Director:** Noreen Humes
Rock Creek Trust Project Director: Ellen Knight **Rock Creek Trust Assistant:** Amy Winninghoff

PROPOSAL ABSTRACT

SUBMITTED TO: **CHEER/STONE CONTAINER CORPORATION**
DATE: **October 14, 1998**
APPLICANT NAME: **Five Valleys Land Trust**
PROJECT NAME: **Clark Fork River Conservation Easement Program**

PROJECT DESCRIPTION:

This is a proposal submitted to CHEER/Stone Container Corporation for the cooperative use of designated funds totaling $50,000 to protect and enhance the Clark Fork River corridor between Harper's Bridge and Alberton and to provide the community of Missoula, the residents of Montana and the citizens of the United States protected and improved riparian resources and wildlife habitat for generations to come.

This proposal would engage Stone Container Corporation in collaboration with the Five Valleys Land Trust (FVLT) to provide conservation easement opportunities to private property owners who own land along the Clark Fork River between Harper's Bridge and Alberton with significant wildlife and riparian values. Many of these landowners do not have the financial means to help underwrite the direct costs associated with placing a conservation easement on their property. The funds from Stone Container Corporation would be used specifically to cover the direct costs of easements, including title work, baseline studies, and long-term stewardship and monitoring.

FVLT HISTORY AND MISSION

The Five Valleys Land Trust got its start in 1972 with the formation of the Five Valleys River Parks Association, a group that worked quietly, but effectively, for more than fifteen years to protect much of what has become the system of riverfront parks and functional riparian habitat that the community enjoys today. In 1989, the Association expanded its conservation capabilities and mission beyond the City of Missoula and into Western Montana. At that time Five Valleys Land Trust was born.

In 1995 FVLT expanded again, this time with the addition of the Rock Creek Trust - a special project with focus solely on the well known and highly regarded Rock Creek drainage east of Missoula. Rock Creek is home to western Montana's only "Blue Ribbon" trout stream.

Five Valleys Land Trust is a not-for-profit community-based and community-supported organization with a mission and purpose to engage in land conservation, stewardship, and educational activities resulting in widespread public benefit. This includes the conservation and acquisition of land in order to preserve, protect, and enhance stream corridors, wildlife habitat, recreational opportunities, scenic open space, agricultural land and historic sites. Our primary tool is the donated conservation easement, a voluntary legal agreement between a landowner and land trust which permanently limits a property's uses in order to protect its conservation values.

FVLT now holds 33 conservation easements and has helped protect more than 10,000 acres of prime wildlife habitat, riparian areas, agricultural lands, scenic and historic places in Missoula County, Ravalli County, Lake County, Mineral County, Granite County, and Sanders County.

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FVLT PROGRAMS AND ACTIVITIES

With phenomenal population growth rates in western Montana (Ravalli County up more than 30%, Missoula County up 17%, Granite County up 10% since 1990) the interest in and demand for conservation easement services continues to grow. FVLT currently has more than 20 conservation easement projects at various stages of negotiation. Conservation easements offer several advantages to landowners: 1) they leave the property in the ownership of the landowner, who may continue to live on it, sell it, or pass it on to heirs; 2) they can significantly lower estate and income taxes, sometimes making the difference between heirs being able to keep land in the family and needing to sell it; 3) they are flexible, written to meet the particular needs of the landowner; and 4) they are permanent, remaining in force when the land changes hand.

Once obtaining a conservation easement, the Land Trust provides long-term stewardship and monitoring so that the land's natural or historic values are preserved in accordance with landowner wishes and the terms of the easement.

In addition to our role of holding easements, FVLT also helps provide focus for a number of grass roots conservation initiatives seeking to protect open space and natural areas at the community level. Our biggest and most visible effort culminated in 1997 with the acquisition of some 1600 acres on Mount Jumbo, one of Missoula's cornerstone conservation lands. This project, initiated by FVLT, was done with the help and cooperation of the Rocky Mountain Elk Foundation, the MT. Dept. of Fish, Wildlife & Parks, the US Forest Service, the City of Missoula, Missoula County and hundreds of Missoula citizens and volunteers.

Financially, FVLT has a reputation for stability and dependability. About 80% of the funding for the work of the Land Trust comes from individuals and businesses within the community and beyond who share our goals. The remaining 20% coming from foundations in the form of grants. To ensure that we are here to stay, FVLT has established a stewardship fund to address long-term monitoring and enforcement of easements, and an endowment with the Montana Community Foundation that will eventually provide a stable source of funding. However, in a relatively small area, with immediate concerns and objectives that may not generate regional or nationwide enthusiasm, funding our day-to-day efforts remains a constant challenge. We must ask easement donors to share in the costs of developing and providing for the perpetual stewardship of their easement.

FVLT is a member of the Land Trust Alliance, a national organization of land trusts. This group provides much assistance to FVLT through their staff, publications, and training sessions. The Land Trust Alliance has developed "Standards and Practices" for the operations of a land trust, which Five Valleys has adopted.

THE COMMUNITY AND FVLT

FVLT enjoys a wide level of community support. We are not an anti-development organization, rather, we believe that development has a certain place within our communities in order to maintain a healthy balance of open space and economic viability. In fact, we believe that a community's economic capacity is enhanced dramatically when view sheds, riparian areas, agricultural lands, and wildlife values are kept intact.

However, along with growth comes the responsibility of understanding what it means to provide healthy

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lifestyles within a community setting. There is no doubt that population numbers will continue to rise in Western Montana. What is often times left out from growth and planning discussions is the effect that open and natural areas have on us individually and as a community. Natural landscapes provide people with shared space in forms of physical, biological, social, and harmonic links to their communities as a whole. Five Valleys Land Trust's work is in part keeping people rooted in the context of their community. People who are rooted in their community will care for and provide direction to those in need and to the youth of their community. The work of Five Valleys Land Trust serves to enrich the life of the community, and to expand opportunities for residents to live healthier, more secure and productive lives.

Historically, FVLT has maintained excellent working relationships with local governments, state government, regional and national land trusts, and other conservation organizations, to assure that mutual goals and objectives can be achieved without duplication of effort and with the most efficient use of the resources available. The projects that would be funded by this proposal would complement the efforts of those groups, and benefit from their direct involvement as appropriate.

Even though FVLT doesn't take political stances, the organization's mission is directly tied to community involvement and solution oriented partnerships. FVLT remains focused on the task of encouraging sound conservation practices with respect to land, water, wildlife and scenic resources within Western Montana. The work of the land trust is a non-threatening, non-governmental tool that landowners can use to address their concerns.

PURPOSE OF THIS PROPOSAL

The continued development of riparian lands along the Clark Fork River between Missoula and Alberton poses a significant threat to water resources, wildlife habitat, and recreational opportunities. Many landowners in this area would like to protect their lands and improve their health of their riparian resources but don't have the financial resources to cover the direct expenses involved with the conservation easement process.

Five Valleys Land Trust proposes to address this problem by establishing a funding source to provide the owners of these critical parcels of riparian land along the Clark Fork river corridor with the financial resources they need to pay for out-of-pocket expenses such as a baseline study, title report, mineral reviews and long-term stewardship and monitoring costs. Each of these steps is required by law and will help permanently protect the natural values of these resource rich properties for the benefit of the entire community.

A typical easement requires about $7,000 to complete, not including the appraisal or the staff time spent crafting and negotiating the document with the landowner. This breaks out as follows.

- $1,000 for the baseline study - This scientific report is completed by a qualified naturalist before the easement is signed, and documents the condition of the land at the time of the easement. Annual monitoring visits use the baseline study as a benchmark to gauge the condition of the conservation resource protected by the easement. Legal acceptance of the baseline report by the landowner and FVLT becomes a recorded document along with the easement. FVLT has developed a state-of-the-art format which is used by many land trusts around the country.

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- $1,000 for title work, mineral searches, and easement recording costs.
- $5,000 for long-term stewardship and monitoring. In accepting an easement, FVLT accepts the responsibility for upholding the terms of the easement in perpetuity. In order to meet this responsibility, FVLT makes annual monitoring visits to each site to ensure that the conditions of the easement are being met.

We believe that a $50,000 grant from Stone Container would enable FVLT to complete at least seven conservation easement projects over a five-year period along the Clark Fork River corridor that otherwise may not be completed. In addition, it would be our intent to maximize the benefit of this grant by requesting that easement donors who do have the necessary financial means supplement the fund with additional contributions.

Five Valleys also proposes to involve other appropriate agencies and organizations, such as Natural Resources Conservation Service (NRCS), Bitterroot Restoration, and Fish Wildlife & Parks in individual projects as appropriate. As the new chief of the NRCS put it "Partnerships are everything to our future.....there's no one agency, no one organization that can do the job alone." FVLT shares the NRCS desire to achieve maximum conservation benefits for the money spent, favoring projects "that provide permanent protection over those offering only temporary protection and to prefer consolidated projects that focus on systems to disparate projects with no collective impact.

CHEER and Stone Container can be assured that any partnership funds from the Corporation would be well accounted for and go solely towards projects in a specific geographical area along the Clark Fork River as designated in this grant proposal. CHEER and Stone Container could expect bi-annual updates reporting on the progress of all activities associated with the use of these grant funds. FVLT's Development Director, Noreen Humes, has been with us since she was hired in 1996 to raise the remaining $1.3 million to secure the protection of Mount Jumbo. Her work includes the oversight and management of grant funds.

CURRENT PROJECTS ALONG THE CLARK FORK RIVER

Five Valleys Land Trust is currently involved in several projects in the area along the Clark Fork River between Missoula and Alberton. One of these projects - a donated conservation easement just east of Harper's Bridge - will permanently protect 200 acres and approximately two miles of winding Clark Fork River frontage. Jim Cusker's family has provided excellent stewardship of this prime Montana landscape, having lived and worked on this land for several generations. Due to a relationship based on trust, Five Valleys has been able to introduce Mr. Cusker and his family to resources available through the NRCS and Fish, Wildlife and Parks which are helping him restore and improve his land's riparian resources. The easement gives a family with a *demonstrated interest* in preserving and protecting the riparian health of the Clark Fork River corridor the opportunity to keep what would otherwise be highly subdividable property. Whether flying into Missoula, sightseeing on Big Flat Road, or floating by - the expansive, scenic view of the Cusker property along the Clark Fork River serves as a reminder for all of us about why we live here.

In addition, FVLT is involved in discussions with several landowners adjacent to the Cusker property who are interested in taking similar steps to protect their own riparian-rich resource. A grant from the Clark Fork River Conservation Easement Program could make the difference in these types of decisions. This

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type of community-oriented project typifies what Five Valleys Land Trust is all about.

SUMMARY

A $50,000 grant from the Stone Container Corporation would result in the protection of hundreds of acres of riparian resource and wildlife habitat and corridors and help establish the beginning of a long-term funding source that could benefit a number of important conservation projects on the Clark Fork between Missoula and Alberton. We also believe that the conservation achieved could have the effect of broadening interest in the use of easements, and the accomplishment of further conservation surrounding the Clark Fork River that would not require funding assistance.

The purpose of this grant proposal is to assist non-commercial, private property owners interested in donating conservation easements on riparian-rich lands along the Clark Fork River between Missoula and Alberton. This proposal presents a model for establishing a successful partnership between business and conservation interests in the Missoula community which is aimed at preserving critical private lands for the benefit of all.

FVLT views this issue as important as affordable housing, land use planning, and overall community vitality. We are confident that CHEER and Stone Container will see this project as a valuable opportunity to benefit future community projects and collaborations, and the Clark Fork River corridor. We appreciate your consideration of our request.

Best regards,

Wendy Ninteman
Executive Director

E00011326

Watershed Planning

Many of the healthy characteristics of this impacted stream have been lost . . .

. . . however, after careful planning, a nearby reach of the same stream has been restored.

Watershed planning begins when citizens of a river basin evaluate the condition of their land and water resources. They then develop a plan to restore or keep the resources in top-notch condition while meeting most social, economic, and ecological needs in the basin.

Steps in watershed planning:

- Form a watershed planning committee that includes a variety of interests and occupations in your basin.
- Hold a public meeting to identify the resource concerns in the basin.
- Form a technical advisory team composed of agencies and organizations that can help you gather information and find solutions.
- Conduct an inventory to determine the total stream miles and condition of critical reaches in the watershed.
- Prepare a plan, reviewing the range of alternatives, setting priorities, evaluating cost efficiency and project effectiveness.
- Present the plan to the public to review and adopt.
- Implement the plan using financial and technical assistance available from a variety of sources.
- Review the plan and progress annually.

Stream restoration is part of watershed planning. If something is "broken" or out of balance on a smaller stream in the watershed, it *may* be fixed by a simple management change, *or* it may require a realigning of channel sections. Think of it like an automobile when something goes awry—the problem could be a broken belt or a blown engine. So before beginning a restoration project, be sure to identify the *cause* of the problem and address that *first*.

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Eight Steps To Restore A Stream

To ensure successful restoration, you need to thoroughly plan and carefully implement the restoration. The steps on this page will help you achieve your goals, as will the agencies listed on the next page.

Get to Know Your Stream

- Your first step is to familiarize yourself with your stream and its combination of characteristics. Take a walk along, or maybe even *in*, your stream.

Assess Your Stream & Streamside Area

- Identify healthy stream reaches.
- Identify problem areas.
- If necessary, seek assistance from a resource professional.
- Use a stream channel and riparian area monitoring form available from local resource agencies.

Quantify Problems: For example, ask

- How many feet of stream bank are bare of vegetation and eroding?
- How many feet of stream bank contain noxious weeds or species with poor root structure?
- How healthy is the fish habitat? Are pools and riffles adequate for fish reproduction, rearing, and overwintering?

Prioritize Problems to Address

- Read Section 3 about common stream problems and their solutions.
- Discuss the stream problems with a stream management specialist.
- Determine which problems can feasibly be corrected by *your* actions.
- Which problems need the help of your neighbors and community?

Establish Your Objectives

- Objectives should be realistic. If you include measurable standards and a workable time frame, you can better gauge your success. For example, you can aim to increase native streambank vegetation by 50 percent in five years.

Develop a Work Plan

- Evaluate a range of alternatives.
- Compare the costs for different management practices and restoration alternatives.

Implement Your Work Plan

- Obtain all necessary permits.
- Adopt new management practices.
- Improve stream channel stability by actions such as:
  —installing tree revetments
  —planting streamside vegetation
- Seek qualified contractors to assist you.

Monitor the Restoration

- Annually evaluate whether you are meeting your restoration objectives. Assess the need for modification and maintenance. Share your observations with stream management professionals so that we all learn how to manage and restore streams successfully.

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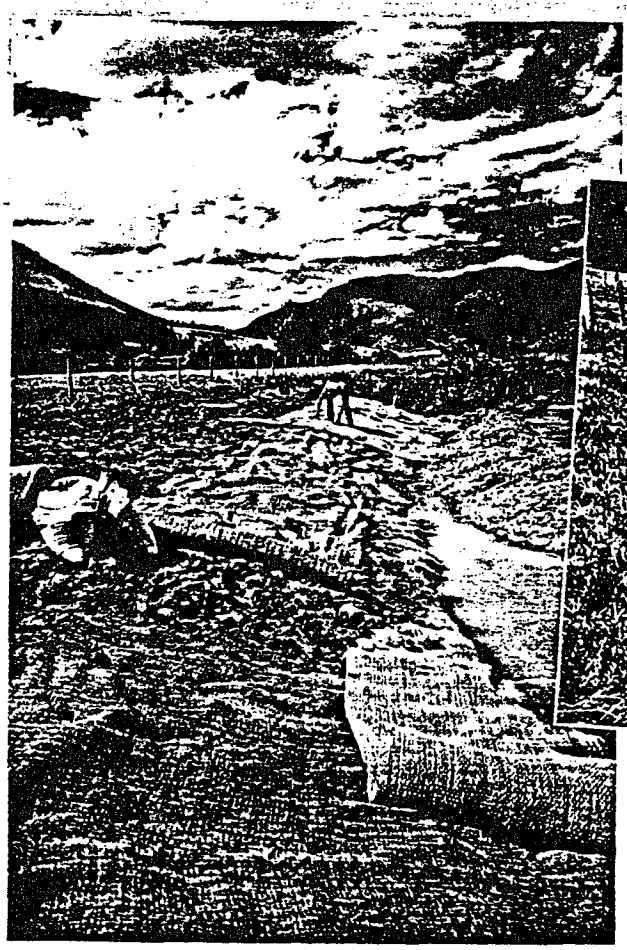
WORKING WITH STREAMS



If you live next to a stream, your streamside management activities can directly affect stream health and function. This section examines some of the most common ways that we impact streams and change their features and behavior.

Most problems can be traced back to something that has changed the supply of water or sediment in the stream or altered the stream channel or banks in some way. We can often lessen the impact through preventive measures or adjustments in our management of the stream. *When making streamside management decisions, you should always practice preventive thinking because stream degradation is much easier and cheaper to avoid than to fix.* You can prevent stream disturbance if you understand stream behavior and the "personality" of *your* stream.

PERMIT ALERT!

LOOK FOR THIS ALERT — it reminds you to always seek guidance and obtain permits from your local land management agencies before work in or near a stream. Always refer to the chart on page 16 before beginning a project.

E00011329

■ Riparian & Streamside Vegetation

Maintaining healthy vegetation should be your first priority when managing stream and riparian areas. Stream behaviors, such as channel widening and bank erosion, are influenced by the amount and kind of vegetation on stream banks. Healthy stream banks are covered by deep, densely rooted streamside vegetation that binds soils. Streambank vegetation also creates friction that slows stream flows. Removing vegetation, or replacing it with riprap or cement walls, increases stream velocity and sends more erosive stream energy downstream.

How We Impact Vegetation

- Overgrazing by livestock or wildlife
- Spraying herbicides
- Operating heavy equipment in riparian areas
- Building roads
- Clearcutting streamside areas
- Farming to the edge of a stream
- Allowing invasion of non-native species
- Removing riparian vegetation

Effects of Impacting Vegetation

- Increases bank erosion & failure
- Widens channels; decreases depth
- Disrupts streamside plant communities
- Increases invasion of non-native plants
- Lowers water table
- Makes stream banks more susceptible to livestock trampling and erosion
- Increases water temperature
- Speeds runoff
- Reduces trapping of sediment and other pollutants
- Reduces livestock forage
- Increases bank damage due to icing
- Decreases valuable real estate
- Decreases fish and wildlife cover

Lessening Our Impact

- Do not remove riparian vegetation
- Control noxious plants
- Manage grazing intensity, vary season of use, and provide sufficient rest to encourage plant vigor and regrowth
- Ensure sufficient vegetation during spring runoff or peak flow to protect stream banks, dissipate stream energy, and trap sediments
- Control the timing of grazing to prevent damage to stream banks when they are wet and most susceptible to trampling
- Re-establish native and appropriate non-native plant species

E00011330

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E00011331

■ Water Quality

Sediment is the number one polluter of streams in Montana. Other pollutants include chemicals, pesticides, herbicides, nutrients, minerals, and salinity. Human-caused changes in temperature, such as warming or cooling, are also considered pollution. All of these pollutants limit the way that water can be used by humans and other life.

How We Impact Water Quality

- *Point source pollution* enters a stream from a known point, such as a discharge pipe, and is usually municipal or industrial in nature. It accounts for approximately 10 percent of water pollution in Montana.
- *Non-point source pollution* enters streams from dispersed areas, such as windblown sediment and runoff from roads or crop lands. It accounts for 90 percent of stream pollution. Non-point source pollution is usually associated with poorly planned land management activities.

Bioassessment

Biologists can assess water quality through bioassessment. During this process, they look for organisms from the stream that are sensitive to organic pollution or heavy metals. Organisms with low tolerance are called indicator species. Their presence indicates good water quality; their absence indicates degraded water quality.

Effects of Our Impact

- Can eliminate entire aquatic communities and make water unsafe for human use
- Increases temperature, which can biologically suppress stream systems
- Increases costs of water treatment, and reduces usefulness of pumps and ditches
- Affects water quality downstream because effects tend to accumulate throughout watershed

Lessening Our Impact

- Protect riparian areas—they filter non-point source pollution such as sediments and nutrients from runoff
- Adopt the Best Management Practices (BMPs) for agriculture, grazing, timber harvesting, and mining to minimize pollutants entering streams and rivers
- Obtain permits before starting any activity that may impact water quality

E00011332

BASELINE INVENTORY
FOR THE
CUSKER CONSERVATION EASEMENT

NOVEMBER 1998

Prepared by:

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PO Box 8656
Missoula, MT 59807

Prepared for:

Five Valleys Land Trust
P.O. Box 8953
Missoula, MT 59807

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INTRODUCTION

Ownership Information

H. James and Earlene K. Cusker
300 Cote Lane
Missoula, MT 59808
(406) 549-4440

Easement History/Owner Intent

The easement donors, H. James and Earlene K. Cusker, are placing their property under conservation easement to protect its open space and natural features, agricultural values, and especially the riparian features associated with the Clark Fork River.

Easement Purpose and Summary

Five Valleys Land Trust is acquiring a conservation easement on a property encompassing approximately 200 acres owned by H. James and Earlene K. Cusker. The purpose of the easement is to preserve in perpetuity and to enhance the property's open space values and natural habitats. The easement will conserve the property's vegetation communities and their associated wildlife and will also preserve rare or unique flora either currently known to occur or later identified on the property. Most importantly, the easement will protect the wetland and riparian areas associated with the Clark Fork River. A general summary of permitted and inconsistent uses of the property under the terms of the easement follows. Please refer to the Deed of Conservation Easement for a description of the exact legal terms and conditions of the easement.

Permitted uses of the property under the easement include:

1. To continue ongoing agricultural use of the property, including to plant, raise and harvest crops, to process agricultural products produced on the property, and to raise and manage livestock provided that such activities do not result in the degradation of the soils, plant communities, water resources, or fish and wildlife species and their natural habitat.
2. To graze and pasture horses, cattle and other livestock, provided that it does not degrade fish and wildlife habitat, vegetation communities, stream banks, and water quality. Grazing may not cause the deterioration of the natural features of the riparian areas as documented in this report. Furthermore, livestock grazing shall be excluded from a fenced buffer zone maintained at least 40 feet from the river along steep channel banks. Moderate livestock use is permitted within an unfenced buffer zone extending at least 150 feet from the river along more gradual channel banks, but within these areas agricultural crops are excluded.
3. To maintain, restore, develop and enhance those water resources on the property that are necessary for wildlife, domestic, ranching and other agricultural activities in a manner consistent with the restrictions and general purposes of the easement. Permitted uses include the expansion of existing ponds and the creation and development of ponds and wetlands for

fishery and wildlife improvement, the creation and development of irrigation systems, drilling wells for agricultural or residential purposes, and the development of stock watering facilities.

4. Use of biological, chemical, and other weed and insect control agents, but only in the amount necessary to accomplish reasonable agricultural objectives.
5. To use the property for hunting of game animals and for camping, hiking, birdwatching, photography, and quiet enjoyment by the Grantor, and the Grantor's guests.
6. To control predatory and problem animals by the appropriate use of a legal control technique.
7. To maintain, repair, remodel and make additions to all existing structures and other improvements on the property. To place upon the property additional structures and other improvements as may be necessary for agricultural purposes, and construct additional accessory structures and improvements for residential purposes.
8. To construct, maintain, repair, modify and replace fences on the Property with the exception that fences on the Property must permit the passage of small game, deer, elk, bear, and other wildlife, except as provided.
9. The Grantor shall have the right to construct, maintain, and repair one additional seasonal single family residence to be located within the E1/2SW1/4SE1/4NE1/4 of Section 21, T13N, R20W and placed at least 250 feet from the normal high water flow of the Clark Fork River. The Grantor shall also have the right to construct, maintain, and repair one additional structure to be located within the S1/2NE1/4NE1/4NE1/4 of Section 21, T13N, R20W.
10. To place a tent, tarp, yurt, teepee, or other shelter on the property on a temporary basis.
11. The removal of trees which present hazards to persons or property, the removal of trees within 75 feet of the residences, the harvesting of dead and diseased trees for use by the Grantor as firewood, and the harvesting of trees for use by the Grantor on the Property as post and poles.
12. To use timber cutting, prescribed burning, and other silvicultural tools for purposes of improving the health and safety of the forest, for habitat enhancement, for returning the forest to a more natural state and for the prevention of catastrophic wildfire.
13. To divide and transfer that portion of the property lying south and west of the Clark Fork River and to sell, exchange, devise, or gift the Property as a single parcel or unit.
14. To operate a single small-scale guest ranch or bed and breakfast to be located in the S1/2NE1/4NE1/4NE1/4 of Section 21, T13N, R20W.

Prohibited uses of the Property under the easement include:

1. The change, disturbance, or alteration of the property's significant natural features or conservation interests on the Property, except as provided.
2. The division or subdivision of any parcels that make up the Property, or the sale of any parcels that make up the Property separately from the other parcels that make up the Property, except as provided for in the easement.

3. The construction or placement on the Property of any buildings, mobile homes, signs, billboards, or other structures, except those specifically provided for in the easement.
4. The establishment of any commercial or industrial facilities or activities on the Property, except as provided.
5. Granting any new roadway or utility easements or access rights through the Property to any adjacent land.
6. The construction of any new roads or vehicle trails on the Property or the use of vehicles off the existing road in a manner which damages vegetation or creates permanent tracks or trails, except for construction and maintenance of roads in connection with ranching and other agricultural uses, hunting, fishing, and recreational uses or in building roads to the new structures provided by the easement.
7. Dumping of public or domestic refuse and hazardous or toxic materials.
8. Filling, excavating, dredging, mining, and drilling, including the exploration for or extraction of minerals, hydrocarbons, soils, sand, gravel, rock, and other materials on or below the surface of the property, except as provided for in the easement.
9. Any use or activity that would pollute, degrade, or threaten to pollute or degrade the property's surface or sub-surface waters, including placing rip-rap or other armoring of the bed and banks of the Clark Fork River.
10. Logging or gathering firewood for commercial purposes.
11. The operation of feedlots, game or fur farms, or kennels for commercial purposes.

Purpose of Baseline Inventory Report

The purpose of this report is to identify and document the condition of the natural resources, conservation interests, and improvements associated with the property at the time the conservation easement is acquired. In the event that a controversy arises with respect to the property's biological or physical resources, this report may be used by Five Valleys Land Trust or the property owner to resolve such a dispute.

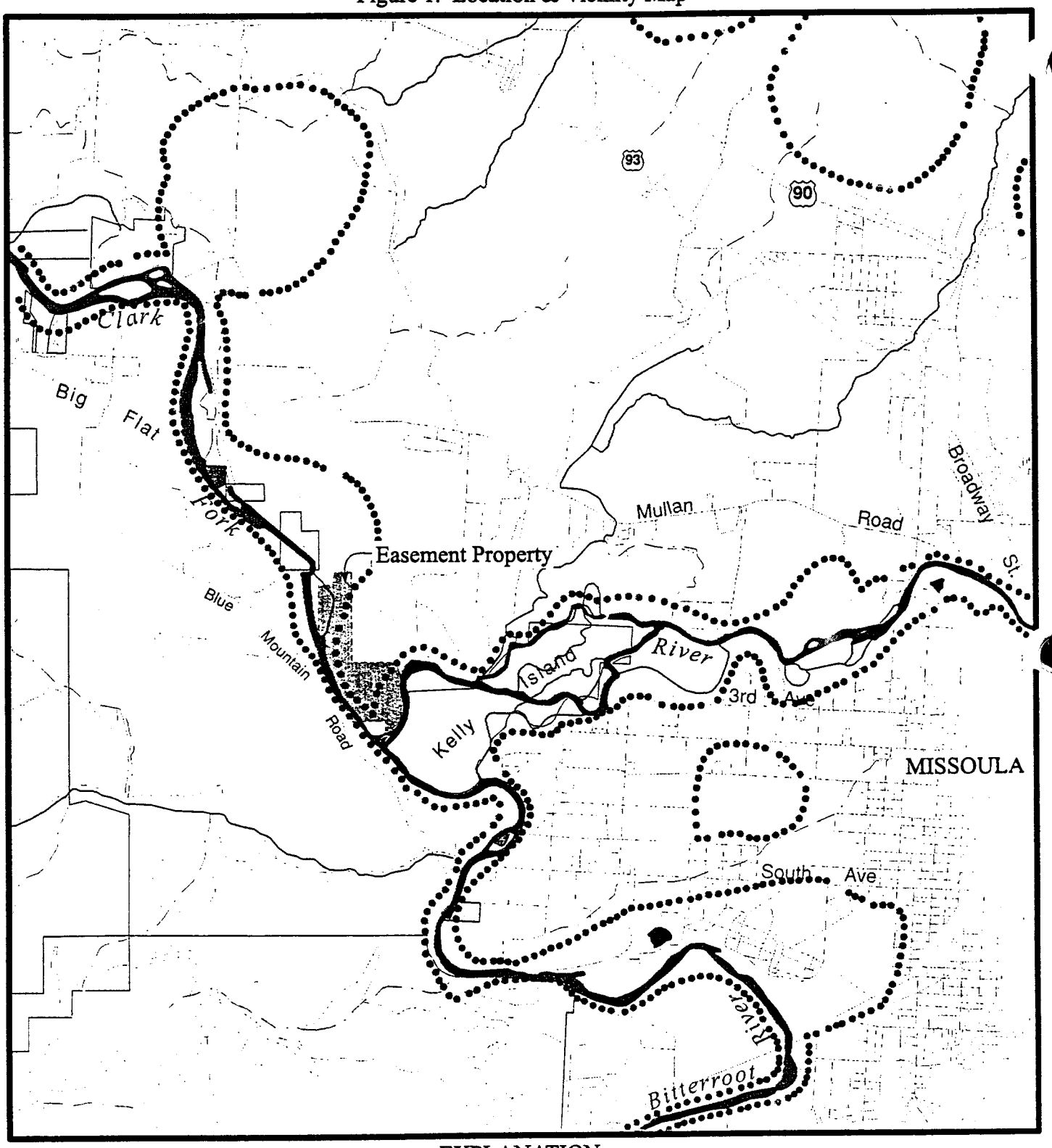
DESCRIPTION OF PROPERTY

Location

The Cusker property lies in the Missoula Valley and is located approximately 6 miles west of Missoula (Figure 1). The 200-acre property lies within the southwest quarter of section 22, the northwest quarter of section 27, and the eastern half of section 21, Township 12 North, Range 20 West on the Primrose, Blue Mountain, NW & SW Missoula, Montana U.S. Geological Survey 7.5 Minute Series Topographic Quadrangles. The elevation of the property is approximately 3,200 feet.

The Missoula Valley is a west-northwest trending intermontane depression that is 50 miles long and up to 8.5 miles wide. The Cusker property is situated at the southern end of the Missoula Valley and is immediately north of the confluence of the Bitterroot and Clark Fork Rivers and

Figure 1. Location & Vicinity Map



EXPLANATION

Land Status:

- Cusker Property
- FVLT Easements
- Missoula County Open Space Cornerstone Planning Areas
- FVLT Properties
- Plum Creek Timber Co.
- Montana Dept. Fish, Wildlife and Parks
- Lolo National Forest
- State Lands

Scale 1' = 1 mile

0 0.5 1 mile

N

Base map modified from Missoula County Surveyor's Bulletin Board Digital Data and the Office of Planning and Grants (1998).

immediately west of Council Hill. This region is typified by low river terraces and rolling arid hillsides. The river terraces are predominately developed for agricultural, livestock, and residential purposes, but also contain significant patches of bottomland riparian forest.

The Cusker property occurs both within the 100-year flood plain of the Clark Fork River and on the adjacent low terraces. Higher portions of the property are characterized by open hay pastures which are dominated by exotic grasses and forbs, such as Kentucky bluegrass (*Poa pratensis*), quackgrass (*Agropyron repens*), and orchard grass (*Dactylis glomerata*). Lower pastureland within the 100-year floodplain is used primarily for livestock grazing. The property also contains low-lying sloughs, which are covered by fairly structurally diverse riparian forest. These slough areas are characterized by an open overstory of black cottonwood (*Populus balsamifera* ssp. *trichocarpa*) and ponderosa pine (*Pinus ponderosa*) with dense patches of shrubs, including black hawthorn (*Crataegus douglasii*), chokecherry (*Prunus virginiana*), and common snowberry (*Symphoricarpos albus*).

Directions

The Cusker property can be reached from downtown Missoula by traveling west approximately 2 miles on West Broadway to the intersection with Mullan Road. Turn left on Mullan Road and travel west-northwest for approximately 4.8 miles. Turn left onto Cote Lane and travel due south for approximately 1.6 miles. At 1.6 miles, turn right on Cusker Lane and proceed over a hill and then down a steep grade that traverses a slope to the Clark Fork River terraces. At the base of this grade continue through a small homesite then bear left to a dirt road that proceeds south towards the Cusker residence.

Special Features

The Cusker property includes approximately 2 miles of Clark Fork River frontage. The associated wetland and riparian areas and adjacent sloughs have high conservation value. The slough areas, because of their structural diversity and abundance of snags, are especially useful to many bird species. Approximately half of the property is within a "potential additional cornerstone" open space area as designated in the Missoula Urban Area Open Space Plan (1995). The property also has a long history of family agricultural uses.

Climate

The Missoula Valley has a semiarid climate typified by warm, dry summers and cool, wet winters. Mean annual precipitation is 13.44 inches, which occurs primarily from December through January and from May through June. Mean annual snowfall is 47.7 inches, most of which falls in December and January. Air temperatures range from a mean monthly maximum of 83.9°F in July to a mean monthly minimum of 14.1°F in January. Climate information is from Western Regional Climate Center (1997). Data are based on climate records measured at Missoula from 1948 to 1997.

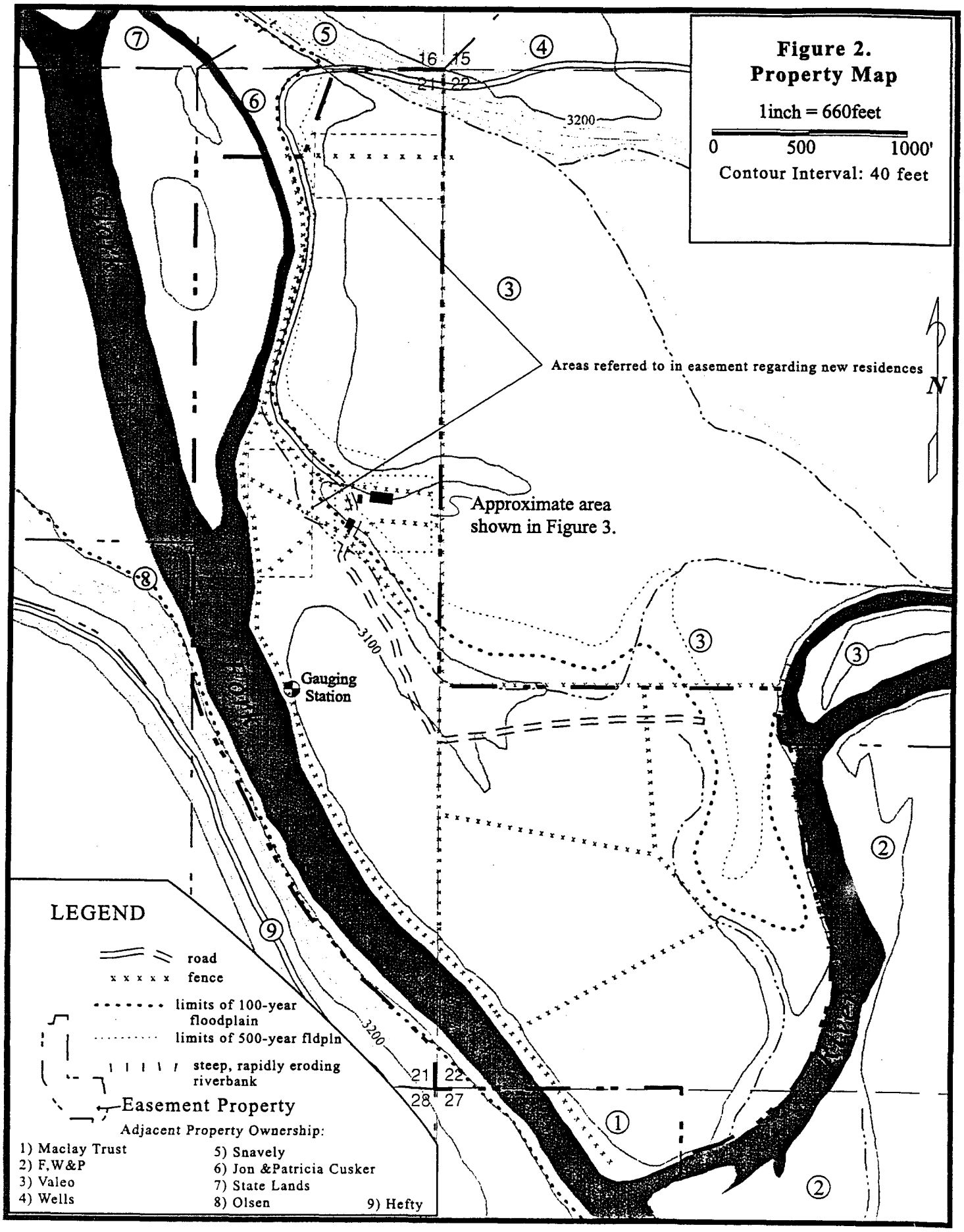
Geology and Geomorphology

The Cusker property lies within the Missoula Basin, which is a west-northwest trending intermontane depression. The basin, which includes the Missoula and Ninemile Valleys, was formed by active faulting 50 to 70 million years ago. The basin is bounded by portions of the Bitterroot, Sapphire, and Rattlesnake Mountains. These ranges are deeply dissected and, except for the Rattlesnake Mountains, which have 7,000 foot peaks, are generally less than 6,500 feet in elevation. These mountains are composed of Precambrian sedimentary deposits of the Belt Series and consist primarily of quartzite, argillite, and carbonate rock (McMurtrey et al. 1965). The stratigraphy of the valley floor consists of several depositional layers (McMurtrey et al. 1965, Alt and Hyndman 1986). The lowest layer is Precambrian sedimentary rock compositionally similar to the belt rock of the mountains. This layer is overlain by thousands of feet of sedimentary debris that was deposited approximately 40 million years ago during the dry climate of the Tertiary Period. Finally, the uppermost layer, which is up to 400 feet thick, is composed of glaciofluvial and galcio-lacustrine deposits from Glacial Lake Missoula and the Clark Fork River.

Since the last glacial period, the most active force in shaping the topography of the Missoula Valley has been the Clark Fork River, and the current topography of the Cusker property has been largely shaped by the river's erosional and depositional forces. The property consists of four broad landforms: the banks and bars of the river's current channel, the adjacent flood plain which is dissected by sloughs and old channels, the low terrace positioned subtly above the adjacent flood plain, and the moderately steep hillside to the north. These landforms are distinguished from one another by the occurrence, frequency, and intensity of flooding.

The active channel margin is frequently flooded and on much of the Cusker property is being actively eroded. Rivers such as the Clark Fork, are extremely dynamic and will meander across their flood plains over time. This channel migration occurs most often at bends in the river. Significant portions of the Cusker property lie on the outside of meander bends, where banks are subject to higher flow velocities and greater scour, especially during flood events. Therefore, in these areas, the banks are characterized by steep to near-vertical slopes with high erosion rates. Most stream banks on the easement property downstream of the confluence of the Clark Fork and Bitterroot Rivers are in an erosional regime. The most recent and dramatic cut-bank erosion on the property, however is occurring on the stream banks at the eastern edge of the property, upstream of this confluence. Here, a sharp meander bend sends high spring flows directly at the river bank, actively eroding the unconsolidated earth materials comprising the adjacent flood plain. In contrast, the stream banks immediately downstream of this eroding section are situated on the inside of a meander bend and are currently experiencing high rates of sediment accretion and bar formation. Please refer to Figure 2, the Property Map, for the location of this most recent and dramatic cut-bank erosion.

The portion of the property from the active channel margin north and east to a prominent slough lined with black cottonwood trees is within the 100-year flood plain (Figure 2). Between the channel and the upper pastureland, this flood plain is characterized by a flat terrace occasionally dissected by meandering sloughs. Although this area lies within the designated 100-year flood



Base map modified from Blue Mt., Primrose, and NW & SW Missoula 7.5 minute USGS Topographic Quadrangles.

plain, it is relatively high compared to the active channel and would probably only be inundated during major flood events. The sloughs are several feet lower and are annually flooded by groundwater to a depth of 1 to 2 feet (Cusker, pers. comm.). All of these sloughs were flooded during the high spring runoff of 1997 (refer to aerial photograph, Appendix C). The low terrace lands to the north and east of this prominent slough are outside of the current 100-year flood plain, yet were formed by over bank flows during prehistoric flooding. The Cusker residence and outbuildings and the northern pastures are situated on this low terrace. The low terrace is bordered on the north by the Grass Valley Frenchtown Ditch, which flows at the base of an abrupt hillside. At the juncture between the low terrace and the hillside to the north on the easement property is a broad depression which apparently extends below the upper limits of the groundwater table and, hence, is filled with standing water during wetter months of each year.

The extreme northeast corner of the property includes a portion of the dry upland slopes. These moderate to steep slopes are broken by shallow ephemeral drainages and are well removed from any recent flood hazards.

Soils

The Cusker property contains four soil types (USDA 1995), and their distribution corresponds roughly with the different landforms associated with the Clark Fork River that occur on the property (see Geology and Geomorphology section). Along the margins of the river's active channel, soil is characterized by riverwash, which consists of sandy, silty, clayey, or gravely sediments that are frequently reworked by water. Riverwash is derived from alluvium and occurs on frequently flooded portions of the flood plain. Xerofluvents underlie the portion of the property beyond the margins of the active channel but still within the 100-year flood plain. Xerofluvents are very deep, somewhat poorly drained to well drained soils that formed in alluvium. The majority of the pastureland in the southern portion of the Cusker property consists of xerofluvent soils. Soil texture varies from loamy very fine sand to loam, and slope is 0 to 2 percent. Within the portion of the property defined as low terrace, soils are characterized as Grantsdale loam. This soil type is very deep and somewhat excessively drained. Parent material is alluvium, and slope is 0 to 2 percent. This soil type is not subject to flooding. At the extreme northeastern corner of the property on the dry hillside, soils are characterized as the Biglake gravely sandy loam. This soil type is very deep and excessively drained. Parent material is alluvium and slope is 8 to 15 percent. All soil descriptions are from USDA (1995).

Though all four soil types derive from alluvium, the length of time since this parent material was deposited varies considerably. Soils that occur within the active flood plain derive from alluvium that has been deposited recently by the Clark Fork River. This alluvium is poorly sorted and consists of unconsolidated silt, sand, and gravel (McMurtrey et al. 1965). Soils that occur within the low terrace derive from alluvium that was deposited during the early Holocene. Parent material for the soils on the upper hillsides were deposited during glacial episodes of the Pleistocene Epoch. This alluvium consists of a thick mantle of reworked Glacial Lake Missoula silt and poorly sorted, unconsolidated sand and gravel (McMurtrey et al. 1965).

LAND USE

Adjacent Land Use and Condition: Public Lands

The Cusker property lies near a significant publicly-owned conservation property: Kelly Island State Park, managed by the Montana Department of Fish, Wildlife, and Parks (FWP). Kelly Island is located immediately south of the Cusker Property across the Clark Fork River (Figure 1). Kelly Island encompasses 656 acres and has been acquired by FWP progressively since 1973 (Bastian, pers. comm.). The most recent addition to Kelly Island State Park was 13.4 acres deeded to the (FWP) by Jim Cusker in 1996 (Bastian, pers. comm.). The park is primarily covered by open ponderosa pine forest and cottonwood bottomland forest along the Clark Fork River. The park supports high populations of white-tail deer, great horned owls, great blue herons, and various woodpeckers (Carlson, pers. comm.). The property is designated as a state fishing access and is managed for natural resource values and recreation, including fishing, bow hunting, and waterfowl and upland bird hunting. Kelly Island has only minor recreational improvements, such as access roads, parking areas, and one boat ramp (Bastian, pers. comm.).

The Bitterroot Mountains, which form the western and southern boundaries of the Missoula Valley, are primarily in public and corporate ownership. Most of this area is managed by the Lolo National Forest, primarily for timber harvest. However, Plum Creek Timber Company also maintains large holdings in the area (see following section).

Adjacent Land Use and Condition: Private Lands

The Majority of lands adjacent to the Cusker property are in private ownership (Figure 1). Land use in this vicinity is primarily agricultural and residential. Agricultural uses are predominately livestock grazing (cattle, sheep, horses) and irrigated pasture and cropland (Newman 1980). For most of the area, the minimum lot size is zoned as 5 acres, though properties are generally larger (Newman 1980). However, as Missoula continues to grow, further subdivision and development pressure will increase in this area. The area also receives high recreational use, primarily fishing.

Land use adjacent to the Cusker property is primarily residential with some agricultural development. The Valeo property to the east of the Cusker property, are grazed by cattle (Figure 2). Most of the parcels adjacent to the Cusker property are 20 acres or larger .

The slopes of the Bitterroot Mountains west of Big Flat and the Cusker property are administered by the Lolo National Forest, with lesser areas owned by Plum Creek Timber Company (Figure 1). Plum Creek manages these lands primarily for timber production.

Property History

In 1938 H. Jay and Mary Louise Cusker moved to the easement property and fnalized their purchase circa 1946. The property was transferred to the easement donors in 1994. Prior to 1946, the property was held by a number of different owners, beginning with the Northern Pacific Railway circa 1890.

The Cusker family has used the property as a residence and for agricultural purposes during their ownership period. Agricultural uses have consisted primarily of cultivating hay and livestock

grazing. These activities have affected the quantity and quality of wildlife habitat on the property by reducing the density and extent of woody vegetation. For example, on the portion of the property within the 100-year flood plain, it is likely that these activities have reduced the amount of woody vegetative cover in the sloughs and eliminated it from portions of the flood plain between these sloughs and the Clark Fork River (see Conservation Implications section).

Cultural Features

The State Historic Preservation Office has no records of any archaeological or historical features occurring in the vicinity of the property (1997). Jim Cusker (1998), however, reports that Dr. Carling Maloof of the University of Montana consulted with Native American elders over 30 years ago and determined that the southeast portion of the property was the location of the historical Council Grove used historically by the Salish tribe.

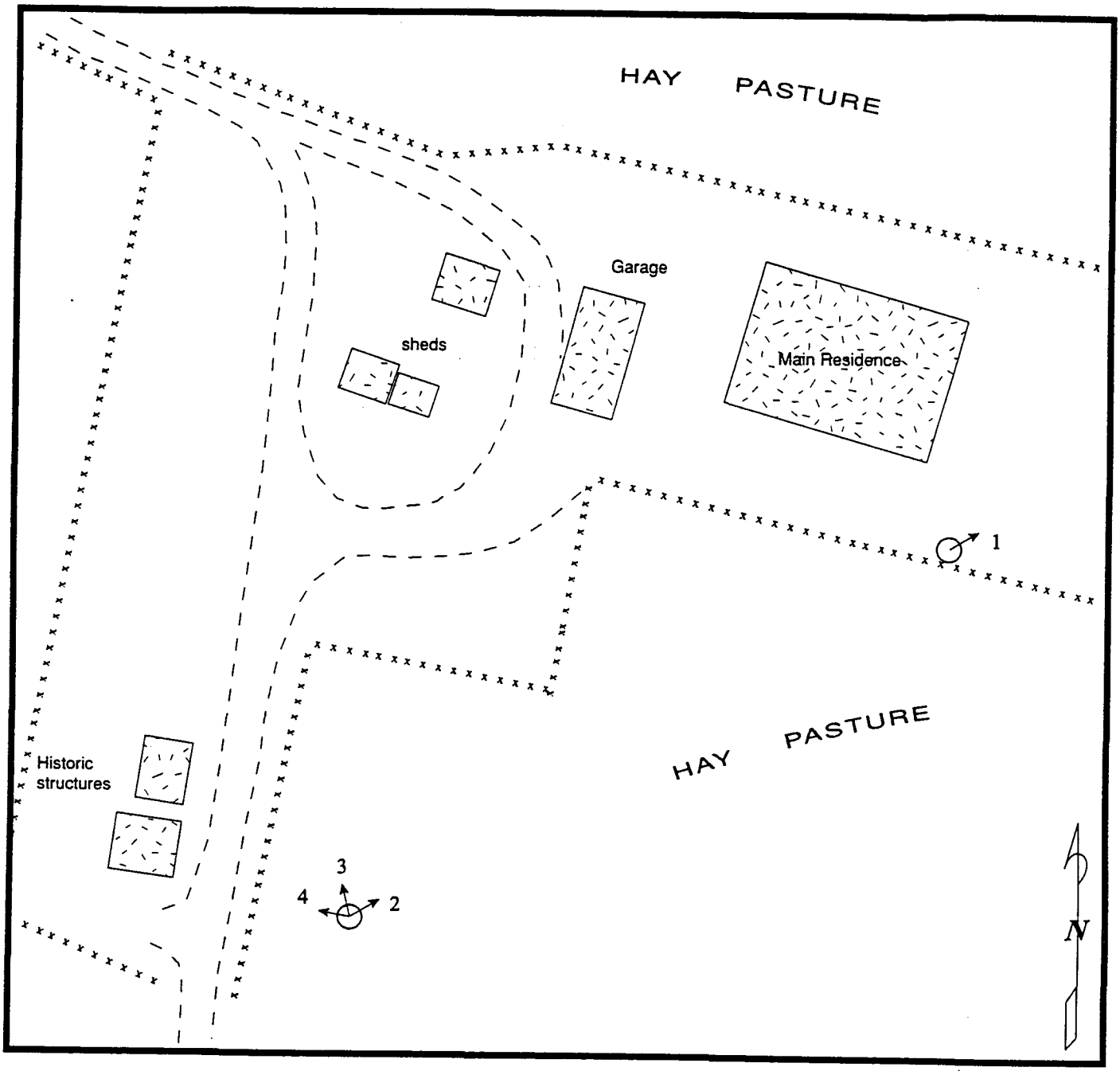
Current Land Use and Improvements

The Cusker property is currently used for residential and agricultural purposes. The ranch headquarters near the center of the property consists of a main residence and garage, two storage sheds and two old farm structures. one made of cinder blocks, the other an old log structure. The headquarters region is situated within a separate 3.24 acre parcel (C.O.S. # 4115). Please refer to Figure 3, the Developments and Improvements Map, for a more detailed depiction of this area. Jim and Earlene Cusker live in the main residence from which he manages the entire property. Other improvements on the property include both perimeter and cross-fences, improved and unimproved dirt roadways, and a small segment of the Grass Valley Frenchtown Irrigation Ditch (Figure 2). All of the property boundaries are fenced except for some property lines that coindice with the banks of the Clark Fork River or occur to the south and west of the river. The majority of the river banks within the property have recently been fenced. Jim Cusker plans to fence off the remaining banks upstream of the confluence once he completes his erosion control efforts in this area. The improved dirt road enters the property at its northern end and is the extension of Cusker Lane. This road provides the primary access to the ranch headquarters. An unimproved road continues across the slough from the headquarters to the south and provides access to the southern pastures (Figure 2). Additionally, a US Geological Survey stream gauge station is located along the Clark Fork River west of the central pasture.

Mr. Cusker currently runs approximately 50 cow-calf pairs on roughly 120 acres of low terrace pastureland including some cottonwood forest (Figure 4). Approximately 50 additional acres are devoted to the production of hay. Refer to Figure 4, the Vegetation Map, for the approximate locations of these pastures on the property. Pastures are either subirrigated or are irrigated with hand-carry lines. Jim Cusker (1998) plans to update this current irrigation system with wheel lines which may require the installation of irrigation wells.

Additionally, the easement donor wishes to reserve the right to construct new residences within two 5 acre areas on the northern portion of the property. These areas are delineated on Figure 2 (page 10). One 5 acre area is located just west of the current residence within the 100 year flood plain and in a region vegetated with a fairly structurally diverse riparian forest/shrub type. This potential future structure must be setback at least 250 from the normal high water flow of the

Figure 3. Developments and Improvements Map



Scale 1' = 50 feet

0 25 50 feet

EXPLANATION

structures

fences

dirt roads

1 photopoints (arrow indicates direction of photo, refer to photographs in Appendix D)

Map data obtained with tape and compass during site visit on July 4, 1998.

adjacent Clark Fork River channel. The other 5 acre area is located at the northeast corner of the easement property, and includes an abrupt hillside to the north, the Grass Valley Frenchtown Ditch and the seasonally flooded pasture that was stocked with horses at the time of the field visit (7/4/98).

WATER RESOURCES

The Cusker property abuts the active channel of the Clark Fork River and lies entirely within the river's flood plain and adjacent low terrace. As measured from the gauge on the property, the Clark Fork River drains approximately 9,000 square miles, including the area drained by the Bitterroot River. The annual runoff is 3,850,000 acre-feet, with over 40 percent of flows from the Bitterroot River. The river usually runs highest in June, which has mean monthly high flows of 16,620 cubic feet per second (cfs). On average, the two lowest flow months are August and January, with mean monthly low flows of 2,286 cfs and 2,226 cfs, respectively. All hydrological data are from Shields et al. (1996).

An east-west trending slough system traverses the property. This low area is an old overflow channel that has since cutoff and no longer receive active flows from the Clark Fork River. Slough channels on the property are seasonally flooded by groundwater and overbank flows to a depth of 1 to 3 feet in the spring and early summer.

Water Quality

The most significant factors affecting water quality in the Clark Fork River downstream from Missoula are heavy metals, toxic compounds (primarily ammonia), and nutrients (Johnson and Knudson 1985). The elevated level of heavy metals in the river, primarily copper and zinc, is the legacy of extensive mining in the river's headwaters. Heavy metals are the primary water quality issue in the upper river; however, their concentration is much lower in the river reach below Missoula. This is due to inflows from tributary streams, such as the Blackfoot and Bitterroot Rivers and Rock Creek, and the slackwater behind Milltown Dam, which acts as a settling basin for metal-laden sediments. The Missoula Wastewater Treatment Plant and the Stone Container paper mill are the primary point sources of ammonia and nutrients in the middle river. Nutrients are primarily nitrogen and phosphorus, which can lead to increased algal levels in the river. In 1988, Missoula enacted a phosphate ban. This has reduced phosphorus input from the Wastewater Treatment Plant by 40 percent and contributed to reduced algal blooms (Berlind 1992).

Both biologically and chemically, groundwater quality in the Missoula valley in general and in the Kelly Island area in particular is good (Newman 1980, Johnson and Schmidt 1988).

Fisheries

Land use practices in the Clark Fork River watershed over the past 150 years, especially mining in the river's headwaters near Butte and Anaconda, have devastated fish populations in the river (Johnson and Schmidt 1988). Though greatly improved, fish populations are still recovering and remain far below the carrying capacity of the river (Johnson and Schmidt 1988). Today, the

middle Clark Fork River supports a diverse fishery of both native and exotic species. Native species include bull trout, westslope cutthroat trout, northern squawfish, longnose dace, redside shiner, longnose and largescale sucker, mountain whitefish, and slimy sculpin; exotic species include rainbow, brook, and brown trout, largemouth bass, yellow perch, northern pike, and pumkinseed (Montana Rivers Information Service 1997). The most common species in this reach of the river are redside shiner, mountain whitefish, northern squawfish, rainbow trout, longnose dace, longnose and largescale sucker, and slimy sculpin (Montana Rivers Information Service 1997). See the preceding Water Quality section for a discussion of factors potentially limiting the fishery of this reach of the Clark Fork River.

Fish Species of Special Concern

The reach of the Clark Fork River from Deep Creek to the Butler Irrigation Ditch supports small populations of genetically pure bull trout and potentially genetically pure westslope cutthroat trout (Montana Rivers Information System 1997). The bull trout population is especially valuable because of its genetic purity. This reach of the river contains substantial bull trout habitat and moderate westslope cutthroat habitat; however, despite the presence of suitable habitat, both species are rare and their populations are declining (Montana Rivers Information System 1997).

Both bull trout and cutthroat trout are vulnerable to extinction throughout their range in Montana and are listed as sensitive species by the U.S. Forest Service (Reichel 1997). Additionally, bull trout is a candidate species for listing under the Endangered Species Act by the U.S. Fish and Wildlife Service (Reichel 1997). Important factors contributing to the decline of bull trout include habitat destruction, degradation, and fragmentation (U.S. Fish and Wildlife Service 1994), and hybridization with brook trout (Leary et al. 1993). Similar factors, especially hybridization with exotic species of trout, threaten populations of westslope cutthroat trout (Allendorf and Leary 1988).

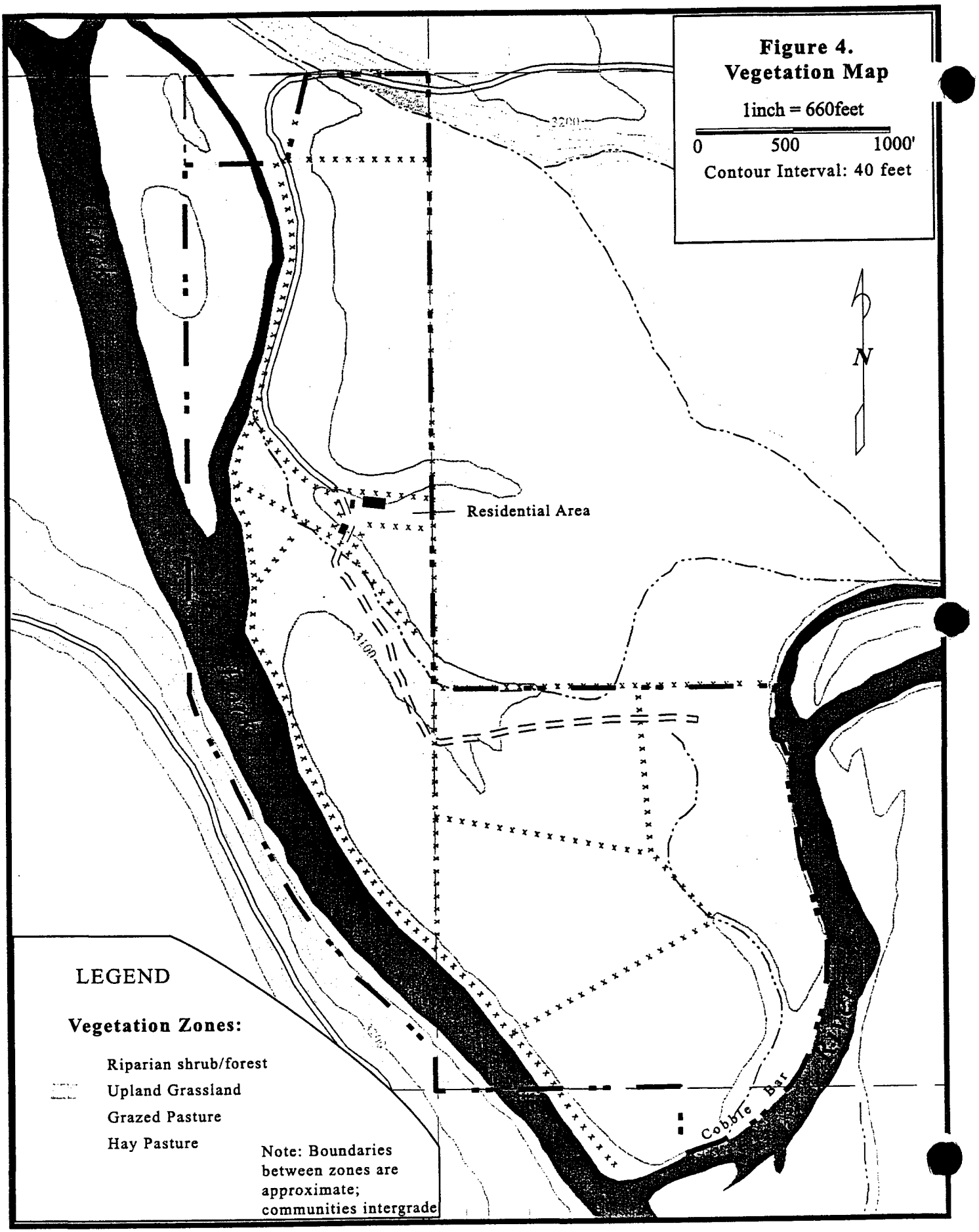
VEGETATION

Methodology

The following vegetation description is based on a qualitative survey of the property conducted on July 4, 1998. Plant communities were defined on the basis of dominant vegetative cover types and geomorphology. Three general plant communities occur on the Cusker property: grassland/ pasture, riparian, and upland grassland (Figure 4). Appendix A contains a list of plant species observed during the field visit.

Grassland/ Pasture

The grassland/ pasture portion of the property, is the dominant vegetative cover on the Cusker property, occupying the majority of the flood plain and low terrace landform types on the property (Figure 4). This cover type can further be broken into grazed pasture and hay pasture. As mentioned earlier, approximately 50 acres is devoted to the production of hay. The majority of the hay pastures are situated above the 100-year flood plain and are dominated by exotic grass



Base map modified from Blue Mt., Primrose, and NW & SW Missoula 7.5 minute USGS Topographic Quadrangles.

species such as quackgrass (*Agropyron repens*), soft brome (*Bromus* mollis), smooth brome (*Bromus inermis*) and orchard grass (*Dactylis glomerata*), yet also contains some alfalfa (*Medicago sativa*).

The remaining grassland regions on the property are maintained as grazed pasture. The composition of plant species varies somewhat within the grazed pasture depending on moisture regime, grazing intensity, and tilling history in the past. Grass species in grazed pastures are characterized by Kentucky bluegrass, orchard grass, timothy (*Phleum pratense*), smooth brome, cheatgrass (*Bromus tectorum*), and intermediate wheatgrass (*Agropyron intermedium*). Forb species observed include prickly lettuce (*Lactuca serriola*), birdsfoot-trefoil (*Lotus corniculatus*), yellow sweet clover (*Melilotus officinalis*), musk thistle (*Carduus nutans*), common mullein (*Thapsus verbascum*), hound's tongue (*Cynoglossum officonale*) and field pennycress (*Thlaspi arvense*). Many of these forb species, especially musk thistle, are increasers in response to consistent heavy grazing pressure. The majority of the grazed pastureland was in a moderately to heavily grazed condition at the time of the field visit. The grazed pasture south of the southern hay pasture was more floristically diverse. Here widely spaced ponderosa pine trees (*Pinus Ponderosa*) give this region a park-like appearance. The presence of a greater diversity of native forbs suggests that portions of this area have not been plowed. Grass species unique to this are include red three awn (*Aristeda longisteda*) and bluebunch wheatgrass (*Agropyron spicatum*). A relatively diverse forb community includes common yarrow (*Achillea millefolium*), hairy golden aster (*Chrysopsis villosa*), pussytoes (*Antenneria microphylla*), rockcress (*Arabis* spp.), little grey aster (*Aster folcatus*), woolly plantain (*Plantago patagonica*), and spotted knapweed (*Centauria maculosa*). Occasional shrubs include silver sagebrush (*Artemisia cana*) and common snowberry (*Symphoricarpos albus*).

The extreme northern pasture consists of a wetter pasture type which, due to standing water, was not sampled during the field visit. A follow-up survey of this region is recommended during a future monitoring visit to the property. The Grass Valley Frenchtown Ditch creates a small microsite favorable to plants with greater moisture requirements. Species in the immediate vicinity of the ditch include willow (*Salix* sp.), sharptooth angelica (*Angelica arguta*), northern bugleweed (*Lycopus uniflorus*), and Cusick's sedge (*Carex cusickii*).

Upland Grassland

Only the extreme northeast corner of the Cusker property is comprised of an upland grassland type. This arid range was dominated by spotted knapweed, yet had remnant stands of natives such as bluebunch wheatgrass, chokecherry, and arrowleaf balsamroot (*Balsamorhiza sagitata*). Also present were Canada bluegrass (*Poa compressa*), yellow sweet clover, common mullein, and Dalmatian toadflax (*Linarea genistifolia* ssp. *dalmatica*)

Riparian

The riparian community occurs on the portion of the property immediately adjacent to the Clark Fork River and within sloughs and depressions with perennially high ground water (Figure 4). It is probable that, at one time, a larger portion of the flood plain was vegetated by riparian cover types, which were gradually removed by livestock grazing and other agricultural activities.

Remnants of these communities within the pastures currently grazed are much less floristically and structurally diverse than those riparian areas which have not received such consistent, recent agricultural pressure. Overall, the riparian cover types are dominated by woody vegetation. In some regions, an overstory of black cottonwood (*Populus balsamifera* ssp. *trichocarpa*), forms a relatively open canopy, with between 20 and 40 percent cover. Shrub cover within these areas varies considerably, and ranges from 5 to 20 percent and forms two layers. The taller layer is composed mostly of black hawthorn (*Crataegus douglasii*) with lesser amounts of willow (*Salix* spp.) in wetter areas. The lower layer is dominated by common snowberry (*Symphoricarpos albus*). Shrubs are distributed patchily and tend to be clumped in wetter areas and under tree canopies. Groundcover is dominated by exotic grass species, primarily quackgrass, common timothy (*Phleum pratense*), reed canary grass (*Phalaris arundinacea*) (which is not exotic), and smooth brome (*Bromus inermis*). Forbs in these riparian forest include spotted knapweed, henbane (*Hyoscyamus niger*), hound's tongue, cow parsnip (*Heracleum* spp) common tansy (*Tanacetum vulgare*) and trace amounts of leafy spurge (*Euphorbia esula*). Slough areas also contain numerous cottonwood snags and abundant downed woody debris, yet signs of cottonwood regeneration were scarce.

On more heavily grazed portions of sloughs, shrub and tree cover becomes patchy to and less diverse. Monotypic stands of both black hawthorn and black cottonwood occur in these areas, and are heavily browsed.

The riparian zone at the southern extreme of the Cusker property is distinct in that it represents recent seral stands of black cottonwood and willow that are colonizing new alluvium deposited on a broad cobbley bar.

Hansen et al. (1995) hypothesized that this riparian forest type's present and historical grazing history can be determined by the composition of the understory shrub layer. Relatively undisturbed sites will be dominated by red-osier dogwood and serviceberry. With increasing grazing pressure, the abundance of these shrubs will decline while the cover of snowberry and Wood's rose will increase. Therefore, on the Cusker property, the relative scarcity of red-osier dogwood and serviceberry and the relative abundance of snowberry in the riparian community may be indicative of past grazing on the property.

Plant Species of Special Concern

One special status plant species, pointed broom sedge (*Carex scoparia*), has been recorded in the vicinity of the Cusker property (Montana Natural Heritage Program 1998). A population of pointed broom sedge is known from the Council Grove State Park and Historic Site. Pointed broom sedge occurs in wet soils along rivers and sloughs in valleys, and it is possible that it could occur on the Cusker property in the slough portion of the riparian/flood plain community. Pointed broom sedge is globally common. However, within the state it is ranked by the Montana Natural Heritage Program as critically imperiled with less than 5 known occurrences in Missoula and Ravalli Counties (Heidel 1996).

WILDLIFE

The Cusker property potentially supports a diverse array of wildlife species. The property's open, riparian, and channel margin habitats support varied and somewhat overlapping assemblages of wildlife species. Though some species may primarily use the open fields in the terrace and riparian/flood plain communities, the sloughs, which are dominated by woody vegetation, provide the richest wildlife habitat on the property. Appendix B lists vertebrate species that may occur on the property.

Riparian areas provide critical wildlife habitat, especially in the arid western United States. The sloughs on the Cusker property provide hiding cover, shade, foraging areas, and breeding sites for a great variety of species. Species that potentially occur in this area include amphibians, such as long-toed salamander, western toad, and Pacific chorus frog; reptiles, such as rubber boa and common garter snake; and mammals, such as beaver, muskrat, mink, striped skunk, raccoon, mule deer, white-tailed deer, and occasional elk, moose and black bear (Stebbins 1966, Hoffmann and Pattie 1968, Ehrlich et al. 1988). Use of the slough area by the above animals ranges from species that require riparian habitat to fulfill most of their life history requirements, such as long-toed salamander and Pacific chorus frog, to more generalist species that occasionally or seasonally use riparian areas, such as mule and white-tailed deer. The sloughs are also characterized by an abundance of downed and decaying woody debris. This provides excellent habitat for long-toed salamander, northern alligator lizard, rubber boa, western terrestrial garter snake, and northern flying squirrel. Seasonal and permanent open water provides habitat for muskrat, frogs, and common garter snake.

A great variety of bird species also frequent riparian zones, utilizing them as foraging and nesting habitat. Species commonly associated with riparian areas include cedar waxwing, Swainson's thrush, killdeer, northern flicker, western wood-pewee, common raven, Steller's jay, American kestrel, American goldfinch, dark-eyed junco, black-billed magpie, downy woodpecker, hairy woodpecker, pine grosbeak, rufous-sided towhee, rufous hummingbird, red-breasted nuthatch, rough-winged swallow, tree swallow, house wren, Wilson's warbler, and white-crowned sparrow (Ehrlich et al. 1988). Snags, which are relatively common in the slough area, provide foraging habitat for woodpeckers and breeding habitat for cavity nesting birds, including woodpeckers, great horned owl, and wood duck.

The near-vertical, eroded banks of the Clark Fork River provide nesting habitat for bank swallow. A bank swallow colonies occur on Kelly Island to the south and east of the Cusker property.

The open fields in the flood plain and terrace communities also provide habitat for several species, including Lewis' woodpecker, gopher snake, racer, northern pocket gopher, Colombian ground squirrel, montane vole, yellow-bellied marmot, and long-tailed weasel (Hoffmann and Pattie 1968, Stebbins 1966).

Numerous bird species were observed during the field visit. Species observed were rough-legged hawk, red-tailed hawk, osprey, black-billed magpie, red-winged blackbird, black-capped chickadee, pygmy nuthatch, hairy woodpecker, Lewis' woodpecker, yellow-bellied sapsucker, northern flicker, pileated woodpecker, European starling, mourning dove, western wood pewee,

eastern kingbird, western meadowlark, western bluebird, song sparrow, killdeer, common raven, American robin, bank swallow, barn swallow, violet green swallow, brown headed cowbird, spotted sandpiper, great blue heron, yellow warbler, western tanager, northern oriole, warbling vireo, common mallard, and house wren. Most bird use was associated with the forested riparian community. Additional wildlife sightings included white-tailed deer, yellow-bellied marmot, and Colombian ground squirrel.

Wildlife Species of Special Concern

Bald eagle has been recorded in the vicinity of the Cusker property (Montana Natural Heritage Program 1998). Bald eagles have been observed nesting along the Clark Fork River downstream from the Cusker property. Though it is possible that bald eagles could nest on the property, it is more likely that they would use it for foraging. Bald eagle is listed as a protected species by the Montana Department of Fish, Wildlife, and Parks, as an endangered species by the U.S. Forest Service, and as a threatened species under the Endangered Species Act by the U.S. Fish and Wildlife Service (Reichel 1997). The Montana Natural Heritage Program ranks bald eagle as rare and vulnerable to extinction (Reichel 1997).

CONSERVATION IMPLICATIONS

Overall, the Cusker property has a high conservation value. With careful stewardship, the riparian and slough areas on the property could be restored to biologically rich communities. Low elevation riparian habitats have become regionally significant due to continuing threats posed by development and flood control activities. These areas serve as critical habitat for a wealth of wildlife species, some of which are declining in numbers in response to the alteration of these habitats. That the Cusker property, including the slough areas, has been historically grazed by livestock, has likely reduced the quantity and quality of wildlife habitat. To maintain and enhance the conservation values of the property, it is important to keep the riparian and slough areas fenced from livestock. Livestock should only be allowed to graze in these areas at low stocking rates, for brief periods, and should be excluded from areas with steep, erosion-prone river banks. The abundance of sod-forming perennial grasses and woody vegetation along steeper banks will help reduce the scouring potential of the Clark Fork River. Once livestock are fenced from these unstable river margins, their recovery could be greatly facilitated by both emplacing large woody debris and then planting willow and sedge along the banks. If these forest and shrub cover types are free from regular livestock grazing, their usefulness to wildlife will be maintained and should increase over time. Because of the seasonally high water tables in the slough areas, these areas should be resilient and natural regeneration rates should be high.

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APPENDIX A: LIST OF PLANT SPECIES

Life Form	Species	Exotic	Community where observed* Grassland	Riparian
Tree	boxelder (*Acer negundo*)	X		X
	ponderosa pine (*Pinus ponderosa*)			X
	quaking aspen (*Populus tremuloides*)			
	black cottonwood (*Populus balsamifera* ssp. *trichocarpa*)			X
Shrub				X
	serviceberry (*Amelanchier alnifolia*)			X
	red-osier dogwood (*Cornus stolonifera*)			X
	black hawthorn (*Crataegus douglasii*)			X
	chokecherry (*Prunus virginiana*)		X	X
	Wood's rose (*Rosa woodsii*)			X
	willow (*Salix* spp.)	X	X	X
	common snowberry (*Symphoricarpos albus*)			X
Vine	white virgin's bower (*Clematis ligusticifolia*)			X
	bittersweet nightshade (*Solanum dulcamara*)	X		X
Forb	yarrow (*Achillea millefolium*)		X	X
	nodding onion (*Allium cernuum*)			X
	sharptooth angelica (*Angelica arguta*)		X	
	gray sandwort (*Artemisia ludoviciana*)			X
	silver sagebrush (*Artemisia cana*)			
	musk thistle (*Carduus nutans*)	X		X
	spotted knapweed (*Centaurea maculosa*)	X	X	X
	sticky chickweed (*Cerastium viscosum*)	X		X
	goosefoot (*Chenopodium* sp.)	X	X	
	Canada thistle (*Cirsium arvense*)	X		X
	Colombia tickseed (*Coreopsis tinctoria*)			X
	hound's-tongue (*Cynoglossum officinale*)	X		X
	spreading fleabane (*Erigeron divergens*)			X
	smooth daisy (*Erigeron glabellus*)			X
	showy fleabane (*Erigeron speciosus*)			X
	stork's-bill (*Erodium cicutarium*)	X		X
	rough bedstraw (*Galium mexicanum*)			X
	licorice root (*Glycerrhiza lepidota*)			X
	hairy golden aster (*Chrysopsis villosa*)		X	X

Life Form	Species	Exotic	Community where observed* Grassland	Riparian
Forb	henbane (*Hyoscyamus niger*	X		X
	prickly lettuce (*Lactuca serriola*)	X	X	
	birdsfoot-trefoil (*Lotus corniculatus*)	X	X	
	northern bugleweed (*Lycopus uniflorus*)		X	
	white campion (*Lychnis alba*)	X		X
	black medic (*Medicago lupulina*)	X	X	X
	white sweet clover (*Melilotus alba*)	X	X	X
	yellow sweet clover (*Melilotus officinalis*)	X	X	X
	wild bergamot (*Monarda fistulosa*)			X
	smaller forget-me-not (*Myosotis laxa*)			X
	common plantain (*Plantago major*)	X		X
	woolly plantain (*Plantago patagonica*)		X	X
	dooryard knotweed (*Polygonum aviculare*)		X	
	black bindweed (*Polygonum convolvulus*)	X		X
	mountain knotweed (*Polygonum douglasii*)		X	X
	sulphur cinquefoil (*Potentilla recta*)	X		X
	curly dock (*Rumex crispus*)	X		X
	tall butterweed (*Senecio serra*)			X
	Jim Hill mustard (*Sisymbrium altissimum*)	X	X	
	late goldenrod (*Solidago gigantea*)			X
	common tansy (*Tanacetum vulgare*)	X	X	X
	pennycress (*Thlaspi arvense*)	X	X	
	yellow salsify (*Tragopogon dubius*)	X	X	X
	mullein (*Verbascum thaspus*)	X	X	X
	common cocklebur (*Xanthium strumarium*)	X		X
Aquatic				
	common duckweed (*Lemna minor*)			X
	great duckweed (*Spirodela polyrhiza*)			X
Graminoid				
	crested wheatgrass (*Agropyron cristatum*)	X	X	
	interm. wheatgrass (*Agropyron intermedium*)	X	X	
	quackgrass (*Agropyron repens*)	X	X	X
	bluebunch wheatgrass (*Agropyron spicatum*)		X	
	redtop (*Agrostis stolonifera*)	X	X	X
	red three awn (*Aristeda longisteda*)		X	
	smooth brome (*Bromus inermis*)	X	X	X
	Japanese brome (*Bromus japonicus*)	X		X
	soft brome (*Bromus mollis*)	X	X	X
	cheatgrass (*Bromus tectorum*)	X	X	X

Life Form	Species	Exotic	Community where observed*	
			Grassland	Riparian
Graminoid				X
	Cusick's sedge (*Carex cusickii*)		X	
	orchard grass (*Dactylis glomerata*)	X	X	X
	Idaho fescue (*Festuca idahoensis*)			X
	reed canary grass (*Phalaris arundinacea*)			X
	common timothy (*Phleum pratense*)	X		X
	Canada bluegrass (*Poa compressa*)	X		X
	Kentucky bluegrass (*Poa pratensis*)	X	X	
	Sandberg's bluegrass (*Poa sandbergii*)			X
Fern Ally				
	common scouring rush (*Equisetum hyemale*)			X
	spikemoss (*Selaginella* sp.)			X

* Grassland community refers to the portion of the property dominated by grasses and forbs. (This community is subdivided into upland grassland and grazed and hay pasture in the text.) Riparian community refers to the portion of the property along the Clark Fork River and in the sloughs.

APPENDIX B: LIST OF POTENTIAL WILDLIFE SPECIES

The following is a list of vertebrate species that may occur on the Cusker property. Bird species are adapted from a checklist of birds of western Montana published by the Five Valleys Audubon Society. All other species are from a list of vertebrate species known or suspected to occur or historically occurring in Missoula County, compiled in 1997 by the Montana Natural Heritage Program.

BIRDS

double-crested cormorant
great blue heron
Canada goose
mallard
wood duck
greater scaup
lesser scaup
common goldeneye
Barrow's goldeneye
bufflehead
common merganser
red-breased merganser
turkey vulture
osprey
bald eagle
northern harrier
sharp-shinned hawk
Cooper's hawk
red-tailed hawk
Swainson's hawkbald eagle
American kestrel
ring-necked
pheasantkilldeer
common snipe
greater yellowlegs
lesser yellowlegs
spotted sandpiper
California gull
ring-billed gull
mourning dove
western screech owl
long-eared owl
northern pygmy owl
northern saw-whet owl
barred owl
Vaux's swift
belted kingfisher
red-naped sapsucker
yellow-bellied
sapsuckerdowny
woodpecker
hairy woodpecker
three-toed woodpecker
northern flicker
Lewis' woodpecker
pileated woodpecker
western wood-pewee
willow flycatcher
least flycatcher
western kingbird
eastern kingbird
tree swallow
violet-green swallow
bank swallow
northern rough-winged swallow
cliff swallow
black-billed magpie
American crow
common raven
black-capped chickadee
red-breasted nuthatch
white-breasted nuthatch
brown creeper
house wren
American dipper
gray catbird

western bluebird	yellow-rumped warbler	black-headed grosbeak
veery	northern waterthrush	lazuli bunting
American robin	MacGillivray's warbler	rufous-sided towhee
bohemian waxwing	common yellowthroat	dark-eyed junco
cedar waxwing	yellow-breasted chat	white-throated sparrow
European starling	American redstart	golden-crowned sparrow
warbling vireo	Brewer's blackbird	song sparrow
red-eyed vireo	common grackle	white-crowned sparrow
solitary vireo	brown-headed cowbird	common redpoll
Nashville warbler	northern oriole	American goldfinch
yellow warbler	western tanager	

Mammals

water shrew	meadow vole	long-tailed weasel
little brown bat	montane vole	mink
mountain cottontail	beaver	striped skunk
yellow pine chipmunk	muskrat	northern river otter
Columbian ground squirrel	house mouse	mountain lion
red squirrel	common porcupine	bobcat
northern flying squirrel	coyote	striped skunk
northern pocket gopher	red fox	mule deer
deer mouse	black bear	white-tailed deer
bushy-tailed woodrat	common raccoon	

Amphibians and Reptiles

long-toed salamander	painted turtle	gopher snake
tailed frog	northern alligator lizard	western terrestrial garter snake
western toad	western skink	common garter snake
Pacific chorus frog	rubber boa	western rattlesnake
northern leopard frog	racer	
spotted frog		

Fishes

slimy sculpin	bull trout	longnose sucker
westslope cutthroat trout	brook trout	largescale sucker
rainbow trout	northern pike	black bullhead
golden trout	peamouth	pumkinseed
pygmy whitefish	northern squawfish	largemouth bass
mountain whitefish	longnose dace	yellow perch
brown trout	redside shiner	

APPENDIX C: AERIAL PHOTOGRAPH

Photo Date : 1990
Scale : 8" = 1 mile
Source : NRCS, NAPP

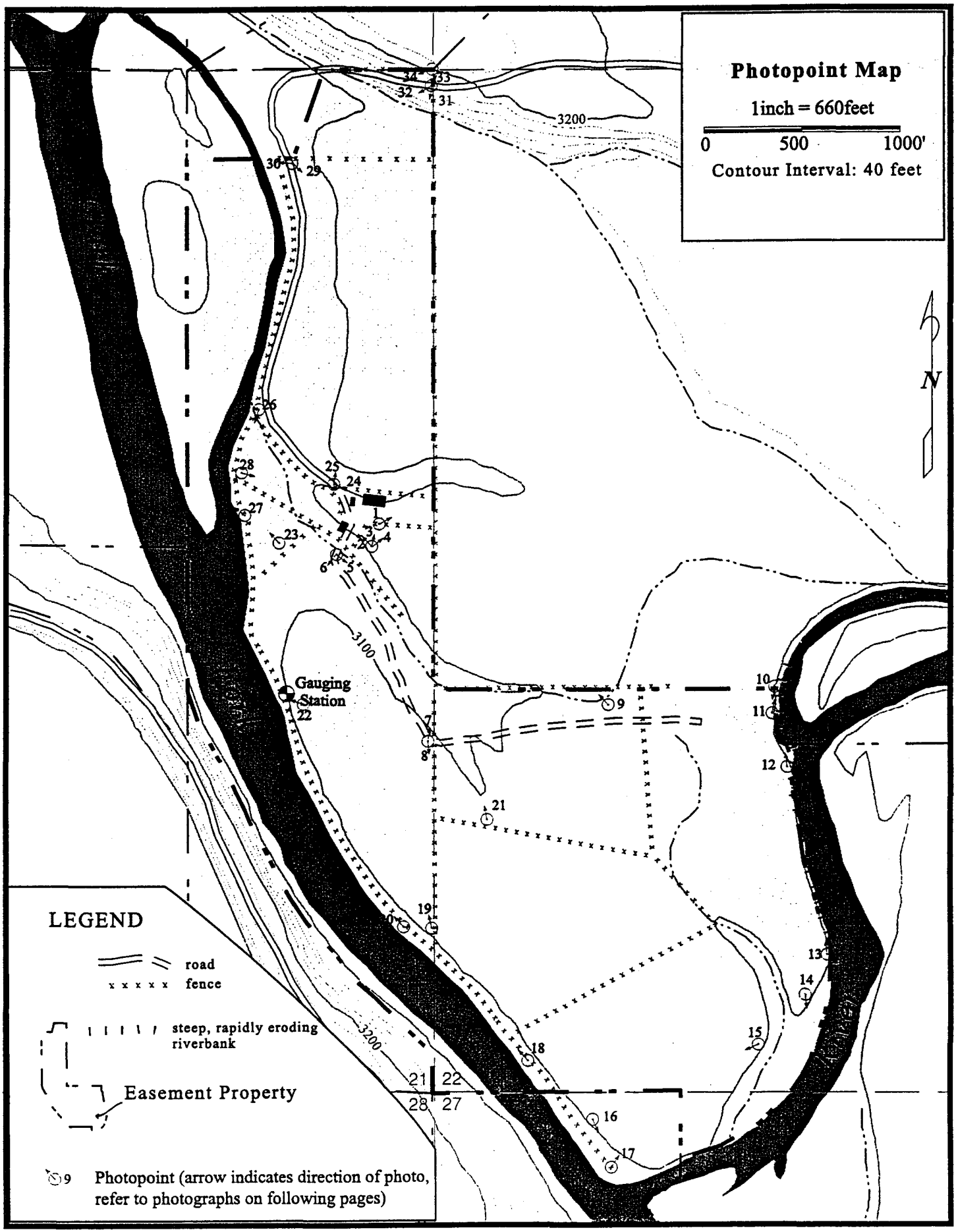
E000113 62

Flood Stage, Spring 1997

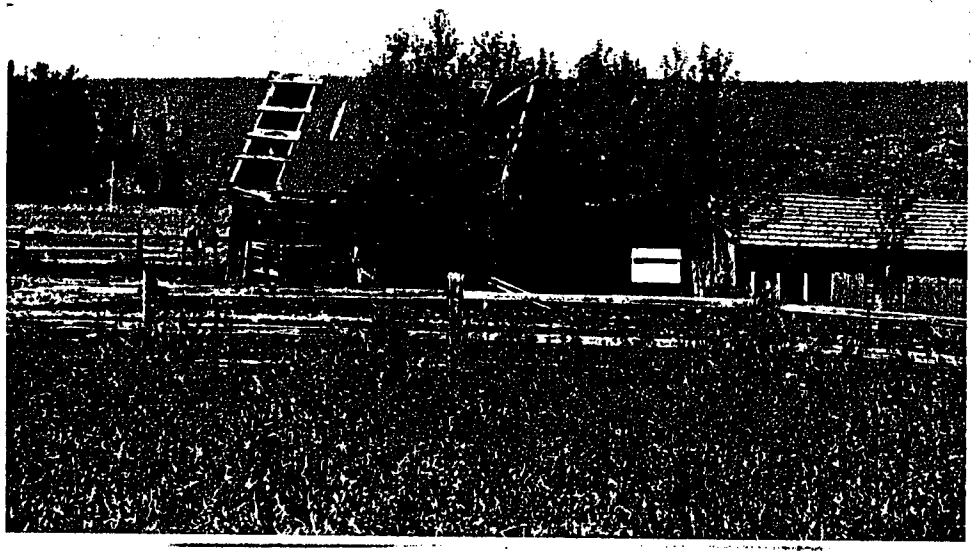
Photo Source: NRCS 1997 Missoula County Flood Flight Line

E00011363

APPENDIX D: PHOTOGRAPHS AND PHOTOPOINT MAP

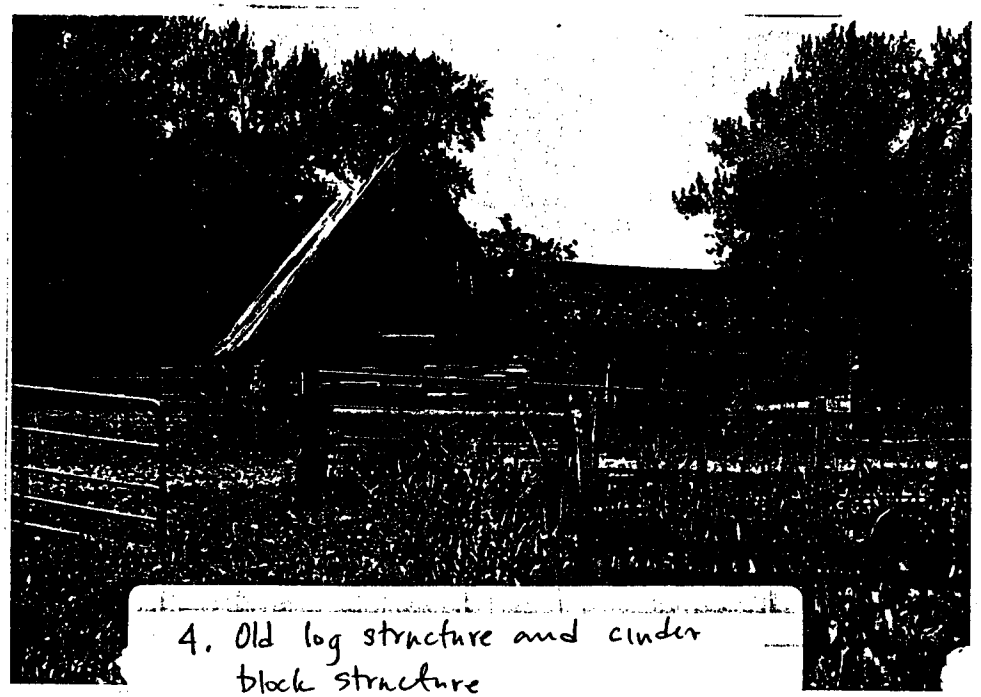


Base map modified from Blue Mt., Primrose, and NW & SW Missoula 7.5 minute USGS Topographic Quadrangles.

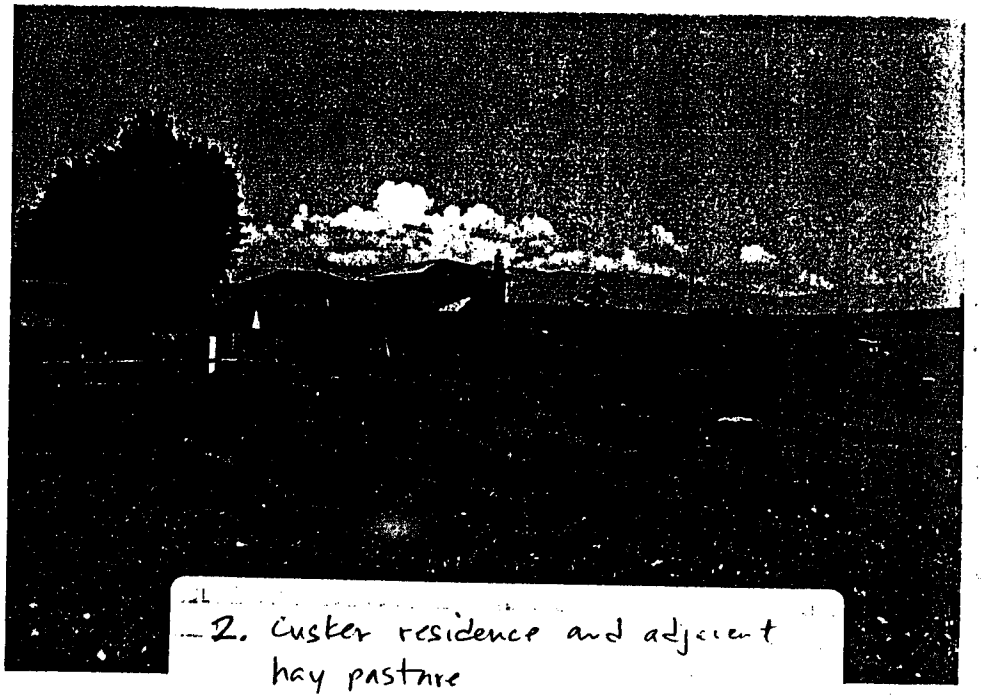


3. Old shed and never shed behind and to right

1. View of landscaped area near Custer residence

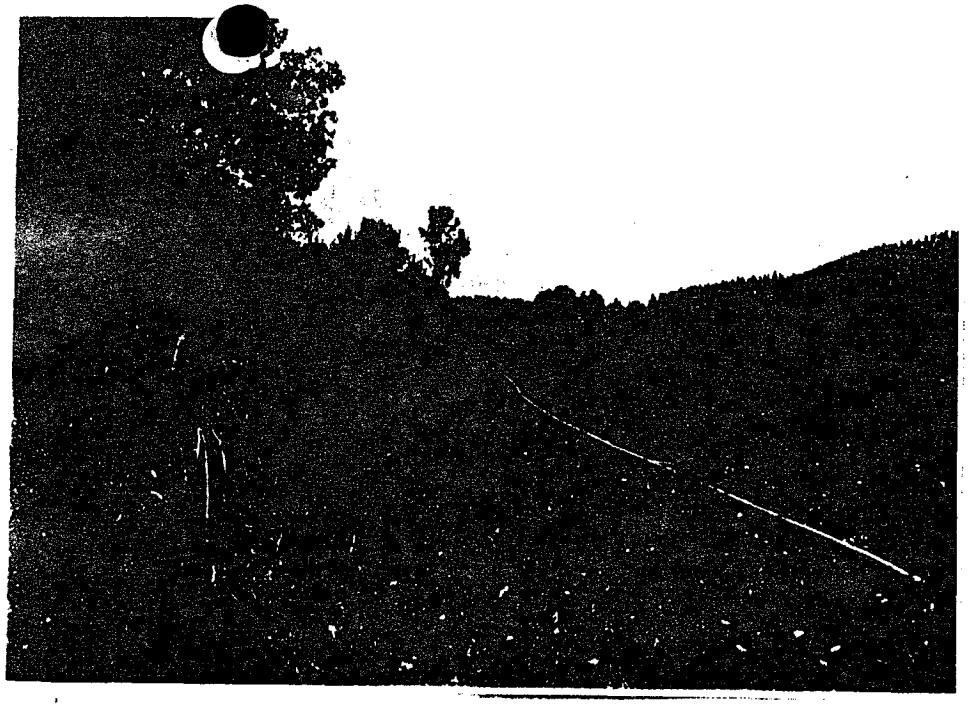


4. Old log structure and cinder block structure

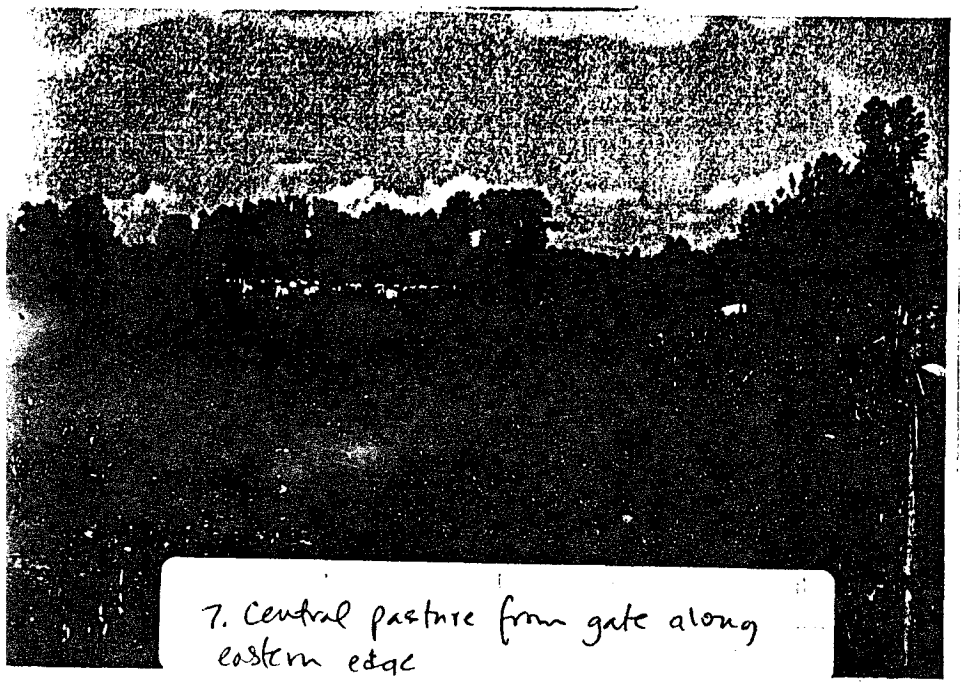


2. Custer residence and adjacent hay pasture

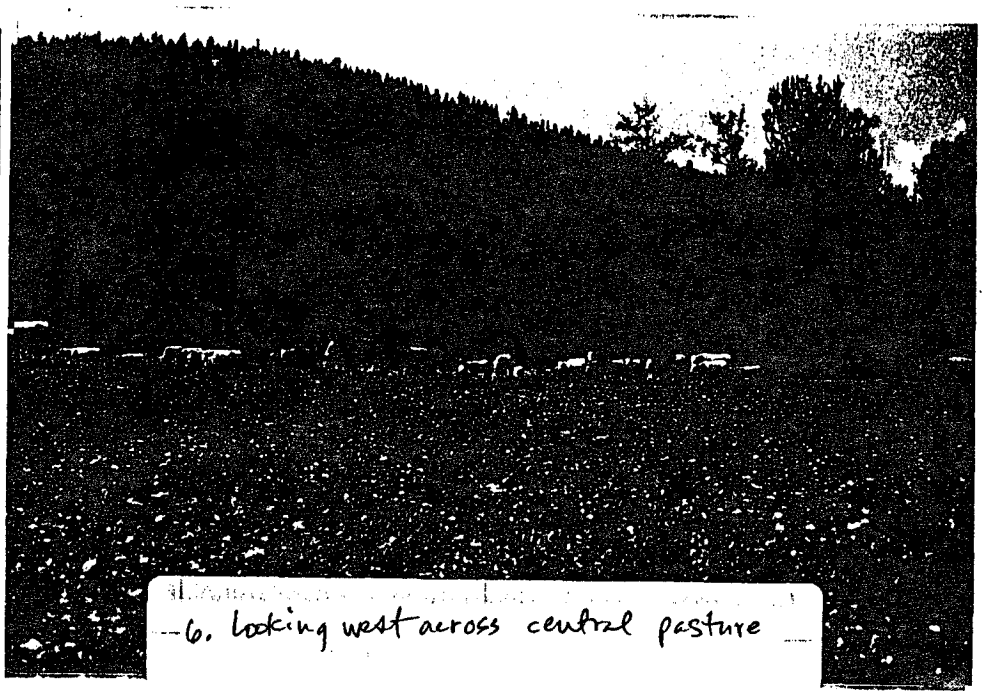
E00011366



5. View of central pasture looking east and south along fenceline

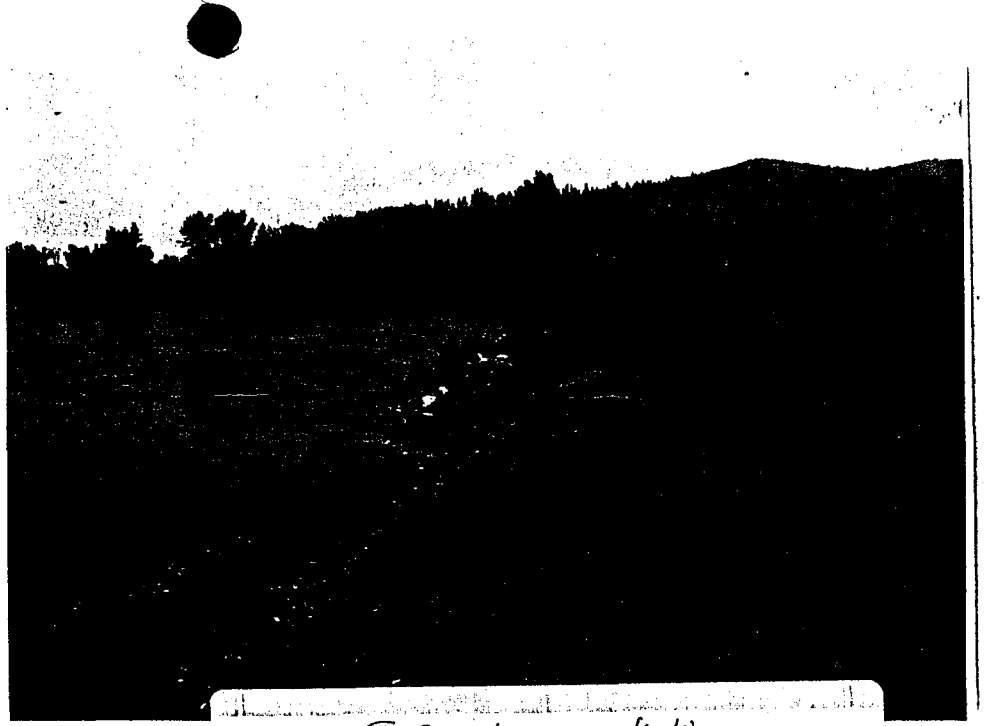


7. Central pasture from gate along eastern edge

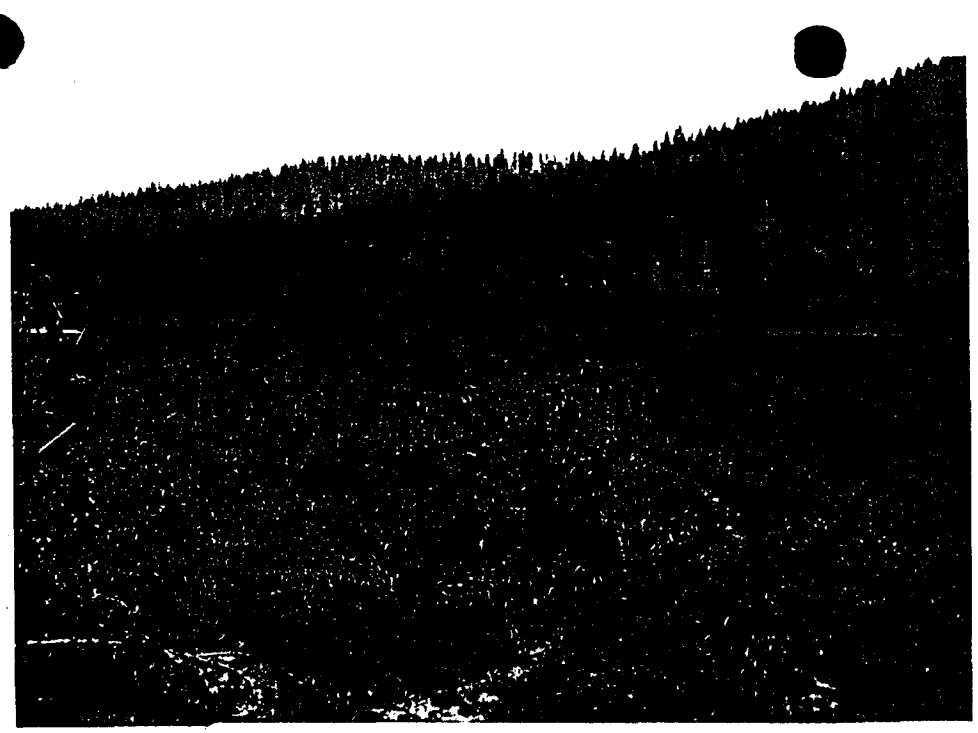


6. looking west across central pasture

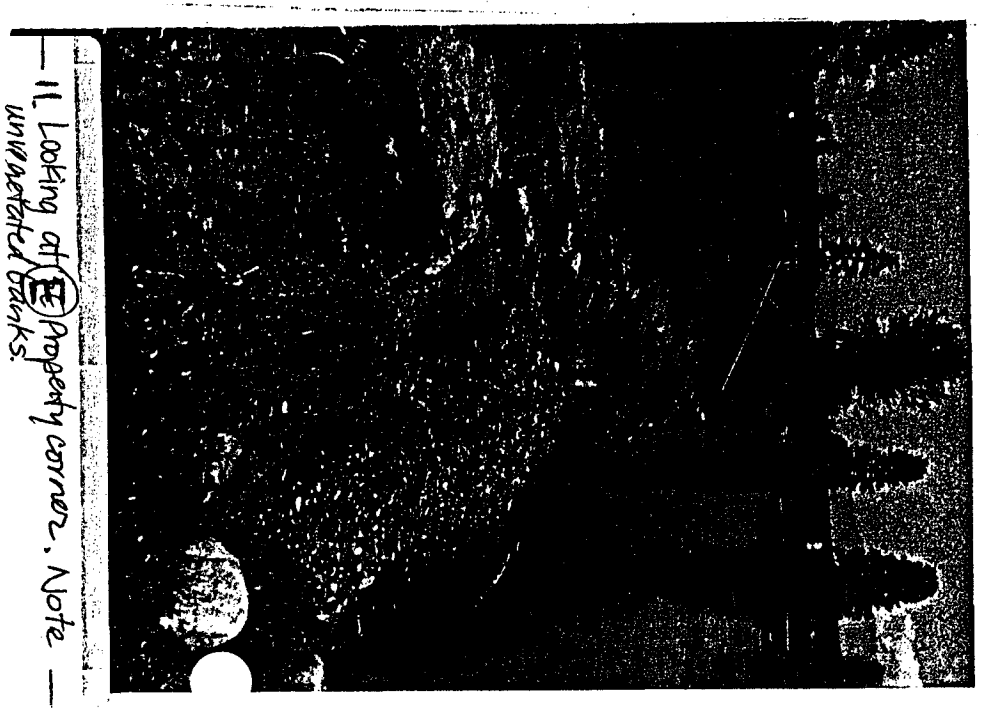
E00011367



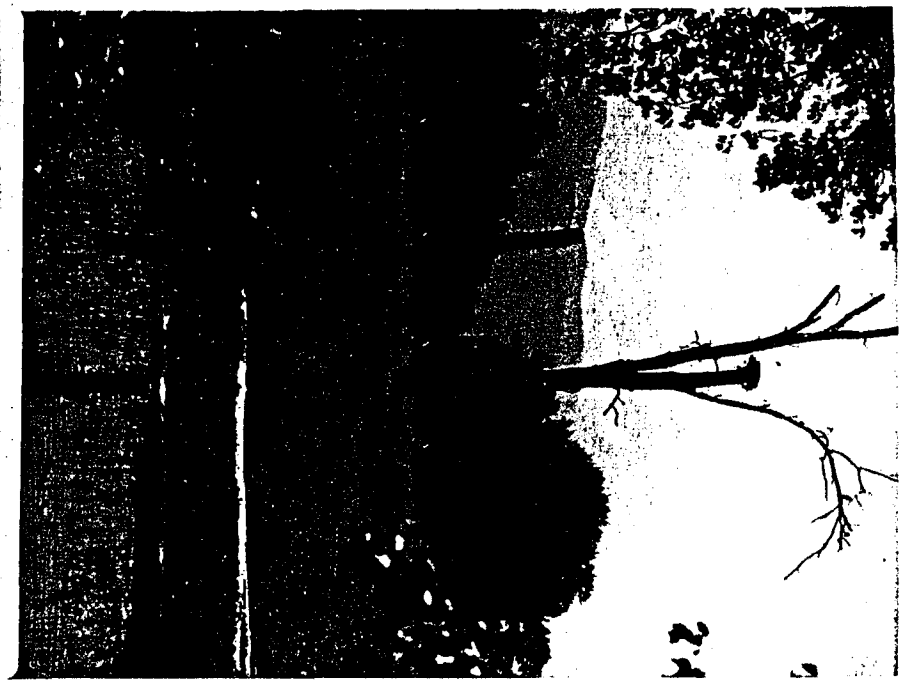
10. From (E) Property corner looking downstream at actively eroding bank.



8. Central pasture looking south along fence – note abundant thistle

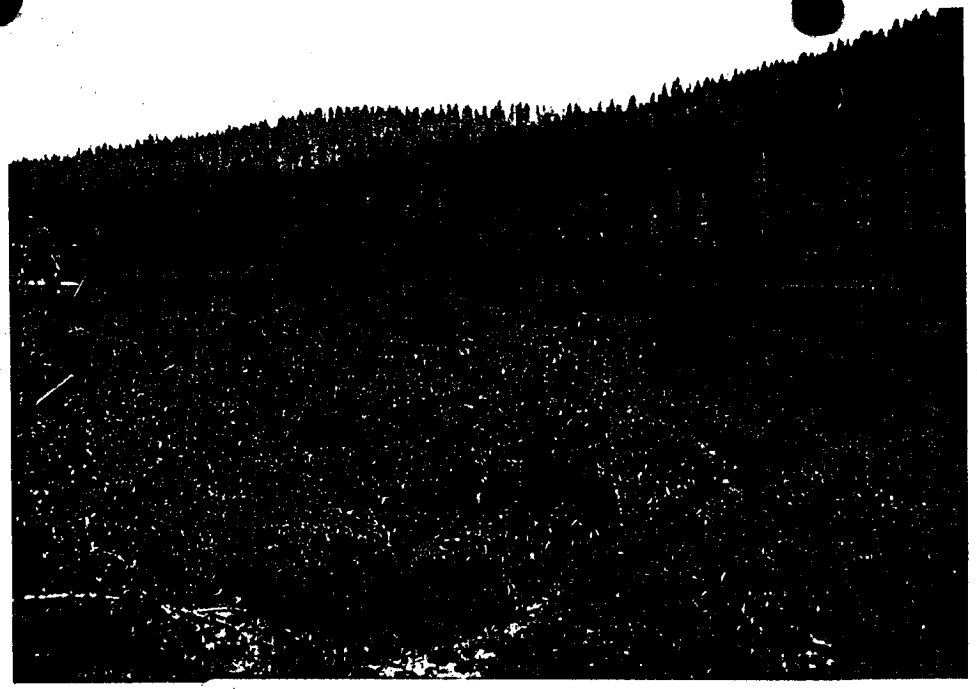


11. Looking at (E) Property corner. Note unvegetated banks.

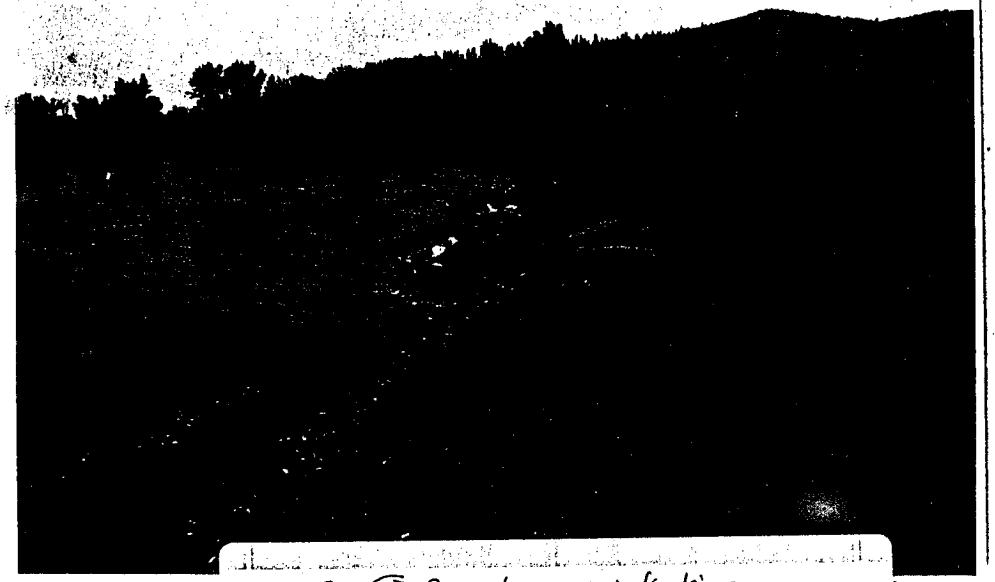


9. View across slough. Note large rough-legged hawk nest atop snag.

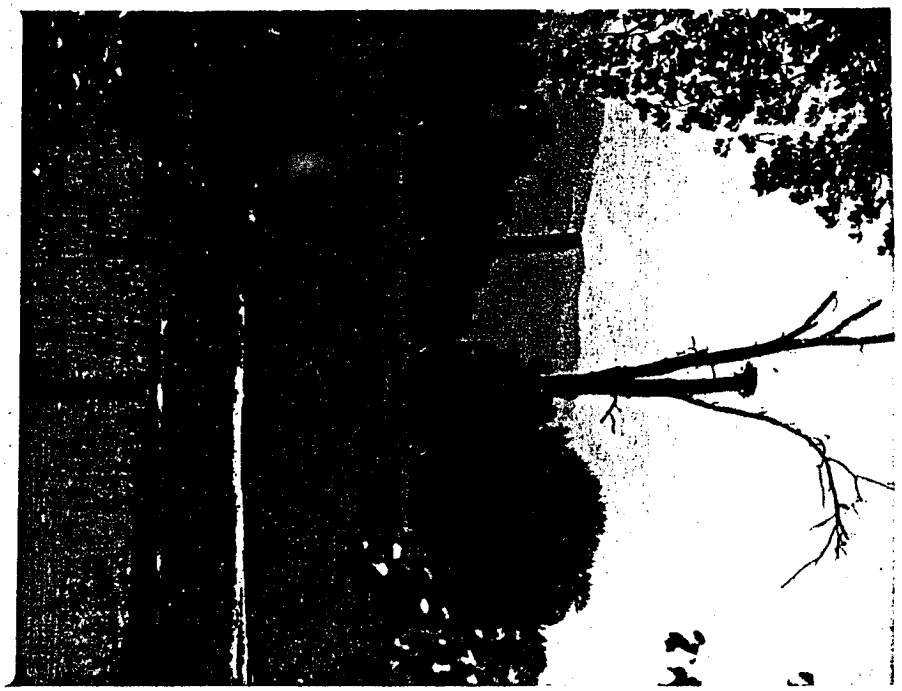
E00011368



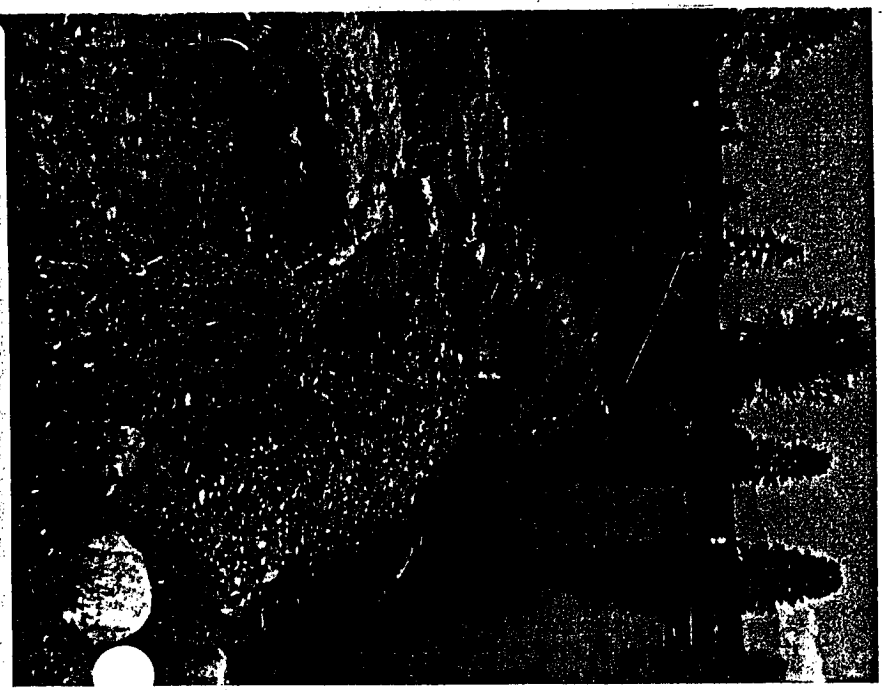
8. Central pasture looking south along fence – note abundant thistle



10. From (E) Property corner looking downstream at actively eroding bank.



9. View across slough. Note large rough-legged hawk nest atop snag.

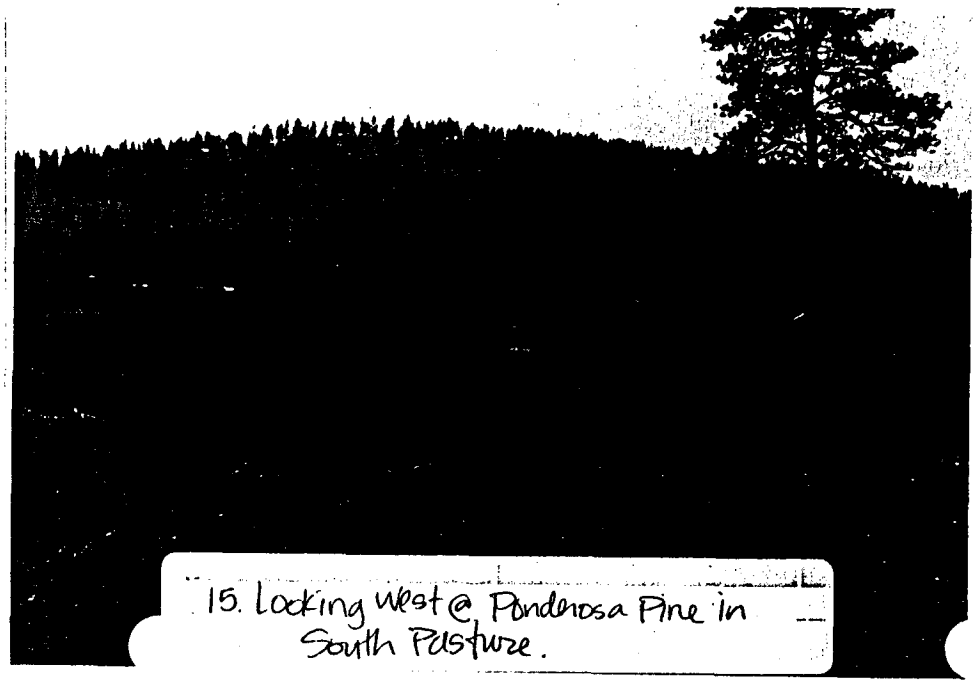


11. Looking at (E) Property corner. Note unvegetated banks.

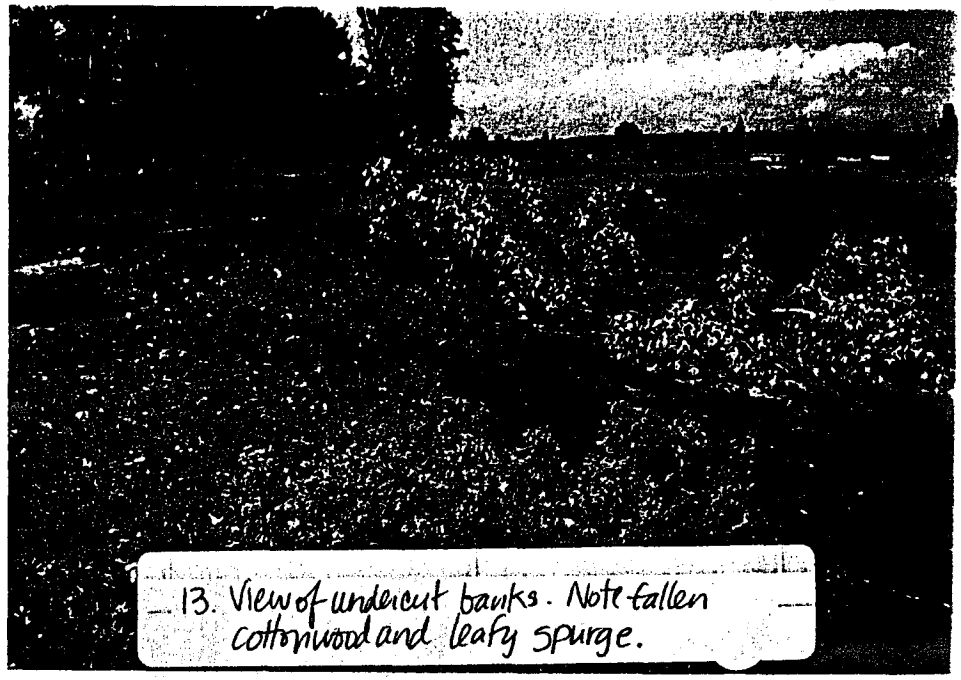
E00011369

14. Looking downstream at young seral stand of cottonwoods.

12. Looking upstream @ eroded banks. Note old rip rap.

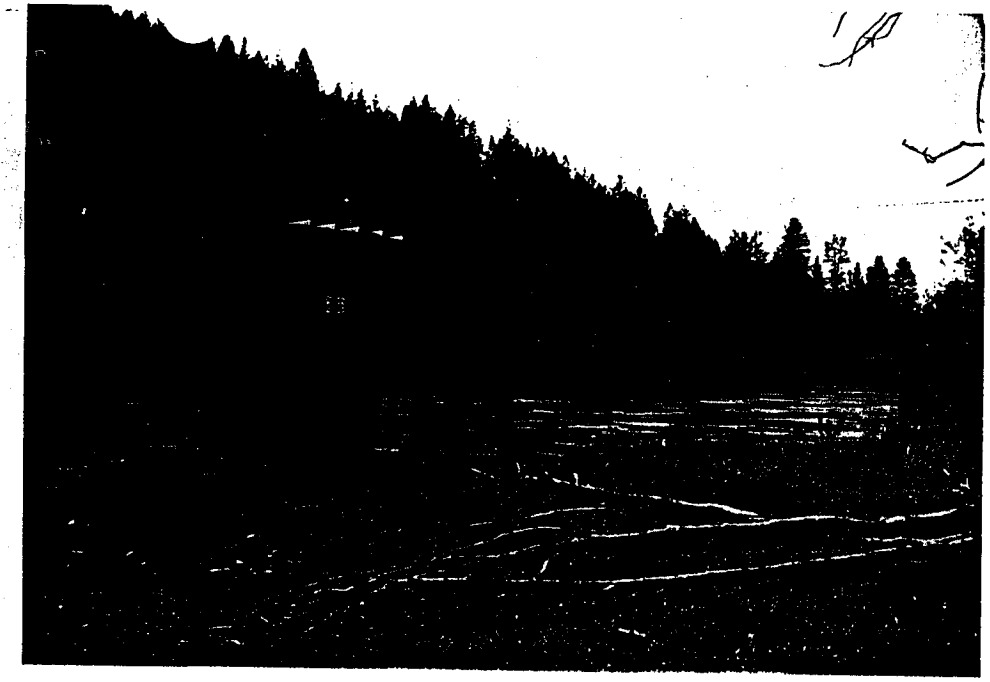


15. Looking West @ Ponderosa Pine in South Pasture.

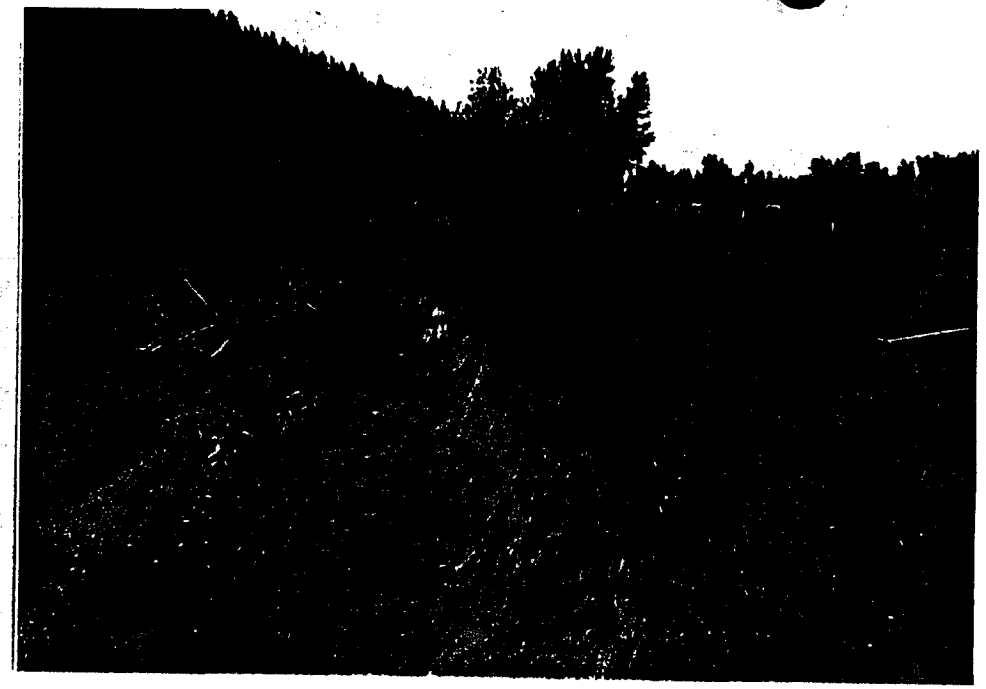


13. View of undercut banks. Note fallen cottonwood and leafy spurge.

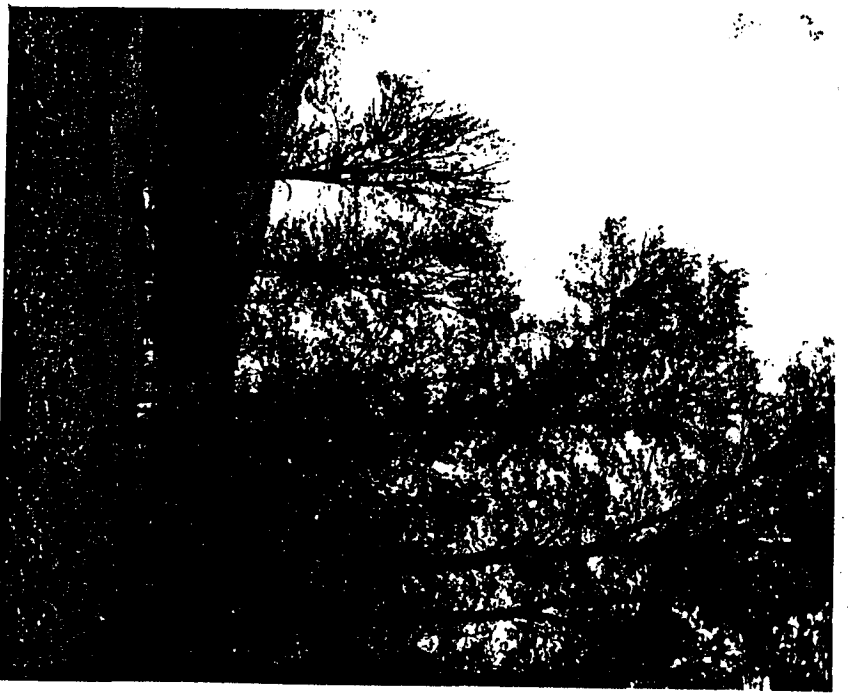
E00011370



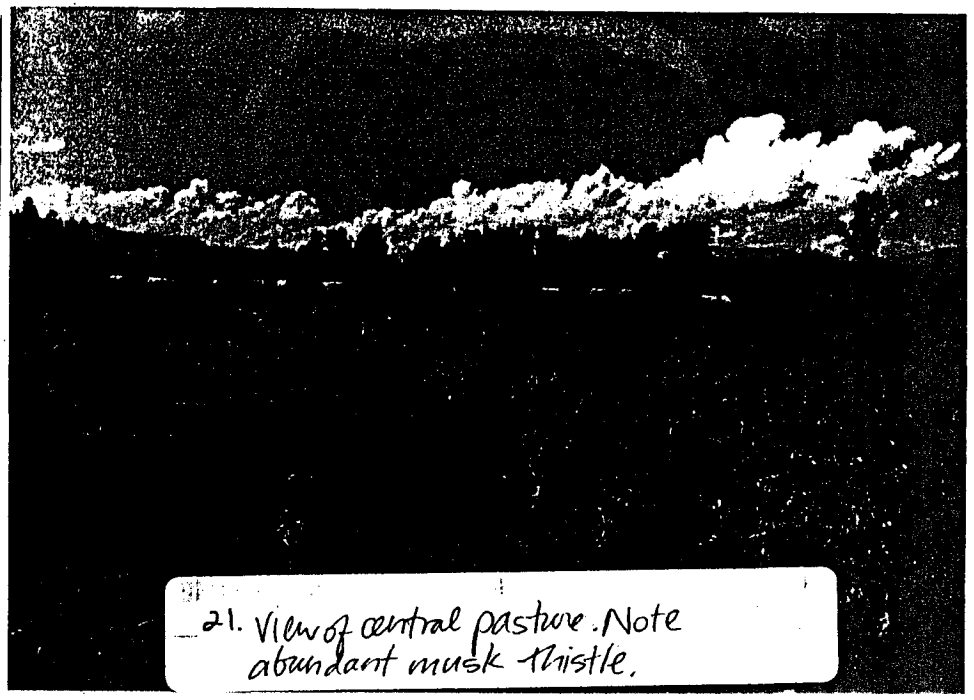
22. USGS Stream gauging station.



20. Looking downstream @ steep, eroded banks.

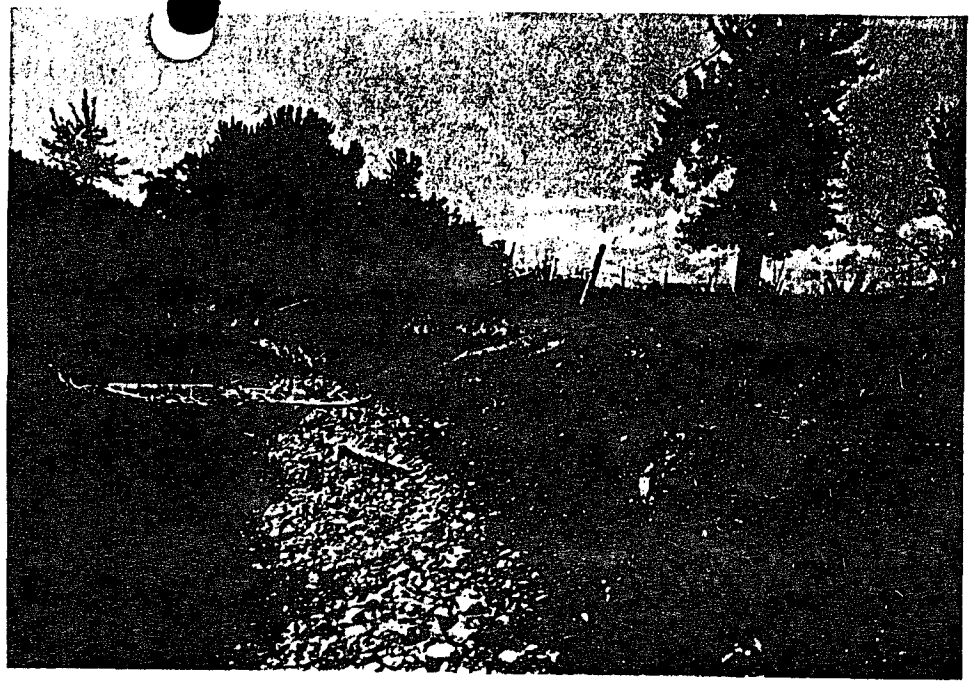


23 Looking west through mature cottonwood forest with browsed shrubs.



21. View of central pasture. Note abundant musk thistle.

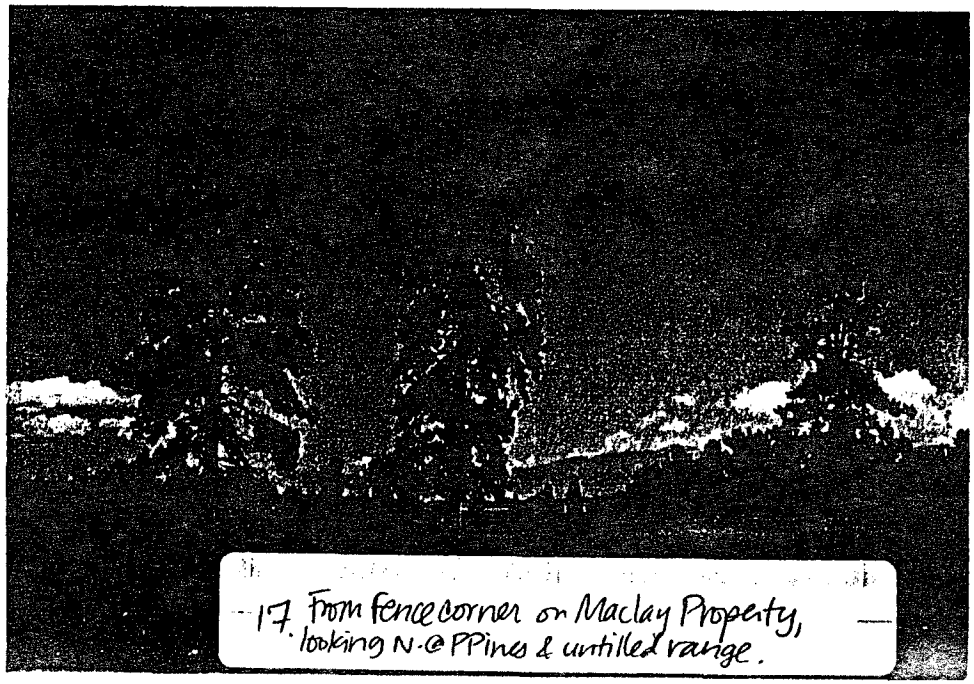
E00011371



18. Note unvegetated, disturbed banks.

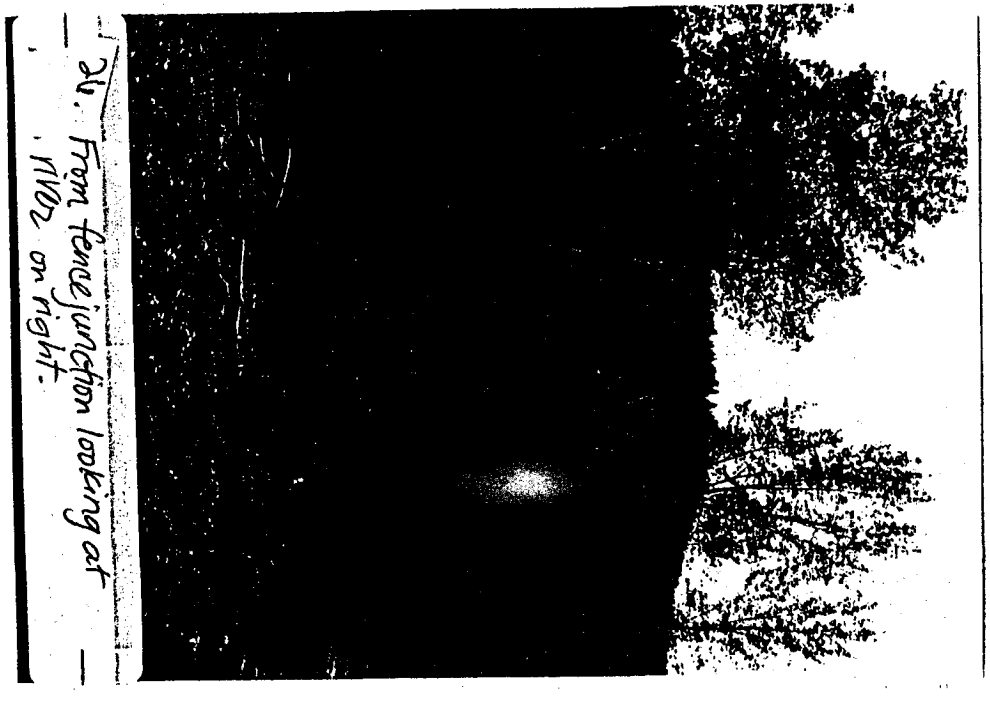
16. Looking southeast @ confluence of Bitterroot & Clark Fork Rivers

19. View north across southern hayfield. Note new fence.



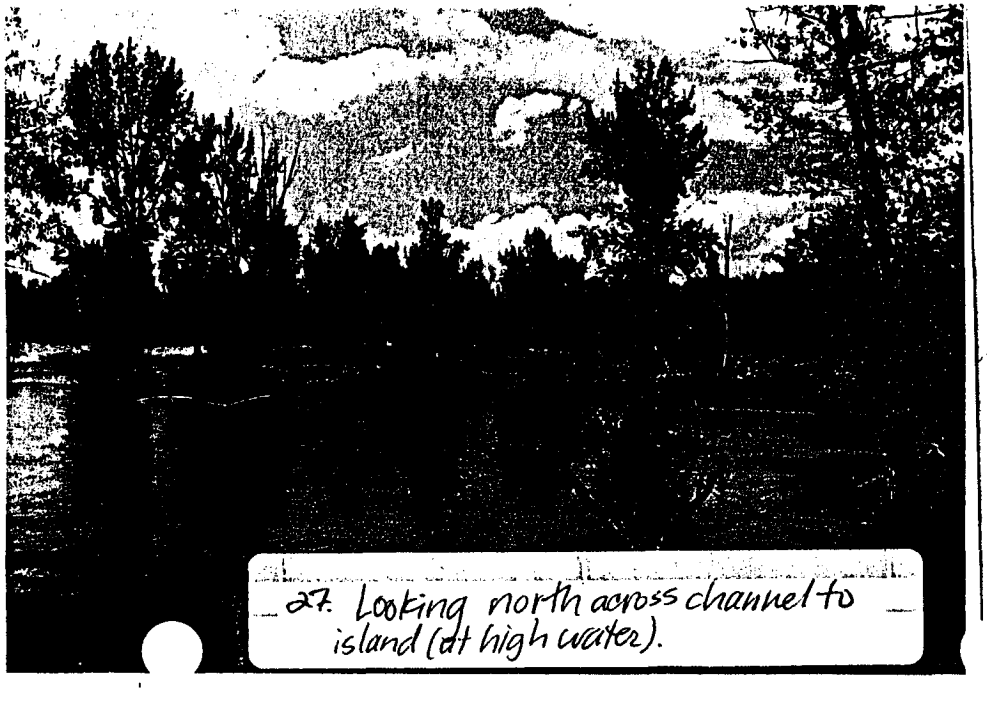
17. From fence corner on Maclay Property, looking N. @ PPines & untilled range.

E00011372

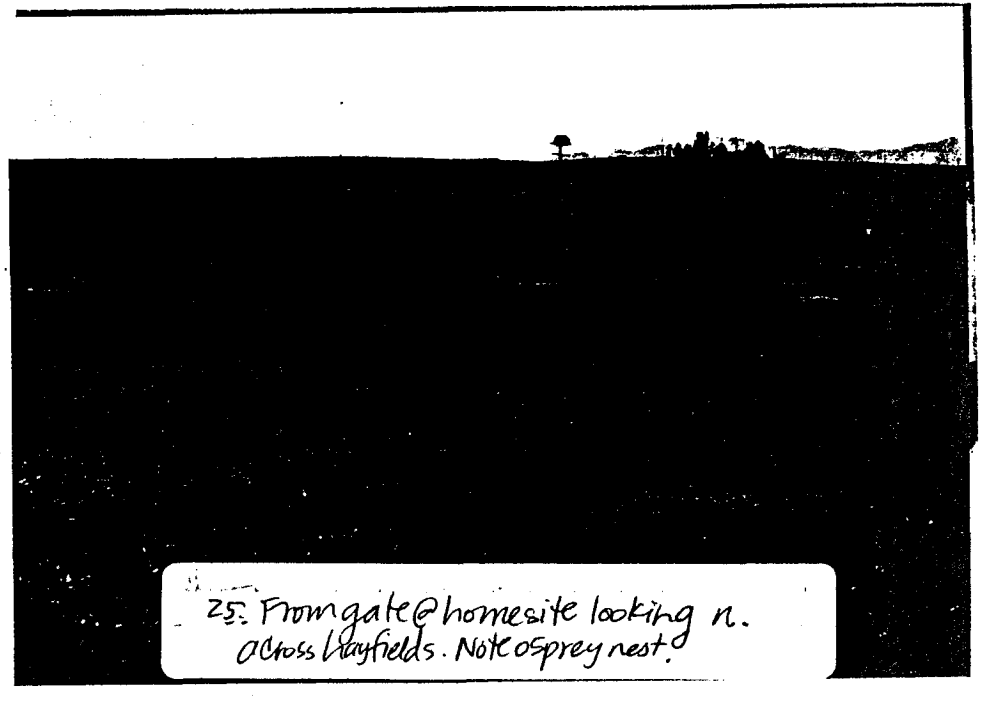


26. From fence junction looking at river on right.

24. From gate at homesite entrance looking SE @ homesite.

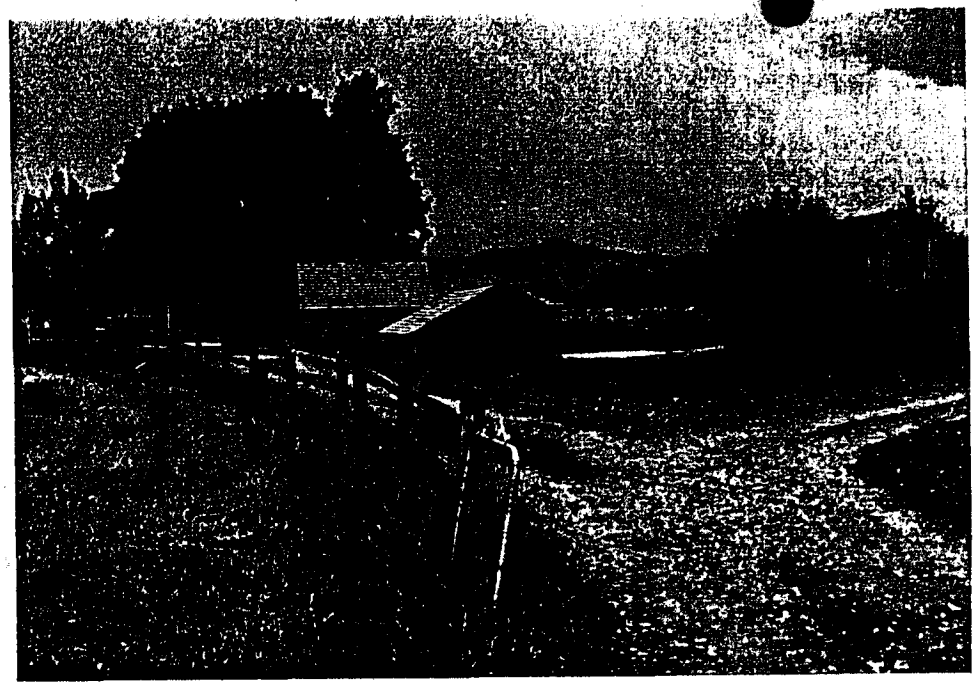


27. Looking north across channel to island (at high water).



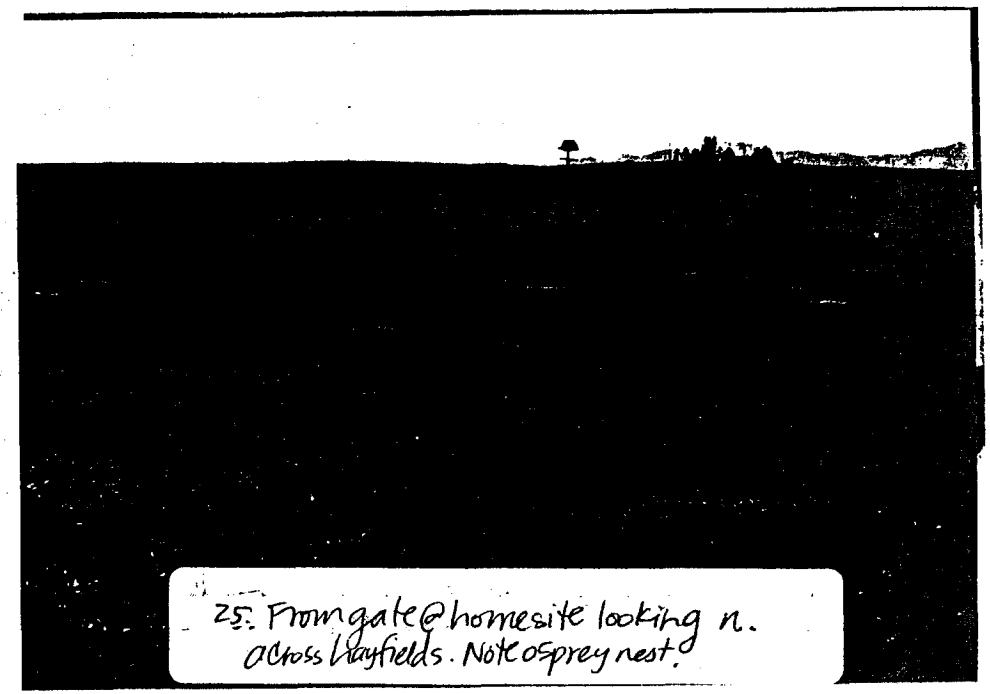
25. From gate @ homesite looking n. across hayfields. Note osprey nest.

E00011373

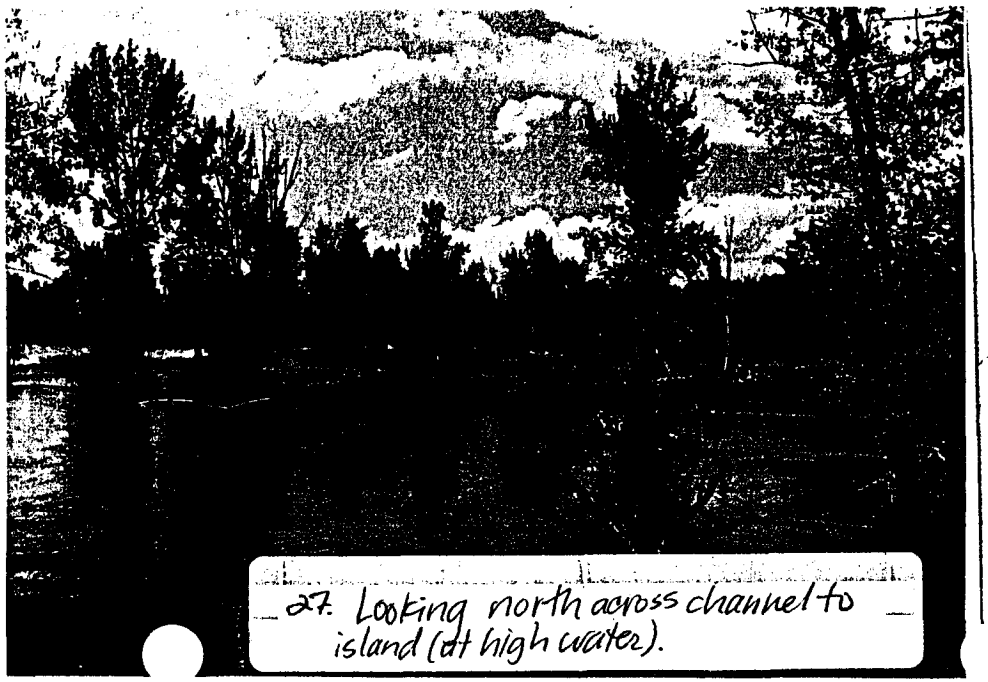


24. From gate at homesite entrance looking SE @ homesite.

26. From fence junction looking at river on right.



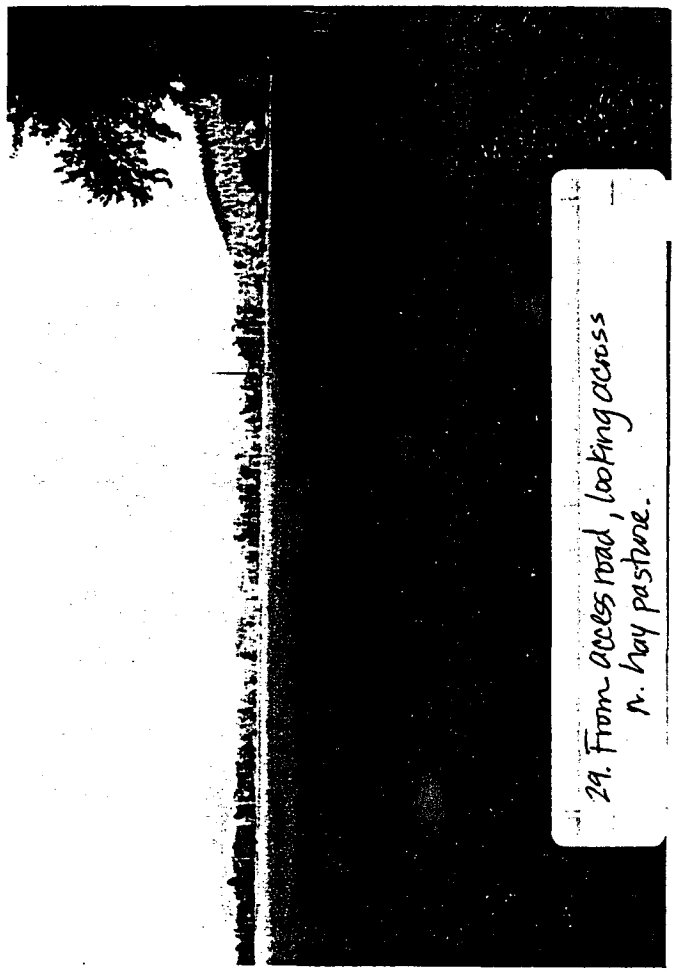
25. From gate @ homesite looking n. across hayfields. Note osprey nest.



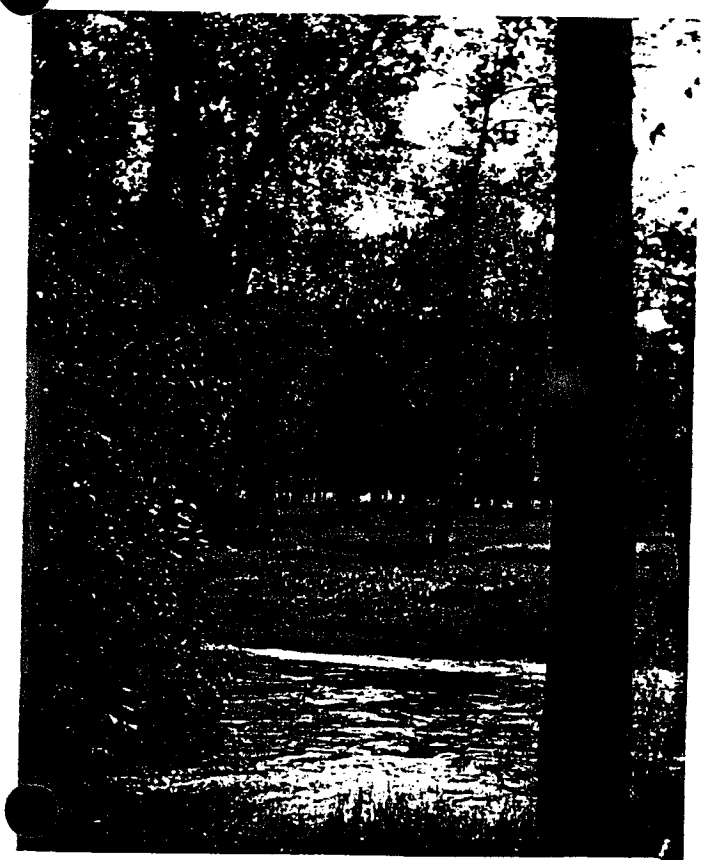
27. Looking north across channel to island (at high water).

E00011374

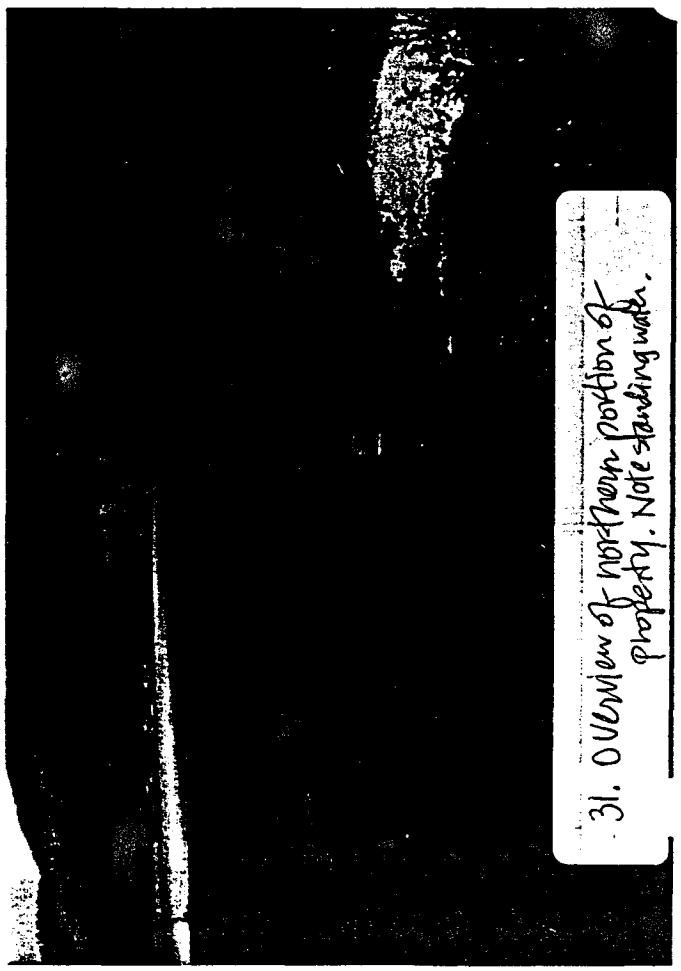
28. View across isolated wooded pasture.



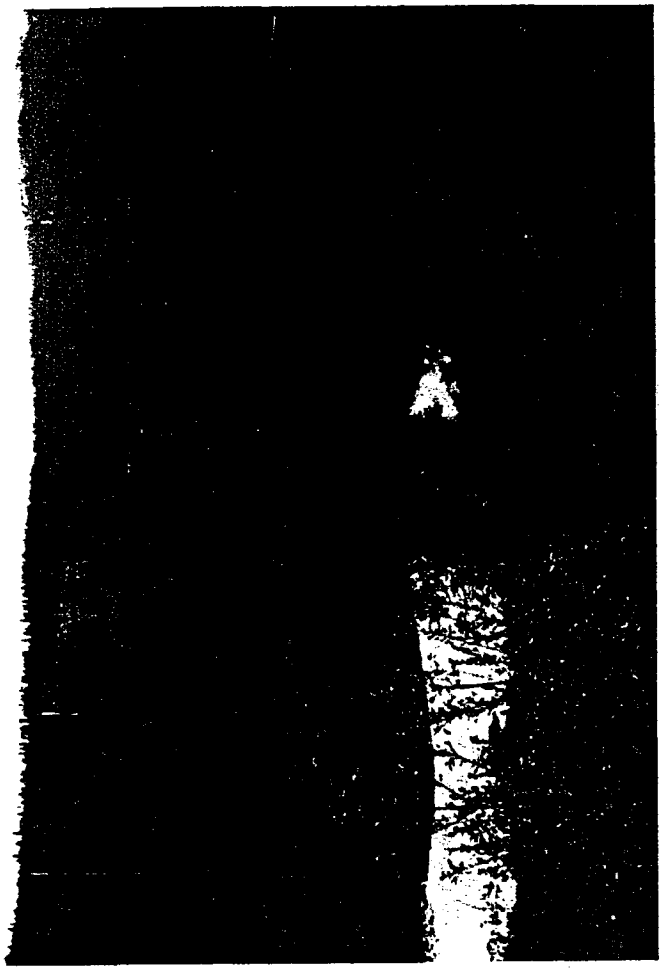
29. From access road, looking across N. hay pasture.



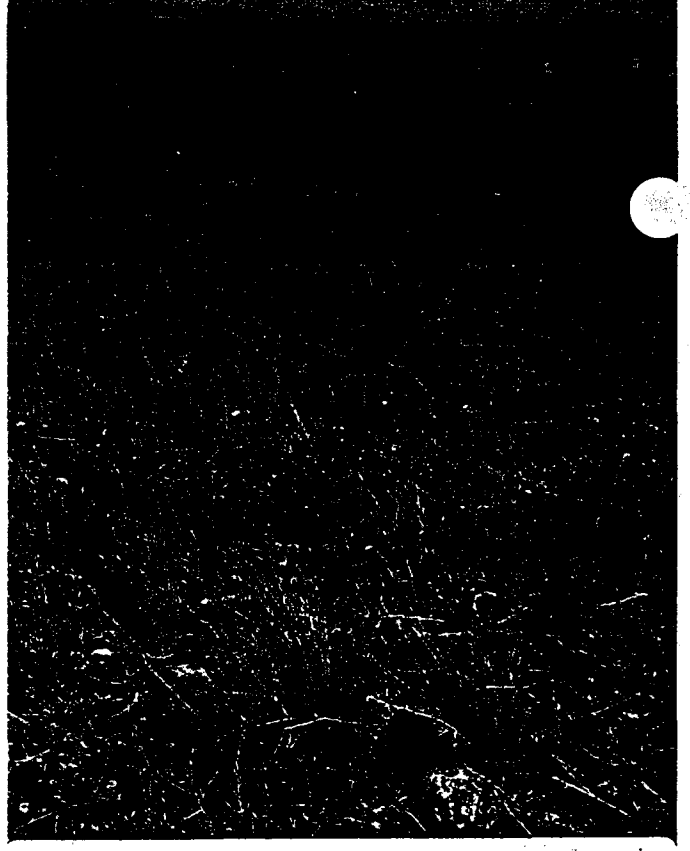
30. Looking due West across channel to Island.



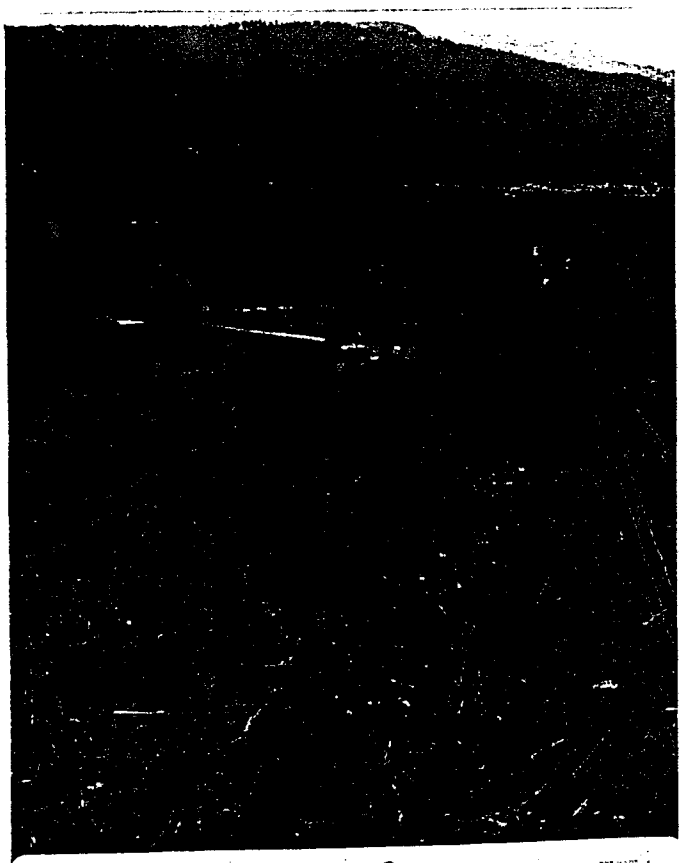
31. View of northern portion of property. Note standing water.



32. View of flooded pasture looking WSW.



33. Upland range dominated by spotted knapweed.



34. Looking due west from NE PC towards river.

Date of Draft October 27, 1998

DEED OF CONSERVATION EASEMENT

This conservation easement has been executed as of _____, 19__, by **H. James and Earlene Cusker,** (husband and wife) whose address is 300 Cote Lane, Missoula, Montana (referred to in this easement as the "Grantor") and **Five Valleys Land Trust, Inc.**, a Montana non-profit corporation whose address is P.O. Box 8953, Missoula, Montana 59807 (referred to in this easement as "Five Valleys"):

WHEREAS, the Grantor is the owner of the real property located in Missoula County, Montana, consisting of 200 acres, more or less, which is described in Exhibit A attached hereto and incorporated herein by this reference (referred to in this easement as the "Property"); and

WHEREAS, the Property has significant open space values as defined in Montana Code Annotated (MCA) Section 76-6-104, and provides significant relatively natural habitat for native plants and wildlife; and

WHEREAS, the Property constitutes a valuable element of the natural habitat of Missoula County and its open space, scenic, historic, and ecological values, including riparian lands, soils, water resources, and habitat for diverse species of wildlife such as ungulates, native fish, waterfowl, upland birds, passerine birds; and

WHEREAS, protection of the Property will contribute to the ecological integrity of Missoula County, and will conserve significant relatively natural habitat for wildlife and plants; and

WHEREAS, all of these natural elements and ecological values are of great importance to the Grantor and to the people of the State of Montana and the United States of America, and are worthy of preservation; and

WHEREAS, the Grantor, as the owner of the Property, owns the rights to identify, preserve, and protect in perpetuity the open space character, scenic values, and significant relatively natural features and values of the Property; and

WHEREAS, Five Valleys is organized to preserve and conserve land for natural habitat, scenic, and open space purposes; and

WHEREAS, the State of Montana has recognized the importance of private efforts toward voluntary conservation of private lands in the state by the enactment of MCA Sections 76-6-101, et seq., and 76-6-201, et seq.; and

WHEREAS, Five Valleys is a qualified private organization under the terms of MCA Sections 76-6-104(5) and 76-6-204, and is an organization described in Section 170(h)(3) of the Internal Revenue Code as qualified to receive and hold conservation easements;

WHEREAS, the Grantor wishes to preserve and protect in perpetuity the open space character, scenic values, and significant relatively natural features and values of the Property by conveying to Five Valleys the right to preserve and protect those values;

NOW, THEREFORE, in consideration of the mutual covenants contained in this easement, and, pursuant to MCA Section 76-6-201, et seq., the Grantor hereby conveys to Five Valleys, and the successors and assigns of Five Valleys, this perpetual easement on, over and across the Property consisting of the rights enumerated below.

E00011377

Section I
Rights Conveyed

The rights conveyed by this Easement are the following:

A. Identification and protection. To identify, preserve, and protect in perpetuity the significant relatively natural habitat, scenic and open space values of the Property, subject, however, to the rights reserved by the Grantor in this easement, and further subject to all third party rights of record in the property existing at the time of conveyance of this easement and not subordinated to this easement.

B. Access. Upon prior notice to the Grantor, to enter upon the Property to inspect the Property, to study and make scientific observations of its ecosystems, and to enforce the rights granted in this easement, in a manner that will not unreasonably interfere with the use of the Property by the Grantor. Five Valleys shall also have the right of immediate entry onto the Property if, in its sole judgment, such entry is necessary to prevent damage to or destruction of the conservation values protected by this easement. Aside from the rights of access granted in this paragraph, this easement does not grant Five Valleys, nor the public, any rights to enter upon the Property.

C. Injunction and restoration. To enjoin any activity on the Property or use of the Property which is inconsistent with this easement, and to enforce the reasonable restoration of any areas or features of the Property which may be damaged by such activities.

Section II
General Effect of Easement

A. Purposes. The purpose of this easement is to preserve, protect, enhance by mutual agreement, and restore (in the event of damage or degradation resulting from improper use of the property) the open space, scenic, and significant relatively natural features and values of the Property in perpetuity. It is further the specific purpose of this easement to conserve important habitat for white-tailed deer, waterfowl, upland birds, passerine birds and cold water fishes, and to conserve the diverse vegetative communities on the Property, and the wildlife inhabiting these communities. In achieving these purposes, it is the intent of this conservation easement to permit the continuation of such uses of the Property as may be conducted consistent with the conservation values protected herein.

B. Baseline Report. Competent naturalists have studied the Property and have collected data, photographs, maps, surveys, studies, reports, and other documentation which establishes the condition of the Property and its resources as of the date of execution of this easement (which documentation is referred to in this easement as the "Baseline Report"). The Grantor acknowledges receipt of a copy of the Baseline Report. Attached to the information is a written acknowledgment signed by the parties, a copy of which is attached to this easement as Exhibit B, which acknowledgment states that the Baseline Report serves as a natural ecosystem bench mark and accurately represents the condition of the Property at the time of conveyance of this easement, as required by Treasury Regulation Section 1.170A-14(g)(5)(I). The final resource documentation report shall be retained on file with Five Valleys. However, the parties agree that if a dispute arises concerning the condition of the Property on the date of execution of this easement, the parties will not be foreclosed from using all other relevant data, photographs, maps, surveys, studies, reports, and other documentation to assist in the resolution of the dispute. The parties further agree that if the Baseline Report contains any summaries of or representations about the terms and conditions of this easement, any conflict or inconsistency between the terms and conditions of this easement and the Baseline Report shall be governed by the express terms and conditions contained herein and not in the Baseline Report.

E00011378

C. Dedication of the Property. The Property is declared to be open space and natural land, and may not, except as provided in this easement, be converted or diverted from open space and natural land.

D. Perpetual restrictions. This easement shall run with and burden title to the Property in perpetuity, and shall bind the Grantor and all future owners and tenants of the Property.

Section III
Permitted Uses and Practices

The following uses and practices, though not an exhaustive recital of consistent uses and practices, are hereby deemed to be consistent with this easement. Some of these consistent uses and practices are identified below as being subject to specified conditions or to the requirement of and procedures for prior approval by Five Valleys as described in Section V of this easement. The remainder of these consistent uses shall not be precluded, prevented, or limited by this easement so long as they are in agreement with the general purposes of this easement.

This easement shall confine the use of the Property to activities such as farming, ranching and other agricultural uses; quiet enjoyment, hunting, fishing and other recreational uses enumerated herein; and two structures to be built at some point in the future.

A. Agricultural activities. To continue ongoing farming, ranching, and other agricultural activities as historically practiced on the Property and to institute and carry on new farming, ranching and other agricultural activities, including to plant, raise and harvest agricultural crops, to process agricultural products produced on the Property, and to raise and manage livestock, subject to the restrictions contained in this easement, and provided that such activities do not result in degradation of the soils, plant communities, water resources, or fish and wildlife species and their natural habitat.

B. Grazing. To graze and pasture cattle, horses, and other livestock, provided that livestock grazing use shall not degrade the fish and wildlife habitat, vegetation communities, stream banks, water quality, or other resources and habitat protected by this easement from the conditions documented in the Baseline Report.

In the riparian area, livestock grazing may not cause range conditions, streambank conditions, vegetative communities, soil structure and composition, and watershed characteristics to significantly deteriorate. A qualitative assessment of the range condition and degree of use as of the date of this easement is included in the baseline report referred to in Section II of this easement.

If Five Valleys determines that livestock grazing has caused significant deterioration of the condition of fish and wildlife habitat, vegetation communities, stream banks, water quality, or other resources and habitat protected by this easement, the Grantor will develop for review and approval by Five Valleys a riparian recovery plan which prescribes a grazing management system to allow the riparian areas to recover to the state documented in the Baseline Report. If Five Valleys approves a riparian recovery plan proposed by the Grantor, the Grantor will implement the plan, and both parties will periodically review the plan to ensure that its grazing prescriptions are restoring the Property to the state documented by the Baseline Report and are maintaining the Property in condition at least that good. If the Grantor does not propose a riparian recovery plan which is acceptable to Five Valleys, or the conditions fail to recover, then Five Valleys will have the right to require the Grantor to cease all grazing until conditions recover.

C. Water resources. To maintain, restore, develop, and enhance those water resources on the Property which are necessary or desirable for farming, ranching and other agricultural uses, wildlife, domestic needs, and private recreation, in a manner which is consistent with the restrictions and general purposes of this easement.

E00011379

Permitted uses include but are not limited to the creation and development of ponds and wetlands for fishery and wildlife improvement in accordance with applicable state and federal regulations; the construction, repair, maintenance, and expansion of irrigation systems; drilling wells for agricultural or residential purposes; and the development of stock watering facilities.

D. Agrichemicals. To use biological control agents or agrichemicals, including but not limited to fertilizers, pesticides, herbicides, insecticides, and rodenticides, but only in those amounts and frequencies necessary to accomplish reasonable agricultural, ranching and residential objectives. Applications of agrichemicals are subject to compliance with all applicable state and local laws and regulations.

E. Buffer zones. If and when the area bordering the Clark Fork River is used for livestock grazing, a fenced buffer zone extending at least forty (40) feet from the normal high water level shall be established and maintained along steep river banks at the Grantor's expense. The purposes of the buffer zone are: to improve stream bank stability; to reduce erosion and runoff; to improve water quality; and, consequently, to enhance fish and wildlife habitat by promoting plant and wildlife production and diversity. Livestock grazing and agricultural crops shall be excluded within the fenced buffer zone. Stock watering on the stream is permitted using water gaps or other appropriate means of limiting livestock access. An unfenced buffer zone of at least one hundred fifty feet from the normal high water level shall be maintained along gently sloping river banks in which moderate livestock grazing is permitted but agricultural crops are excluded. Grantor, his successors and assigns, shall have the right to construct fences to protect any sensitive riparian area. No non-native plant species shall be planted in either of the buffer zones without prior approval of Five Valleys Land Trust.

F. Hunting, fishing, and quiet enjoyment. To use the Property for hunting of game animals and birds, fishing, camping, hiking, birdwatching, photography, and quiet enjoyment by the Grantor and the Grantor's family, employees and invitees on a non-commercial basis, or on a commercial basis as allowed under paragraph P of this section.

G. Predators/problem animals. The Grantor may control predatory and problem animals by the appropriate use of legal control technique. Wherever possible, all measures used for such control shall be limited in their application to specific animals which have caused damage to livestock or other property; provided, however, that if it is not possible to identify a specific predatory or problem animal or when historic data indicates that a sufficient threat exists, the Grantor may use appropriate preventive control techniques; and provide further, that the aforementioned restrictions applicable to the identification and control of problem animals shall not apply to rodents. basis.

H. Buildings and structures. To maintain, repair, remodel, and make additions to all existing structures and other improvements on the Property, including: barns, sheds, shops, garages, corrals, fences, roads, irrigation structures, ditches, and pipelines. If any or all of such structures are removed or destroyed, to replace them with similar structures of the same approximate size in the same general locations. To place upon the Property additional structures and other improvements as may be necessary for agricultural purposes, pursuant to the terms of this easement. The right to place or construct additional accessory structures and improvements for residential purposes, including, without limitation, small garages for motor vehicles, sheds, patios, carports, and greenhouses, but not including a residential dwelling except as specifically allowed under paragraph J of this section.

I. Fences. To construct, maintain, repair, modify, and replace fences on the Property. All fences on the Property must permit the passage of small game, deer, or other wildlife, with the exception of fences around haystacks, harvested crops, and residential crop or truck gardens, and kennels or enclosures for pets, chickens, and similar animals.

J. New Residences. The Grantor shall have the right to construct, maintain and repair one additional seasonal single family residence to be located within the E½SW¼SE¼NE¼ of Section 21,

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Township 13 North, Range 20 West, M.P.M., Missoula County, Montana. This structure must be located at least 250 feet from the normal high water flow of the Clark Fork River. The Grantor must obtain Five Valley Land Trust's prior approval of the design and location of the residence, which approval will not be unreasonably withheld.

The Grantor shall also have the right to construct, maintain and repair one additional structure, which might be either a single family residence, guest ranch or bed and breakfast, to be located within the S½NE¼NE¼NE¼ of Section 21, Township 13 North, Range 20 West, M.P.M., Missoula County, Montana. The Grantor must obtain Five Valley Land Trust's prior approval of the design and location of the residence, which approval will not be unreasonably withheld.

All new residential structures are subject to compliance with all applicable state and local laws and regulations.

K. Temporary shelters. To place a tent, tarp, yurt, tepee, or other shelter upon the Property on a temporary basis from time to time.

L. Cutting of trees. The removal of trees which present a hazard to persons or property, the removal of trees within seventy-five feet of the residences, the harvesting of dead and diseased trees for use by the Grantor as firewood, and the harvesting of trees for use by the Grantor on the Property as posts and poles, any of which may be performed without prior notice and approval.

M. Timber management activities. To use timber cutting, prescribed burning, and other silvicultural tools for purposes of improving the health and safety of the forest, for purposes of returning the forest resource to a more natural state, and for the prevention of catastrophic wildfire, all subject to the approval of a timber harvest plan by Five Valleys as more specifically required by Section V of this easement. Any timber harvest must be performed in accordance with forestry practices which are consistent with the general and specific intentions of the Grantor as expressed in this easement, must conform to state and federal forestry laws, practices, guidelines, or regulations, and must minimize soil disturbance, vegetation damage, and impacts on the integrity of the watershed, water quality, wildlife habitat, and the natural scenic and aesthetic qualities of the Property.

N. Transfer and Division. The Grantor shall have the right to divide and transfer that portion of the subject property lying south and west of the southwesterly high water line of the Clark Fork River, provided that such transfer is effected with an express provision reflecting that said portion is subject to the terms and conditions of this easement, without modification or expansion of the terms of this easement. Under no condition may the land subject to this easement be divided except to allow the transfer of those lands lying south and west of the southwesterly high water mark of the Clark Fork River.

The Grantor also has the right to exchange, devise, or gift the Property as a single parcel or unit. The Grantor shall furnish Five Valleys with a copy of any document or conveyance utilized to effect the transfer of the Property within thirty (30) days after the execution of the document or conveyance.

O. Commercial Uses. To operate a small-scale guest ranch or bed and breakfast to be located in the NE¼NE¼NE¼ of Section 21, Township 13 North, Range 20 West, M.P.M., Missoula County, Montana. The Grantor must obtain Five Valley Land Trust's prior approval of the plans for the guest ranch or bed and breakfast before commencing operations, which approval shall not be unreasonably withheld. No such guest ranch or bed and breakfast shall provide overnight accommodations for more than ten guests. Any commercial use of the property must be in compliance with local zoning restrictions.

Commercial agricultural use is also permitted as stated in Section III, paragraph A.

P. Residual rights. Except as expressly limited herein, to use the Property for any purpose not

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inconsistent with this easement.

Section IV
Inconsistent Uses

The Grantor states and agrees that the following uses and practices, though not an exhaustive recital of inconsistent uses and practices, are inconsistent with the purposes of this easement, and shall be prohibited:

A. Alteration. The change, disturbance, alternation, or impairment of the significant relatively natural ecological features and values or the destruction of other significant conservation interests on the Property, except as specifically provided for in this easement.

B. Subdivision. The division, subdivision, or de facto subdivision of any portion of the Property separately from the other parcels which make up the Property except as specifically provided for in this easement. It is the intent of this easement, with the exception of the single division and transfer described and permitted in Section III, Paragraph N of this easement, that the entire property be maintained as a single unit. The Land shall not be used as open or natural space or park land for any subdivision or development purposes or requirements on land not covered by this Easement, nor shall the Landowners use, exercise or transfer any development rights on or to the Land separate from the Land. For purposes of this Easement, development rights include, without limitation, any and all rights, however designated, now or hereafter associated with the Land or any other property that may be used to compute development density, lot yield or any other development variable of or pertaining to the Land or any other property.

C. Structures and housing. The construction or placement on the Property of any buildings, camping accommodations, temporary living quarters of any sort, mobile homes, signs, billboards or other advertising materials, or other structures, except for those specifically provided for in Section III of this easement, and except that vehicular campers owned by the Grantor or the Grantor's guests may be parked on the Property on a temporary basis as appropriate to accommodate normal visitation.

D. Commercial facilities. The establishment of any commercial or industrial facilities or activities (other than those necessary in the operation or uses of the Property expressly permitted by this easement), including, but not limited to, outfitting, any small business, restaurant, night club, campground, trailer park, motel, hotel, commercial swimming pool, gas station, retail outlet, or facility for the manufacture or distribution of any product other than products to be grown or produced on the Property in connection with purposes expressly permitted under Section III, paragraph O of this easement.

E. Easements. The granting of any new roadway or utility easements or rights of access through the Property to any adjacent land. By granting the easement the Grantor has released and transferred to Five Valleys all of his right to any such easements or rights of way, so any easements or rights of way which the Grantor attempts to grant after the date of this easement will be void, unless Five Valleys approves and executes the easement.

F. Roads. The construction of any new roads or vehicle trails on the Property, or the use of vehicles off of the existing road(s) in a manner which damages vegetation, or which creates permanent tracks or trails: except for establishment of low impact roads in connection with farming, ranching and other agricultural uses; hunting, fishing and other recreational uses; and residential access. Any road constructed for one or more of such purposes shall be sited and maintained so as to minimize adverse impact on the natural habitat, scenic and open space values of the Property. Any road construction shall be subject to the prior written approval of Five Valleys. The Grantor's written notice shall include a construction plan describing the purpose of the road, its location on a topographic map and, to the extent deemed necessary by Five Valleys, discussion of the following: road grade, drainage, erosion/sedimentation impacts and mitigating efforts, areas of cut and fill, and special concerns like culvert placement, bridges, fords, buffer strips between roads and streams, and fish and wildlife impacts and mitigating efforts. Seeding and

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reestablishment of cover vegetation on exposed cuts and banks is required.

G. Utilities. The granting of right-of-way easements for utilities or the installation of utility structures, lines, conduits, cables, wires or pipelines upon, over, under, within or beneath the Property, except in connection with the construction of permitted agricultural structures, and for residential and associated structures as provided in Section III of this easement.

H. Dumping. The dumping or other disposal of public or domestic hazardous or toxic materials or substances or non-compostable refuse on the Property.

I. Excavation and mineral activities. The filling, excavating, dredging, mining, drilling, exploration for, or extraction of minerals, coal, hydrocarbons, including oil and gas, bentonite, soils, sand, gravel, rock, or other material on or below the surface of the Property except as permitted by this easement.

J. Ground or surface water and wetlands. Any use or activity that would pollute or degrade, or threaten to pollute or degrade, the surface or sub-surface waters or wetlands located on or underlying the Property, or which would alter or disturb any watercourse or wetland on the Property. Water resources on the property may be developed in accordance with Section III, paragraph C, provided that such development is accomplished in a manner consistent with the maintenance of watercourses and wetlands in a natural condition. In accordance with applicable state and federal regulations, the restoration and enhancement of water resources, including bank stabilization measures and development of ponds, shall be permitted. Rip-rapping or other armoring of the bed and banks of the Clark Fork River shall not be allowed.

K. Game, fur, or fish farms. The raising or confinement of game farm animals (as defined in MCA Section 87-4-406 as amended from time to time), native or exotic fish, fur bearing animals, or other native and exotic animals as delineated in MCA Title 87 in its entirety.

L. Commercial feed lot. The establishment or maintenance of any commercial feed lot, defined for purposes of this easement as a facility used for the purpose of receiving, confining, and feeding of livestock for hire.

M. Timber harvest. Logging or gathering firewood for commercial purposes.

Section V
Prior Notice by Grantor and Approval of Grantee

The Grantor shall not undertake or permit any activity requiring prior approval of Five Valleys without first having notified Five Valleys of the desired activity and having received approval from Five Valleys as required by this section.

A. Grantor's request for permission. Prior to the commencement of any activity, use, or enterprise requiring Five Valleys's approval, the Grantor must send Five Valleys a written request for permission to undertake or permit that activity, use or enterprise. The request must inform Five Valleys of all aspects of the proposed activity, including, but not limited to, the location, size, capacity and number of structures, improvements, facilities or uses, and the dates and duration of the activity. The request must provide Five Valleys with an address to which responses should be sent, and the names and addresses of persons to contact about the request.

B. Address to which requests must be sent. Requests for permission must be sent by registered or certified mail, return receipt requested, and shall be addressed to Five Valleys at P. O. Box 8953, Missoula, Montana 59807, or at whatever other address Five Valleys may provide to the Grantor from time to time.

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C. Time for response. Five Valleys shall have thirty (30) days from the receipt of a request for permission, as indicated by the registered or certified return receipt, to review the proposed activity, use or enterprise and to notify the Grantor of any objection to that activity, use, or enterprise; provided that the 30-day period shall not begin until such time as Five Valleys has received adequate information from the Grantor to evaluate the proposed activity. If Five Valleys requires additional information to evaluate the proposed activity, Five Valleys shall request the information from the Grantor as soon as practicable and in any case not later than 20 days after receiving the request for permission. In the case of requests for permission to engage in a timber harvest or prescribed burn on the Property, in recognition of the significant impacts which these activities could have upon the Property, Five Valleys will have sixty (60) days in which to review the request.

D. Response to a request for permission. Five Valleys's decision to approve or disapprove the activity proposed by the Grantor shall be sent by registered or certified mail, return receipt requested, to the Grantor at the address provided to Five Valleys in the request. A decision by Five Valleys to disapprove a proposed activity must be based upon Five Valleys's determination that the proposed activity is inconsistent with this easement. If, in Five Valleys's judgment, it is possible that the proposed activity can be modified to be consistent with this easement, Five Valleys's response shall inform the Grantor of the manner in which the proposed activity can be modified to conform with this easement. Once a request for permission has been modified to the satisfaction of Five Valleys, or Five Valleys otherwise concurs with the matters set forth in the Grantor's request, the proposed activity may thereafter be conducted in the manner approved by Five Valleys. Except as provided in the next section, a proposed activity, use, or enterprise may be commenced or conducted only after the Grantor has received Five Valleys's express written approval, and only in the manner requested by the Grantor and approved by Five Valleys.

E. Grantee's failure to respond. If Five Valleys fails to post its response to the Grantor's request within the time allowed in subparagraph C, the proposed activity shall automatically be deemed consistent with the terms of this easement, and Five Valleys will have no further right to object to the activity identified by the request.

F. Acts beyond the Grantor's control. The Grantor will not be liable, not shall Five Valleys be entitled to bring an action against Grantor for failure to request permission to undertake prudent actions taken by the Grantor under emergency conditions to prevent, abate, or mitigate significant injury to the Property resulting from causes beyond the Grantor's control, including, without limitation, fire, flood, storm, and earth movement, or from any similar cause which is beyond the control of the Grantor, or from any prudent action taken by the Grantor under emergency circumstances to prevent, abate or mitigate significant injury to the Property resulting from such causes.

G. Timber Harvest. Any request to perform timber management activities or thinning, including harvest or thinning for the abatement of a disease or infestation, must be accompanied by a timber harvest plan prepared by qualified natural resource personnel. The Grantor and Five Valleys will mutually determine the completeness of the timber harvest plan and its adherence to the general and specific intentions of this easement prior to the approval of the plan and the initiation of any timber harvest.

Section VI
Breach and Restoration

A. Notice of violation. If a violation, or threat of violation, of any restriction contained in Section V of this easement, whether by the Grantor or by a third party, comes to the attention of Five Valleys, Five Valleys shall notify the Grantor in writing of the violation and demand corrective action sufficient to cure the violation. Where the violation involves injury to the Property resulting from any use or activity inconsistent with the purposes of this easement, the Grantor shall restore the portion of the Property so injured to the condition that existed prior to the injury.

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B. Grantee's remedies. If the Grantor (I) fails to cure the violation within thirty (30) days after receiving a notice of the violation from Five Valleys; or (ii) under circumstances where the violation cannot reasonably be cured within a thirty (30) day period, fails to begin curing the violation within thirty (30) days of the date mutually agreed to between the Grantor and Five Valleys when efforts to cure the violation can reasonably be made; or (iii) fails to diligently pursue efforts to cure the violation until it is finally cured, then Five Valleys may bring an action at law or in equity in a court of competent jurisdiction to enforce the terms of this easement, to enjoin the violation by temporary or permanent injunction, to recover any damages to which it may be entitled for violation of the terms of this easement, and to require the restoration of the Property to the condition that existed prior to any such injury. If Five Valleys, in its sole discretion, determines that circumstances require immediate action to prevent or mitigate significant damage to any protected resource, Five Valleys may pursue its remedies under this paragraph without waiting for the period provided for cure to expire. Five Valleys's rights under this paragraph apply equally in the event of either actual or threatened violations of the terms of this easement, and the Grantor agrees that Five Valleys's remedies at law for any violation of the terms of this easement are inadequate and that Grantee shall be entitled to the injunctive relief described in this paragraph, both prohibitive and mandatory, in addition to such other relief to which Five Valleys may be entitled, including specific performance of the terms of this easement, without the necessity of proving either actual damages or the inadequacy of otherwise available legal remedies. Five Valleys's remedies described in this paragraph shall be cumulative and shall be in addition to all remedies now or hereafter existing at law or in equity.

C. Costs of enforcement. If Five Valleys prevails in enforcing the terms of this easement, any costs incurred by Five Valleys, including reasonable costs of suit and attorneys' fees, and any costs of restoration necessitated by the Grantor's violation of the terms of this easement, shall be borne by the Grantor.

D. Grantee's discretion. Enforcement of the terms of this easement shall be at the discretion of Five Valleys, and any forbearance by Five Valleys to exercise its rights under this easement in the event of any breach of any provision of this easement shall not be deemed or construed to be a waiver by Five Valleys of such provision or of any subsequent breach of the same or any other provision of this easement or of any of Five Valleys's rights under this easement. No delay or omission by Five Valleys in the exercise of any right or remedy upon any breach by the Grantor shall impair such right or remedy or be construed as a waiver.

E. Acts beyond the Grantor's control. Nothing contained in this easement shall be construed to entitle Five Valleys to bring any action against the Grantor for any injury to or change in the Property resulting from causes beyond the Grantor's control, including, without limitation, fire, flood, storm, and earth movement, or from any prudent action taken by the Grantor under emergency conditions to prevent, abate, or mitigate significant injury to the Property resulting from such causes.

Section VII
Maintenance and Taxes

The Grantor retains all responsibilities and agrees to bear all costs and liabilities of any kind related to the ownership, operation, upkeep and maintenance of the Property including the control of noxious weeds in accordance with Montana law, and agrees to defend and indemnify Five Valleys against such expenses. The Grantor shall pay any and all taxes, assessments, fees, and charges levied by competent authority on the Property, except any tax or assessment on this easement. Any lawful tax or assessment on this easement shall be paid by Five Valleys.

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Section VIII
Indemnities

A. Indemnification by the Grantor. The Grantor shall hold harmless, indemnify, and defend Five Valleys and its directors, officers, employees, agents, and contractors and the heirs, personal representatives, successors and assigns of each of them (collectively referred to in this easement as the "Indemnified Parties") from and against all liabilities, claims, penalties, costs, losses, damages, expenses, causes of action, demands, or judgments, including, without limitation, reasonable attorneys' fees, arising from or in any way connected with (I) injury to or the death of any person, or physical damage to any property, resulting from any act, omission, condition, or other matter related to or occurring on or about the Property, in the event of Grantor's negligence, and then only except to the extent of the adjudicated proportionate fault of any of the Indemnified Parties; (ii) the obligations specified in Section VII; and, (iii) the obligations arising from past, present or future dumping of hazardous materials on the Property, and any obligations associated with their cleanup or containment of their impacts.

B. Indemnification by Five Valleys. Except to the extent of the adjudicated proportionate fault of the Grantor or its agents or employees, Five Valleys shall hold harmless and indemnify the Grantor and its agents, employees, personal representatives, successors and assigns from and against all liabilities, claims, penalties, costs, losses, damages, expenses, causes of action, demands, or judgments, including, without limitation, reasonable attorney's fees, arising from or in any way connected with injury to employees, officers or directors, of Five Valleys while on the Property in the course of carrying out the duties and obligations of Five Valleys under the terms of this easement.

Section IX
Assignment of Easement

Five Valleys may assign its interests in this easement upon obtaining the Grantor's prior written consent and; provided that:

Any assignment may be made only to an organization [or governmental agency] qualified at the time of transfer as an eligible donee under Internal Revenue Code Section 170(h)(3) or its successor, or any regulations issued thereunder, and is organized or operated primarily or substantially for one or more of the conservation purposes specified in Section 170(h)(4)(A) of said code; and

Five Valleys requires, as a condition of such transfer, that the conservation purposes of this easement shall be carried out and enforced in perpetuity; and

Five Valleys represents to the Grantor that its present intention is to assign its interest in this easement only in connection with a dissolution of Five Valleys.

Five Valleys agrees that it will make a reasonable effort in the event of any assignment to suggest an assignee which is a qualified organization other than a governmental unit referred to in Section 170(c)(1) of the Code, which has conservation of natural resources as a substantial organizational purpose.

Section X.
Resource Data

A. Acknowledgment of receipt of baseline report. Prior to the execution of this easement a baseline report was prepared which contains information sufficient to document the condition of the Property on the date of execution of this easement. A written acknowledgment signed by the parties, a copy of which is attached to this easement as Exhibit B which acknowledgment states that the baseline report accurately represents the condition of the Property as of the date of execution of this easement, as required by Treasury Regulation β1.170A-14(g)(5)(I). The baseline report will be retained on file with Five Valleys.

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B. Purpose of baseline report. The parties intend that the resource data shall be used by Five Valleys to monitor the Grantor's future uses of and activities on the Property . The parties further agree that if a controversy arises with respect to the biological or physical condition of the Property or a particular resource on the Property, the parties shall not be foreclosed from utilizing any other relevant document, survey, or report to assist in the resolution of the controversy. The Grantor and Five Valleys recognize that changes in economic conditions, in agricultural technologies, in accepted farm, ranch and forest management practices, and in the situation of the Grantor may result in an evolution of agricultural and related uses of the Property provided such uses are consistent with the purposes of this easement.

Section XI.
Extinguishment and Condemnation

A. Extinguishment of easement. As provided for in Section 1.170A-14(g)(6)(I) of the Internal Revenue Code Regulations, if unexpected circumstances arise in the future which render the purposes of this easement impossible or impractical to accomplish, this easement can only be terminated or extinguished, whether in whole or in part, by judicial proceedings in a court of competent jurisdiction. If this easement is terminated or extinguished by judicial proceedings, Five Valleys will be entitled to receive compensation from the Grantor in an amount determined in accordance with Paragraph B of this section ,unless Montana law in effect at that time provides otherwise. The court may provide for the compensation to be paid to Five Valleys either at the time of the court proceedings or at the time of a subsequent sale, exchange, or involuntary conversion of the Property. In either case this easement will remain in full force and effect and will not be extinguished until (I) the full compensation has been received by Five Valleys; or (ii) the court has entered a judgment against the Grantor in favor of Five Valleys in the amount of the compensation, which judgment has a lien priority which is as of the date of this easement; or (iii) Five Valleys has received a note in the amount of the compensation bearing interest at the rate payable by statute and payable at the time of the next sale, exchange, or involuntary conversion of the Property, which note is secured by a mortgage or trust indenture on the Property with a lien priority which is as of the date of recording of this easement. Five Valleys must use the compensation received with respect to the extinguishment in a manner which is consistent with the conservation purposes of this easement.

B. Compensation payable to Five Valleys if this easement is extinguished.
The Grantor is obtaining a qualified appraisal which will establish the fair market value of the Property immediately before the execution of this easement, the fair market value of the Property immediately after the execution of this easement, and the percentage by which this easement reduces the value of the Property. The Grantor and Five Valleys agree, as required by Section 1.170A-14(g)(6)(ii) of the Internal Revenue Code Regulations, that this easement creates a property right, immediately vested in Five Valleys, which will always have a fair market value which is equal to that same percentage of the fair market value of the Property as of any date of determination, determined as if the Property were unencumbered by this easement. After the appraisal has been completed, the parties will execute a document which amends this paragraph to set forth the fair market value of the Property immediately before the execution of this easement, the fair market value of the Property immediately after the execution of this easement, and the percentage by which this easement reduces the value of the Property, as established by the appraisal. If this easement is extinguished, Five Valleys will be entitled to receive that same percentage of the fair market value of the Property unencumbered by this easement as of the date of the extinguishment. If the parties cannot agree upon the fair market value of the Property unencumbered by this easement as of the date of the extinguishment, then this fair market value will be determined by an appraisal or appraisals, and the Grantor will pay the cost of the appraisal or appraisals.

C. Eminent Domain. If part or all of the Property is taken by right of eminent domain, the Grantor and Five Valleys may join in appropriate actions to recover the full value of the Property or portion of the Property taken and all incidental or direct damages resulting from the taking. Any expense incurred by the Grantor or Five Valleys in any such action shall be first reimbursed out of the condemnation award, and the

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remainder of the proceeds shall be divided between the Grantor and Grantee in proportion to their interest in the Property, as determined by Paragraph B of this section. Five Valleys must use the compensation which it receives with respect to the condemnation in a manner which is consistent with the conservation purposes of this easement.

Section XII
Interpretation

The provisions of this easement shall be reasonably construed to effectuate their purpose of preserving and protecting habitat for wildlife, unique native plants, and diverse vegetative communities. No remedy or election given by any provision in this easement shall be deemed exclusive unless so indicated, but it shall, whenever possible, be cumulative with all other remedies at law or in equity. The parties acknowledge that each party and its counsel have reviewed and revised this easement and that no rule of construction that ambiguities are to be resolved against drafting party shall be employed in the interpretation of this easement. In the event of any conflict between the provisions of this easement and the provisions of any use and zoning restrictions of the State of Montana, Missoula County, or any other governmental entity with jurisdiction, the more restrictive provisions shall apply. This easement shall be interpreted in accordance with the laws of the State of Montana.

Section XIII.
Miscellaneous Provisions

A. Partial invalidity. If any provision of this easement or the application of any provision of this easement to any person or circumstance is found to be invalid, the remainder of the provisions of this easement and the application of such provisions to persons or circumstances other than those as to which it is found to be invalid shall not be affected by the finding of invalidity.

B. "Grantor" and "Grantee". The terms "Grantor" and "Grantee", as used in this easement, and any pronouns used in place of those terms, shall mean and include the Grantor named above and Grantor's heirs, personal representatives, executors, successors in interest and assigns, and Five Valleys Land Trust, Inc., and its successors and assigns, respectively.

C. Titles. Section and paragraph titles and subtitles are for convenience only and shall not be deemed to have legal effect.

D. Subsequent deeds. The Grantor agrees that reference to this easement will be made in any subsequent deed, or other legal instrument, by means of which they convey any interest in the Property (including any leasehold interest).

E. Amendment. If circumstances arise under which an amendment to or modification of this easement would be appropriate, the Grantor and Five Valleys may jointly amend this easement; provided that no amendment shall be allowed that affects the qualification of the easement or the status of Five Valleys under any applicable laws, including Section 170(h) of the Internal Revenue Code of 1986, as amended, or Section 76-6-201, et seq., MCA. Any such amendment shall be consistent with the purposes of this easement, shall not affect its perpetual duration, shall not permit additional development or improvements to be undertaken on the Property other than development or improvements currently permitted by this easement, and shall not impair any of the significant conservation values of the Property. Any such amendment shall be in writing, shall refer to this easement by reference to its recordation date, shall be signed by the Grantor and Grantee, and shall be recorded in the official records of Missoula, County, Montana.

F. Governing law. If any dispute arises over the interpretation or enforcement of the terms and conditions of this easement, the laws of the State of Montana shall govern the resolution of such dispute.

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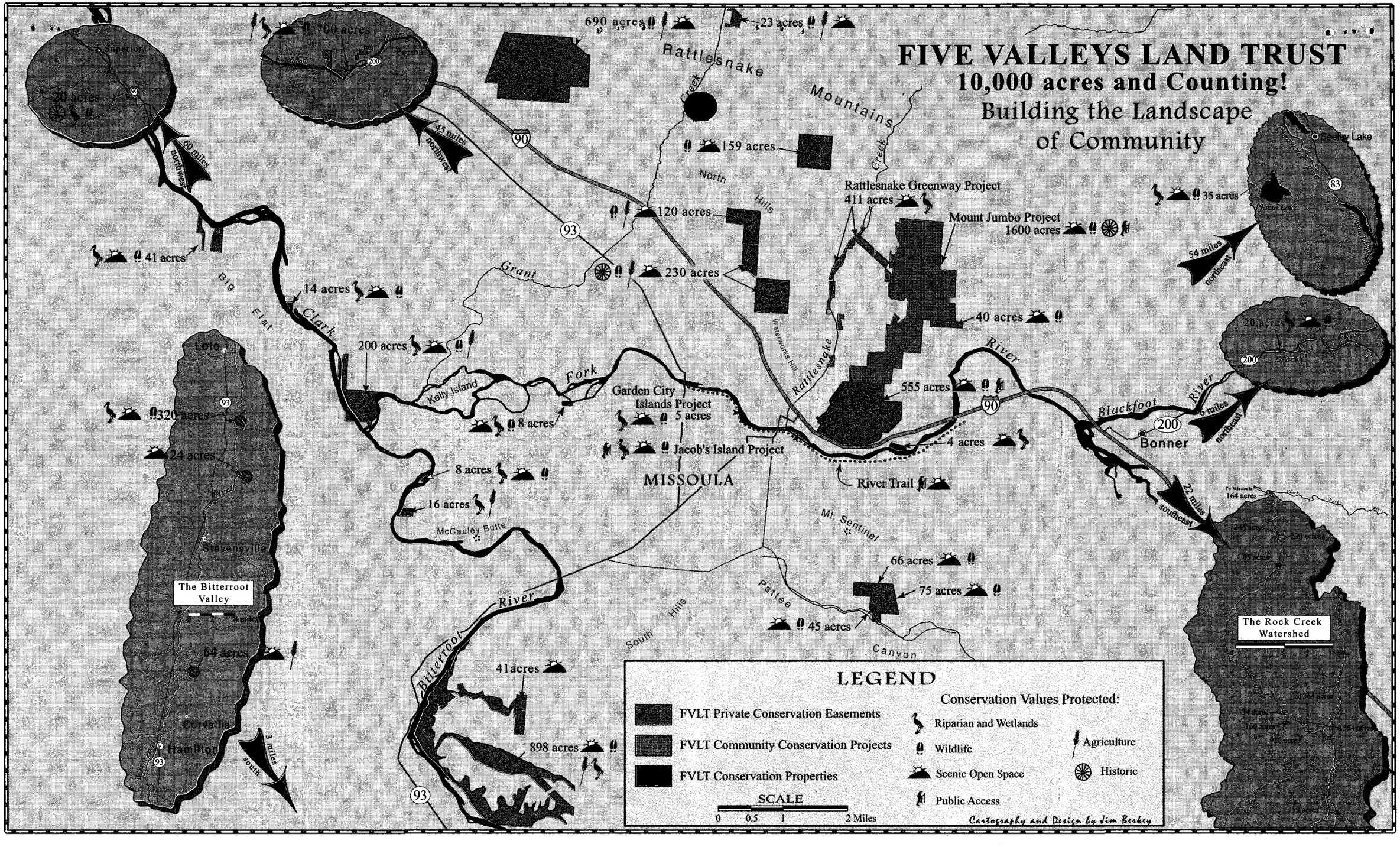
FIVE VALLEYS LAND TRUST
10,000 acres and Counting!
Building the Landscape of Community
Superior
20 acres
60 miles northwest
700 acres
Permo
45 miles northwest
690 acres
23 acres
Rattlesnake Mountains
Creek
159 acres
North Hills
120 acres
230 acres
Rattlesnake Greenway Project
411 acres
Mount Jumbo Project
1600 acres
35 acres
Seeley Lake
54 miles northeast
41 acres
Big Flat
14 acres
Clark
Grant
200 acres
Kelly Island
Fork
8 acres
Garden City Islands Project
5 acres
Jacob's Island Project
MISSOULA
Waterworks Hill
Rattlesnake
40 acres
555 acres
River
Blackfoot
River
6 miles northeast
20 acres
Bonner
4 acres
River Trail
22 miles southeast
Lolo
320 acres
24 acres
Stevensville
The Bitterroot Valley
64 acres
Corvallis
Hamilton
3 miles south
8 acres
16 acres
McCauley Butte
Mt. Sentinel
66 acres
75 acres
45 acres
Pattee Canyon
South Hills
Bitterroot River
41acres
898 acres
The Rock Creek Watershed
LEGEND
FVLT Private Conservation Easements
FVLT Community Conservation Projects
FVLT Conservation Properties
Conservation Values Protected:
Riparian and Wetlands
Wildlife
Scenic Open Space
Public Access
Agriculture
Historic
SCALE
0 0.5 1 2 Miles
Cartography and Design by Jim Berkey

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Bitterroot Restoration, Inc.

Bitterroot Consultants ▸ Bitterroot Native Growers ▸ Bitterroot Revegetation Services

October 22, 1998

Stone Container Corporation
Attn: Ed Scott
PO Box 4207
Missoula, MT 59806

Dear Ed,

As per our phone conversation of September 24, enclosed is a proposal for identifying projects and preparing conceptual plans for Habitat restoration efforts on the Clark Fork River. Please give me a call if you have any comments or questions or would just like us to get started. All of us at BRI would be pleased to help you with your efforts. Thank you for your time and consideration.

Sincerely,

Leonard Ballek

Leonard Ballek
Vice President

Received 10/28/98

XC: Bob Boschee

Fo Yo Io
Ed

445 Quast Lane, Corvallis, MT 59828-9406
Phone: (406) 961-4991 *Fax:* (406) 961-4626
E-mail: sales@revegetation.com or consulting@revegetation.com

Proposal to the Stone Container Corporation:

Riparian Habitat Restoration on the Clark Fork River

Bitterroot Restoration, Inc.

Bitterroot Restoration, Inc. (BRI) proposes to assist Stone Container in riparian restoration efforts on the Clark Fork River between Harpers Bridge and Alberton. This assistance would include a concentrated effort, working with the Audubon Society and other conservation groups, to locate three to five significant and visible projects in this area. By identifying project sites and articulating project goals, we can leverage existing funding to enhance projects we identify.

Background

Len Ballek and Tom Parker of Bitterroot Restoration have been in contact with Ed Scott and David Ledford of Stone Container Corporation regarding habitat restoration along the Clark Fork River. Through conversations with local members of the Audubon Society, we have identified potential riparian restoration themes along the river between Harper's Bridge and Alberton. This river reach lacks significant cottonwood regeneration—cottonwoods provide essential habitat for Lewis' woodpecker and Great blue heron. By working with conservation-oriented organizations like the Audubon Society, we can identify specific sites that would be appropriate for riparian restoration along this reach. Most importantly, we can identify landowners who would be interested in hosting restoration projects.

Proposed tasks

Bitterroot Restoration proposes to complete the following tasks:

1) Identify three to five potential projects sites by working with local conservation groups and land owners.

2) Develop brief conceptual implementation plans with cost estimates for each site. Plans would include: description of work to be performed; maps; photos; and typical drawings of restoration techniques.

Cost for tasks 1 and 2—includes communication, travel, supplies, and plan writing ***$6,000***

3) Leverage additional funding for restoration projects by taking the conceptual plans to potential funding sources within the community, and also targeting national funding sources like the National Arbor Day Foundation.

Cost for task 3 would be determined on a time and materials basis.

Why Bitterroot?

Bitterroot Restoration is a comprehensive ecological restoration firm. We work throughout the western United States and our clients include: Peabody Western; Plum Creek Timber Company; Pittsburgh and Midway Coal; the National Park Service; and many other government agencies, private landowners, and members of industry. Our comprehensive structure allows us to plan, implement, and provide appropriate native plant materials for feasible, cost effective projects. Our clients value our ability to bring continuity, accountability, and credibility to every project we do.

Stone Container Corporation

7/27 → ED S
Let's Discuss
BBB

INTERNAL CORRESPONDENCE

DATE: 21 July 1998

To: See Distribution

Location:

From: David L. Ledford Dave

Location: Columbia

CC: Corky Lee

Subject: Bull Trout and Clark Fork

$50K for Parks
No ▷ -
Can ▷ other
$50K for
Happens Huson
- Judge
- CHEER
Stone.

Distribution: Bob Bosche, Ed Scott, Curt Barton, Rich Lane

Update on executing Sections 3.a. and 3.b. of consent order

1. Fulfilling obligations of Section 3.b. relating to spending $50,000 on Bull Trout will pose no problems. We can partner with Montana Fish, Wildlife, and Parks, and the USFWS on some projects they have ongoing. I spent a day in the field with them, looking at stream restoration projects they are doing, and we can get a lot of good things accomplished with them.

Past Proposals

2. We are going to spend $50,000 of the $100,000 required in Section 3.a. at the Missoula mill site. I can work with BRI, and the WHC to come up with projects. I also want to include Montana Fish, wildlife and Parks. I have to be careful with BRI as they might spend half the money planning the project instead of doing something.

3. We should consider spending the remaining $50,000 from section 3.a. somewhere other than adjacent to the Clark Fork River between Harper's Bridge and Alberton. After visiting there, I am not sure what we can do that is significant for wildlife. I want to copy Section 3.a. of the consent order, and share it with some 3rd parties to get outside opinions as to if there are other places we could better spend the money. The 3rd parties would be individuals with Montana Fish, Wildlife and Parks, Trout Unlimited, and the U.S. Fish and Wildlife Service. If these parties determine that the $50,000 could be better spent somewhere else, I would ask them to approach CHEER and ask that we be allowed to spend the money elsewhere.

It would be better to spend the money on assisting in endangered species recovery than on butterfly gardens in Missoula. Hopefully, the chosen 3rd parties could help put us on the offensive with CHEER. Once we get the consent of CHEER to spend the money elsewhere, we could get another local NGO to take the point with us. A group like the Clark Fork Coalition might be a good choice. CHEER would be in the background while the Clark Fork Coalition was doing things with Stone Container Corporation to save endangered species.

?

Stone Container Corporation

Forest Products Division

Mullan Road
West of Missoula

Mailing Address:

P.O. Box 1027
Missoula, Montana 59806-1027

(406) 626-5293
Fax (406) 626-5839

Discuss w/EDS.

TO: Bob Boschee
David Ledford
Ed Scott

FROM: Rich Lane

DATE: August 7, 1998

SUBJECT: Clark Fork Habitat Protection

CC: Corky Lee

I recently met with the Five Valleys Land Trust folks to discuss the possibility of leveraging our Clark Fork Habitat funds (Section 3.a of the consent order) to accomplish Stone's goals. I have followed this group ever since their Mount Jumbo project; a good portion of the money they raised for that effort resulted from selective timber harvest on the mountain. The Five Valleys leadership publically spoke proudly of the excellent logging that enhanced wildlife habitat, forest health and public access while helping to fund the project. I've since attended two of their annual fund raisers and it is true that several of their principals are ardent enviros (Tom France of the National Wildlife Federation and the late Arnold Bolle to name two) and they recently honored Jim Carlson of the county health department with a conservation award. Other supporters include the Montana Power Company, the Rocky Mountain Elk Foundation and Browning Ferris Industries (BFI), who run the local landfill. They also got a grant from Turner and Liz Claiborne (who is having her land near Swan Lake selectively harvested). They claim to be apolitical and I have not seen anything to the contrary; they aren't going away either, with or without our support.

The attached letter and abstract propose that Stone's money would be designated for conservation easements along the Clark Fork that would limit commercial and housing development and thus protect/enhance wildlife habitat. Timber availability/harvest is not an issue. Locally, this river is not as well loved as the Blackfoot but is becoming more popular with recreationists as Missoula's population expands. Biologically, the river is a good fishery and is an important mixing zone for the Mill and the city. Bear, moose, coyotes, white tails, bald eagles and ospreys use the banks. Historically, the river's heavy metal pollution problems supposedly remind Montanan's of why "big out-of-state" companies require tough regulation. Politically, if the right terms can be negotiated with Five Valleys and long term praise can be generated by others, this project should be a real winner for our Mill.

Feb. 12, 1998 GF Trib

Crusade to save Missouri's aging cottonwoods

By MICHAEL BABCOCK
Tribune Outdoor Editor

Michael Dalton and Mary Jane Ahrendes have a simple but distant vision: They see cottonwood trees on the wild and scenic Missouri.

Cottonwoods, the linchpins of central and eastern Montana's riparian areas, are fading from the river scene.

But save the trees and you save the rest of the riparian area.

"Over the next 20 to 30 years, what few groves of cottonwood there are left will be gone," Dalton said. "They have a short life span. We need to do something and we can't wait for the private landowner or the BLM. There isn't time."

> "We have a lot of work to do in the next 20 or 30 years to avoid a moonscape along the river."
>
> — Michael Dalton

So the husband and wife have formed the Sunburst Foundation and are working to make it a nonprofit organization aimed at restoring the riparian areas along the river and educating river users and ranchers about renewing what once was a self-sustaining resource.

Dalton probably is familiar to many in Great Falls: He was a broadcaster here from 1975 to 1985 and was a marketing director for the Rocky Mountain Treatment Center. He left the city to spend 27 months with the Peace Corps in Honduras. Dalton is now a massage therapist.

Ahrendes was born in Bozeman and raised in Highwood. She returned 18 months ago from the Dominican Republic where she taught school.

The two were inspired to form the Sunburst Foundation by Virgelle outfitter Don Sorensen after they floated the river last summer.

"I was ranting and raving about all these corporations — Disney and Ford — saying 'isn't it too bad our grandchildren won't see the Eye of the Needle' and I said look at the riparian areas," said Sorensen, who owns Missouri River Canoe Co.

"That is kind of what stimulated their whole process about what they could do along the river with a nonprofit corporation," Sorensen said.

Dalton said Sorensen was talking about humanity's obligation to pay back what it takes and to sustain and restore nature.

See CRUSADE, Page 4

Crusade: To save the trees

FROM 1

"We heard those words and said, 'why not do something about that?'" Dalton said.

"In a perfect world we would think of the river as a renewable, self-sustaining constant resource," Dalton told a group of conservationists last week. "Maybe there are a few rivers like that but not the Missouri. There is too much pressure on the riparian areas."

Dalton said the pressure began with woodcutters who supplied the steamboats on the river. The boats, he said, consumed almost 300,000 cords of cottonwood. It came from the river banks that are now bare.

Dalton said he and his wife are "jumping through the hoops to become a non-profit organization" so that the Sunburst Foundation can advocate restoration of the riparian areas and act as a clearing house for work projects.

They have talked with the Bureau of Land Management, the Boy Scouts and a group of outfitters to come up with a list of projects that could be done on the Missouri.

Buck Damone, an outdoor recreation planner for the Bureau of Land Management, said Sunburst Foundation's goals and objectives are worthwhile but he said it is almost premature to talk about it.

"They definitely have the interest and the caring is there but they have some things to do yet," he said.

"The thing he is going to key on is the riparian ecosystem. That's extremely worthwhile," Damone said.

Damone confirmed that Dalton and the BLM have a list of tentative work projects lined up for the Sunburst Foundation.

"It's almost premature until he gets the nonprofit status," Damone said. "I feel he will get to where he wants to go but it is early in the whole process."

Dalton said the outfitters are committed to a project at Dark Butte in which an area would be fenced to keep cattle back and allow the area to restore itself.

Dalton imagines Sunburst Foundation as an educational foundation that would take groups of children on five-day floats on the Missouri.

"Hopefully those kids will learn and take it back to the farms and cities," Dalton said.

Dalton told a meeting of the Conservation Council, a group of representatives from other conservation-minded groups in Great Falls that he would like to help restore the vision of those who work in the Bureau of Land Management.

"We've found that BLM sometimes stands for 'bureau of long meetings,'" Dalton said. "Maybe they have lost track of the vision of what got them into that (type of work) in the first place."

Ahrendes said at the Sunburst Foundation, they feel it is important not to give energy to the problem but to be "solution focused."

"We realize we need to emphasize the vision that this is how it would be in a perfect world," she said.

Dalton said the vision is of a win-win situation where cattle can graze near the water; where floaters could still pull into green, clean campsites; and where ranchers have leases and don't do "hot-season" grazing.

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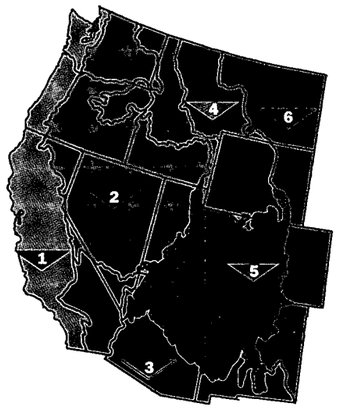
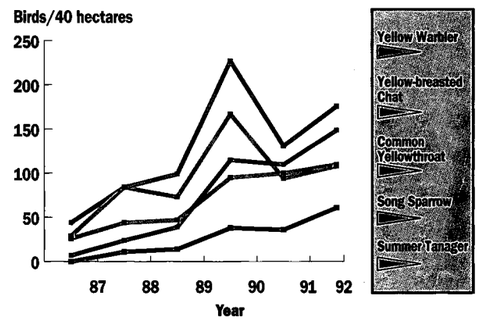


1 Coastal
2 Great Basin
3 Arid Southwest
4 Northern Rockies
5 Colorado Plateau and Southern Rockies
6 Prairies

The Western Working Group of Partners in Flight has defined six general geographic regions with inherent commonalities in the occurrence of riparian bird species. These correspond with groups of physiographic areas defined for the Breeding Bird Survey.



Populations of five riparian obligate species increased dramatically on the San Pedro River in Arizona following the complete removal of livestock.

1. Yellow Warbler - *A widespread riparian obligate most often found in mid-story and canopy vegetation. Song and appearance are distinctive. Photo © Ron Spomer.*

2. Willow Flycatcher - *A widespread riparian obligate most often found in the understory and mid- story. Call is distinctive. Photo © Brian E. Small.*

3. Yellow-breasted Chat - *A widespread riparian obligate most often found in the understory and mid-story. Song is loud and distinctive. This secretive warbler is one of the best indicators of riparian health in the West. Photo © 1997 Wendy Shattil/Bob Rozinski.*

4. Song Sparrow - *A widespread riparian obligate that uses understory vegetation almost exclusively. Song is distinctive. This common sparrow is one of the best indicators of riparian health in the West. Photo © Dave Maslowski.*

5. Bell's Vireo - *A riparian obligate in some geographic areas and a dependent in others. Uses the understory and mid-story. Photo © Brian E. Small.*

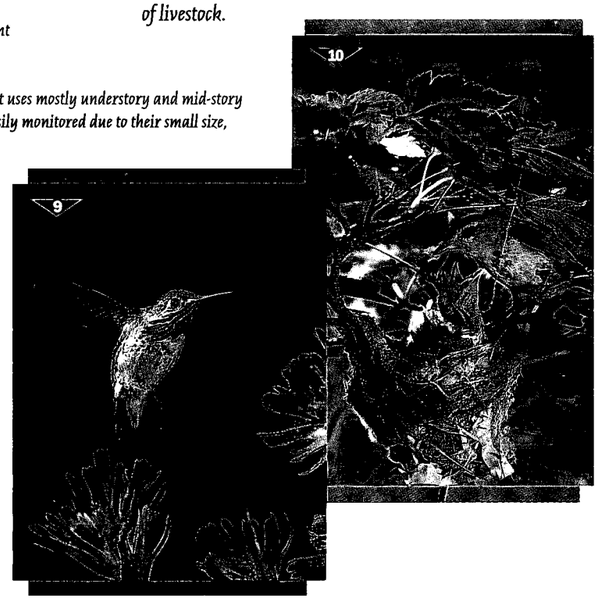
6. Violet-crowned Hummingbird - *A riparian obligate in the Southwest that uses mostly understory and mid-story vegetation. This bird is eagerly sought by birders. Hummingbirds are not easily monitored due to their small size, quickness and lack of loud song. Photo © Brian E. Small.*

7. Swainson's Thrush - *A widespread dependent of riparian understories. This thrush is an excellent indicator of riparian health but also occurs in moist, non-riparian habitats where vegetation cover is good. Song is distinctive. Photo © Dave Maslowski.*

8. Bullock's Oriole - *A widespread riparian dependent most often found in mid-story and canopy vegetation. Song not as distinctive as some species but it can be readily learned. Photo © Sherm Spoelstra.*

9. Calliope Hummingbird - *A riparian dependent of the understory and mid-story. Hummingbirds are not easily monitored due to their small size, quickness and lack of loud song. Photo © Ron Spomer.*

10. Warbling Vireo - *A widespread riparian dependent found almost exclusively in canopy vegetation. It has a nondescript appearance but distinctive song. Photo © Tom J. Ulrich.*

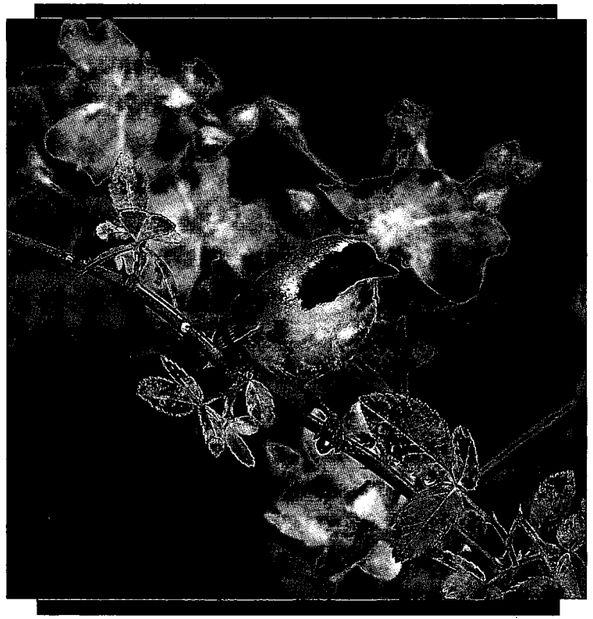


Bureau of Land Management
Partners in Flight
BLM/ID/PT-98/004+6635

For further information, contact: Nongame Program Manager, Bureau of Land Management, 1387 S. Vinnell Way, Boise, Idaho 83703, 208-373-4043, or your Partners in Flight State Working Group Chair.

BIRDS AS INDICATORS OF RIPARIAN VEGETATION CONDITION IN THE WESTERN U.S.

Wetlands and riparian areas comprise <1% of the land area in the western U.S., yet they support a tremendous diversity and abundance of wildlife. For example, in Arizona and New Mexico, at least 80% of all animals use riparian areas at some stage of their lives. In the Interior Columbia River Basin, 64% of neotropical migratory landbirds depend on riparian vegetation during the breeding season. This habitat may harbor from 2-10 times as many individual birds as does adjacent, non-riparian, vegetation.



Common Yellowthroat *- A widespread riparian obligate that uses understory vegetation almost exclusively. This distinctive looking and sounding warbler is one of the best indicators of riparian health in the West. Photo © Dave Maslowski.*

Monitoring the health of riparian ecosystems involves the measurement of several different variables. For example, channel characteristics and vegetation age-class distribution are currently evaluated under the Proper Functioning Condition process (TR 1737-9, BLM, 1993).

Additional monitoring to assess the occurrence of riparian obligate or dependent bird species will provide a fuller picture of ecosystem health. Experience on the San Pedro River in Arizona shows that the Common Yellowthroat and Song Sparrow, among other species, are excellent indicators of ecosystem recovery following the cessation of livestock grazing (see graph). Those monitoring riparian systems can readily learn the distinctive songs of species that should be present and thereby help assess the health of riparian vegetation. Some good indicators, such as the Song Sparrow, are widespread and still reasonably common. Others, such as the Willow Flycatcher, require conservation action now to prevent further losses of habitat and population numbers (see table).

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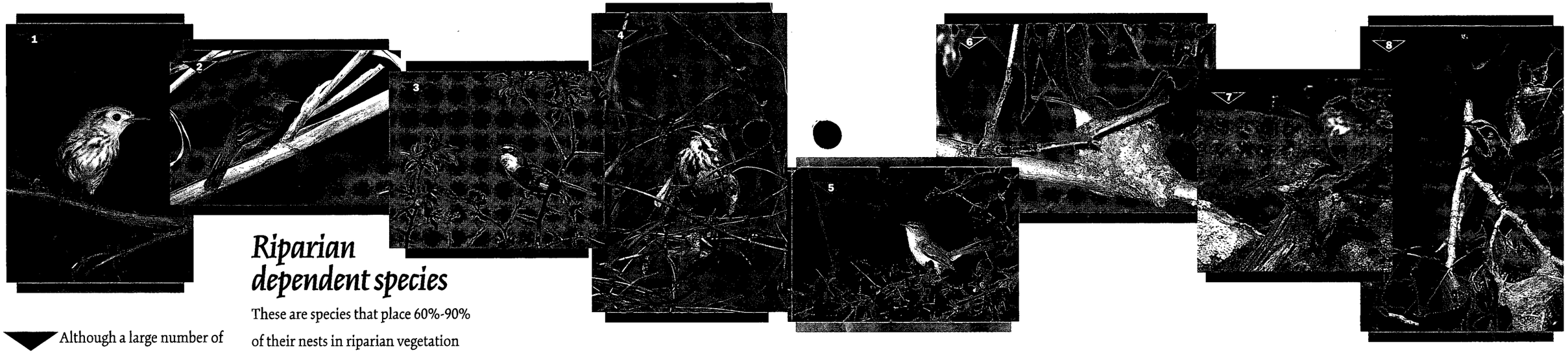

Although a large number of bird species use riparian vegetation at some time during the year, it is possible to define two sub-groups of landbird species that are especially reliant on riparian habitats during the breeding season.

Riparian obligate species

These are species that place >90% of their nests in riparian vegetation or for which >90% of their abundance occurs in riparian vegetation during the breeding season. They may forage outside riparian vegetation. Without riparian vegetation in good ecological condition, these species will not occur in a given area. Some species may be classified as obligates in one geographic area but not another.

Riparian dependent species

These are species that place 60%-90% of their nests in riparian vegetation or for which 60%-90% of their abundance occurs in riparian vegetation during the breeding season. Riparian dependents might still occur in an area if riparian vegetation were seriously degraded but their populations would be greatly reduced and they might not persist in the long-term. Some species may be classified as dependents in one geographic area but not another.

Evaluate your riparian habitat

If you have a riparian area and do not have obligate and dependent birds, particularly understory species that should occur in your geographic area during the breeding season, then your riparian vegetation may not be in as good a condition as it could be.

OBLIGATE SPECIES[1]	CONSERVATION ACTION REQUIRED IN GEOGRAPHIC REGION[3]						VEGETATION LAYER(S) USED[4]		
	COASTAL	NORTHERN ROCKIES	GREAT BASIN	ARID S.WEST	CO. PLAT./ S. ROCKIES	PRAIRIES	UNDER-STORY	MID-STORY	CANOPY
Abert's Towhee				●			●		
American Dipper							●		
American Redstart							●	●	●
Bald Eagle							●		●
Bell's Vireo	●		●	●			●	●	
Belted Kingfisher							●	●	
Black Swift					●				●
Broad-billed Hummingbird				●			●	●	
Brown-crested Flycatcher								●	
Common Blackhawk				●	[illegible]			●	●
Common Yellowthroat	●		[illegible]		[illegible]		●		
Elegant Trogon				●				●	●
Gila Woodpecker				●				●	●
Gray Hawk								●	●
Green Kingfisher							●	●	
Lincoln's Sparrow							●		
Lucy's Warbler			●	●			●	●	
Northern Beardless-tyrannulet								●	●
Orange-crowned Warbler			●				●	●	
Orchard Oriole								●	●
Painted Bunting				●		●	●	●	
Rose-throated Becard								●	●
Song Sparrow	●						●		
Streak-backed Oriole								●	●
Sulphur-bellied Flycatcher								●	●
Summer Tanager				●	●			●	●
Thick-billed Kingbird				●				●	●
Tropical Kingbird								●	●
Varied Bunting							●	●	
Veery		●	●				●	●	
Vermillion Flycatcher							●	●	
Violet-crowned Hummingbird				●			●	●	
Willow Flycatcher	●	●	●	●	●	●	●	●	
Wilson's Warbler	●	●	●				●	●	●
Yellow Warbler	●		●					●	●
Yellow-billed Cuckoo	●		●	●	●	●		●	●
Yellow-breasted Chat	●		●	●	●		●	●	

DEPENDENT SPECIES[2]	CONSERVATION ACTION REQUIRED IN GEOGRAPHIC REGION[3]						VEGETATION LAYER(S) USED[4]		
	COASTAL	NORTHERN ROCKIES	GREAT BASIN	ARID S.WEST	CO. PLAT./ S. ROCKIES	PRAIRIES	UNDER-STORY	MID-STORY	CANOPY
American Goldfinch							●	●	●
Bank Swallow	●							●	●
Bewick's Wren			●	●	●		●		
Black-billed Cuckoo									●
Black-capped Chickadee								●	
Black-chinned Hummingbird							●	●	
Black-headed Grosbeak	●							●	●
Blue Grosbeak	●						●	●	
Blue-throated Hummingbird								●	●
Bronzed Cowbird							●	●	●
Bullock's Oriole								●	●
Calliope Hummingbird							●	●	
Cooper's Hawk								●	●
Cordilleran Flycatcher		●					●	●	
Eastern Kingbird								●	●
Elf Owl				●			●	●	
Ferruginous Pygmy-owl				●			●	●	
Fox Sparrow							●		
Gray Catbird							●	●	
Harris' Hawk				●			●	●	
Hooded Oriole								●	●
House Wren							●		
Indigo Bunting							●	●	
Lazuli Bunting	●						●	●	
Lesser Goldfinch							●	●	●
Lewis' Woodpecker			●					●	●
MacGillivray's Warbler							●	●	
Mississippi Kite									●
Northern Goshawk			●					●	●
Painted Redstart							●	●	
Phainopepla				●				●	
Red-eyed Vireo								●	●
Red-faced Warbler				●			●	●	
Red-headed Woodpecker					●	●	●	●	●
Red-naped Sapsucker								●	●
Swainson's Hawk	●		●						●
Swainson's Thrush	●						●		
Tree Swallow								●	●
Warbling Vireo	●								●
Western Wood-pewee								●	●
White-eared Hummingbird				●			●	●	
Zone-tailed Hawk									●

[1] *Species is considered to be Obligate (see definitions) in at least one [illegible]graphic region (see [illegible]).*
[2] *Species is considered to be Dependent (see definitions) in at least [illegible]graphic region [illegible]).*
[3] *The Western Working Group of Partners in Flight determined that conservation action is needed now for the species in the geographic region(s) indicated.*
[4] *The vegetation layer(s) used most by the species. The species is most useful as an indicator of the ecological condition of the layer(s) used.*

E00011396

Western Riparian Systems: Magnets for Migrants

Wake-up Call

Imagine. It is dark and you have been traveling at an altitude of 5,000 feet for eight hours over arid desert, crossing the Mexican border at midnight. You have been flying on your own two wings, fueled by body fat and guided by the celestial map of the constellations. The sun begins to rise, and the dry, treeless expanse appears below. A serpentine river slithers through the flat valley, shedding off green fields of alfalfa and cotton. You are hungry and tired from your journey that began in Central America. As you descend, you notice that the trees and bushes are no longer there. You continue on your flight, hoping that before you run out of fuel, you can find some trees to land on. Unfortunately, this scenario is real to more and more birds with each passing year.

Oasis-the Only Trees Around

Throughout much of the western United States, riparian (river edge) forests are oases that offer the only trees to the landscape. And it is in these trees where more than half of all bird species in a region must find food, build nests and raise their young. In arid regions, birds disappear when the riparian trees that they depend on are destroyed. Despite their overwhelming importance to birds, these forests have been degraded, bulldozed, or chopped down at an alarming rate. In the Central Valley of California, it is estimated that only 5% of the original riparian forest exists, and that many of these remnants are degraded by human activities.

By 1986, along the lower Colorado River, only 25% of the riparian vegetation remained

and what was left was mostly the exotic, shrubby salt cedar that replaced native plants. Less than one percent of the remaining habitat was mature cottonwood or willow-the most important habitat for many riparian birds. Because of their proximity to water-a contested resource, riparian habitats are the most heavily impacted in the West.

Take Me to the River

Bird communities along rivers in the western United States have been well studied. Bird densities are much higher than in other habitats, including upland forests. What makes riparian forests so attractive to birds? With the wealth of nest sites, shelter, food and water, they are frequently the best and, in arid regions, the sole providers of many birds' basic needs.

The lush forests are chock-full of a variety of insects that birds depend on for food. Also in abundance are tree frogs, mice and other animals that are prey for larger birds. In one study, Yellow-billed Cuckoos were found to raise more young if they were able to add tree frogs into their diet of insects. Another study found that along the lower Colorado River, birds were able to feed on cicadas, an easily captured prey that annually reach to tremendous population levels only in the riparian vegetation. In yet another study, it was found that the exotic Russian Olive trees along the Rio Grande in New Mexico provide fruit in fall and winter to large numbers of American Robins and other birds. Many species need trees for nest sites. In arid regions riparian forests contain the only suitable trees around. Herons, hawks, jays, big enough to build cavity nests, which are reused by many other birds such as: Elf Owls, Lucy's Warblers, trogons, swallows, some flycatchers, nuthatches, chickadees, titmice and wrens.

All birds need water for drinking and bathing, and riparian vegetation provides many with shelter from predators while they fulfill these needs. Aside from shelter, a healthy riparian habitat contains small pools from past floods and small oxbow lakes. These conditions are what many birds prefer over swiftly-moving, open streams and rivers.

Shaking in their Roots

Decisions to alter riparian habitats are often made for short-term economic goals without regard for the long-term value of these forests for flood control, maintaining high numbers of birds that eat agricultural insect pests, recreation, and protecting high biodiversity. The main culprits are farmland conversion, dam building, cattle grazing, pollution from mining, stream channelization, and housing development. The flat, alluvial floodplains along many large rivers are ideally suited to agriculture, especially with flood control and water releases from the ubiquitous dams. Unfortunately, these floodplains were also ideally suited for the historically-vast riparian forests.

A look at the history of settlement in the West shows that agriculture and cattle won out over the riparian vegetation. During the 20th century, exploitation of water grew to the extent that nearly all rivers and major steams in the West were damned. This greatly accelerated the development of agriculture, and also destroyed vast amounts of forest quickly by drowning and slowly, by preventing the regeneration of the fertility of soils produced by annual floods. Other effects of dams that are detrimental to riparian vegetation include; increased salinity of the released water and downstream soil, lowered water table downstream, and destructive flooding from prolonged water releases.

Mooove Along Little Doggie

Cattle grazing remains the single most destructive force that can be practically and significantly reduced. Many studies have shown that cattle systematically destroy shrubs and foliage under 5 feet tall. These same shrubs are critical for providing feeding and

nesting areas for birds. Also, by adding to the structural diversity of the vegetation, this shrubby layer increases the area's overall biodiversity potential.

In overgrazed areas, the destruction of the shrubby layer can eliminate several species. Many of these riparian birds such as the Willow Flycatcher and Bell's Vireo are highly threatened throughout much of their ranges. Experiments have shown that many riparian birds will increase their populations two to fifty times within six years after cattle are fenced out.

If grazing continues for decades, as it has in many areas, large trees fail to reproduce because cows eat the saplings. This, in turn, leads to the eventual loss of large shade trees when these trees die and are not replaced by younger trees. Because this process is slow and often exceeds the average human lifespan, it is difficult to notice the gradual reduction of riparian forest. Yet studies have documented, with interviews and historical photographs, that forests in many areas have been completely lost.

In addition, cows trample the banks of streams, widening the channel and eventually deepening the channel bottom. This lowers the water table and kills the shallow-rooted, native trees.

Elimination of grazing in riparian habitats can vastly improve their regeneration, reduce the channel width and depth, increase stream flow, and greatly increase the abundance and species of birds. Simply changing bad grazing practices also helps. Letting proper numbers of cattle graze riparian vegetation only after the growing season, using artificial watering ponds and fencing cows out of riparian areas for extended periods of time can increase not only the vitality of the riparian forests, but the health and productivity of cattle as well.

A Vicious Cycle

In some desert areas, trailer parks spring up under the cool shade of cottonwood trees. The inhabitants soon chop down these trees because the "cotton" from the seed pods get caught in the air conditioners in the trailers. Idle trailers, no longer in the shade, become overheated and their occupants more dependent on air conditioners. Non-native trees are then planted to provide shade. This results in a great loss of biodiversity as these trees, such as eucalyptus and non-fruiting mulberry, generally lack insect prey and are useless for birds. In some cases tamarisk is planted, which can provide habitat for a few nesting and migrating species.

Paving over Paradise

Many cities and towns have turned their rivers and creeks into concrete channels, removing all vegetation, under the guise of flood control. Another form of flood control is the use of rip-rap (rocks and boulders) to reduce erosion of banks. In this procedure all vegetation is bulldozed away which results in an area nearly devoid of birdlife.

Levees built adjacent to river banks prevent point bars from forming. Without these gravelbars and sandbars, riparian vegetation is confined to terraces and banks that often lack the early stages of regrowth preferred by several species such as; Bell's Vireos, Blue Grosbeaks, and Lazuli and Indigo Buntings.

Desert Highways

Because many western rivers run through arid landscapes, their riparian forests serve as natural corridors for woodland birds moving about. Young of many birds need these corridors to help them disperse after gaining independence from their parents. Several montane species may follow the ribbons of riparian growth when, after breeding, they

descend to lowland rivers to take advantage of the abundant insect prey. Migrating birds are also known to follow rivers in their routes to and from their breeding grounds, and depend on the food-rich vegetation for their pit-stops.

Some species greatly extend their ranges along rivers. Populations can be far from the species' main distribution. These can serve as springboards for colonizing adjacent rivers or as sources of recruits to supplement smaller and more vulnerable outlying populations. In the Southwest, riparian specialists such as; Brown-crested Flycatcher, Summer Tanager, and Indigo Buntings recently expanded their western and northernmost limits to isolated outposts in the deserts of California. It is thought that this recent expansion will continue, with new recruits being added from their population strongholds in Arizona.

Sacramento River and Cowbirds

Once a tremendous river system with luxuriant and extensive forest, the Sacramento River is now a prime example of the effects of long-term abuse that face nearly all riparian areas in the West. Willow Flycatcher, Warbling and Bell's Vireos have become extirpated from the valley. Other species such as; Yellow-billed Cuckoo, Bank Swallow, Yellow Warbler, and Blue Grosbeak have severely reduced distributions, maintaining only small, isolated populations.

Among the causes are loss of habitat through farmland conversion, stream channelization, and the building upstream of Shasta Dam. With the expansion of agriculture, cowbirds have expanded their range into California, entering the state along the lower Colorado River Valley in the 1870's and reaching the northern Sacramento Valley by 1950. Cowbirds feed in open areas on the grain and waste of farms. With the reduction of large patches of riparian forest to narrow strips, songbirds that formerly nested with impunity have not been able to escape the heavy nest parasitism of cowbirds. This is the final blow to many riparian species.

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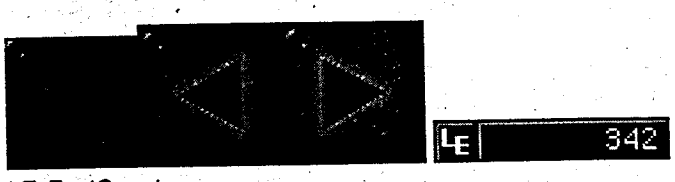
written by John Sterling



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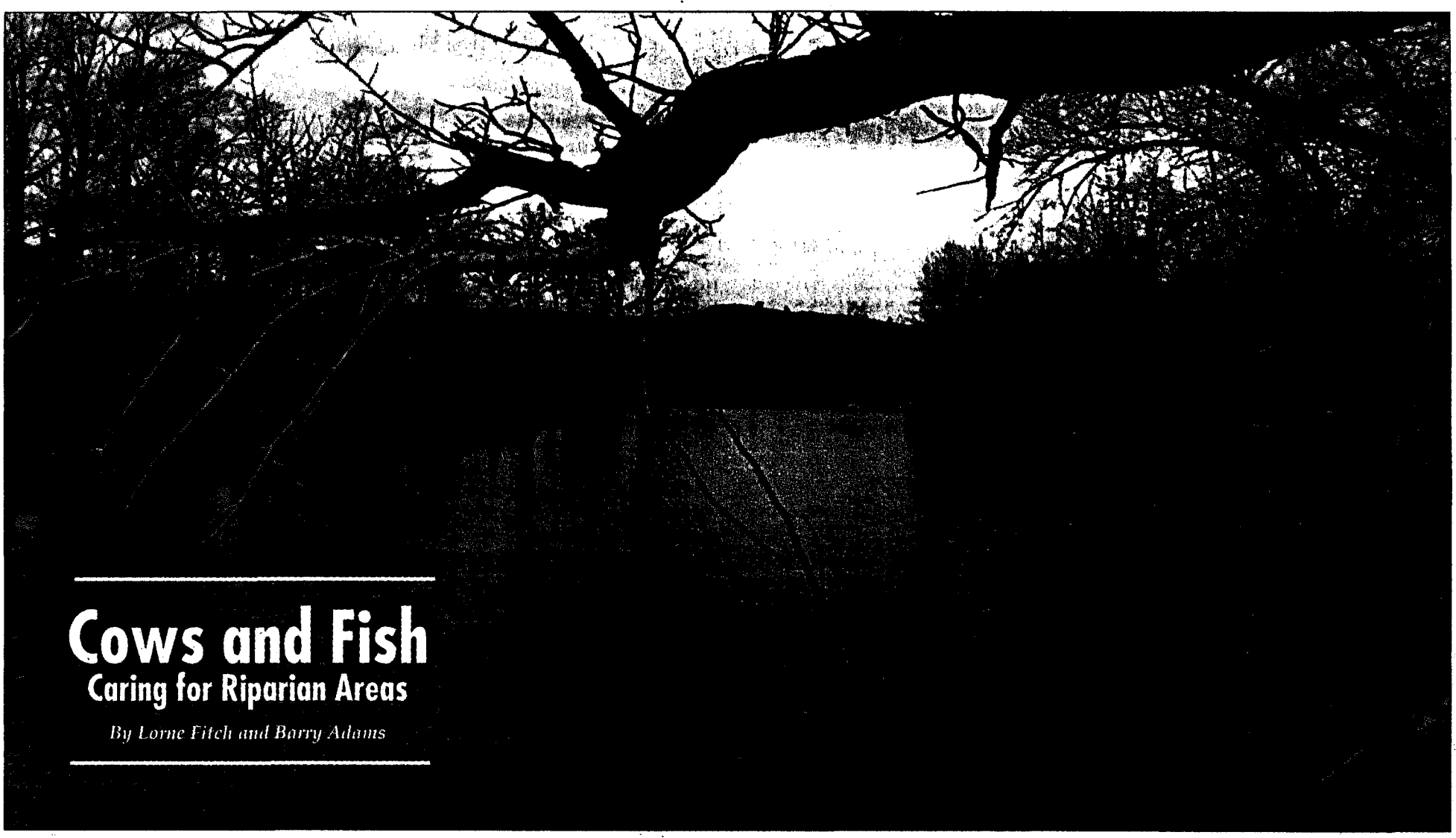

Cows and Fish

Caring for Riparian Areas

By Lorne Fitch and Barry Adams

Mr. Fitch and Mr. Adams have been studying the health of a critical though small part of our environment, the shores of streams, rivers, wetlands and lakes. They share their findings about the importance of encouraging plant growth in the 'green' zone and of restricting the grazing of cattle.

In one of Aldo Leopold's lesser known essays (a book report actually), he criticizes a writer of Western history for a failure to recognize the cause and effect relationship between cattle and landscape change in the southwestern United States. Leopold observed that predator control had made the landscape safe *for* cows and now the challenge is to make the landscape safe *from* cows. Overstatement, perhaps, but with enough truth to lead into riparian management in Alberta.

Riparian areas
Definitions and perspectives

Fancy definitions aside, riparian is the green zone, not what passes as the Forest Reserve, but the green area along streams and rivers and around wetlands and lakes, where vegetation responds to abundant water. Riparian areas make up less than 2% of Alberta's landscape yet use and utilization is disproportionate to its size. About 80% of Alberta's fish and wildlife species (all of the fish and most of the wildlife) depend on riparian areas for all or part of their life cycles. We humans do too! We settled riparian areas first because of the water, the wood and the shelter. We continue to occupy and use these emerald threads. Our use of riparian areas has changed many of them significantly.

Issues over damage to riparian areas aren't new. Signs were evident in the 1960s; research confirmed suspicions in the '70s; and the '80s brought calls for action. But only in the 1990s have we begun to deal with the human issue behind riparian problems.

The issue relates to how we see unique pieces of the landscape and how, based on a vision tempered by tradition and attitude, we treat the land. Tradition and attitude can be difficult to overcome. Tradition motivates people to do what they do; it may be the things our parents did or what our peers do. This tendency cuts across all lines, and we all fall into the trap of tradition. In turn, our traditions define our attitudes. As a result, we tend to see the world not as a unique set of interacting mechanisms, each influencing the other, but as pieces and products, components important to who we are or who we represent. One could argue that this sectoral view is behind our conflicts over land use, declining productivity of fish, wildlife and riparian rangelands, and our inability to reach toward better management practices that focus on sustainability.

Anyone who has dealt with land use issues for any length of time recognizes that people go through stages in problem solving. At first (and this is evident in the riparian situation) there is avoidance. If you don't see a problem, you don't have to acknowledge it. Next, there is denial. "There isn't a problem, and if there is, I didn't cause it" – the fish are gone because of overfishing; the trees are gone because of beavers; cities pollute the water; the water has always been that colour; cows and streams just don't mix. It's a big step to the third stage, awareness: " I never knew grazing those banks would result in that much erosion. Those trees and shrubs are important for trout and birds. I never knew stream valleys could produce so much grass."

But if it is a big step to awareness, it can be a giant leap to the final step of acceptance. This is a delicate stage, and the acknowledgement that you are part of the problem has to be tempered with the realization that being part of the problem also means you can be part of the solution. That solution not only has to be environmentally, but economically sound as well, in order for positive change to occur.

One difficulty is that a ruined riparian zone is not like a forest that was reduced to stumps overnight. Cattle have traditionally stayed in streamside areas and the sight of them there isn't acknowledged by ranchers or laymen as part of an induced landscape change. Over two generations, heavy grazing can take a narrow, meandering stream with hidden trout and transform it into a dry channel beside dead aspen trunks. You have to recollect whether willows or aspens used to be present, whether the stream should be that wide or shallow, or whether the stream had water in it at all. Noticing the gradual deterioration is a bit like watching your face grow old; most people don't notice much change until they are asked to look in a mirror.

That's what a project called the Alberta Riparian Habitat Management Partnership (*aka* "Cows and Fish") is about – holding up a mirror to landscape change. This partnership, at first blush, is an unlikely one: the Alberta Cattle Commission, Trout Unlimited, Fish and Wildlife Services, Public Land Services, the Canadian Cattleman's Association and Department of Fisheries and Oceans. However, the outlook for resolving riparian conflicts is good if interdisciplinary efforts, inter-agency cooperation and livestock producer involvement all occur. That way, reasonable grazing management approaches can be developed and implemented to provide forage for livestock while maintaining or improving riparian habitat health.

How green is my valley and why
Ecological function and process

A fundamental step in the process of changing attitudes about, and use of riparian areas is the provision of an understanding of how riparian areas are formed and how they function. It's akin to an owner's manual on green zones. Moving water has energy; call it horsepower. When more horsepower is generated, streams can work harder at erosion and the transportation of eroded material. A simple doubling of the speed of a stream's flow allows it to erode four times as much and to carry 64 times the amount of material. That's horsepower, and all of us, livestock producers included, need to understand those simple physics, to avoid unleashing a problem.

Grazing is not the only riparian action that creates problems. Dams and diversions, logging, cultivation agriculture, channelization and flood control, urbanization and recreational developments are all implicated in poor riparian health. The common thread running through all these actions is an increase in stream horsepower. How that horsepower gets unleashed lies in what we do, collectively, to the riparian area and the watershed. Stream banks that are resistant to stream horsepower are the foundation of a stable riparian area.

Streams and riparian areas are literally held together by a diversity of plants with strong root systems. Stream horsepower is reduced by resistant riparian vegetation, and the vegetation traps sediment which becomes incorporated into the banks. Water tables in well-vegetated riparian areas are higher and allow plants to keep their roots wet. Plant diversity is greater and forage production is high compared to poorly-vegetated valleys. There, with reduced storage of ground water, water tables are lower and vegetation struggles to extract enough moisture. Vegetation may change to dry, upland site types.

Where vegetation has been removed by heavy grazing, logging or floodplain development, the cohesive nature of stream banks breaks down, the stream

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Vegetation forms the roots of the solution

widens and becomes shallow and the riparian area is in a state of ill health. If the problem is an unstable, eroding stream bank, vegetation forms the roots of the solution. Diverse, healthy vegetation has a major influence on stream channel shape and size. Healing takes revegetation, sediment deposition and bank rebuilding. An understanding of ecological function, how things fit and work together, is the first step in figuring out how to successfully restore or maintain the productive nature of riparian areas.

Riparian areas – a magnet

Riparian areas have a magnetic influence on cattle distribution – cattle go for the green and stay unless moved. When livestock are allowed to graze riparian areas for extended periods, especially under a season-long or continuous style of use, those areas will become degraded. Grazing, regrazing and trampling will damage vegetation and soil, the foundations of riparian areas. In the natural system, localized impacts were short-lived because wild grazing animals did not loiter for long periods of time. Good range management practices imitate the natural system and foster healthy native plant communities and riparian areas. The key principles of range and riparian area management are:

- balance animal demand with the available forage supply,
- distribute livestock evenly,
- avoid or minimize grazing during fragile or vulnerable periods, and
- provide effective rest after grazing

When these principles are put into practice the results are:

- healthy vegetation that builds and maintains stream banks,
- plant species diversity which contributes to forage and shelter values,
- enough vegetation to resist stream horsepower in high flow events,
- maintenance of stream flows from good ground water reserves,
- protection of the riparian area during vulnerable stages,
- wildlife and fish are attracted to a diversity of habitats,
- livestock find abundant forage, water and shelter, and
- economic benefits flow back to the livestock producer.

Tools and techniques for outsmarting a cow

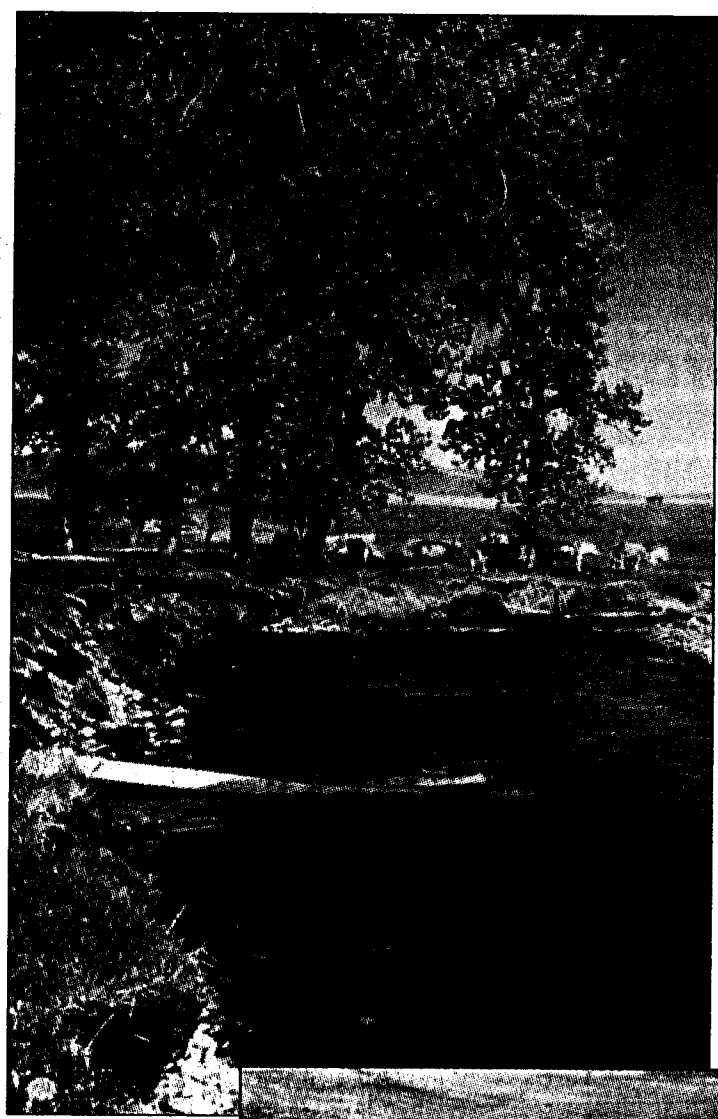
An understanding of how riparian areas function and how livestock respond to them are key bits of a riparian management puzzle. The last piece is figuring out how to outsmart a cow. If left to themselves, livestock will graze when and where they choose. Successful riparian management requires modifying animal behaviour to control grazing patterns, timing and intensity.

The first step in any riparian grazing strategy is to improve livestock distribution, to better balance out the grazing load over the landscape. Controlling the timing of grazing, when riparian areas are vulnerable, controlling the intensity and adding more rest to the grazing cycle are the next progressive steps. A change to a rotational grazing system that defines recurring periods and patterns of grazing and rest for two or more pastures provides adequate rest and deferment periods to offset the impacts of grazing. Riparian pastures move management to the next level – that of separating pasture units on a land type or landscape basis. This tends to be one of the most successful methods because it allows effective control of grazing during high risk periods, plus rapid recovery of riparian area health and productivity.

Stream bank, or exclusion fencing is what most people think of when the subject of grazing and streams is raised. Exclusion fencing involves eliminating livestock grazing on a narrow fringe of the riparian area. It is a valuable tool to raise awareness about riparian management by demonstrating the effect of rest on riparian vegetation. The option is a consideration for riparian problem areas where nothing else works and grazing exclusion will provide the fastest recovery. However, on a large scale, fencing cattle out of the stream corridor may fail to deal with grazing problems on other landscape units that make up a ranch and may be prohibitively expensive.

Other reflections on the green zone

Many ranchers and livestock operators acknowledge that riparian landscapes require careful treatment and are beginning to think seriously about how to modify grazing to improve these areas. Those that have already figured this out provide us with careful range management practices useful to learn from. The results are encouraging. On one ranch, following five years of livestock management through rotational grazing, forage yields have increased three times. The parameters that define fish habitat also show progressive improvement and woody vegetation, the "rebar" of stream banks, is making a comeback. On another ranch, good management has produced a diverse riparian habitat with six times as many breeding and nesting birds as a neighbouring ranch still being managed with a continuous, season-long grazing style. Those kind of results indicate that maintenance of riparian areas in a healthy condition makes economic sense and also displays good stewardship of shared resources like water, fish and wildlife.



Damaged part of Pekisko Creek, culprits in the background

Lorne Fitch

A healthy piece of Pekisko Creek

Lorne Fitch

Three decades of research by range managers, biologists and hydrologists has shown us the value of riparian areas for forage production, maintenance of fish and wildlife populations and providing water to sustain human communities. It is now clear that the two percent of our rangelands which are riparian areas are disproportionately more important than their size would indicate. The key message is, riparian areas have significant importance, they are different from uplands and need to be managed differently. Research results also show us the difficulty of restoring the functions and values of these areas, after years of damage. By comparison, careful, thoughtful management has been shown to maintain riparian areas and all their functions and values.

Healthy, productive riparian areas and livestock are not mutually exclusive. With some care and thought applied to management, riparian areas, "the green zone", can be safe from cows. The greater challenge is, can riparian areas be made safe from us?

[Lorne Fitch is a biologist with Alberta Fish and Wildlife Services; Barry Adams is a Regional Range Manager with Public Land Services. Both are based in Lethbridge and are part of the "Cows and Fish" project as well as other landscape based initiatives. An awareness document, "Caring for the Green Zone - Riparian Areas and Grazing Management" is available by contacting the authors.]

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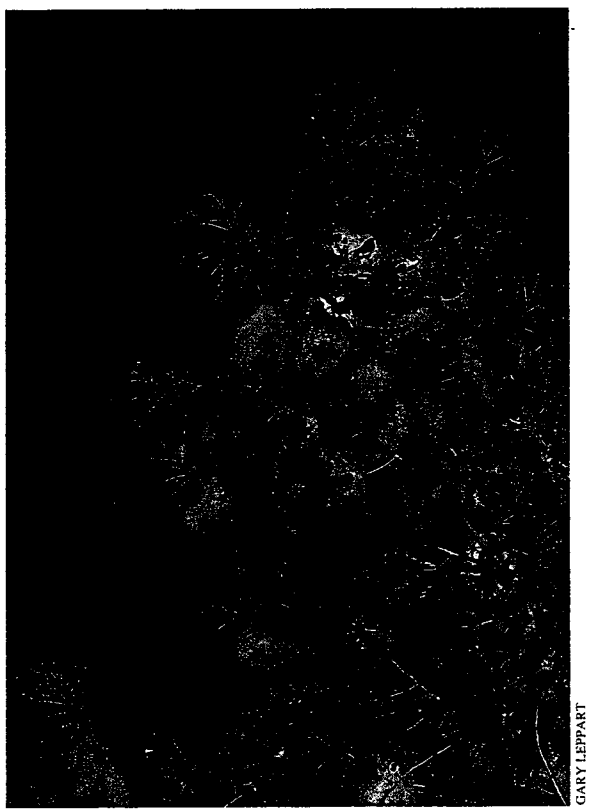
CHUCK HANEY

Cotton to Cottonwoods

Suburbanites complain about the mess, but out on the plains where few trees grow, cottonwoods offer vital shade and wildlife habitat.

by BRUCE AUCHLY



GARY LEPPART

Cottonwood seeds await a breeze.

IF THE COTTONWOOD were the predominant tree east of the Mississippi River, American history, literature, even sports might have taken on a different flavor. Picture schoolchildren learning the poem, "Under the spreading cottonwood tree, the village smithy stands." Would George Washington have "fessed up" to cutting down a cottonwood tree? Maybe Babe Ruth would have whacked home run number 60 with a cottonwood bat.

Instead, botany and climate have conspired to make the cottonwood the major tree of the American plains where few people live. So it's underappreciated; or, maybe not.

In 1995, a quiet Great Falls neighborhood erupted when several residents circulated a petition to force a neighbor to cut down five cottonwoods because their floating, feathery (well, cottonlike) seeds were clogging up screens and gutters and noses. The petition drive eventually failed—perhaps, as the city forester said at the time, because people who live on the plains appreciate their trees and the difficulty it takes to grow them in this climate.

Yet, cottonwoods along some of Montana's rivers and elsewhere throughout the West are slowly disappearing, and that could have devastating effects on wildlife. "In the West," says Paul Hansen of the University of Montana, "One to five percent of the landscape is riparian, yet seventy-five percent of wildlife is associated with riparian areas."

As any good whitetail hunter knows, riverbottoms with brush and trees grow big deer. And

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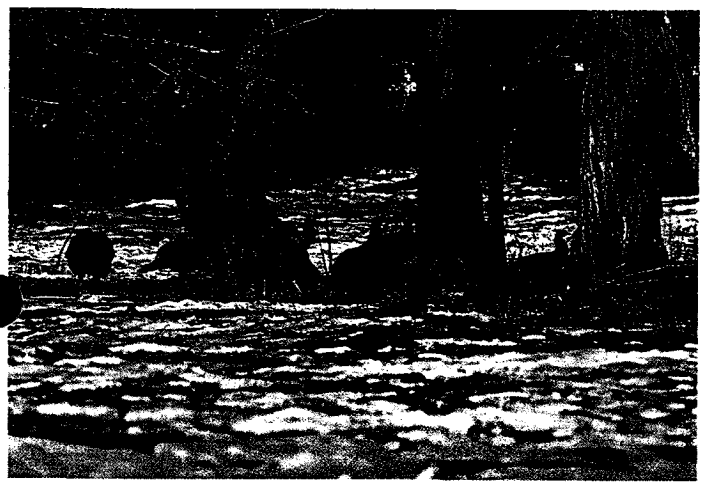
where there are trees and rivers there are beaver. Then there are the animals we don't hunt or trap, like voles, bats, and chipmunks. And, because cottonwoods are found near water, they are the perfect rest and refueling stop for "neotropical migrants," birds that breed in northern latitudes but winter in Mexico and beyond. To imagine what these birds could face in a landscape devoid of riparian forests, think of driving cross-country on an interstate highway where the only gas stations are 500 miles apart with no exits in between. One could only hope the gas gauge and bladder don't give out! In Montana, cottonwoods are gas stations and rest stops along the avian interstate system.



W. STEVE SHERMAN

Cottonwoods are a major component of most riverbottom plant communities, providing habitat for everything from black bears (right) to Merriam's turkeys (above).

Montana lays claim to three cottonwood species: black (*Populus trichocarpa*), Great Plains (*Populus deltoides*), and narrowleaf (*Populus angustifolia*). Black cottonwood is the dominant family member west of the Continental Divide, although it is also found east of the divide. According to Hansen, narrowleaf and Great Plains cottonwoods are restricted to areas east of the divide and found at altitudes between 2,000 and 6,600 feet. In central and eastern Montana, black cottonwood tends to grow at higher elevations than the narrowleaf variety, which grows at higher elevations than the Great Plains version.

Modern knowledge about cottonwoods in Montana starts, like so much other natural science, with Lewis and Clark. Along the Teton River on June 6, 1805, William Clark noted cottonwood trees with narrow leaves like those of the wild cherry. A few days later Meriwether Lewis described the tree, and hence is given the honor of discovering the narrowleaf species. That same month, the expedition set about portaging the Great Falls of the Missouri with cottonwood dugouts mounted on wheels carved from cottonwood.

West of the divide, Lewis was the first person to collect specimens of black cottonwood, which he took back to Philadelphia. The expedition members were already well acquainted with the Great Plains cottonwood, having used it to build their 1804-05 winter fort in present-day North Dakota. Of all the western trees encountered by the expedition, no other contributed as much to the party's success, says Paul Cutright in *Lewis & Clark: Pioneering Naturalists*: "Though we think it probable that they would have successfully crossed the continent without the cottonwood, don't ask us how!"

The Indians Lewis and Clark met did more than appreciate the cottonwood, they made it part of their culture. Besides forage for horses, Indians tapped the tree in spring for sap to eat, extracted a yellow dye from the buds, and concocted medicines from the leaves, bark, and buds. Blackfeet warriors even rubbed themselves with the sap to conceal their human scent when stealing enemy horses.

This native understanding of the tree that survives and thrives in the extreme climate of the plains did not immediately pass from one culture to another. European settlers, accustomed to omnipresent trees, were shocked when entering first the treeless tallgrass prairie of the Midwest and finally, as they neared the Rocky Mountains, the shortgrass prairie. But as nineteenth century settlers headed west and passed the 96th meridian (Montana's eastern border lies at the 104th parallel), they soon learned to look for cottonwoods: The trees grew near water, a sign of grass for livestock as well as timber for repairs, firewood, shade, even food.

"Settlers once cut white inner pulp from the tree and made a delicacy called cottonwood ice cream; but no one remembers the recipe, and people no longer know how to eat a cottonwood," writes William Least Heat Moon in *PrairyErth*.

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BILL JONES AT 81 has seen a tree or two grow in his lifetime. Jones ranches along Blackleaf Creek west of Bynum in a house surrounded by cottonwoods and willows. "There's something about cottonwoods," he says. "We're used to willows and brush along the creek. But there's something about these cottonwoods that reach up 25 to 30 feet above the brush."

Jones grew up on a treeless homestead about 20 miles away. "We planted a nice shelterbelt of poplar, box elder, Chinese elm, green ash, and black willows." He figures only people who have lived on the plains can cherish trees because there are so few. Where trees are commonplace, Jones says, a person might love them but not appreciate what they mean or what an individual plant can do. Along the creek by his current home, Jones sees pheasants and partridge. He figures it's the cottonwoods. He's right, but it's more.

"It's kind of hard to separate out cottonwoods from riparian areas," says FWP wildlife biologist Dennis Flath. "Riparian habitat has major importance for wildlife. Seventy percent of neotropical birds use riparian areas. In the floodplain you'll find all the amphibians and reptiles. For fisheries, cottonwoods provide bank stabilization and shading."

Flath, stationed in Bozeman, has spent years studying riparian areas. He's currently researching the bald eagles of the Yellowstone. Cottonwoods are water-loving trees that can grow taller than 80 feet and live 100 years or more. As towering riverbank sentinels, they make perfect nesting sites for our fish-eating national symbol.

Unlike oak, hickory, and walnut trees, cottonwoods do not depend on mammals and birds for seed dispersal. This tree survives despite and because of weather extremes: wind and water. Cottonwood seeds need bare soil and full sunlight to grow. Floods, then, become the perfect cultivator, creating gravel bars and depositing silt on them as flows recede. When a female cottonwood releases its wispy seeds in early summer, a fortunate wind may float nature's cotton candy to the proper germination spot. The seeds have just a handful of weeks to sprout or die. Once sprouted, they cling tenaciously to life. In the first growing season, seedlings can send a taproot three feet down in search of water. Saplings, under perfect conditions, in one year can grow to twice the height of a man.

LYNN BACON

LANCE R. PECK

DONALD M. JONES

Cottonwood forests are logged today for pulp, posts, firewood, and lumber for pallets, water tanks, caskets, paneling, and a variety of other products. Because younger, healthier trees are usually chosen for harvest, there will be fewer of the large, old trees preferred as nest and perch sites by bald eagles, ospreys, hawks, owls, and woodpeckers (like the flicker above) in the future.

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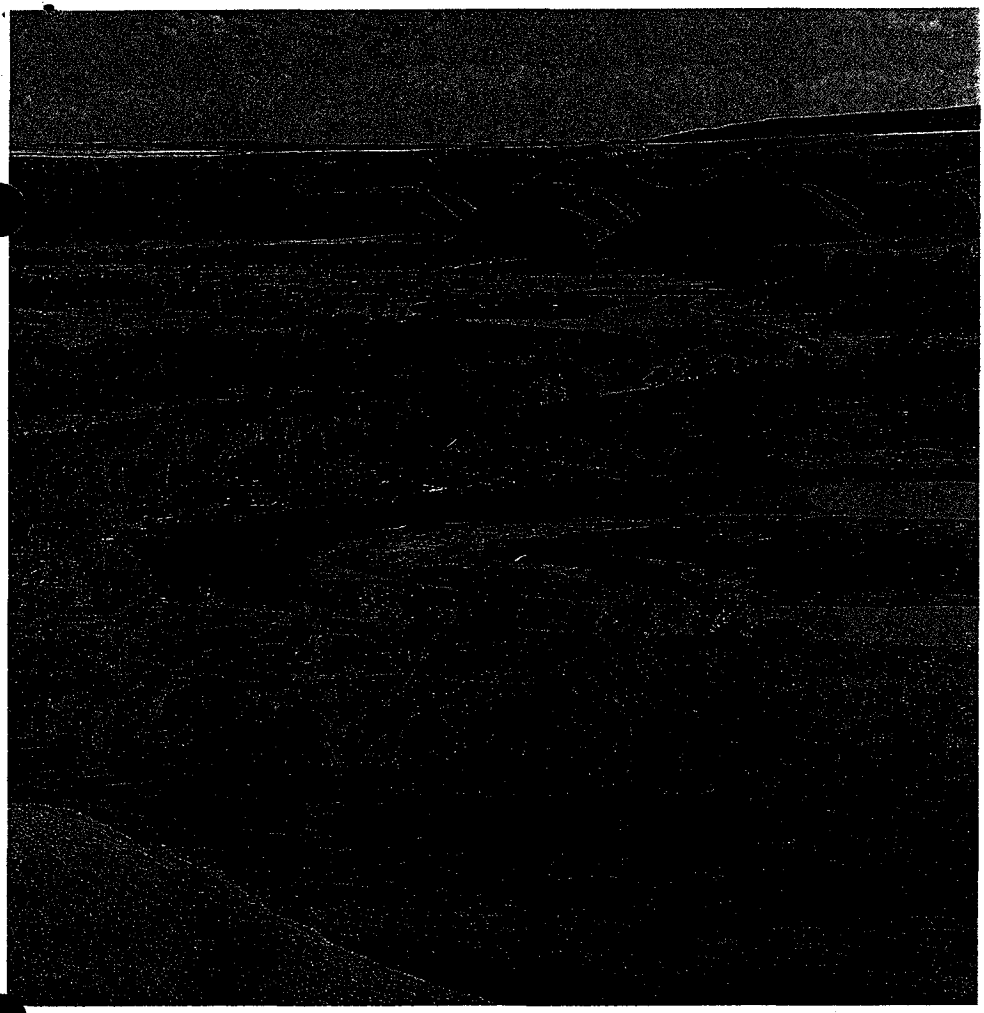

JOHN LAMBING

Along the Marias River in north-central Montana, cottonwood seedlings are far less numerous below Tiber Dam than above. Dams limit cottonwood regeneration by preventing the river channel scouring and silt deposition that creates ideal seedbeds.

Water and wind. Floods and breezes. Man hasn't conquered wind, yet. Dams we know about.

Dams, especially those built for flood control, hold back runoff in the early summer when cottonwood seeds need it to scour river channels and create new gravel bars. No floods mean no new gravel bars with just the right amount of silt for the seeds to germinate successfully. By late summer and early fall, when the water is released, the seeds are no longer viable.

"In the Flathead we're not seeing any cottonwood regeneration," says Paul Hansen. "We have to re-educate people about floods. Just as we had to relearn our fire behavior, we have to accept that not all floods are bad."

A similar situation is occurring on the Marias River in north-central Montana. Cottonwood seedlings are far less numerous downstream from Tiber Dam than upstream, according to a 1995 study by a University of Lethbridge scientist. "If the operation of the Tiber Dam continues in the pattern of the past four decades," he concludes, "it is probable that the deficiency of seedling recruitment will continue....This would result in a gradual loss of riparian cottonwoods over the next half-century downstream of Tiber Dam."

Adds Hansen about the West in general: "We're still getting cottonwood regeneration, but less than we were getting before the dams." As the state's main rivers east of the Continental Divide, the Missouri and Yellowstone contain critical wildlife habitat. Both rivers sport healthy cottonwood groves, though threats to the trees' future are real. The Yellowstone has no major dams along its entire 670-mile stretch. The Missouri has lots of dams and their effect on cottonwoods is being studied.

In 1992, scientists with the U.S. Geological Survey (USGS) began to look at cottonwood growth on the Wild and Scenic section of the Missouri River between Fort Benton and the Fred Robinson Bridge—about 150 miles. The area does not have a lot of cottonwood groves, although Mike Scott of the USGS believes there never were many.

"Extensive cottonwood forests need a wide, meandering channel," Scott says. The Wild and Scenic Missouri is anything but that. The river narrows as it runs through this area because the constrained valley is geologically new. Geologists believe the Missouri River once turned north at Little Sandy Creek, just downstream from Fort Benton, and ran through the present-day towns of Big Sandy and Havre. Then it followed the valley now occupied by the Milk River eastward, rejoining the present Missouri channel east of Glasgow. Over thousands of years, a series of ice age glaciers created a new river channel, with the last ice age about 10,000 to 12,000 years ago pushing the river south on its current course.

The few exceptions to the Missouri's narrow channel are at the mouths of tributaries like the Judith River, where extensive cottonwood groves thrive. Without an actively meandering channel, exceptionally large floods are needed to provide the right conditions for regeneration. "In constrained sites," Scott says, "it takes a really big flood to establish a good seedbed."

To understand how a big flood helps, picture a bathtub as a river and the dirt rings as cottonwood seedlings. The ring that gets covered every time the bathtub is filled will get wiped out. But the ring from that Saturday night when you were filthy and filled the tub near the brim will remain. Exceptional floods can prepare seedbeds high enough in the Missouri's narrow channel that the seedlings will escape high water and ice in following years.

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On the Missouri those are floods measured as greater than 50,000 cubic feet per second at the Fort Benton river gauge. "There have been twelve of that size since the 1890s," Scott says. "The biggest flood on record was in 1908 when the flow measured 107,000 cfs."

The last flood close to 50,000 cfs was in 1981. The top five flood years were 1908, 1953 (75,000 cfs), 1964 (69,000 cfs), 1892 (66,000 cfs), and 1975 (59,000 cfs). "In normal years the peak spring runoff reaches about 15,000 cfs," he says. For cottonwood regrowth on the Missouri, dams are not the villains they are elsewhere. Scott says that dams have changed the river's flows and in turn have influenced cottonwood growth, but it's not clear that the trees are declining on the river.

"Cottonwoods along the Wild and Scenic Missouri are much the way they were described in Lewis and Clark's time," Scott says. "Above Cow Creek [25 miles upstream of the Robinson Bridge] Lewis and Clark said there was no timber except pines. The same above Arrow Creek [80 miles downstream from Fort Benton]. Above Coal Banks [42 miles below Fort Benton] there was more timber and at the Marias, they were into many cottonwoods."

While floods are necessary for cottonwoods to have a good start, it takes more than high water to grow a big tree. Winter ice and summer cattle grazing are tough on the young plants. "We think that ice is limiting how close they can grow to the river," Scott says. The term is ice scouring. On the Missouri, ice jams build up each winter. Like an SOS cleaning pad, they have the potential to scour the river banks clean. Mature trees can be pushed over by an ice jam; survivors show gouges and cuts from ice. Seedlings don't stand a chance.

Cattle grazing along the riverbanks in summer also can reduce seedling survival. The USGS team, in cooperation with the Bureau of Land Management (BLM), is including grazing in its cottonwood regeneration study. The BLM administers both recreation and grazing on the Wild and Scenic Missouri.

Joe Frazier, hydrologist with the BLM in Lewistown, feels that grazing does play a role in limiting cottonwoods along this section of river. "For generations," he says, "ranchers and farmers have grown wheat, barley, or hay on the uplands and grazed the rough breaks along the river during summer. Because the breaks are so steep and rugged, about the only water source for their livestock is the river itself. The cattle typically spend summer next to the river trampling and eating the vegetation until they are moved back to the uplands after the fall harvest."

Ice, floods, drought, dams, disease, and summer grazing are all taking their toll on the cottonwoods, willows, and other riparian species, says Frazier. "Our data show a huge difference between ungrazed areas or those with winter use only and those with continual summer use. Seedlings are established every year, but in summer-grazed areas they never grow to the sapling or pole stage." Frazier fears that hunters, floaters, ranchers, and birdwatchers are all facing an extended period when there will be virtually no mature trees.

What is a riverbank with fewer cottonwoods? On a morning in mid-May at Woodhawk Landing about 20 miles upstream from Fred Robinson Bridge, Frazier posed the question in a statement: "Close your eyes and listen." Then block out the orioles, yellow-rumped warblers, rufous-sided towhees, yellow warblers, and house wrens.

Silence is not a pretty sight.

But birds are not the only beneficiaries of cottonwoods. For hundreds of years, we have relied on them for fuel, forage, medicine, shelter, shade, and comfort. Today, despite the grumblings of suburbanites, we all benefit directly or indirectly from these hardy, drought-resistant trees. Perhaps it's time to give cottonwoods the respect they deserve. ■

RIPARIAN AREAS and cottonwoods will be the focus of a symposium sponsored by the Society of Wetland Scientists (SWS) at Montana State University in Bozeman June 3 to June 5. For registration information call MSU conference services at (406) 994-3333. For the complete agenda or to register electronically, use the SWS home page at *http://www.sws.org*

DUSAN SMETANA

White-tailed deer emerge from cottonwood groves to feed in adjoining fields, but retreat to the shelter of the trees when danger threatens.

E00011407

9/23/98

① Leonard Belick (Bitterroot Restoration)
(Len).

→ David Ledford asked him to investigate Habitat Restoration off Mill Property.

→ Denver Holdt.

→ Asked Leonard to put together Proposal focusing on off-site work. Also asked him to think about Five Valleys Land Trust idea.

→ Do chart to discuss Proposals

→ Trip on Thurs. 6:30 AM
Next Thurs Oct 1, 1998.

Denver / Weeks / Driscoll

- Focus on Water Fowl + Shore Birds
- Knows a lot about types of animals / species here.
- Suggested different means of Managing Ponds
- Species Survey (1st Step).
- Color Procure
- OR Manage Cattle.

Owl Research Institute, Inc.
Denver W. Holt
President
(406) 549-7626
P.O. Box 8335
Missoula, Montana 59807
owl@montana.com

P2 Plan

E00011410

Received 8/9/99

XC: Boschee
Willhite
Frye

To/To
Gd

From: Robert Pojasek <rpojasek@sprynet.com> on 08/14/99 12:27 PM CDT
To: Ed Scott/MISSO/Mill/STO@STO
cc:
Subject: Motion to enforce the P2 Plan

Ed,

There is noise on the Internet that CHEER's attorney is getting ready to file a Motion to Enforce the P2 Plan with the judge that approved the plan. I have heard these noises before and little has happened. They are cropping up again on their list server. I did copy a list of the "violations" that they are seeking to show. I thought you might find this of interest. Let me know if you have heard anything through your channels.

(The parenthesis for ea. item below indicate first the Addendum A sectn #; followed by the Plan's sectn # where any attempt to meet the requirement is made).

Section III

(III-1; 3.1).
No statement of manager & facility-wide commitment (promised to be forthcomming...).
(III-1-a; 3.2)
No mention of the MOEC's if-needed problem solving teams.
(III-2-a; 1.0)
No statement of quantified, verifiable pre-existing P2 efforts; also, their list of past P2 accomplishments went beyond the five year limit (1993) ;-}
!
(III-1-b; 3.1)
No exact statement, as required, that the Plan's objectives are to identify & prioritize reduction opportunities, and to identify P2 opportunites that benefit human health & env. The Plan does use these phrases over two paragraphs, but not quite with the exact same meaning as what is required.
(III-2-c;)
No statement of plans to reduce other (BOD, water, energy, etc.) wastes.
(III;)
No "action planning sequences" submitted w/ the P2 Plan. [While I think I know what the "action planning. sequence" mentioned in the Addendum A's opening p'graph of Sec III (the overview) means, I'm not sure we describe it anywhere. So I'm not sure this is a violation.]

Section IV

||
V
AT THIS POINT, NOTE THAT THE INTRO TO SECTION IV APPEARS TO ALLOW STONE TO *NOT* CONSIDER (AS BEING INAPPLICABLE) ANY OF THE FACTORS TO BE USED IN SELECTING THE "alternatives" (a word only used in subsections IV-4 & IV-5), ie factors used for final evaluation (whereas as "opportunities" is used for subsections IV-1 through 4). So the allegations concerning

requirements of subsections IV-4 AND IV-5 belwo may not hold. I hope the intro doesn't mean the factors used in ALL of section IV, ie also in the identification & evaluation of the initial P2 "opportunities", need not be used. Charlie needs to interpret what this languague means for the Motion, I think!
The intro does say that the purpose of listing all the factors is to ensure they are consistently considered; that Stone will consider factors it believes are relevant (implying they should at least have stated when they believed factors to be innaplicable); and if not listed factors are (found to be) applicable, they'll be used.
/\
||

(IV-1; 4.0)
No identification of initial P2 opportunities that is based on the listed factors (toxicity, quantity used, process risk, etc.) A PROOF is that there's no list of initial P2 opportunities. NOR can CHEER find any random, individually mentioned P2 opportunities to which these toxicity, quantity used, process risk, etc. factors have been applied. In fact, CHEER can find no numerical or even narrative data--estimated or actual--that indicates the factors were applied in any manner. At a minimum, it is impossible that these factors were applied to identify P2 opportunities in the consistant manner that is neccesary both to identify pollution prevention opportunities and to comply with the Consent Decree. As no initial P2 opportunities having been identified, there can be no comparative evaluation that would achieve the maximal P2 benefit for both the company (and its shareholders) and for human and ecologic health.
Specifically:
(IV-2-a, b & c; 4.0).
No analysis of the identified P2 opportunities for current vs. (anticipated) post-P2-implementation emissions, chemical usage and waste generation is possible.
(IV-3-a; 4.0)
No analysis of these initial P2 opportunities for economic cost/benefit impacts, using the 14 listed factors is possible.
(IV-4-a; 4.0)
No identification of technologies, procedures or training programs that potentially could reduce generation of pollutants, by-products or use of chemicals for the (non-existant) identified P2 opportunities is possible.

(IV-4-b; 4.0)
Thus, no "alternatives" can be selected from the initial P2 "opportunities" (using the IV-4-a identification process directly above), which were to undergo even more analysis so that once more the most beneficial projects are the ones finally implemented. (Nor, as required, is the basis that was to be used for the selection that did not occur described).
(IV-5-a; 4.0).
No ranking of final (to be implemented) projects according to their energy use, byproducts, emissions, and cost savings, is possible, because the final projects to be implemented were not selected according to this procedure that identifies the most beneficial ones. In fact, no ranking at all was done, and thus there is no final showing the entire methodology was completed.
(IV-5-b; 4.0)

Finally, no explanation of reasons P2 opportunities would have been selected for implementation, including why implemented projects would have provided env. & health benefits (and presumably economic beefits to Stone). Again, this all undermines the incentives to engage in P2.

Ed S.

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Robert Boschee
General Manager, Missoula Mill
Stone Container Corporation
P.O. Box 4707
Missoula, MT 59806-4707

January 29, 1999

Re: CHEER v. Stone Container, CV 96-24-M-CCL

Dear Bob:

In response to Russ Frye's letter of January 15, 1999, and in order to avoid quibbling over whether my December 14, 1998 letter constitutes proper notice under paragraph 11 of the Consent Decree, please accept this letter to serve as notice under the dispute resolution provisions of paragraph 11. CHEER wishes to resolve these issues without resort to the court, so the extra 30 days afforded by this letter should provide Stone with all the additional time it needs to address the substantive concerns. CHEER does not, however, waive its right to claim that the December 14 letter constituted proper notice. Though I'm sure you have already been provided with a copy of the December 14 letter, enclosed in another copy. All comments contained in that letter remain valid.

Please understand that CHEER is pleased that the pollution prevention is underway, that projects have been identified for P2 activity and the program appears to be headed in the right direction. The concerns are likely not with the process, but with the dearth of information about the process. Addendum A to the consent decree is intended to provide the information critical to understanding the processes you have employed to come to those conclusions. Without that information your report is little more than conclusory.

While the message from Stone continues to be that you do not wish to go through what you view to be unnecessary analysis, you must look at it from CHEER's perspective as well. We spent of great deal of time negotiating the elements of the Addendum A and even fighting over the meaning of numerous words. After all the wrangling, the language of Addendum A has been made as clear as possible. The language is unambiguous that specific types of information are required to be provided

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in the P2 Plan and annual reports. If you recall, the parties discussed at length the elements about which information must be provided. We agreed that if a certain element was not relevant, or for instance that there was no cost involved in a certain project, that Stone merely had to make it clear that this was the case. The P2 Plan fails to accomplish this task. It neither provides substantive information nor identifies that a particular element is not applicable to a particular project. Such information is critical to understanding how decisions are made on the chosen projects and to provide a baseline for assessing the value of the P2 program over the life of the agreement. I'm sure you would agree that in order to make an assessment of the value of the program, there must be consistent, substantive information provided throughout the process. The confidentiality component of the settlement was intended to address legitimate concerns Stone might have about revealing such information.

With regard to the Bleach Plant Effluent and alternative bleaching processes, the settlement agreement requires Stone to provide "the completed analysis of alternatives to its current bleaching technology, as well as the results of Dr. Pojasek's review, to the Plaintiffs as soon as it is available." The statement in Mr. Frye's letter that "the decision on the future of the bleach plant will be made in the very near future" sidesteps the fact that the analysis is likely overdue. Please provide the analysis immediately. If the decision turns out to be to stop bleaching, and that process stops promptly, then separating the BPE should become a moot point. But if the decision is to phase out the bleach plant over some period of time then separating the BPE remains something that must be prioritized for prompt action.

We again request that you revise the P2 Plan to include the information required by the Consent Decree. As a reminder, the second update on the OCC rejects is due February 1. I sincerely hope we can promptly resolve these issues.

Yours Truly,

Charles M. Tebbutt

cc: Darrell Geist
Jack Tuholske
Robert Pojasek (via fax and first-class mail)
Russ Frye

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* admitted in Oregon

December 14, 1998

Russell Frye, Esq. (Via Fax 202-974-5602 and First-Class Mail)
Chadbourne & Parke
1200 New Hampshire Avenue, N.W.
Washington, D.C. 20036

Re: CHEER v. Stone Container, CV 96-24-M-CCL

Dear Russ:

We have received and reviewed Stone's Pollution Prevention Plan which is required by Section 7.B.1. My clients are pleased to see the list of pollution prevention tasks to which Stone has committed for the 1998-99 P2 Program year. There are, however, some significant deficiencies with the Plan.

First, the P2 Plan fails in any respect to address designation of the Bleach Plant Effluents as a priority pollution prevention item as required by Section 7.B.6. of the Consent Decree. Regardless of whether Stone has decided what it will do concerning its bleaching operations, the agreement is clear that Stone must address this issue immediately. Addressing this issue should provide critical information about the financial and environmental viability of whatever bleaching option that Stone chooses. Failure to collect and analyze this information negates this aspect of the purpose and intent of this part of the agreement and constitutes a direct violation of the Consent Decree.

Second, the P2 Plan fails to include whole sections of the basic information required by Sections II, III and IV of Addendum A. Particularly, the P2 Plan fails in the following specific areas:

1) Section II. "An initial pollution prevention (P2 Plan), which identifies and prioritizes hazardous chemicals, processes and/or emission sources... consistent with the elements listed in Sections III and IV." As will be discussed in more detail below, the P2 plan provides no

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information whatsoever about the elements required by Sections III and IV.

2) The introduction to Section III states:

"The P2 Plan shall identify the steps by which P2 opportunities shall be identified...These steps shall include at least the following: process flow maps for every major operation in the facility, accounting of materials used and lost from the operation, identifying P2 opportunities using consistent factors, a system for identifying the most beneficial opportunities, preparing a materials balance for each process opportunity targeted..., a description of the system [to be] use[d] for assessing costs and measuring results of the alternatives identified for pollution prevention, and an action planning sequence for implementing the alternatives selected in the planning efforts.

The initial P2 Plan shall present the action plans for each of the alternatives to be implemented in the first year of the P2 Program."

Of the above required elements only very rudimentary process flow maps are included in the P2 Plan. All of this information was required to be provided as baseline information in the initial P2 Plan. For example, there is no description in the P2 Plan of how P2 opportunities were identified. This is a critical part of the plan for CHEER to see. Sections III and IV specifically set forth what is required. It should not be necessary to reiterate each of the elements. Essentially, none of the elements in Section IV (2-4) are provided anywhere in the P2 Plan. Please promptly revise the P2 Plan with this required information.

3) Section III.(1). There is no "Statement of the corporate and facility-wide management commitment to and support for the P2 Plan." § III (1). Please comply with this provision in the revised P2 Plan.

While recognizing it is not a specific requirement of the agreement, CHEER is disappointed that Mill Manager Bob Boschee is not on the MOEC. It is important for the Mill Manager to be a direct part of the process to make the entire process work most effectively and productively.

4) Section III(2)(a). The P2 Plan fails to "provide a measure of the reductions in emissions, discharges, waste generation, and hazardous chemical usage those measures have achieved." It is this information which will provide part of the basis for verification of these past P2 activities. Please provide this information in the revised P2 Plan.

5) Section IV (5-6). There is a serious lack of detail in the P2 Plan concerning these items. These elements are self-explanatory and need to be addressed in the revised P2 Plan.

In order to be clear which elements of Addendum A are described in the P2 Plan, it is suggested that the P2 Plan be written in a manner that follows, to the extent practicable, the outline of Addendum A.

This letter also constitutes notice pursuant to the requirements of paragraph 11 of the Consent Decree concerning dispute resolution. CHEER requests that Stone revise the P2 Plan in accordance with all of the above comments and the requirements of the Consent Decree. We hope that these issues will be resolved informally during the next 30 days.

Sincerely,

Charles M. Tebbutt

cc: Darrell Geist
Jack Tuholske
Robert Pojasek (via fax and first-class mail)

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PETER F. FITZGERALD*

*NOT ADMITTED IN D.C.

January 15, 1999

Charles M. Tebbutt
Western Environmental Law Center
1216 Lincoln Street
Eugene, OR 97401

Re: Comments on Stone's Pollution Prevention Program

Dear Charlie:

We have reviewed and discussed the comments on Stone's initial Pollution Prevention Plan contained in your December 14, 1998 letter. Stone also had an opportunity to review the letter with Dr. Pojasek, since Stone had previously arranged for Pojasek to meet with the Mill Operations Committee in Missoula this week. Of course, we disagree with your assertion that the P2 Plan contains some significant deficiencies. Stone is willing, though, to supply some additional information which we believe will address your clients' concerns.

At the outset, I must disagree that your December 14, 1998 constitutes notice that triggers the requirements of Paragraph 11 of the Consent Decree concerning dispute resolution. Paragraph 14 of the Consent Decree provides that, whenever the Decree requires notice to a party, the communication shall be directed to (in the case of Stone) the General Manager of the Missoula Mill. Thus, the requirement of Paragraph 11 that the party invoking dispute resolution must send a written notice to the other party has not been satisfied by your letter addressed to me, and the thirty-day period from the date of the notice has not begun to run.

Nevertheless, without waiving the requirements of Paragraph 14, we are responding here to the comments in your letter.

Your first point is that the P2 Plan does not designate bleach plant effluents as a "priority pollution prevention item" as provided in Section 7.B.6. of the Consent Decree. (Note that the Consent Decree does not say that this means Stone "must address this issue immediately," as your letter asserts.) As I believe CHEER knows, Stone has been conducting a major reanalysis of bleaching at the Missoula Mill, including the possibility of ceasing bleaching. Such an action obviously would result in significant pollution prevention. It also would render irrelevant any additional analysis of ways to further separate bleach plant effluent from general mill effluent prior to the primary clarifier. The decision on the future of the bleach plant will be made in the very near future. Stone believes this is an appropriate way to treat the bleach plant effluent issue as a priority pollution prevention item. It would be foolish for Stone to devote its limited resources on a potentially futile additional study of separation of the remainder of bleach plant effluent, when those resources are needed to implement real projects with known pollution prevention benefits. Of course, if a decision were made to continue bleaching, Stone would then promptly begin further work on identifying ways of separating bleach plant effluent.

Stone is surprised at the various general and specific comments that the P2 Plan fails to comply with Addendum A. As you know, Stone retained Bob Pojasek to prepare the initial P2 Plan at CHEER's urging. Stone agreed to the pollution prevention provisions in the Consent Decree only after meeting at length with Dr. Pojasek about how the process would work, again based on your suggestion that this would help Stone realize that the process the plaintiffs were insisting on would indeed be a productive analysis rather than disruptive busywork. Nevertheless, now that Dr. Pojasek has prepared the initial P2 Plan in cooperation with the Missoula Mill and certified that the P2 Plan satisfies the requirements of the Consent Decree and Addendum A, and Stone has identified numerous worthwhile pollution prevention projects at the mill, it appears CHEER is not satisfied with the process. As you can imagine, this is rather frustrating for Stone.

While one obviously can quibble about precise conformity of the P2 Plan to Addendum A, we believe the plan does contain the types of information addressed in Addendum A and does lay out the process Stone used to identify and analyze

pollution prevention opportunities for this initial P2 Plan and will use to identify and analyze additional opportunities in the coming years. It appears that in many cases CHEER is requesting (probably without realizing it) that the P2 Plan contain unnecessary detail and irrelevant information. For example, if a particular practice, such as the use of chemical can be eliminated, then detailed analysis of the current way of doing things may be of little or no use. Providing the kind of minute detail your letter seems to suggest about every aspect of a huge, complex manufacturing facility like an integrated paper mill would have taken Dr. Pojasek and the Missoula Mill team literally years. I think we can agree with your statement that "it should not be necessary to reiterate each of the elements" that may be considered, if applicable, in evaluating each of the pollution prevention alternatives.

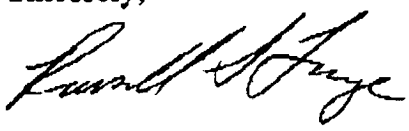
Stone believes that much of the information CHEER probably is hoping to see will be contained in the action plans that the Missoula Mill and the MOEC have been developing for each of the pollution prevention alternatives identified. These action plans will not only identify the benefits anticipated from each activity and the way those benefits will be measured, but also provide information about the anticipated schedule for achieving the pollution prevention benefits, discussed in the latter part of your letter. These action plans, which have taken a bit longer to prepare than anticipated, should be completed within the next few weeks and will be provided to CHEER when they are done.

Finally, your criticism of the P2 Plan's statement of management commitment to pollution prevention and the P2 Plan is especially perplexing and seems entirely to focus on form rather than substance. The P2 Plan itself, of course, evidences a direct, substantive commitment to pollution prevention, not just an unsupported statement of commitment. Stone went even further in the P2 Plan, though, and committed to prepare a mill-wide statement of pollution prevention principles, with input from a variety of mill employees. We would have thought that CHEER would have been pleased by this more extensive commitment to incorporate pollution prevention into the mill "culture."

I hope this letter addresses many of your comments, but in any event I would suggest that we reserve further discussions about the adequacy of the P2 Plan until CHEER has received and had an opportunity to review the action plans discussed

above. I think that may clarify better how the P2 Program is working at the Missoula Mill and may help address a lot of your client's concerns.

Sincerely,



Russell S. Frye

cc: Bob Boschee
Ed Scott
Curt Barton
Paul Willhite
Bob Pojasek

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MEMORANDUM

TO: Messrs. Boschee, Scott, Barton & Willhite

FROM: Russell S. Frye

DATE: December 15, 1998

RE: CHEER's Objections to Initial Pollution Prevention Plan

I received the attached letter from Charlie Tebbutt yesterday evening, claiming that the Missoula Mill's initial Pollution Prevention Plan contains "significant deficiencies," at least some of which constitute "a direct violation of the Consent Decree." I think most of the objections relate to things where we knew CHEER might not think the P2 Plan goes far enough. I believe a number of the issues are also things that Pojasek said were unnecessary, despite the specificity of Addendum A to the Consent Decree.

As you will see from Tebbutt's letter, the primary objections are that the P2 Plan does not address separation of bleach plant effluent from the mill sewer as a priority pollution prevention item, does not contain information about how pollution prevention opportunities are identified and prioritized, does not contain a materials balance and other information for each process, does not provide a statement of corporate and mill management commitment to and support for the P2 Plan, does not address pollution per unit of production, does not quantify costs of chemical usage and pollutant generation, fails to consider cross-media shifts in pollution from pollution prevention opportunities, and provides insufficient detail about the schedule for implementation of the chosen pollution prevention opportunities and factors which might cause delays in that schedule. CHEER apparently is not objecting to any of the particular pollution prevention opportunities chosen (other than the failure to address bleach plant effluent).

CHEER also has not asked for a meeting to discuss the P2 Plan, as it could have under Section 7.I.2. of the Consent Decree, although there is no deadline for them to make that request, and they may be thinking they would request a meeting after Stone revises the P2 Plan. Tebbutt does, however, claim that his letter constitutes notice, pursuant to Paragraph 11 of the Consent Decree, that CHEER believes it has grounds to ask the Court to enforce the Consent Decree and is requesting informal negotiations to resolve the matter. Under Paragraph 11, if the parties are unable to resolve the matter informally within 30 days from the date of the notice (or within such additional period of time as they might agree), CHEER could request that the Court resolve the dispute or enforce the Consent Decree.

Tebbutt's letter to me does not actually start the 30-day clock running, as he suggests, because he has failed to comply with the provision of the Consent Decree governing notice, which requires that notice be sent directly to the General Manager of the Missoula Mill. Unless anyone objects, I propose to send Tebbutt a letter immediately, pointing out that his letter to me fails to comply with the notice requirements of Paragraph 14 of the Consent Decree. That presumably will only buy us a few days, however, until he sends the same letter to Bob.

As I told Ed and Paul when the P2 Plan was being finalized, I think CHEER does have some legitimate arguments that the P2 Plan does not satisfy the requirements of Paragraph 7.B. and Addendum A. I assume Pojasek certified that the current version complies with the Consent Decree and Addendum A, but there is a good argument that such a certification is not conclusive. Of course, we will want to make much of the pragmatic argument that Pojasek was hired at CHEER's suggestion and that Stone was led to believe that following Pojasek's approach would satisfy the pollution prevention requirement. To the extent that the P2 Plan simply omits things that the Consent Decree, including Addendum A, requires, though, I think the Court likely will not defer to Pojasek's certification.

What this probably means, then, is that some additions should be made to the P2 Plan in the next 30 days, to keep this process moving.

Attachment

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December 14, 1998

Russell Frye, Esq. (Via Fax 202-974-5602 and First-Class Mail)
Chadbourne & Parke
1200 New Hampshire Avenue, N.W.
Washington, D.C. 20036

Re: CHEER v. Stone Container, CV 96-24-M-CCL

Dear Russ:

We have received and reviewed Stone's Pollution Prevention Plan which is required by Section 7.B.1. My clients are pleased to see the list of pollution prevention tasks to which Stone has committed for the 1998-99 P2 Program year. There are, however, some significant deficiencies with the Plan.

First, the P2 Plan fails in any respect to address designation of the Bleach Plant Effluents as a priority pollution prevention item as required by Section 7.B.6. of the Consent Decree. Regardless of whether Stone has decided what it will do concerning its bleaching operations, the agreement is clear that Stone must address this issue immediately. Addressing this issue should provide critical information about the financial and environmental viability of whatever bleaching option that Stone chooses. Failure to collect and analyze this information negates this aspect of the purpose and intent of this part of the agreement and constitutes a direct violation of the Consent Decree.

True

Second, the P2 Plan fails to include whole sections of the basic information required by Sections II, III and IV of Addendum A. Particularly, the P2 Plan fails in the following specific areas:

1) Section II. "An initial pollution prevention (P2 Plan), which identifies and prioritizes hazardous chemicals, processes and/or emission sources... consistent with the elements listed in Sections III and IV." As will be discussed in more detail below, the P2 plan provides no

unbleached · 100% postconsumer waste · soy ink

information whatsoever about the elements required by Sections III and IV.

2) The introduction to Section III states:

"The P2 Plan shall identify the steps by which P2 opportunities shall be identified...These steps shall include at least the following: process flow maps for every major operation in the facility, accounting of materials used and lost from the operation, identifying P2 opportunities using consistent factors, a system for identifying the most beneficial opportunities, preparing a materials balance for each process opportunity targeted..., a description of the system [to be] use[d] for assessing costs and measuring results of the alternatives identified for pollution prevention, and an action planning sequence for implementing the alternatives selected in the planning efforts.

During First Year

The initial P2 Plan shall present the action plans for each of the alternatives to be implemented in the first year of the P2 Program."

See Above

Of the above required elements only very rudimentary process flow maps are included in the P2 Plan. All of this information was required to be provided as baseline information in the initial P2 Plan. For example, there is no description in the P2 Plan of how P2 opportunities were identified. This is a critical part of the plan for CHEER to see. Sections III and IV specifically set forth what is required. It should not be necessary to reiterate each of the elements. Essentially, none of the elements in Section IV (2-4) are provided anywhere in the P2 Plan. Please promptly revise the P2 Plan with this required information.

3) Section III.(1). There is no "Statement of the corporate and facility-wide management commitment to and support for the P2 Plan." § III (1). Please comply with this provision in the revised P2 Plan.

During First Yr.

While recognizing it is not a specific requirement of the agreement, CHEER is disappointed that Mill Manager Bob Boschee is not on the MOEC. It is important for the Mill Manager to be a direct part of the process to make the entire process work most effectively and productively.

Bob's Decision

4) Section III(2)(a). The P2 Plan fails to "provide a measure of the reductions in emissions, discharges, waste generation, and hazardous chemical usage those measures have achieved." It is this information which will provide part of the basis for verification of these past P2 activities. Please provide this information in the revised P2 Plan.

A Measure? (Quantify?)

5) Section IV (5-6). There is a serious lack of detail in the P2 Plan concerning these items. These elements are self-explanatory and need to be addressed in the revised P2 Plan.

TBM.

In order to be clear which elements of Addendum A are described in the P2 Plan, it is suggested that the P2 Plan be written in a manner that follows, to the extent practicable, the outline of Addendum A.

This letter also constitutes notice pursuant to the requirements of paragraph 11 of the Consent Decree concerning dispute resolution. CHEER requests that Stone revise the P2 Plan in accordance with all of the above comments and the requirements of the Consent Decree. We hope that these issues will be resolved informally during the next 30 days.

Sincerely,

Charles M. Tebbutt

cc: Darrell Geist
Jack Tuholske
Robert Pojasek (via fax and first-class mail)

PZ Plan Financial

E00011428

RISK MANAGEMENT CONSULTING

POJASEK & ASSOCIATES

Robert B. Pojasek, Ph.D.
President

Production Process Evaluations / Process Mapping
Process Improvement and Optimization Programs
Independent Third-Party Program Reviews
Environmental ABC Accounting Pilot Projects
Benchmarking Best Practices
Performance Measurement Systems
On-Site Training & Briefings
Pollution Prevention
Change Management

February, 1998

Risk Management

Pojasek & Associates specializes in risk management and production process optimization activities that minimize wastes and maximize our clients' profits. It is our view that waste elimination becomes a strategic business opportunity for these clients. Our unique consulting practice uses proven business methods to:

- Improve quality management
- Manage overhead expenditures
- Increase process efficiency
- Integrate services into the core business
- Promote loss control for reduced risk liability.

To achieve these goals, we work closely with our clients to implement our highly-regarded *Systems Approach.* This sequence of problem solving and decision making tools will enable you to define and implement waste elimination actions. We effectively evaluate our clients' waste elimination activities by evaluating on-going programs in quality management, health and safety, environmental management, maintenance, production and other related functions. As appropriate, our services can assist in implementing new business integration systems or improve existing management systems. We work to integrate risk management services into our clients' strategic direction and goals.

Eliminating waste is now considered to be a mainstream effort in industry. It must be considered during initial design phases of workplaces, equipment, processes, and products. Pojasek & Associates can help you capitalize on these efforts by measuring the degree to which they insulate the company from the financial risks posed by existing and changing regulations.

The insight and expertise of Dr. Robert B. Pojasek come from years of experience working with facilities from a diverse number of industry types. His cutting-edge methods have placed him among the nation's leaning experts in risk management and pollution prevention.

Pojasek & Associates' risk management services include:

- Development and implementation of clean production plans
- Environment, health and safety (EHS) cost accounting
- Customized process improvement training
- Process improvement system program reviews
- Best practices benchmarking
- Development of *Green Teams*
- Supply chain management.

Clean Production Plans

Pojasek & Associates facilitates the development and implementation of clean production and pollution prevention plans. These plans catalogue process functionality and materials use with a computerized process mapping tool. With this information, it is possible to identify prevention opportunities and provide a systematic approach to incorporating clean production methods into a facility's operations.

Clean production plans are often used to satisfy a legal Settlement Agreement or a regulatory agency supplemental environmental project (SEP). Fines may be reduced once a company has agreed to pursue the use of such a plan. Many of our clients have reduced fines from in excess of $100,000 to less than $20,000 while benefitting from the additional cost savings that our loss prevention efforts bring. We have also developed plan updates to meet pollution prevention requirements of state regulations.

We have found that clean production enhances our clients' competitiveness by:

- Reducing the process losses that trigger requirements for compliance
- Improving the quality of the product or service provided
- Increasing process efficiency and reducing waste.

Pojasek & Associates works closely with a client's key managers and process experts to comprehensively and accurately define the company's operations and trace each loss back to its source. Focus group sessions with client teams also identify the facility's *best practices* and generate alternatives that address the root cause of the problem. Our interaction with these individuals provides the training needed to ensure that the plan stimulates continuous process improvement.

Environment, Health and Safety (EHS) Cost Accounting

Improving our clients' EHS performance helps manage unnecessary overhead costs. Pojasek & Associates identifies the financial implications of each pertinent EHS activity. We determine the cost drivers and assign them to specific process steps using process maps. Then we work to find production alternatives that obviate the need for these EHS expenditures. Our process maps can help management visualize the "before" and "after" scenarios with the costs linked to these maps. With these activity-based costs eliminated from our client's overhead, savings translate into profit. We helped one client fond an alternative grinding compound that eliminated tetracholoroethene from their operations. This client avoided costs of approximately $150,000 on a Title V air operating permit application and additional costs for process modifications required to meet MACT standards. By eliminating the solvent, this facility is no longer regulated as a large quantity generator of hazardous waste. EHS personnel can now become more involved in prospective activities now that the reactive compliance burden has been reduced. Many companies have instituted pilot projects with Pojasek & Associates to test the applicability of this service to their operations.

Process Improvement Training

We believe organizations must have process improvement and management capabilities - in house. Pojasek & Associates offers customized on-site training to help you understand the basics; how people, materials and methods are intimately linked; knowing what tools are available; and having the skills to use them. By learning the *Systems Approach*, companies can implement effective, team-based approaches to optimize manufacturing and support processes. Our training programs promote practical methods that can be implemented rapidly. Customized exercises derived from your own operation are used to initiate discussions and build confidence in using the business analysis tools presented. Management briefings are provided to maintain their support for these training efforts and to make sure the training is carefully linked to their strategic direction. We help create an organization that is eager and ready to make sound changes. Dr. Pojasek also offers training to multi-client groups throughout the year.

EHS Management Program Assistance

Pojasek & Associates offers the following services for EHS management program assistance:

Integration
We specialize in integrating EHS management systems into existing programs such as quality management, operations, and maintenance. This is accomplished in a five step program: engagement, assessment, strategy, implementation, and re-evaluation. In this manner, EHS activities become part of what every employee does every day.

Implementation
We advise on development of strategies and practical concepts to help with process optimization program implementation. Using our *Systems Approach*, we can help develop action plans that lower implementation costs and speed the attainment of goals.

Green Teams
To reach environmental excellence, organizations must unlock and channel the ideas and energies of their staff. We have helped companies formulate a range of teams including: environmental steering committees; environmental action teams; process improvement teams; and green teams. What sets us apart are the use of structured analysis tools that allow teams and management to effectively communicate with one another and to measure progress in monetary terms.

Information Services
We have established an extensive library and networking capability that afford our clients ready access to information. Whether clients wish to decrease the use of a specific chemical, invest in new equipment, or modify a process, we help clients find the information they need for the change they seek.

Best Practices Benchmarking
We help clients benchmark their best practices against other firms. We provide useful information about best practices both within and beyond specific industry types. Our broad experience provides our clients with a range of innovative, yet practical, approaches.

Independent Reviews
A company that participates in voluntary programs, such as Responsible Care®, or prepares an annual report for EHS programs may seek independent review. We have developed the tools needed to measure adherence to such programs and evaluate the continuous improvement necessary for ISO 14001 programs. This provides us with the opportunity to show how costs can be lowered by increasing the amount of prevention in the programs.

Supply Chain Management
To help minimize costs and assure quality of incoming goods, we work with our clients' suppliers. Deficiencies are resolved using the problem solving and decision making tools of our *Systems Approach.* Best practices are developed and made available throughout the supply chain to assure continued viability of our clients' products and services.

Next Steps

To learn more about the services of Pojasek & Associates:

- Ask for our reprints
- Try our self assessment to see how your company rates on waste elimination efforts
- Subscribe to our newsletter
- Contact Pojasek & Associates with your specific needs.

Contact

Robert B. Pojasek, Ph.D.
President
Pojasek & Associates
P.O. Box 1333
E. Arlington, MA 02174-0021
(781) 641-2422 Phone/Fax
rpojasek@sprynet.com

RMP

E00011434

RMP – Financial

E00011435

Pojasek & Associates
P.O. Box 1333
E. Arlington, MA 02474-0071
Tax ID # 04-3407178

INVOICE Submitted To:

Ed Scott
Smurfit-Stone Container Corp.
P.O. Box 4704
Missoula, MT 59806-4707

February 12, 1999

In Reference To: P.O. 1999-00137; Review of BMP; Project B-022

Invoice # 1065

1/18/99	Review and comment on BMP 4 hrs. @ $150	$ 600.00
TOTAL DUE		$ 600.00

PLEASE MAKE CHECK PAYABLE TO: POJASEK & ASSOCIATES

Payment Terms Net 30 Days. Please contact Dr. Robert Pojasek if there are any problems with this invoice at (781) 641-2422. Thank you.

2/23/99
OK to pay
G.P.

Bleach Plant

E00011437

Ed

Smurfit-Stone
Containerboard and Paper Division

March 11, 1999

Darrell Geist
Cold Mountain, Cold Rivers
P.O. Box 7941
Missoula, MT 59807

Dear Darrell:

I was frankly surprised by your letter of February 26, 1999 to Bob Boschee, requesting a copy of Smurfit-Stone Container's never-completed analysis of alternative bleaching technologies. As you know, our consent decree requires the mill to provide the plaintiffs "the results of its completed analysis of alternatives to its current bleaching technologies... as soon as it is available and at least thirty days prior to any final decision on technologies is made. Smurfit-Stone also committed to continue to evaluate any new information "that might further reduce the environmental impact of the pulp bleaching technology chosen".

One of the issues discussed in our negotiations was that, while the company was willing to share the analysis with Montana CHEER, et al. once it was completed, and to review any additional information they presented at that time, the company was not willing to have CHEER involved in the analysis as it was being conducted. Obviously, the language of the consent decree reflects the fact that Smurfit-Stone would only be required to provide any analysis once it was completed and prior to selection of a bleaching technology.

In this case, the analysis was never completed and no alternative bleaching technology was ever selected. Thus, the mill has acted completely consistent with the consent decree.

We also have to wonder why you would be demanding this analysis, in any event. During our settlement negotiations, CHEER emphasized that they wanted to receive Smurfit-Stone analysis of alternative bleaching technologies, and to have an opportunity to comment on that analysis and its implications before Smurfit-Stone made a final decision on a new bleaching technology, in order to assure that the company was aware of available information about alternative bleaching technologies and their environmental effects. CHEER also emphasized that it wanted to assist the company in making sure that the full costs of each of the alternatives had been identified and considered in the selection process.

Smurfit-Stone Container Corporation
Missoula Mill
Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707 phone 406-626-4451 fax 406-626-5986

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Obviously, none of those objectives is relevant now, since the mill will not be choosing any bleaching technology. Your suggestion that it might be necessary to hold a meeting in order to discuss this incomplete analysis that has now become moot is even more perplexing. And finally, the Missoula mill completed its last run of Spra-White this past February. Therefore, the bleach plant is not expected to operate in the future.

Sincerely,

Ed Scott
Environmental Manager

ED:plg

→ ED S.

Cold Mountain, Cold Rivers

406-728-0867 phone 406-327-1209 fax
PO Box 7941 Missoula MT 59807
cmcr@wildrockies.org http://www.wildrockies.org/cmcr

February 26, 1999

Bob Boschee, General Manager
Smurfit-Stone, Missoula Mill
Mullan Road
PO Box 4707
Missoula, Montana 59806-4707
VIA FAX AND MAIL

XC: Initiate
Please Review and Call me
Ed.

Dear Bob,

Thank you for your letter of February 18, 1999, outlining how Stone's decision to cease bleaching affects the legal requirements contained in our Consent Decree. Let me say first that the citizen plaintiff groups agree with Stone that the decision to close the bleach plant was a difficult one for mill workers whose jobs may be affected. Though we have long advocated converting the bleach plant to a chlorine-free system, the decision to close the bleach plant will result in a safer mill, a cleaner environment, and we hope, will lead to additional pollution prevention benefits for mill employees and local residents.

With regards to bleach plant effluent and Stone's public statements that the mill will cease bleaching by June, 1999, we request that Stone notify CHEER directly of when bleach plant operations have ceased. As June is over one year from entry of our Consent Decree, it is still a priority requiring prompt action. Again, we ask that Stone notify us directly of when the bleach plant is completely shutdown.

We are concerned by your statement that because Stone never completed its bleaching analysis it therefor need not release available information to CHEER et al pursuant to section 7.D.2 of the Consent Decree. The failure by Stone to release its analysis to CHEER at least 30 days prior to any final decision, constitutes a direct violation of our Consent Decree. We request that Stone immediately release its bleaching analysis, and any review by Dr. Robert Pojasek to CHEER. Though a meeting of the Plaintiffs and Stone may not be needed on this issue, we will only be able to decide whether to waive this requirement after reviewing Stone's bleaching analysis.

Finally, as discussed in our letters of December 14, 1998, and January 29, 1999, we want to remind you that the 30-days notice for dispute resolution over the P2 plan will pass on February 28, 1999. We are disappointed that Stone has not attempted to resolve the issues we have raised. We obviously cannot resolve these issues short of court without your participation. We would like to resolve this dispute as soon as possible.

sincerely,

Darrell Geist

cc: Charlie Tebbutt
Jack Tuholske
Robert Pojasek
Russ Frye

Ed

Smurfit-Stone

Containerboard and Paper Division

February 18, 1999

Darrell Geist
President
Cold Mountain, Cold Rivers
P.O. Box 7941
Missoula, MT 59807

VIA CERTIFIED MAIL

Dear Darrell:

Smurfit-Stone Container Corporation recently made the difficult decision to cease bleaching pulp at the Missoula Mill. I say "difficult" because closure of the bleach plant will result in some of our valued employees losing their jobs and because bleached kraft linerboard was a high-value product important to the Missoula Mill. Unfortunately, the cost of upgrading the technology for making white-top linerboard, including the cost for compliance with new air and water pollution regulations in EPA's pulp and paper "Cluster Rule," were too great.

We will be ceasing to operate the bleach plant within approximately two to three months. I wanted to make sure that CHEER, Cold Mountain, Cold Rivers and Native Forest Network were aware of this decision. Smurfit-Stone Container's decision to cease bleaching affects several provisions of our Consent Decree. First, because it became apparent, in the middle of Stone's assessment of various bleaching technologies, that the costs of all of the options might be prohibitive, Smurfit-Stone never completed the draft analysis of alternatives to the current bleaching technology that is discussed in section 7.D.2. of the Consent Decree. The decision to cease bleaching also means that Stone will not need to evaluate new information concerning environmental impacts of pulp bleaching as discussed in section 7.B.3.

Previous correspondence from Charlie Tebbutt criticized the Missoula Mill for not explicitly making "bleach plant effluents" a priority pollution prevention item in its Pollution Prevention Plan. As we noted previously, at the time the P2 Plan was completed, Smurfit-Stone was considering closing the bleach plant, so it made no sense to develop more detailed plans for how bleach plant effluents might be managed, until that decision was made. Now that the bleach plant will be closed soon, there will not be any bleach plant effluent to address, so that provision of the Consent Decree also has become moot.

While it is not directly addressed in the Consent Decree itself, chlorine used in the pulp bleaching was one of the chemicals that would have been addressed under the EPA Risk Management Program regulations discussed in section 7.C. of the Consent Decree, and I know that the transportation and storage of chlorine needed for the bleach plant was an

Smurfit-Stone Container Corporation
Missoula Mill
Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707 phone 406-626-4451 fax 406-626-5986

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important concern of the Plaintiffs. In fact, since the only chemicals the Missoula Mill uses in sufficient quantities to trigger the Risk Management Program regulations are associated with the bleach plant, we will no longer be involved in the RMP implementation and compliance actions discussed in section 7.C. of the Consent Decree.

Thus, while the decision to cease bleaching presents some significant disadvantages for the Missoula Mill, it does resolve a number of issues that you and other representatives of the Plaintiffs raised and that are addressed in the Consent Decree. I hope it will simplify implementation of the Consent Decree.

I want to make you aware of one other development. Section 7.E.1. of the Consent Decree states that the Missoula Mill will "continue to work with Philip Environmental Services, Inc., or any other presently identified entities," to look at alternative processes for handling OCC rejects. As you know, corporate representatives had had discussions and meetings with Philip Environmental Services before the Consent Decree was executed. Since that time, corporate staff have made repeated attempts to interest several Philip representatives in doing further work to evaluate technology that might be applicable to OCC rejects at the Missoula Mill and at other Smurfit-Stone mills, without success. Since Philip does not appear to have any interest in committing more time to this matter, we are now talking with a couple of other vendors who may have an interest in working with the company to evaluate other technologies for managing the OCC rejects.

Sincerely,

Bob Boschee

Bob Boschee

cc: Charles M. Tebbutt
Robert J. Pojasek

BB:plg

Stone Container Corporation
Missoula Mill
Containerboard and Paper Division

To: **Distribution**

Date: **July 16, 1998**

From: **Ed Scott**

Subject: **Meeting With Dr. Pojasek Regarding Modification of The Bleach Plant.**

As part of the Consent Decree with MT CHEER, we are required to discuss with Dr. Pojasek the status of mill's bleaching sequence evaluation (Please see attachments from the Consent Decree - paragraph D.)

Part of the discussion is required to focus on the factors that Stone is evaluating, including the process Stone used to identify TCF technologies for further evaluation and the extent to which environmental costs and benefits of the various technology options are being included in the analysis.

Once Dr. Pojasek receives and reviews this information, he is then required to submit to the Mill a written review of the process the Mill is using to identify and evaluate alternative bleaching sequences and to make suggestions for including pollution prevention considerations as outlined in the attached Addendum A.

The Mill must then take Dr. Pojasek's comments into account and reflect or respond to the comments, as appropriate, in the Mill's written analysis of alternative bleaching options.

The Mill's written analysis and Dr. Pojasek's review must be made available to MT CHEER at least 30 days prior to any final decision on sequences is made. The Mill must then schedule a meeting with MT CHEER within 25 days following submittal of the reports to allow them to ask questions regarding the information contained in the reports.

To begin to get this process completed, a meeting has been scheduled with Dr. Pojasek for *Wednesday July 22, 1998 in the upstairs conference room from 10:30 a.m. - 1:30 p.m.* Lunch will be provided.

The agenda is as follows:

Item	Personnel
Status of Mill's Bleaching Sequence Evaluation.	M. Misra/B. Madison
Factors Evaluated & Process Used To Evaluate Various Bleaching Sequences including TCF.	M. Misra/B. Madison
Additional Info Needed For Pojasek to Complete Written Review of Process.	B. Pojasek

IQS Innovation Quality Service

Agenda (Cont.)

Item	Personnel
Format and Timing of Review Document.	B. Pojasek
Next Steps	E. Scott

Let me know if you have any questions regarding this meeting. Thanks for your assistance.

Ed Scott

Distribution: Marxer
Kohl
Madison
Misra
Eastlick
Savage
Pojasek

cc: Boschee
Lamey
Olson
Anderson

Barton --> Willhite

information Dr. Pojasek has obtained during his work with the Missoula Mill on its P2 Program is taken into account in structuring the hazard assessment, to the extent appropriate and consistent with the RMP regulations. Likewise, Dr. Pojasek will assist Stone in developing a mechanism so that information about hazards identified through Stone's activities to comply with the RMP regulations are taken into account in Stone's P2 Program. Dr. Pojasek will have access to all Stone personnel and information necessary to perform his role.

2. Dr. Pojasek's annual report certifying Stone's implementation and compliance with the P2 Program, discussed in subsection B.3, will include a section which indicates how pollution prevention opportunities were considered in the RMP program, if any relevant activity occurred in that year.

D. Conversion to Alternative Bleaching Process

1. Stone has already included Dr. Pojasek in Stone's ongoing evaluation of alternatives to its current bleaching technology. Dr. Pojasek shall discuss, with the officials responsible for that analysis, the factors that Stone is evaluating, including the process Stone used to identify TCF technologies for further evaluation and the extent to which environmental costs and benefits of the various technology options are being included in the analysis. Dr. Pojasek shall submit to Stone a written review of the process Stone is using to identify and evaluate alternative technologies and shall make suggestions for including pollution prevention considerations, as identified in Addendum A, into that process. Stone will take Dr. Pojasek's comments and suggestions into account and will reflect or respond to those comments, as appropriate, in its discussion of its analysis of bleaching alternatives with the Plaintiffs described in subsection D.2. below. Dr. Pojasek will have access to all Stone personnel and information necessary to perform his role.

2. Subject to subsection I., Stone shall provide the results of its completed analysis of alternatives to its current bleaching technology, as well as the results of Dr. Pojasek's review, to the Plaintiffs as soon as it is available and at

least thirty (30) days prior to any final decision on technologies is made. Stone shall schedule a meeting with Plaintiffs within twenty-five (25) days after the results of Stone's analyses of alternative bleaching processes have been provided to Plaintiffs to discuss the analyses with Plaintiffs and review any comments provided by Plaintiffs.

3. Stone will continue to evaluate any new information that might further reduce the environmental impact of the pulp bleaching technology chosen above as part of its P2 Program described in subsection B.

E. OCC Rejects

1. Stone shall assess technologies and processes for handling OCC rejects with the goal of eliminating the burning of OCC rejects containing chlorinated plastics. Stone shall continue to work with Philip Environmental Services, Inc., or any other presently identified entities, to identify, evaluate, and implement, where determined to be technically and economically feasible, processes to handle OCC rejects such that burning would be reduced or eliminated.

2. Stone shall commit at least $150,000, to be spent as needed over the term of this Consent Decree, to the OCC alternatives identification and assessment process.

3. Stone shall work with Dr. Pojasek (or another expert acceptable to plaintiffs), to identify and prioritize potential alternative processes for handling the OCC reject waste stream and to establish schedules and costs for exploring potential alternatives.

4. Stone shall provide a written report to Plaintiffs by August 1, 1998 and February 1, 1999, detailing the status of the OCC alternatives review processes. Thereafter, Stone shall provide a detailed status report as part of the annual pollution prevention report required by this Consent Decree, unless burning of OCC rejects containing chlorinated plastics has been eliminated.

E00011446

ADDENDUM A
CRITERIA FOR POLLUTION PREVENTION PROGRAM

I. GENERAL AGREEMENT

This document sets forth the elements of the comprehensive Pollution Prevention Program ("P2 Program"), including the initial Pollution Prevention Plan ("P2 Plan"), which Stone Container Corporation ("Stone") has agreed to undertake as part of the Consent Decree with Montana CHEER, Cold Mountain, Cold Rivers, and the Native Forest Network ("Plaintiffs") for its pulp and linerboard mill in Missoula, Montana (the Missoula Mill).

Stone shall retain as a consultant Dr. Robert Pojasek, or another mutually agreeable consultant (the "Consultant"), to assist Stone in the design, preparation and implementation of the pollution prevention program. The Consultant shall assist Stone in developing the initial P2 Plan, preparing the annual reports documenting implementation of the P2 Program, addressing the specific items referenced in the Consent Decree, and shall certify whether Stone is implementing this agreement, as described below. This Addendum is incorporated into and is a part of the Consent Decree.

The initial P2 Plan shall be completed and provided to Plaintiffs no later than six (6) months after entry of this Consent Decree. The Consultant shall certify the adequacy of the initial P2 Plan and, on an annual basis for five consecutive years commencing 12 months after submission of the initial P2 Plan, certify that the P2 Program has been satisfactorily implemented for the preceding year.

Certification shall be sent, along with the initial P2 Plan and thereafter with the annual report, to the person(s) designated to receive notices for Plaintiffs under Paragraph 14 of the Consent Decree in the form of a letter signed by the Consultant specifying whether the pollution prevention program is being implemented consistent with the criteria set forth in this Addendum A.

II. REPORTS REQUIRED FROM STONE

Stone shall prepare two separate reports. They are as follows:

-- An initial pollution prevention plan (P2 Plan) which identifies and prioritizes hazardous chemicals, processes and/or emission sources that will be the subject of more extensive evaluation of pollution

prevention measures consistent with the elements listed in Sections III and IV.

-- Annual progress/certification reports which identify the progress and accomplishments of the previous year and any new ideas or modifications to the initial P2 Plan consistent with the elements listed in Sections III and IV.

III. THE POLLUTION PREVENTION PLAN (P2) REQUIREMENTS

The initial P2 Plan is intended to be a general blueprint for P2 Program implementation over the course of the term of the Consent Decree. The P2 Plan shall identify the steps by which pollution prevention opportunities shall be identified for possible implementation at the Missoula Mill. These steps shall include at least the following: preparing process flow maps for every major operation in the facility, accounting of materials used and lost from the operation, identifying P2 opportunities using consistent factors, a system for identifying the most beneficial opportunities, preparing a materials balance for each process opportunity targeted for consideration in each year of the program, a description of the system the Missoula Mill will use for assessing costs and measuring results of the alternatives identified for pollution prevention, and an action planning sequence for implementing the alternatives selected in the planning efforts.

The initial P2 Plan shall present the action plans for each of the alternatives to be implemented during the first year of the P2 Program. The P2 Plan (and if modifications are made the annual reports) shall also include, at a minimum, the following facility-wide information:

(1) Statement of the corporate and facility-wide management commitment to and support for the P2 Plan, as well as the following items:

a) A listing of the facility's Mill Operations Environmental Committee. The mill manager should serve as an active member of the Committee. The Committee shall include both salaried and hourly personnel. The Committee should meet on a regular basis and review the action plans on a quarterly basis. Problem-solving teams will be set up if necessary to work on particular projects. Such teams will report periodically on their progress to the Committee.

b) A description of the P2 Plan worker and management training program.

c) A description of Stone's "Environmental Cost Accounting" program that will be used to assess costs of the departments/processes as they exist at the time of the P2 Plan preparation and to assess the differences attributable to the P2 alternatives selected in the planning process.

d) A statement of whether employees are evaluated based on environmental performance.

(2) Statement of the scope and objectives of the P2 Plan.

(a) The P2 Plan shall describe generally the current pollution prevention measures in place at Stone's facility at the start of the planning process and provide a measure of the reductions in emissions, discharges, waste generation, and hazardous chemical usage those measures have achieved. This analysis should be limited to examples where independently verifiable data exist and should not go back more than five (5) years.

(b) The general objectives of the P2 Program shall be to identify and prioritize pollution reduction opportunities at Stone's facility from emissions, discharges and waste generation, including the use, generation, or emission of hazardous chemicals and/or other pollutants, and to identify pollution prevention alternatives that benefit human health or the environment.

(c) Plans to reduce the use or waste of other materials (e.g. other regulated materials, solid waste, BOD, water, energy) shall be discussed in this section.

IV. ELEMENTS REQUIRED TO BE INCORPORATED INTO POLLUTION PREVENTION PROGRAM

The P2 Plan is the blueprint for the P2 Program as a whole. Implementation of the P2 Plan shall be documented in the annual reports in the form of discrete action plans. If changes or modifications are made to the P2 Plan, they shall be described in the annual reports. The elements listed below provide the factors which may be appropriate to be considered in coming to decisions concerning pollution prevention alternatives for each of the pollution prevention opportunities under consideration and the prioritization of these alternatives consistent with assessing benefits that the implementation of the alternative would entail. The parties recognize that not all factors listed in this section may be applicable to the pollution prevention alternative under consideration, but Stone will consider any

factors it believes are relevant. The purpose for listing the factors is to ensure that these factors are consistently considered. If other factors are applicable to a case-specific situation, such factors considered by Stone shall be discussed.

(1) Identification of P2 opportunities.

Stone shall identify, with the assistance of the Consultant, those hazardous chemicals, production processes and emission/discharge sources that will be the subject of more extensive evaluation of potential pollution reduction alternatives. Chemicals, processes and emission/discharge sources shall be identified based on such factors as the toxicity or level of other hazard presented by the chemicals or pollutants, the amount of the chemical used or generated, and information available to Stone and the Consultant that suggests there may be potential for significant reductions in use or emissions/discharges or the chemical or pollutant.

For each hazardous chemical, production process or emission/discharge source identified for more extensive evaluation, the P2 Plan or annual reports, as applicable, shall include the information described below in subsections (2), (3) and (4).

(2) Analysis of current and projected chemical use, waste byproduct generation, and emissions. To perform this analysis Stone shall, if applicable:

(a) Name the production unit(s) and list its product(s) and process(es).

(b) Describe the "unit of product" most useful for measuring the rate of production (e.g., pounds produced, or dollars of net sales), and quantify the number of units of product. (Note that for all the years during which the facility implements a P2 Plan for one production unit, it must use the same "unit of product.") Description and quantification of unit of product is not required if the chemical use, waste byproduct generation, or emissions are not related to production rate.

(c) Describe the effects of any anticipated pollution prevention alternatives on the rate of material used, waste byproducts generated or emissions associated with the activity.

(3) Analysis of economic impacts. To perform this analysis, Stone shall:

(a) Quantify the cost, or give a detailed qualitative analysis where quantification is not possible, of generating and controlling pollutants from, and using each chemical at, the production unit to the extent possible, considering, where relevant, the following factors:

- purchase of the chemical;
- manufacture, if the chemical is manufactured at the facility;
- fees;
- taxes;
- energy costs associated with the chemical use or process;
- storage or accumulation of input chemicals and byproducts;
- handling of input chemicals and byproducts;
- operation and maintenance procedures associated with the chemical or process;
- worker health or safety costs associated with the chemical or process, including training, protective equipment, and lost employee time due to accidents;
- byproduct treatment;
- byproduct disposal;
- environmental management activities not listed above; and
- insurance costs associated with the chemical or process;
- potential liability associated with the process or with emission, use and disposal of the chemical.

(4) Evaluation of potential pollution prevention alternatives. To perform this evaluation Stone shall:

(a) Identify technologies, procedures, and training programs that could potentially reduce the generation of pollutants and/or byproducts and the use of chemicals in the manufacture of the product through (as applicable):

- elimination of process or chemical;
- input substitution;
- product reformulation;
- production unit redesign, modification or modernization;
- improved operation and maintenance or production unit equipment and methods;

- improved training;
- recycling, reuse, or extended use of the chemical through a means that is integral to the production process.

(b) Select from the above-mentioned pollution prevention technologies, procedures, and training programs the potential pollution prevention alternatives which are determined to be of highest priority for further analysis. Describe the basis on which these specific potential pollution prevention alternatives were selected.

(5) Selection of pollution prevention alternatives Stone will implement. In the initial P2 Plan and in each annual progress report as part of the overall P2 Program provided for herein, Stone shall, with the assistance of the Consultant:

(a) Select the alternatives evaluated in step (4) that Stone plans to implement in the succeeding year. Describe interactions between the chosen alternatives with respect to chemical and energy use, byproducts and emissions, and cost savings.

(b) Explain the reason for selecting the alternatives to be implemented, including the basis for concluding whether the chosen alternatives will provide environmental or health benefits.

(c) Before selecting each opportunity Stone must explore the extent to which the activity may shift releases from one environmental medium to another (e.g., air to water, water to solid waste, etc.).

(6) With regard to the implementation of pollution prevention alternatives, as set forth in step (5), Stone shall, in the initial P2 Plan and the applicable annual progress report:

(a) Describe a schedule for implementation of the pollution prevention alternatives selected and describe the milestones by which progress will be evaluated during implementation in the P2 Plan. In the annual progress reports, measure and describe progress against these milestones.

(b) Identify reasonably foreseeable factors that could cause delays in implementation of the P2 Plan.

(c) Identify factors that caused delays in implementing previous P2 Plan (not applicable for the initial P2 Plan).

(7) Statement of Certification

The Consultant shall certify that the initial P2 Plan was prepared in accordance with the criteria set forth in this Addendum A. Thereafter, the Consultant shall certify that the annual progress reports required by this Consent Decree and the selection by Stone of additional pollution prevention alternatives described in those annual progress reports are consistent with the criteria set forth in this Addendum A. Should the Consultant fail to certify the initial P2 Plan or the annual progress reports, Stone's failure to obtain such certification shall constitute a breach of this Agreement.

(8) The initial P2 Plan and annual progress reports shall be submitted to the person(s) designated to receive notices for Plaintiffs under paragraph 14 of the Consent Decree, the Missoula County Local Emergency Planning Committee, Missoula County Health Department, Montana DEQ and US EPA at the same time.

STONE CONTAINER MISSOULA BLEACH PULP FACILITIY

Summary for Dr. Pojasek

July 22, 1998

CONFIDENTIAL

Stone Container Corporation

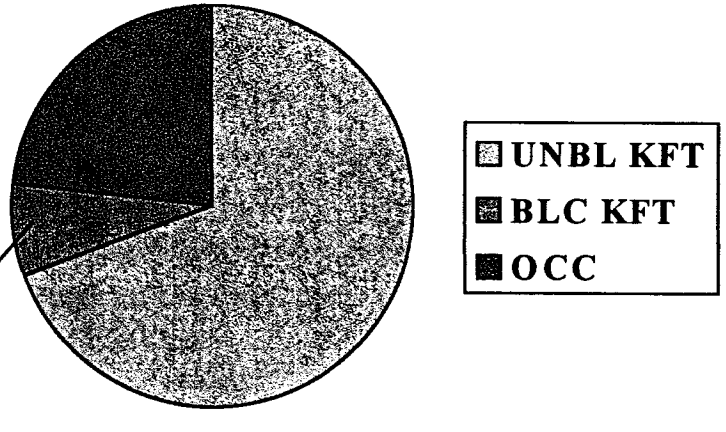
E00011454

MISSOULA, MONTANA

Unbleached Liner and White Top Liner

AVG. PULP PRODUCTION

- UNBLCH'ED KRAFT SW 1340 TPD
- BLCH'ED KRAFT SW 150
- OCC RECYCLE 450
  - TOTAL 1940



CHHD

83 ISO

Stone Container Corporation

E00011455

ECF & TCF TECHNOLOGIES

Economics, Pulp Quality & Environmental Impact

A. LITERATURE SURVEY

B. LABORATORY STUDY

Stone Container
Corporation

E00011456

Literature Review Topics

Factors considered

- Yield
- Brightness
- Strength
- Conversion Costs
- Environmental Compliance

Stone Container Corporation

E00011457

Yield

- Bleached yield from 25 Kappa
- Yield O D Eo D D - 43.5% - ECF
- Yield O Z Eo Z Q P - 41.3% - TCF
- TCF Bleaching will utilize 5.2% more wood than ECF Bleaching
- Low kappa pulping is a necessary step in TCF bleaching

Stone Container Corporation

E00011458

Yield (Cont.)

- Kappa 14 followed by TCF bleaching would increase wood consumption by 9 to 11% compared with pulping to 30 Kappa followed by ECF bleaching.
- Reference : Pulp & Paper, 12/95, Page 95-96, By Sloan and Fleming (4), Pulp & Paper, 10/97, By Deardorff (5), AF&PA Report No. 72280, Rev 2, Pulp & Paper 12/94 By Fleming and Sloan Pages 94-95, World Paper, 7/1995, By D. Reeves (15)

E00011459

Brightness

- Difficult to achieve ~~90+~~ 85+ Brightness in TCF Sequences
  - Higher Peroxide usage to achieve ~~90~~ 85+ brightness
- ~~90~~ 85+ Brightness is easily attainable in ECF
- References: Das Papier, 1994, Vol 48, 10A, V11-V19 (2), ECF Bleaching - The reasonable alternative. By H.X. Deal, BE&K (6), 82nd Annual CPPA meeting - B.V. Lierop, R.M. Berry And B.P. Roy (7)

E00011460

Strength Properties

- Lower Tear and Tensile in TCF sequences
- Tear strength deficit of 10 to 12% at constant tensile strength
- References: Pulp & Paper, 6/95, Page 83-92, By F. Steffes and U. Germgard (3), Pulp & Paper, 10/97, By Deardoff (5), Pulp & Paper, 12/1994, By Fleming, Page 95-96 (8), Response to the questions presented by the Maine Legislature (13)

E00011461

TCF Conversion: Very Costly

- Conversion cost of C/D Eop D sequence to D Eop D sequence will be $18.8 Millions and operating cost will increase by $9.23/ton.
- Conversion to O Z Eop P sequence will cost $144.3 Millions and the operating cost will increase by $12.72/ton.

Notes from Dave

Stone Container Corporation

E00011462

TCF Conversion:(Cont.)

- References: PIMA Magazine, 11/92, By L.M. Lancaster, J.J.Renard, C.F.Yin and R.B. Philips (9), Pulp & Paper, 1/95, by G.W. Kutney, Pages 85-87 (10), Pulp & paper, 3/97, By V.R. Parthasarathy, Pages 89-95 (11) Response To Sodra (1)

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E00011463

Environmental Compliance Issues

- Cluster rule compliance - both ECF and TCF technology can comply
- The environmental effects from the chlorinated compounds of ClO2 bleaching are insignificant
- The dioxin level from ClO2 bleaching is insignificant

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E00011464

Environmental Issues (Cont)

add notes

- ~~Effluent Closure Technology - Technologies have developed for both ECF and TCF~~
- References: Pulp & paper, 6/95, By N.G. Johanson, F. Clark and D.E. Fletcher, Pages 71-75 (12) , Paper Age, 4/94, By D.C. Pryke, Page 18-19 (14), AF&PA, 3/13/95, By D.W. Reeve (16)

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E00011465

MISSOULA BLEACHING STUDY

- Sequence Criteria
- Sequences selected for Study
- Chemical Cost to ~~80+~~ 85+ Brightness
- Bleached Pulp Strength

Stone Container Corporation

E00011466

Sequence Criteria

- Ability to attain the ~~80+~~ 85+% ISO brightness target
- Economically Favorable
  - Low Capital and Operating Cost
- Strength Properties
  - As good as now or better
- Cluster Rule compliance

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E00011467

Sequences Studied

- CHHD (Existing)
- DEopDD
- ODEoD
- ODEopD

ECF

- OZEoD — TCF/ECF
- OZEoP — TCF

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E00011468

Chemical Cost

- CHHD $47.07/ton ~~(Existing)~~
- DEoDD $35.71/ton
- ODEoD $31.08/ton
- ODEopD $34.77/ton
- OZEoD $36.03/ton
- OZEoP $65.14/ton

Notes

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E00011469

AOX From Bleach Filtrate(Kg/ADMT)

- CHHD 5.53 (Existing)
- DEoDD 0.94
- ODEoD 0.41
- ODEopD 0.67
- OZEoD 0.05
- OZEoP 0.00

Untreated
60% Treatment

.625

Stone Container Corporation

E00011470

Strength Properties @500CSF

- CHHD Tear=9.5,Tensile=9.8, Burst=6.5
- DEoDD Tear=10, Tensile=9.8, Burst=6.2
- ODEoD Tear=10 Tensile=9.7, Burst=6.5
- ODEopD Tear=11, Tensile=9.8,Burst=7.2
- OZEoD Tear=10.2,Tensile=7.0,Burst=4.7
- OZEoP Tear=9.0, Tensile=5.0, Burst=3.5

Stone Container Corporation

E00011471

Conclusions

- Literature suggests higher yield in ECF Sequences than TCF sequences.
- Difficult to achieve ~~90+~~ 85+ brightness in case of TCF bleaching
- TCF bleached pulp has lower tear, tensile and Burst than the ECF bleached pulp.
- TCF conversion cost will be higher than ECF conversion.

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E00011472

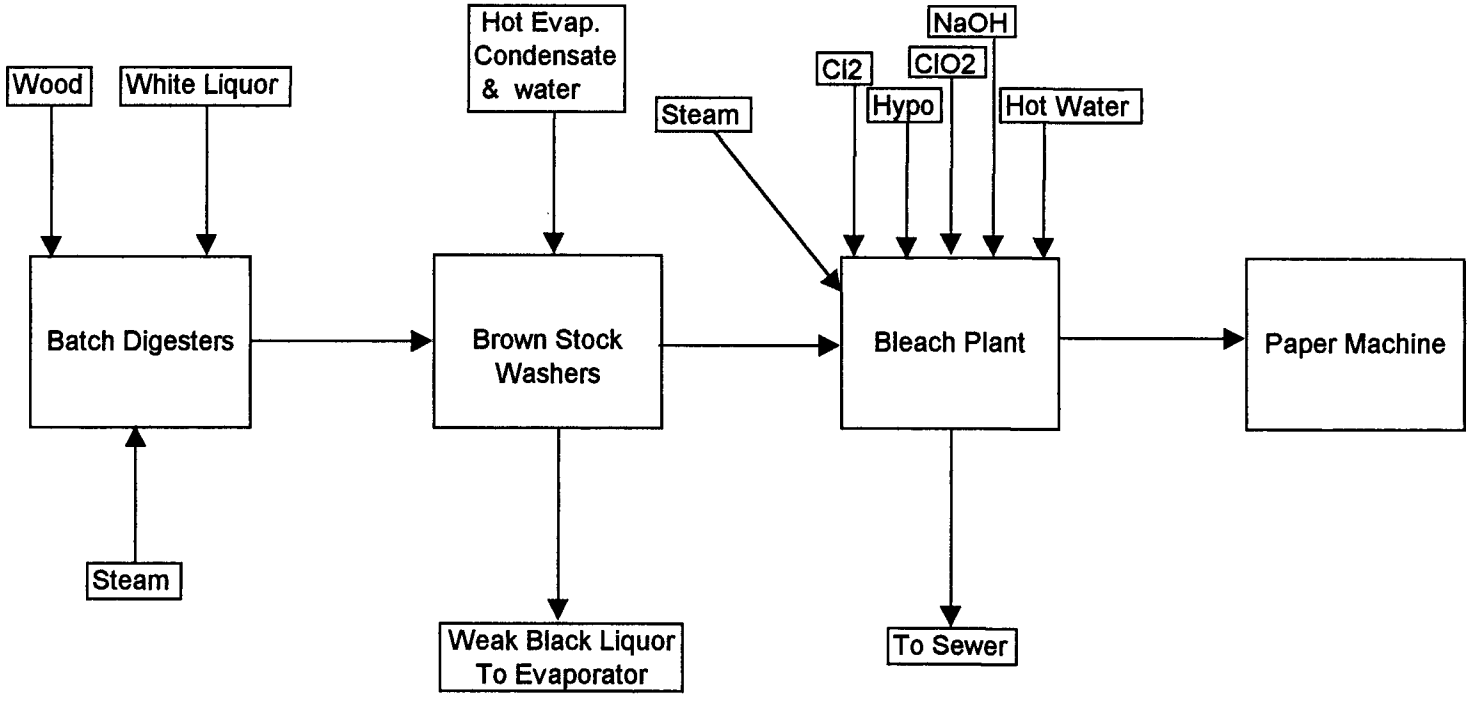
Conclusions (Cont.)

- Operating cost of TCF sequences will be greater than the ECF sequences
- ECF sequences will produce insignificant amount of chlorinated organics.
- Cluster Rule Compliance - both ECF & TCF will comply.

Stone Container Corporation

E00011473

PROCESS MAP FOR MISSOULA BLEACH FIBER OPERATION



E00011474

Industra Inc.

545 North Pleasantburg Drive, Suite 300, Greenville, SC 29607
Tel: 864-370-9906 Fax: 864-370-9824

Fax Cover Sheet

To:	Mr. Steve Eastlick Stone Container
Fax Number:	406/626-5572
From:	Arie van Donkelaar Industra Inc. Greenville, SC
Fax Number:	864-370-9824
Number of Pages Transmitted, Including Cover Sheet:	4
Date Submitted 17 June 1998	**Time Submitted**

Subject: Project Memorandum 11813Q-01, Bleaching Sequences

Received 6/18/98

XC: C. Ackel

6-17-98

xc → Kohl
Marxer
Olson
Madison
Scott
Stengel
Griffin
McLaughlin
Anderson

Mahendra Misra
Via FAX
(770) 621-6747

F.Y.I. Steve

Date: 6/17/98	**Time:**	**By:** Jsw	**Project:** 11813Q

16 June 1998

PROJECT MEMORANDUM 11813Q-01
BLEACHING SEQUENCES

Originator: Arie van Donkelaar

1.00 PURPOSE

The purpose of this project memorandum is to compare the features of the two bleaching sequences, DEopDnD and EoDEopD, considered for the Stone Container Missoula plant. It is intended that a final decision on which sequence to take to Class 10 scope and estimate will be made during the 25, 26 June meetings at Missoula.

2.00 SUMMARY

The class 30 scope and estimate bleach plant modification listed two bleaching sequences with predicted operating costs and equipment modifications. The first sequence was DEopDnD and the second the "mini" O2 option, ODEopD. Subsequent bleaching trials in the Grand Mere Stone laboratory have resulted in the following operating cost forecast including steam and credit for spent acid and caustic return.

	DEopDnD	Mini "O" ODEopD
Operating costs, class 30	$39.02/T	$32.04/T
Operating costs, lab	$41.35/T	$42.03/T
Brightness	84.1	83.9
Kappa to BP	25	19
Kappa factor	0.2	0.22
AOX, kg/t	0.94	1.03
AOX, end of pipe, kg/t	0.47	0.515
AOX, regulation, kg/t	0.625	0.625

FROM Industra, Inc. 8643709824 06-17-98 03:44PM TO 14066265572*11813 *284 P.2/4
E00011476

The perceived advantages of a "mini O2": lower AOX and lower operating costs by lowering the Kappa number with Oxygen, were not proven in the lab trials. The causes of the higher than expected operating costs are the higher steam costs and a higher chlorine dioxide chemical consumption per Kappa number required for the "mini-O2" treated stock.

Advantages and disadvantages of each approach are summarized below:

	DEopDnD	ODEopD
Advantages	fewer modifications three D stages	6.0 TPD ClO_2 by Industra 6.9 TPD by Stone lower Kappa
	strong Eop many installations lower capital cost	few installations
Disadvantages	requires press. Eop	requires press. O2
	equipment cost 7' by 70 ' 316 SS tube $ 200,000 in both cases final size can be determined during the 25, 26 June meeting	
	7.1 TPD ClO2	requires 316 SS brown HD
		requires stock split D1 D2 tower
	requires bleach screens modifications in both cases	
		requires more steam and HP
		might not be able to recycle Eo
		only two D stages
		weak Eop

Note that the class 30 estimate did not include a pressurized Eop tube, while the lab bleaching was carried out with 15 minutes at 60# pressure. Without a pressurized tube, bleaching with oxygen in the atmospheric upflow tower of 37' ft height, will be effective only with very low oxygen applications. We predict less than 0.3%. It was my oversight not to include a pressurized tube in the estimate for the DEopDnD sequence.

With a pressurized Eop tube, we will be able to operate at a variety of Kappa Factors and a up to 1% oxygen applications in the D0 and Eop stages according to the most economical results.

FROM Industra, Inc. 8643709824 06-17-98 03:44PM TO 14066265572*11813 #284 P.3/4
E00011477

The choice of the capacity for the ClO_2 generator is usually a mill decision and is based on getting enough capacity to cover prolonged periods of peak loads during high Kappa numbers, to be able to raise the Kappa number in the future for a yield gain or to get a cushion for future increased production rates through the bleach plant. A 10 TPD chlorine dioxide generator is mentioned in the letter, 5 June 1998, "Preliminary Proposal for Engineering Services" to Stephen Eastlick.

3.00 RECOMMENDATION:

Because of capital cost effectiveness and operating costs versus brightness obtained, Industra recommends the DEopDnD sequence with a pressurized Eop tube added to the E upflow tower.

AvD

Distribution: S. Eastlick, Stone Container
A. van Donkelaar, Industra (via E-mail)
J. Miller, Industra (via E-mail)
M. Roberts, Industra (via E-mail)
Project File

11813Q/PM_01

FROM Industra, Inc. 8643709824 06-17-98 03:45PM TO 14066265572*11813 #284 P.4/4
E00011478

STONE CONTAINER CORPORATION
Missoula Mill
Containerboard and Paper Division
PO Box 4707
Missoula, MT 59806

(406) 626-4451

Accounting fax:
(406) 626-5905

FAX COVER SHEET

TO: Mahendra Misra

FROM: Ed Scott

DATE: 9/27/97

NUMBER OF PAGES (INCLUDING COVER SHEET): 4

COMMENTS OR SPECIAL INSTRUCTIONS:

Mahendra -

As per your Request -
Note that Production
Values reflect 1998
Operating Budget Values

Ed

→ Neal Marxer
Please Review & Return
Thanks,
Ed.

Stone Container Corporation
Engineering & Technology
1979 Lakeside Parkway, Tucker, Ga 30084
Tel: (770)-621-6752 Fax: (770)-621-6733

Date: Sept. 2, 1997

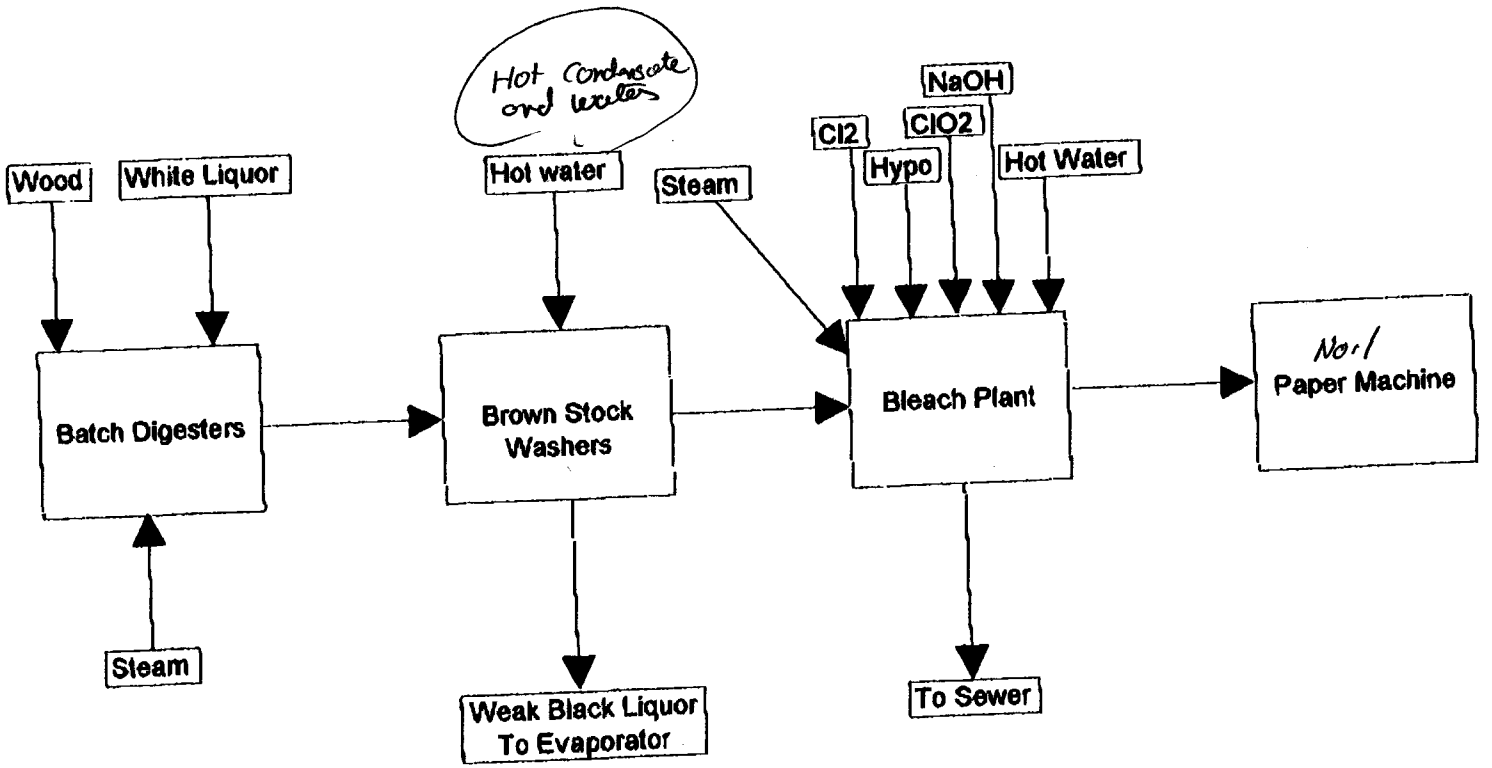
To: Ed Scott
From: Mahendra Misra

Curt and myself met with Dr. Pojasek and during that meeting he requested us to construct a simple process map for the bleached fiber operation and the portion of the total production going to the bleach plant. I have made it as simple as possible. However, I would like you to check the accuracy of these numbers.

Mahendra

Ed,
Please check Production #'s with Production. Please Review the Accuracy of these #'s and Return to me
Process Map looks good.
Thanks
Ed.

PROCESS MAP FOR MISSOULA BLEACH FIBER OPERATION



MISSOULA FIBER PRODUCTION

1998 Budget Values

	Production T/D	% Wood Pulp	Comments
KAMYR	~~982.00~~ 342,410 970 T/D	~~51.55%~~ 52.4%	Hi Yield Pulp
M & D	~~103.00~~ 30,005 tons 85 tons/day	~~5.44%~~ 4.6%	Mostly Saw Dust
BATCH	~~180.00~~ 97,932 277 T/D	~~9.45%~~ 15.0%	Hi Yield Pulp
BATCH	~~180.00~~ 41,503 118 T/D	~~9.45%~~ 6.4%	Bleached Pulp
~~PIN CHIPS~~	~~10.00~~	~~0.52%~~	~~Pin Chips~~
OCC	~~400~~ 141,200 - 400 T/D	~~23.02%~~ 21.6%	
Total Wood Pulp	~~1905.00~~ 653,050 1850 T/D	100%	

Cambridge Environmental Inc
58 Charles Street Cambridge, Massachusetts 02141
617-225-0810 617-225-0813 FAX

B-799

FAX COVER SHEET

DATE: August 19, 1997

TO: Ed Scott **FAX #:** 406/626-5905

FROM: R. B. Pojasek **FAX #:** 617-225-0813

NUMBER OF PAGES INCLUDING COVER SHEET: 6

COMMENTS:

Bleach Plant White Paper

(617)225-0812

BL

MEMORANDUM

To: Ed Scott, Curtis Barton, Mahendra, Misra

From: R.B. Pojasek RBP

Subject: Stone Container Bleach Plant White Paper

Date: August 19, 1997

A meeting was held on August 14, 1997, in Cambridge, Massachusetts to discuss the status of the subject paper. I said that I would comment on the March 3, 1997 draft outline that Ed Scott prepared for my comments. I am attaching a copy of this draft outline to this memorandum.

I believe that the white paper must be brief in the text portion. However, it should have adequate tables and figures supporting the information. The contents must address the following points:

1. Current situation
2. Evaluation program
3. Expected outcome

Each of these items should address a number of topics.

Current situation. This section should have a process map (Mahendra provided with a reprint describing process maps) of the current bleaching operation. Mahendra has some good graphics to show the size of bleaching relative to pulp production at the Missoula mill. There should be a statement of what has happened in the market place that caused Stone Container to consider modifying the bleach plant.

Evaluation program. This section should describe the team that has been assembled to conduct the evaluation, mentioning my independent review capacity. There should be a brief description of alternatives (Ed's Section III.) along with the bleaching processes considered (Ed's Section IV). A listing of criteria need to be presented. Mahendra has a table for this. Describe the process of applying the criteria to select an alternative. Mahendra has a slide describing this; although he may not have addressed Ed's Section III clearly (he did address Ed's Section IV). Process maps need to be prepared for alternatives making it past the first cut (this way people can *see* the before and after).

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58 Charles Street Cambridge, Massachusetts 02141
617-225-0810 FAX: 617-225-0813 E-mail: camenv58@aol.com

Expected outcome. (Perhaps this is not the best name for this section) You need to describe the alternative selected for moving forward with. Describe how this meets your requirements as outlined in the first section. Describe how you plan to proceed with bringing this process on line.

This is real simple and can be accomplished in approximately ten pages of text with extra supporting tables and figures. Do you want to take a crack at a more detailed outline? Do you wish to have a telephone call to discuss this outline?

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OUTLINE FOR STONE BLEACH PLANT WHITE PAPER

I. Mill description

A. Brief history

B. Size

1. TPD
2. Employees

C. Processes

1. Virgin pulping
2. Recycle pulping

D. Bleach plant discussion

1. TPD
2. Usage (end product)
3. Present sequence
4. Physical properties required (i.e. strength, brightness, etc.)

II. MACT, Cluster Rules

A. Industry interpretation of Cluster Rules

1. Chemicals allowed/chemicals banned
2. Timing for promulgation
3. Timing for compliance
4. Residual limits (i.e., AOX emissions, etc.)
5. Testing locations (i.e. @ B.P./@ end of pipe)
6. Other issues

B. Impact on Missoula Mill

1. Cl_2 no longer allowed
2. Other issues

III. Alternatives for bleached fiber

A. Market pulp

1. Pros/Cons
2. Why dismissed

B. Recycle office waste

1. Pros/Cons
2. Why dismissed

C. Bleach OCC

1. Pros/Cons
2. Why dismissed

D. Whiteness enhancers (i.e. clays/starches, etc.)

1. Pros/Cons
2. Why dismissed

E. Sawdust bleaching

1. Gearing up for trial
2. Possible impact on bleach sequence

F. Shutdown B.P. altogether (do nothing approach)

1. Impact on Missoula Mill

IV. Bleaching processes considered

A. Criteria for new B.P.

1. Meet specifications - Cluster Rules
2. Meet specifications - customers
3. Low capital cost
4. Low operating cost

B. Discussion of ECF and TCF

C. TCF options considered

1. Pros/Cons
2. Why dismissed
3. Worldwide trends in TCF

D. ECF options considered

1. List all sequences considered

   a. Pros/Cons of each
   b. Why each was dismissed

E. Discussion of final two options

1. $DEopD_ND$ vs. ODEopD
2. Why ODEopD is preferred

   a. How it meets (measures up to) anticipated Cluster Rules

STONE CONTAINER CORPORATION
Missoula Mill
Containerboard and Paper Division
PO Box 4707
Missoula, MT 59806

(406) 626-4451

Accounting fax:
(406) 626-5905

FAX COVER SHEET

TO: Mahindra Misra

FROM: Ed Scott

DATE: 8/12/97

NUMBER OF PAGES (INCLUDING COVER SHEET): 23

COMMENTS OR SPECIAL INSTRUCTIONS:

Mahindra -

In preparation for your meeting on Thursday 8/14/97 with Dr. Pojasek, inclosed are copies of most of the correspondence that has taken place between Stone Container & Dr. Pojasek.

Good luck Ed

E00011489

Received 12/16/96

XC: Boschee
Eastlick
Frye
Willhite.

Memo

To: Ed Scott

From: R.B. Pojasek Bob

Subject: Upcoming Telephone Call - Preparation

Date: December 16, 1996

In preparation for our discussion on Wednesday, December 18, 1996 at 11:00 am MST, I would like to raise a few questions. Any information you could fax to me prior to our conversation would be quite helpful.

1. I would like to see the wording in the Agreement for my involvement in the evaluation of the new bleaching system and the use of tree-free fiber sources. Do you plan to go with a "time and materials" contract for this effort or will you be looking to prepare a scope with a defined level of effort? I plan to use a junior associate @ $55/hr. To gather some information on alternatives for your review. We have found some reliable sources with experience in this area. We will want to construct a process map for the chlorine dioxide sequence that you are currently considering. This can be done by talking to Troy Savage or someone else that you designate.

2. When do you expect to start the pollution prevention planning work? Could you send me the wording that you agreed to. We will need to agree on a scope and level of effort for this work. I plan to have Kerry Bartlett spend a week at the mill to facilitate the process mapping sessions and to gather information for the plan. It will take approximately four months to complete the plan if the iterations go smoothly. Do you expect this to start in January? We would recommend that you get an early start on this effort. We need to get this project on our planning schedule.

3. Is there any other project that I need to know about? What happened to the risk management planning issue?

I look forward to receiving information from you today or tomorrow. We will talk on Wednesday.

Cambridge Environmental Inc
58 Charles Street Cambridge, Massachusetts 02141
617-225-0810 FAX: 617-225-0813 E-mail: camenv58@aol.com

XC: Boschee
Frye
Inlillhite.

Memo

To: Ed Scott

From: R.B. Pojasek

Subject: Conference Call

Date: December 17, 1996

It was not clear from your voicemail message that you received my other memo. There are some other things that I need before I can participate in this call.

1. I still need to see the portion of your Agreement with MT CHEER that specifies what my scope in this evaluation will be. I also need a purchase order or contract to cover our time and expenses to provide the required services. Hopefully you will be able to provide me with this information tomorrow when we speak.

2. You should prepare a detailed process map for the selected bleaching sequence which shows all the process work steps and the materials used and lost from each step. The losses should include those to the air (including fugitive losses), water, solid wastes (including hazardous wastes), all spills/leaks, and accidental losses (especially during start-up and shut-down). I have attached a sample process map to this memo to show basically what I am looking for.

3. We are aware that there is detailed total chlorine free research being done at the University of Maine, North Carolina State University and Georgia Tech. I am sure there are other places doing this research. We are also aware of a vendor in Boston that offers full scale total chlorine free bleaching technology to the pulp and paper industry. I know you have looked at a couple of alternative vendors. In order to test the thoroughness of your alternative evaluation, we will require some time to see what these engineers are offering and to see if you should have considered these alternatives in your evaluation. We need a contract to support the time necessary to do this background check. In addition, we would like to see the ***Cluster Rules*** guidance and any ***MACT*** information that you may have to guide your evaluation efforts.

4. You were not clear on the voicemail message as to whether tree-free fiber evaluation is included in the conference call. If it is, we have some leads to pursue on this topic as well.

Cambridge Environmental Inc
58 Charles Street Cambridge, Massachusetts 02141
617-225-0810 FAX: 617-225-0813 E-mail: camenv58@aol.com

DEC-17-1996 08:22 CAMBRIDGE ENV. INC. 6172250813 P.02

If you have a contract mechanism in mind, we can still have the conference call. However, we will want to follow it up with the independent information gathering that is discussed above. As you know, we are rapidly approaching Christmas. Friday is my last day in the office until perhaps December 30, 1996. You may also start loosing some of your people as well. Let's see what we can do to get this moving. I have been in the office every day for the past two weeks.

My colleagues and I are real excited about this opportunity to work with you and the folks at the Missoula mill.

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58 Charles Street Cambridge, Massachusetts 02141
617·225·0810 FAX: 617·225·0813 E-mail: camenv58@aol.com

Stone Container Corporation
Containerboard and Paper Division
Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707

Missoula Mill

406.626.4451
406.626.5986 Fax

December 20, 1996

Dr. Robert B. Pojasek, Ph.D.
Cambridge Environmental Inc.
58 Charles Street (3rd Floor)
Cambridge, Massachusetts 02141

(VIA FAX: (617) 225 - 0813)

Dear Bob:

As we discussed last week (December 11, 1996), Stone Container and MT. CHEER have come to an agreement in principle regarding their lawsuit. The agreement in principle includes that you will look at the bleaching sequences Stone is evaluating for use at the Missoula Mill. Time is of essence in order to be able to give your comments and recomendations timely consideration. This was agreed to because the final settlement agreement is unlikely to be signed before Stone Container decides on its technology option. There is no written agreement between Stone and MT CHEER concerning your involvement in Stone's analysis of bleaching alternatives (or any other issue for that matter).

Scope of Involvement in Bleaching Issue

You will promptly discuss, with the officials responsible for the bleaching analysis, the factors that Stone is evaluating, including the process Stone used to identify TCF technologies for further evaluation and the extent to which environmental costs and benefits of the various technology options are being included in the analysis. Stone will take your comments and suggestions into account and will reflect or respond to those comments, as appropriate, in its discussion of its analysis of bleaching alternatives with MT. CHEER that will be held after Stone has completed the analysis.

In otherwords, your involvement is limited in scope in order to address MT. CHEER's concerns that Stone adequately consider environmental issues in review of the different bleaching technologies. You are being hired to review Stone Container's evaluation process for bleaching alternatives and to suggest any additional considerations that should be factored into the analysis, but you are not being hired to suggest technology options for consideration or attempt to evaluate the pros and cons of different options yourself. After reviewing what Stone is doing, you might want to suggest that Stone consider alternatives, but you are not being retained to develop alternatives for us. We would not expect you, for example, to be contacting vendors.

There is not yet a "selected bleaching sequence" for which to prepare the "detailed process map" you requested. Stone will describe to you the information it has evaluated to date on the inputs to and outputs (including wastes) from the alternatives being evaluated.

After reviewing the analytical process Stone is using to identify and select a bleaching sequence, you can provide comments and suggestions to us, either orally or in writing, about that process.

Stone Officials Responsible For Bleaching Analysis

The following Stone personnel will provide you with information relative to your scope of work.

	Name	Phone #	Location
1.	Steve Eastlick	(406) 626 - 4451 Ext. 316	Missoula, MT
2.	Mahendra Misra	(770) 621 - 6752	Atlanta, GA

As we discussed earlier this week, these two individuals are presently putting together a summary of the bleaching sequences and factors used to evaluate them. This information will be faxed to you as soon as it is completed. If you have any questions regarding this information or need additional information, we will then coordinate either a conference call or mill visit (if necessary).

As we also discussed earlier this week, the fiber issue and pollution prevention plan will not start until further notice.

The work you are being hired to complete on the bleaching issue will be completed on a "time and materials basis" not to exceed $5,000 without further authorization. The purchase order number is 184 - 40653.

If you have any questions regarding this information, please contact me.

Sincerely,

Ed Scott
Environmental Manager

cc: Boschee
Marxer
Kohl
Eastlick
Misra (Atlanta)
Frye
Barton (Atlanta) --> Willhite

Stephen M. Eastlick
Senior Project Engineer

xc → Ed Scott
F.Y.I.
SME

Stone Container Corporation

Containerboard and Paper Division

Missoula Mill
P.O. Box 4707
Missoula, Montana 59806

Phone 406-626-4451
FAX 406-626-5572

FAXED 12-31 SME

DATE: 12-31-96 TIME: 1:30 P.M.

TOTAL NUMBER OF PAGES 1 INCLUDING COVER SHEET

TO: Bob Pojasek FAX NO: 617-225-0813

COMPANY: TELEPHONE: 617-225-0812

PLEASE DELIVER COPIES OF THIS TO:

COMMENTS:

Bob;

Just a note to let you know that Ed Scott is putting together the data on anticipated Cluster Rules that you had requested. Should be ready to fax to you by Thursday, Jan. 2nd. Also wanted to clarify that we have considered the option of TCF bleaching also, not just ECF. Ed tried to contact Mahendra Misra today but it appears that the Atlanta office is closed for New years.

Happy New Year,
Steve

P.S. In my absence 1-6-97 thru 1-17-97, please work directly with Ed Scott. SME

JAGUAR
SPOKEN HERE

E00011495

Stone Container Corporation
Containerboard and Paper Division
Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707

Missoula Mill

406.626.4451
406.626.5986 Fax

January 2, 1997

Dr. Robert B. Pojasek, Ph.D.
Cambridge Environmental Inc.
58 Charles Street (3rd Floor)
Cambridge, Massachusetts 02141

(VIA FAX: (617) 225 - 0813)

Dear Bob:

As Steve Eastlick outlined in his fax to you dated December 31, 1996, I have put together the attached information which describes the anticipated effluent limits under the Cluster Rules.

Please note that the Missoula Mill falls under the following production categories:

1. Unbleached Kraft
2. Bleached Kraft
3. Secondary Fiber

If you have any questions regarding this information, please contact me.

Sincerely,

Ed Scott
Environmental Manager

cc: Boschee
McLaughlin
Marxer
Kohl-->Anderson
Eastlick
Misra (Atlanta)
Frye
Barton (Atlanta) --> Willhite

Memo

Received 1/6/97
Neal + Russ —
Can you Please provide me with this Info By the proposed deadline.
Thanks
Ed.

To: Ed Scott

From: R.B. Pojasek RP

Subject: Review of Bleaching System Modifications (B-799)

Date: January 4, 1997

In my conversation with Mahendra, I learned that one of the three initial constraints in selecting the new bleaching sequence was to consider using as much of the current equipment as possible. This would certainly lower the capital costs of the new system.

I would like a ***written*** description of the current bleaching system. It would help if you could include a copy of the process flow diagrams that were prepared in support of your Title V Air Operating Permit Application (Bleaching only). If any of the bleaching sequences in the evaluation require modification of any of the pulp digesters, I want those process flow diagrams as well. Ed

Troy?

Please provide me with a listing of the products that are currently bleached and the approximate tonnage of each product on an annual basis. As a comparison, please provide me with the approximate tonnage of all products produced at the mill on an annual basis. Neal

Mahendra also told me that he provided you with a copy of the evaluation that he prepared on the six bleaching sequences. I do not have that memo. Please send it to me. Russ 1/8/97

I would like to have this material in my office by the close of business on Wednesday. Could you send it via some type of express mail. I will be in the office on Thursday morning. However, you can reach me via my voice mail (617/225-0812) if you have any questions in the meantime. Thanks for all the help, Ed.

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58 Charles Street Cambridge, Massachusetts 02141
617-225-0810 FAX: 617-225-0813 E-mail: camenv58@aol.com

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Containerboard and Paper Division
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Missoula Mill

406.626.4451
406.626.5986 Fax

January 8, 1997

Dr. Robert B. Pojasek, Ph.D.
Cambridge Environmental Inc.
58 Charles Street (3rd Floor)
Cambridge, Massachusetts 02141

(VIA Fax (617)225-0813)

Dear Bob:

As per your request, I have put together the following information you requested in your correspondence dated January 4 and received January 6, 1997.

Request For Description of Current Bleaching System

Please see attachments taken from mill's Title V Permit Application. Note that the modification of the bleaching sequence is not expected to require modification of any of the pulp digesters.

Production Information

Presently, the mill's 1997 operating budget is as follows:

Amount of pulp budgeted to be bleached: 63,624 tons
Amount of sky-white linerboard budgeted to be manufactured using bleached pulp: 162,099 tons
Total amount of all linerboard budgeted to be manufactured: 737,414 tons

Please note that Stone Container Corporation considers this production information to be confidential information.

Also note that the sky-white linerboard that is manufactured by the Missoula Mill is a two ply sheet that is made up of one brown (non-bleached) sheet and one white (bleached) sheet.

Mahendra's Analysis of Six Alternative Bleaching Sequences

Please see attachment. This is the written assessment received from Mahendra.

If you have any questions regarding this information, please contact me.

Sincerely,

Ed Scott
Environmental Manager

cc: Boschee
McLaughlin
Marxer
Kohl-->Anderson
Eastlick
Misra (Atlanta)
Frye
Barton (Atlanta) --> Willhite

Received 1/20/97

X C: Boschre
Kohl
Marxer
Anderson → Eastlick
Willhite.

Memo

To: Ed Scott

From: R.B. Pojasek

Subject: Bleaching Evaluation

Date: January 20, 1997

Thank you for sending the sheet Mahendra sent to you regarding his evaluation of bleaching sequences. It would be great to have some supporting information in writing. Could Steve Eastlick provide me with a brief written overview?

1 or 2 page Document

Previous information that you sent to me indicates that Stone Container chose to restrict its evaluation to bleaching sequences that involve no modification of the digestion steps. Mahendra has told me that one of his three criteria was using as much of the existing equipment as possible to keep the capital costs down. I would like to know how Stone Container would choose to balance ***operating*** costs over the life of the equipment versus the capital costs amortized over that lifetime. A configuration which is more expensive could be cheaper to run and cost less over some period of time. It seems that many firms have chose to go to extended delignification or oxygen delignification prior to bleaching in order to keep the operating costs of the bleaching sequence at a low level. Why did Stone Container choose not to do this? Was the decision based solely on containing capital costs?

The decision to upgrade the bleaching seems to be tied to one product (sky-white linerboard) according to Steve Eastlick and your letter of January 8th. Has Stone Container considered bleaching only OCC pulp for this product to lower the bleaching requirements? Is this a viable concept? Can the whiteness be enhanced using clays to reduce the need for bleaching? If this would not work, are there other sources of market pulp or wood furnish that would decrease the need to bleach? It would be interesting to review the product spec sheet for this one product to see the Kappa Number requirement, reflectivity, strength, viscosity, etc. and to see if other methods available to the mill could meet these numbers without increasing the cost over what it will be with the new bleaching sequence.

I believe that Stone Container should determine the most cost effective total chlorine free bleaching sequence that would meet its requirements and carry this through the same analysis as the elemental chlorine free alternatives. This is sort of like the "no action alternative" in an environmental impact statement as required by the National Environmental Policy Act. Of course you would have to show that the alternatives in the paragraphs above would not significantly reduce the cost of this alternative. If TCF is very much more expensive (as Mahendra tells me) than ECF options, this analysis will clearly demonstrate this fact. On the

Cambridge Environmental Inc
58 Charles Street Cambridge, Massachusetts 02141
617-225-0810 FAX: 617-225-0813 E-mail: camenv58@aol.com

other hand, if TCF is not feasible at the present time in your opinion, this will have to be clearly demonstrated to have any credibility with the community. This latter case will be more difficult to do than the former case. We need to talk about this demonstration.

Are there any plans to have a face to face review meeting for this effort once you have assembled all the testing information? It would be very useful to meet with the selection committee just prior to its final decision? The questioning and interaction would provide useful information that you can present to the community and the regulators as the basis for your selection of the sequence you decide to construct. I wish to know your thoughts on this. In addition, I would like a written milestone chart of the timing for the rest of the decision making process in this project. How is the pilot/laboratory testing coming along? What internal approvals are required within Stone Container to complete the selection process? (1) (2)

Thank you for facilitating this review. I have appreciated your responsiveness, Ed.

(1) Bob B —
What do you think?

(2) Steve E —
Can you help me with this?

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Stone Container Corporation
Containerboard and Paper Division
Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707

Missoula Mill

406.626.4451
406.626.5986 Fax

March 3, 1997

Dr. Robert B. Pojasek, Ph.D.
Cambridge Environmental Inc.
58 Charles Street (3rd Floor)
Cambridge, Massachusetts 02141

(VIA FAX: (617) 225 - 0813)

Dear Bob:

In response to the discussions we had during our last conference call which took place on February 10, 1997, Steve Eastlick and myself have drafted an outline for the *Stone Container Bleach Plant White Paper* (Please See Attached Outline).

Please review the outline we intend to follow in putting this white paper together and let me know if you have any questions or comments.

Sincerely,

Ed Scott
Environmental Manager

cc: Boschee
Willhite
Frye

OUTLINE FOR STONE BLEACH PLANT WHITE PAPER

I. Mill description

A. Brief history

B. Size

1. TPD
2. Employees

C. Processes

1. Virgin pulping
2. Recycle pulping

D. Bleach plant discussion

1. TPD
2. Usage (end product)
3. Present sequence
4. Physical properties required (i.e. strength, brightness, etc.)

II. MACT, Cluster Rules

A. Industry interpretation of Cluster Rules

1. Chemicals allowed/chemicals banned
2. Timing for promulgation
3. Timing for compliance
4. Residual limits (i.e., AOX emissions, etc.)
5. Testing locations (i.e. @ B.P./@ end of pipe)
6. Other issues

B. Impact on Missoula Mill

1. Cl_2 no longer allowed
2. Other issues

III. Alternatives for bleached fiber

A. Market pulp

1. Pros/Cons
2. Why dismissed

B. Recycle office waste

1. Pros/Cons
2. Why dismissed

C. Bleach OCC

1. Pros/Cons
2. Why dismissed

D. Whiteness enhancers (i.e. clays/starches, etc.)

1. Pros/Cons
2. Why dismissed

E. Sawdust bleaching

1. Gearing up for trial
2. Possible impact on bleach sequence

F. Shutdown B.P. altogether (do nothing approach)

1. Impact on Missoula Mill

IV. Bleaching processes considered

A. Criteria for new B.P.

1. Meet specifications - Cluster Rules
2. Meet specifications - customers
3. Low capital cost
4. Low operating cost

B. Discussion of ECF and TCF

C. TCF options considered

1. Pros/Cons
2. Why dismissed
3. Worldwide trends in TCF

D. ECF options considered

1. List all sequences considered

   a. Pros/Cons of each
   b. Why each was dismissed

E. Discussion of final two options

1. $DEopD_ND$ vs. ODEopD
2. Why ODEopD is preferred

   a. How it meets (measures up to) anticipated Cluster Rules

MEMORANDUM

To: Ed Scott

From: R.B. Pojasek

Subject: Comments on Bleaching White Paper

Date: March 10, 1997

I have attached my comments on your white paper outline. I have placed in the mail some articles that were sent (unsolicited) to me by Montana CHEER. It looks like they are reading up on bleaching alternatives. Your white paper will have to address their concerns or you will have to find some other means to address these concerns. My feeling is that if the white paper is convincing, it should be able to stand well on its own.

I also wanted you to know that I am beginning to run out of time on your original authorization of $5,000. If you plan to have me work some more on this issue or if you want to have me come to Missoula or Atlanta to interact with the group preparing the bleaching evaluation, you will have to consider extending the initial amount. At any rate, I will only bill you for the time and expenses that are incurred to do what you ask me to do in this regard, as per our agreement. Thank you.

Cambridge Environmental Inc

58 Charles Street Cambridge, Massachusetts 02141
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Stone Container Corporation
Containerboard and Paper Division
Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707

Missoula Mill

406.626.4451
406.626.5986 Fax

April 18, 1997

Dr. Robert B. Pojasek, Ph.D.
Cambridge Environmental Inc.
58 Charles Street (3rd Floor)
Cambridge, Massachusetts 02141

Dear Bob:

As we discussed during our last call, attached is some recent information put together by Grand'mere. If you have any questions regarding this information please feel free to contact Mahendra Misra or myself.

The cost information in these documents is to be treated as confidential business information.

Sincerely,

Ed Scott
Environmental Manager

cc: Boschee
Willhite → Mahendra Misra
Frye

→ Ed Scott Presentation 2-12-97

E00011508

MISSOULA MILL BLEACHING STUDY

PRESENTED BY:

MAURICE LEROUX

STONE-CONSOLIDATED CORPORATION
RESEARCH & TECHNICAL DEVELOPMENT
GRAND-MÈRE, QUÉBEC

February 12, 1997.

Research Centre & Technical Development

255, 1st Street
Grand-Mère, (Québec)
G9T 5L2
Telephone : (819) 533-2238
Telefax : (819) 533-2351

Stone-Consolidated Corporation

March 27, 1997.

Project #: 60225

Mahendra Misra
Project Manager
Stone-Container Corporation
1979 Lakeside Parkway, Suite 300
Tucker, GA 30084
U.S.A

Mahendra,

Attached, you will find the physical testing results of the pulps that were bleached according to the following sequences:

- DEopDD
- EoDEopD

as well as four (4) tables depicting the brightness, bleaching costs, AOX and colour levels for all of the sequences carried out at the Research Centre (including the ones which were completed last month). I will be in Missoula on the 3rd of April to present the aforementioned results. I look forward to seeing you there.

Sincerely,

Maurice Leroux
Chef de Discipline - Blanchiment

ML/pb

N. Marxer - Missoula

c.c. G. Wilkinson - Tucker
B. Boschee - Missoula
P. Lamey - Missoula
T. Savage - Missoula
M. Caron - R&DT
Y. Lemay - R&DT
P. Bozzer - R&DT

Stone Container Corporation
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Missoula Mill

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May 8, 1997

Dr. Robert B. Pojasek, Ph.D.
Cambridge Environmental Inc.
58 Charles Street (3rd Floor)
Cambridge, Massachusetts 02141

(VIA FAX: (617) 225 - 0813)

Dear Bob:

As we discussed earlier today, please investigate how Stone Container's Missoula Mill might evaluate the "qualitative factors", such as reduced liability and reduced worker exposure, in its analysis of bleaching alternatives.

Let me know if you have any questions regarding this request.

Sincerely,

Ed Scott
Environmental Manager

cc: Boschee
Willhite
Frye

TOTAL P.02

Received 5/27/97
XC: Bob B
Paul M
Russ F
Bob May we Proceed? Please Advise
Ed.

MEMORANDUM

To: Ed Scott

From: R.B. Pojasek RBP

Subject: Bleaching Modification Evaluation

Date: May 23, 1997

I am awaiting your authorization of the extension of my contract before starting work on the qualitative criteria determinations for the criteria matrix you plan to use in your final evaluation. I would like to get some idea of your time frame in needing this information so you can complete your white paper. I understand that I will be providing you with a critique of this paper as well on this contract.

Is Stone Container close to an agreement with CHEER on the pollution prevention planning effort? Is so, do you have any timing in mind as to when the project would start? I will need some notice so we can schedule personnel to work on this assignment. Thank you.

Cambridge Environmental Inc
58 Charles Street Cambridge Massachusetts 02141
617-225-0810 FAX: 617-225-0813 E-mail: camenv58@aol.com

(1) How we ~~analyzed~~ identified TCF Technologies

(2) How we are evaluating the alternative (TCF / ECF) what factors

(3) Extent to which Env $ and Benefits are being included

(1) Call Mahendra
About providing JCF U.S.
ECF Info.

What Sequences / What Factors.

(2) TALK to Steve about timing
of A..

Tertiary Screen rejects from the
OCC Plant are Sewered to WWTS
~~Clar~~ and end up in
Clarifier and the Sludge
is dewatered and burned
in WFB.

Originally 100% Fiber
99% ~~Non Plastic~~ Fiber
w/ less than 1% plastic.

Help Improve Consistency of
Sludge to assist In
dewatering.

(3) ~~[illegible]~~ Bring ~ 100 Copies
of S.O.P.

Stone Container Corporation
Containerboard and Paper Division
Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707

Missoula Mill

406.626.4451
406.626.5986 Fax

May 8, 1997

Dr. Robert B. Pojasek, Ph.D.
Cambridge Environmental Inc.
58 Charles Street (3rd Floor)
Cambridge, Massachusetts 02141

(VIA FAX: (617) 225 - 0813)

Dear Bob:

As we discussed earlier today, please investigate how Stone Container's Missoula Mill might evaluate the "qualitative factors", such as reduced liability and reduced worker exposure, in its analysis of bleaching alternatives.

Let me know if you have any questions regarding this request.

Sincerely,

Ed Scott
Environmental Manager

cc: Boschee
Willhite
Frye

Stone Container Corporation
Missoula Mill
Containerboard and Paper Division

To:
Distribution

Date:
April 29, 1997

From:
Neal Marxer

Subject:
BLEACHING CHEMICAL COSTS

Please find attached the results of lab work done at Grand Mere and chemical costs as prepared by Mahendra Misra. Mahendra also commented to me that he felt the chlorine dioxide substitution sequence would not meet the proposed Cluster Rules because the estimated AOX at end of pipe would be greater than 0.5. He indicated that the mini O2 may be able to meet an end of pipe AOX of less than 0.5 provided you use less chlorine dioxide on the first stage and more on the last stage of the chlorine dioxide stages. The 0.4 end of pipe AOX is an estimate by Industra. This sequence of using less chlorine dioxide on the first stage and more on the last stage will be trialed at Grand Mere.

/plg

Distribution:

Bob Boschee
Marc Olson
Troy Savage
Brad Madison
Ed Scott

IQS Innovation Quality Service

Stone Container Corporation
Engineering & Technology
1979 Lakeside Parkway, Tucker, Ga 30084
Tel: (770)-621-6752 **Fax: (770)-621-6733**

Date: April 17, 1997

To: Neal Marxer
From: Mahendra Misra

I am summarizing the results of the lab work done at Grand'Mere based on the actual chemical cost. I got the chemical cost numbers from Troy. Please review these numbers and let me know if I have missed anything.

Mahendra
Mahendra

Copies

B. Boschee
T. Savage
B. Madison
M. Olsen

~~B. Boschee~~

MISSOULA BLEACH MODIFICATION
250 ADT/D

4/17/1997

			EXISTING	ClO2 SUBS.	Mini O2	Mini O2	O2-delig.
SEQUENCE			**CHHD**	**DEopDnD**	**EoDEopD**	**EoDEopD**	**ODEOD**
			EXIST. EQP.	EXIST. EQP.			
KAPPA NO.			25	25	25-Eo-19	25-Eo-19	25-O2-15
CHEMICALS		KF →	0.21	0.2	0.215	0.18	0.2
ADT/D	250	UNITS					
Cl2		lb/adtp	93	0	0	0	0
NaOH		lb/adtp	26.5	30	58	54	65.2
O2		lb/adtp	0	9	27	27	45
H2O2		lb/adtp	0	5.4	5.4	3.6	0
ClO2		lb/adtp	12.25	57	55	55	35
EDTA		lb/adtp	0	0	0	0	0
H2SO4		lb/adtp	0	18	18	12	12
HYPO		lb/adtp	77.4	0	0	0	0
OZONE		lb/adtp	0	0	0	0	0
Tot. ClO2		**t/d**	**1.5**	**7.1**	**6.9**	**6.9**	**4.4**
COST:	$/LB						
Cl2	0.115	$/adtp	10.70	0.00	0.00	0.00	0.00
NaOH	0.105	$/adtp	2.78	3.15	6.09	5.67	6.85
O2	0.05	$/adtp	0.00	0.45	1.35	1.35	2.25
H2O2	0.335	$/adtp	0.00	1.81	1.81	1.21	0.00
ClO2	0.60	$/adtp	7.35	0.00	0.00	0.00	0.00
ClO2(Solvay)	0.5	$/adtp	0.00	28.50	27.50	27.50	17.50
EDTA	0.75	$/adtp	0.00	0.00	0.00	0.00	0.00
H2SO4	0.025	$/adtp	0.00	0.45	0.45	0.30	0.30
HYPO	0.27	$/adtp	20.90	0.00	0.00	0.00	0.00
OZONE	1.20	$/adtp	0.00	0.00	0.00	0.00	0.00
Na2SO4	0.03						
Bleach Cost		$/adtp	41.73	34.36	37.20	36.03	26.90
Credit (NaoH)		$/adtp	0.00	0.00	-2.55	-2.55	-3.40
Credit (Na2SO4)		$/adtp	0.00	-4.28	-4.13	-4.13	-2.63
Net Bl. Cost		$/adtp	41.73	30.08	30.52	29.35	20.87
Brightness(ISO)			83.9	84.1	83.9	83(Est.)	83.2
AOX(Kg/ADMT)			5.53	?	1.03	0.8(Est.)	0.41
st. AOX(End of Pipe)			2.77	?	0.515	0.4	0.205

>0.5

Stone Container Corporation
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Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707

Missoula Mill

406.626.4451
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April 18, 1997

Dr. Robert B. Pojasek, Ph.D.
Cambridge Environmental Inc.
58 Charles Street (3rd Floor)
Cambridge, Massachusetts 02141

Dear Bob:

As we discussed during our last call, attached is some recent information put together by Grand'mere. If you have any questions regarding this information please feel free to contact Mahendra Misra or myself.

The cost information in these documents is to be treated as confidential business information.

Sincerely,

Ed Scott
Environmental Manager

cc: Boschee
Willhite → Mahendra Misra
Frye

→ Ed Scott Presentation 2-12-97

E00011519

MISSOULA MILL BLEACHING STUDY

PRESENTED BY:

MAURICE LEROUX

STONE-CONSOLIDATED CORPORATION

RESEARCH & TECHNICAL DEVELOPMENT

GRAND-MÈRE, QUÉBEC

February 12, 1997.

SEQUENCES STUDIED:

1. CHHD
2. DEopDD (INDUSTRA)
3. ODEoD
4. ODEopD (INDUSTRA)
5. OZEoD
6. OZEoP

E00011520

SEQUENCE CRITERIA:

- ✓ ABILITY TO ATTAIN THE 83-85% ISO BRIGHTNESS TARGET
- ✓ CONFORMS TO CLUSTER RULES' DISCHARGE LIMITS
- ✓ ECONOMICALLY FAVOURABLE

E00011521

BLEACHING CONDITIONS

CHHD (KF=0.23)

STAGE	CHEMICALS USED	TEMPERATURE (°F)	TIME (MIN)	CONSISTENCY (%)	pH	RESIDUAL (%)	VISCOSITY (mPa*s)
C	5.18% Cl_2	80	45	3.0	1.7	0.07	
H	1.00% NaOH 3.10% NaOCl	130	49	8.0	7.6	0.03	
H	0.30% NaOH 1.20% NaOCl	135	177	14.0	8.4	0.02	
D	0.68% ClO_2 0.17% NaOH	150	207	11.0	3.6	0.08	13.0

E00011522

BLEACHING CONDITIONS

CHHD (KF=0.14)

STAGE	CHEMICALS USED	TEMPERATURE (°F)	TIME (MIN)	CONSISTENCY (%)	pH	RESIDUAL (%)	VISCOSITY (mPa*s)
C	3.14% Cl_2	75	41	3.0	2.1	NIL	
H	1.00% NaOH 2.15% NaOCl	140	59	10.0	8.8	0.01	
H	1.00% NaOH 2.15% NaOCl	140	129	10.0	10.9	0.01	
D	0.35% ClO_2	190	183	10.0	3.3	NIL	14.7

E00011523

BLEACHING CONDITIONS

DEopDD

STAGE	CHEMICALS USED	TEMPERATURE (°F)	TIME (MIN)	CONSISTENCY (%)	pH	RESIDUAL (%)	VISCOSITY (mPa*s)
D	1.79% ClO_2 1.00% H_2SO_4	150	41	3.0	2.5	NIL	
Eop	0.50% O_2 (75 PSI, 30 min) 0.30% H_2O_2 1.25% NaOH	160	59	10.0	10.1	0.01	
D	0.60% ClO_2	170	129	10.0	3.0	NIL	
D	0.26% ClO_2	170	183	10.0	2.7	NIL	17.2

E00011524

BLEACHING CONDITIONS

ODEoD

STAGE	CHEMICALS USED	TEMPERATURE (°F)	TIME (MIN)	CONSISTENCY (%)	pH	RESIDUAL (%)	VISCOSITY (mPa*s)
O	2.00% O_2 (100 PSI, 60 min) 2.00% NaOH	203	60	10.5	11.5	-	17.0
D	1.13% ClO_2	122	60	10.0	2.7	trace	
Eo	0.50% O_2 (75 PSI, 30 min) 1.50% NaOH	203	60	10.0	11.0	-	
D	0.79% ClO_2 0.12% NaOH	176	180	10.0	2.9	trace	14.0

E00011525

BLEACHING CONDITIONS

ODEopD

STAGE	CHEMICALS USED	TEMPERATURE (°F)	TIME (MIN)	CONSISTENCY (%)	pH	RESIDUAL (%)	VISCOSITY (mPa*s)
O	2.00% O_2 (100 PSI, 60 min) 2.00% NaOH	203	60	10.5	11.5	N/A	17.0
D	1.18% ClO_2 1.00% H_2SO_4	150	47	10.0	2.0	trace	
Eop	0.50% O_2 (75 PSI, 30 min) 0.30% H_2O_2 1.25% NaOH	160	59	10.0	11.0	0.03	
D	0.80% ClO_2	170	129	10.0	2.5	0.03	14.6

E00011526

BLEACHING CONDITIONS

OZEoD

STAGE	CHEMICALS USED	TEMPERATURE (°F)	TIME (MIN)	CONSISTENCY (%)	pH	RESIDUAL (%)	VISCOSITY (mPa*s)
O	2.00% O_2 (100 PSI, 60 min) 2.00% NaOH	203	60	10.5	11.5	-	17.0
Z	0.60% O_3 1.00% H_2SO_4	122	60	40.0	3.1	0.37	9.9
Eo	0.50% O_2 (75 PSI, 30 min) 1.50% NaOH	203	60	10.0	10.9	-	8.1
D	0.79% ClO_2 0.12% NaOH	176	180	10.0	2.5	nil	7.8

E00011527

E00011528

BLEACHING CONDITIONS

OZEoP

STAGE	CHEMICALS USED	TEMPERATURE (°F)	TIME (MIN)	CONSISTENCY (%)	pH	RESIDUAL (%)	VISCOSITY (mPa*s)
O	2.00% O_2 (100 PSI, 60 min)	203	60	10.5	11.5	-	17.0
	2.00% NaOH						
Z	0.60% O_3	122	60	40.0	3.1	0.37	9.9
	1.00% H_2SO_4						
Eo	0.50% O_2 (75 PSI, 30 min)	203	60	10.0	10.8	-	8.1
	1.50% NaOH						
P	1.00% H_2O_2	176	60	11.8	2.5	trace	
	2.50% NaOH						
							4.8

MISSOULA BLEACHING STUDY

BRIGHTNESS

SEQUENCE TESTED	% ISO BRIGHTNESS
CHHD (KF=0.14)	65.3
CHHD (KF=0.23)	83.9
DEopDD	75.1
ODEoD	83.2
ODEopD	81.9
OZEoD	83.9
OZEoP	77.1

E00011529

MISSOULA BLEACHING STUDY

AOX LEVELS

SEQUENCE TESTED	AOX	
	(lb/odt)	(kg/adt)
CHHD (KF=0.14)	9.71	4.37
CHHD (KF=0.23)	12.28	5.53
DEopDD	2.08	0.94
ODEoD	0.91	0.41
ODEopD	1.48	0.67
OZEoD	0.10	0.05
OZEoP	N/A	N/A

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E00011531

MISSOULA BLEACHING STUDY

FILTRATE PROPERTIES

SEQUENCE TESTED	COLOUR (Pt-Co units)
CHHD (KF=0.14)	2040
CHHD (KF=0.23)	1310
DEopDD	930
ODEoD	1770
ODEopD	950
OZEoD	170
OZEoP	N/A

MISSOULA BLEACHING STUDY

ECONOMICS

SEQUENCE TESTED	CHEMICAL COST ($/ADTPD)
CHHD (KF=0.14)	$36.52
CHHD (KF=0.23)	$47.07
DEopDD	$35.71
ODEoD	$31.08
ODEopD	$34.77
OZEoD	$36.03
OZEoP	$65.14

E00011532

MISSOULA BLEACHING STUDY

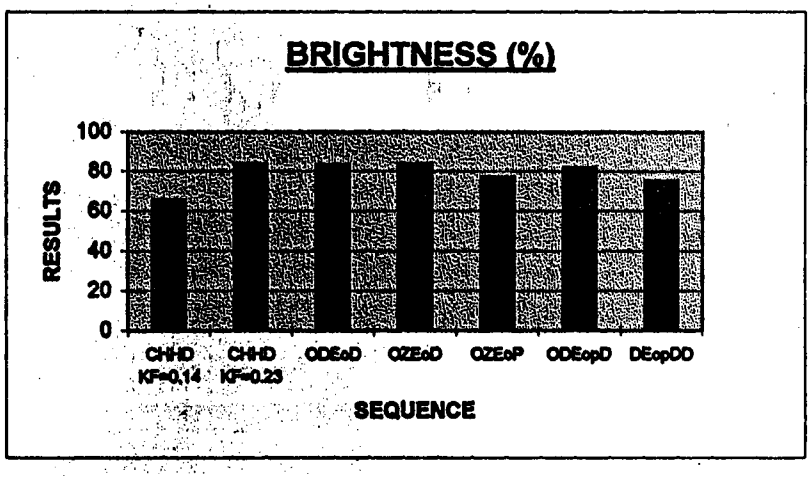
SUMMARY OF RESULTS

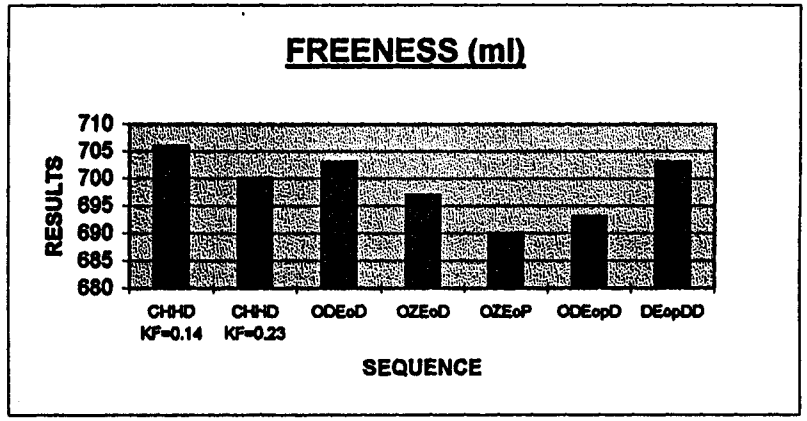
SEQUENCE	% ISO BRIGHTNESS	CHEMICAL COST ($/ADTPD)	t/d ClO_2*	AOX (lb/odt)	VISCOSITY (mPa*s)
CHHD (KF=0.14)	65.3	$36.52	0.88	9.71	14.7
CHHD (KF=0.23)	83.9	$47.07	1.70	12.28	13.0
DEopDD	75.1	$35.71	6.63	2.08	17.2
ODEoD	83.2	$31.08	4.79	0.91	14.0
ODEopD	81.9	$34.77	4.95	1.48	14.6
OZEoD	83.9	$36.03	1.98	0.1	7.8
OZEoP	77.1	$65.14	N/A	N/A	4.8

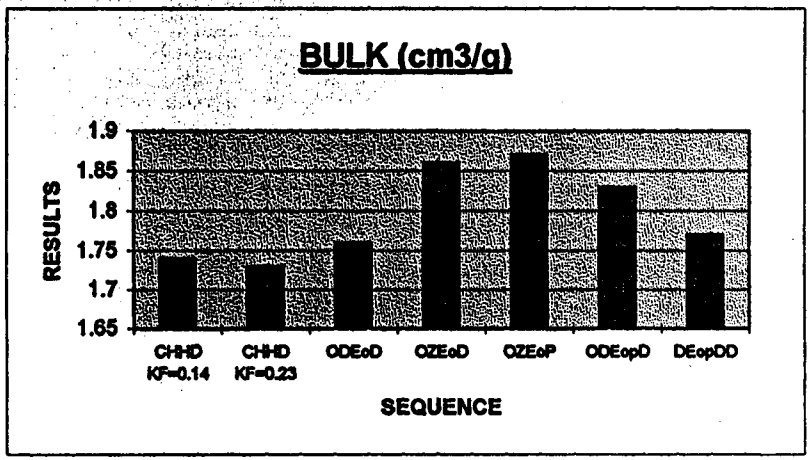
* based on a production rate of 250 t/d

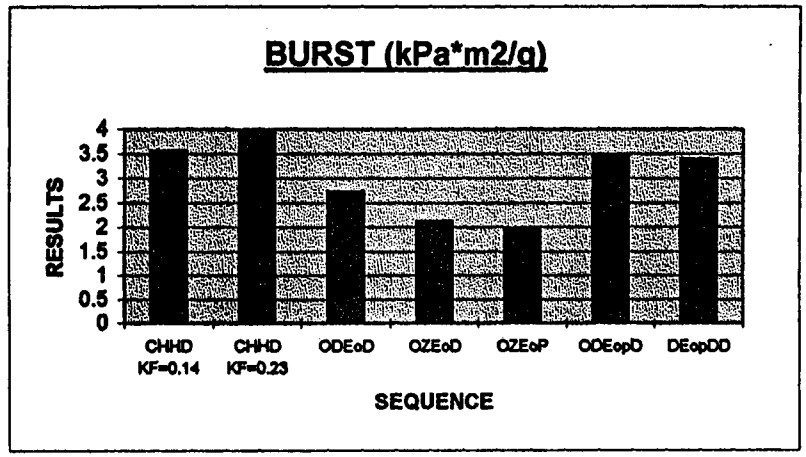
E00011533

TESTS @ 0 REVOLUTIONS



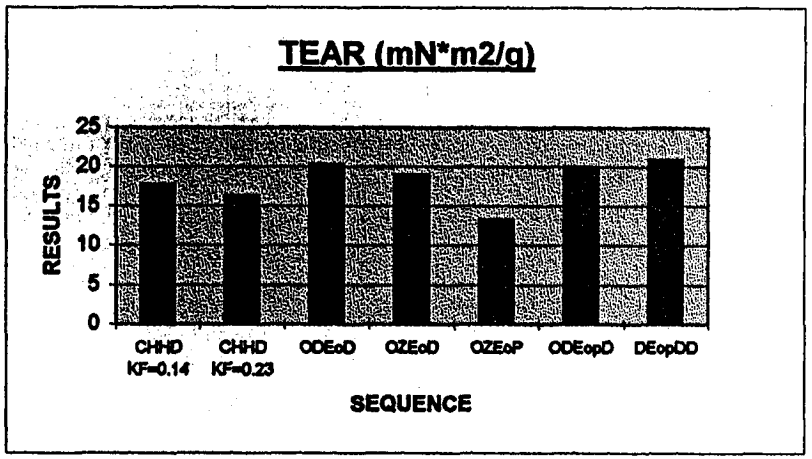


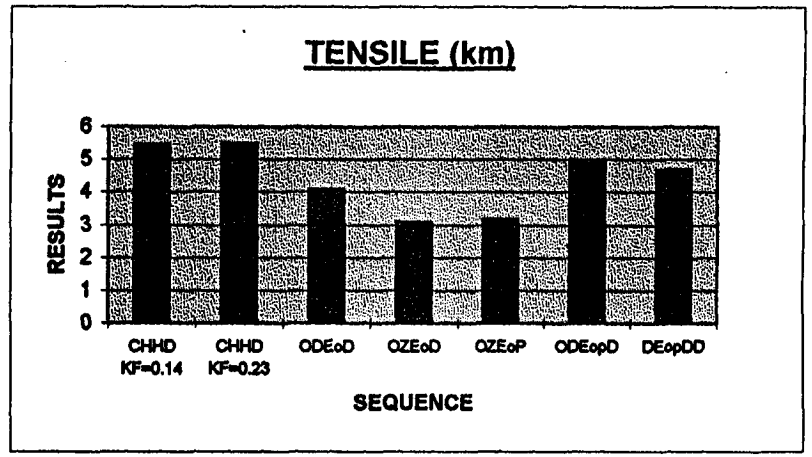


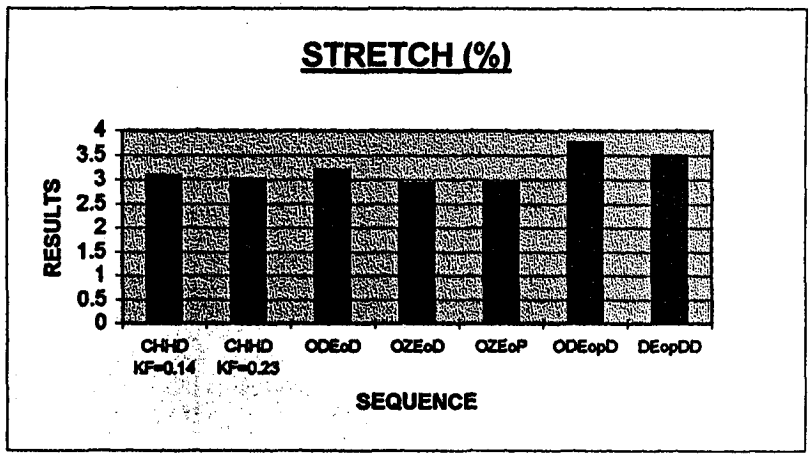


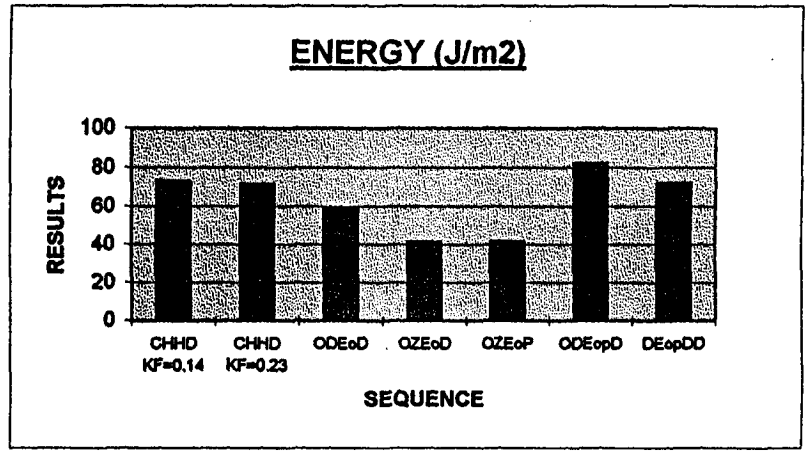
E00011534

TESTS @ 0 REVOLUTIONS



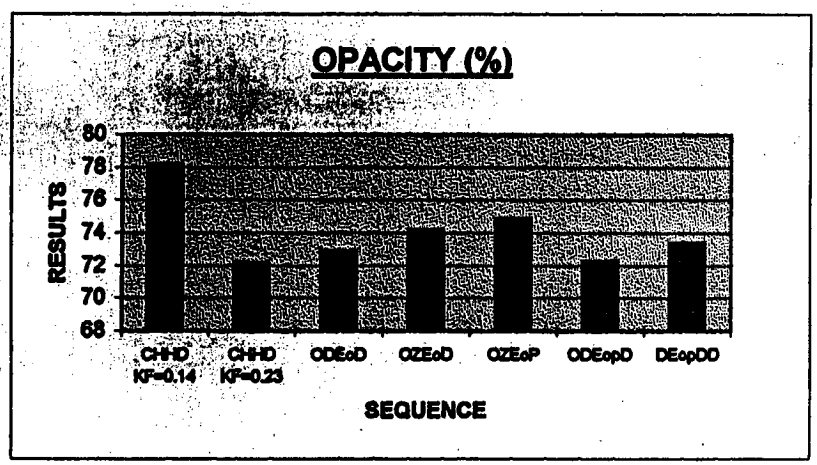


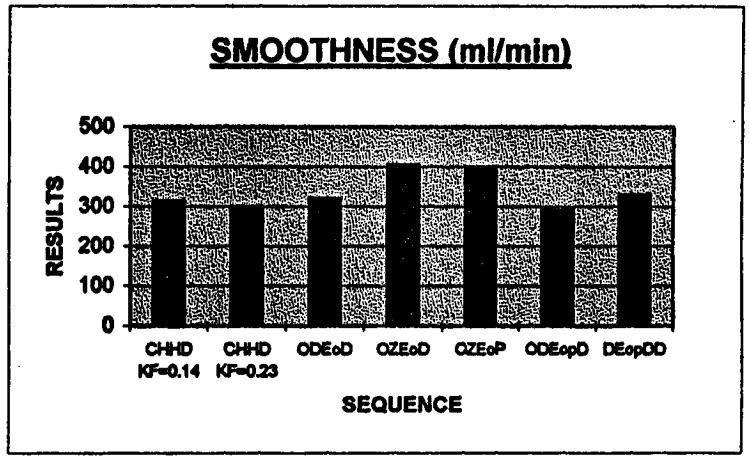


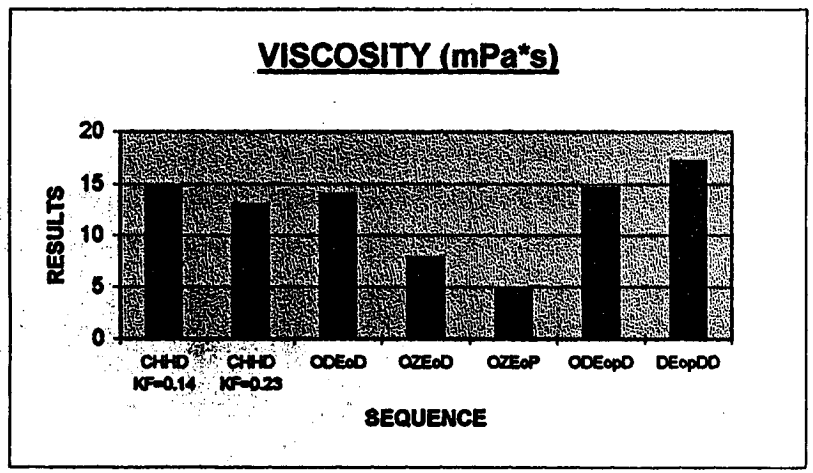


E00011535

TESTS @ 0 REVOLUTIONS

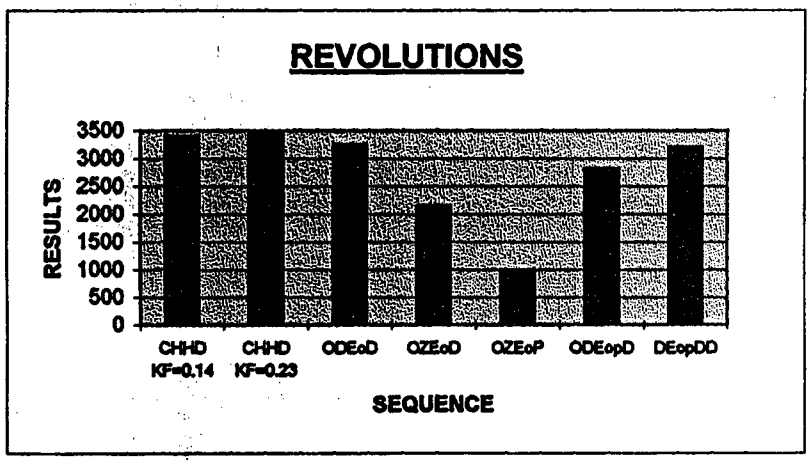


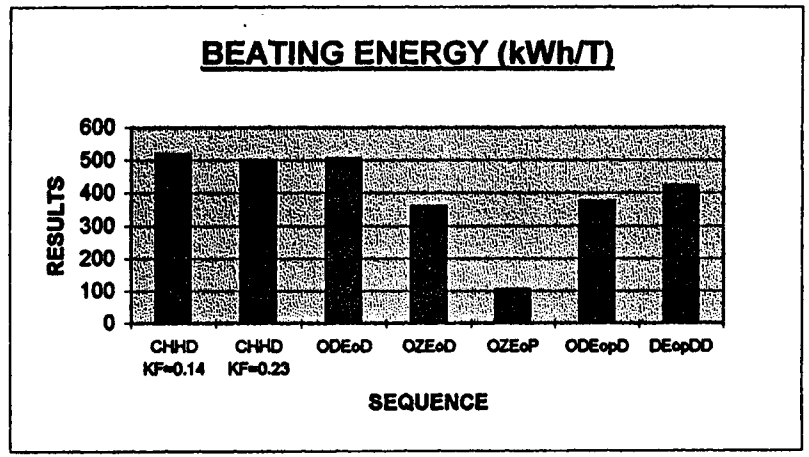


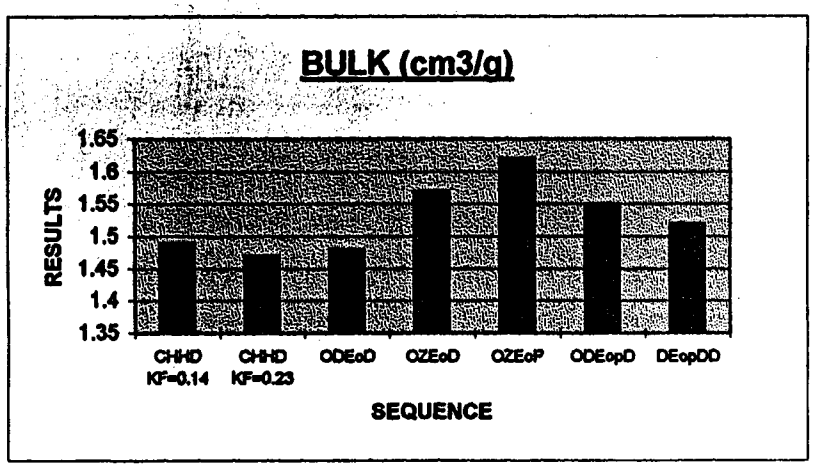


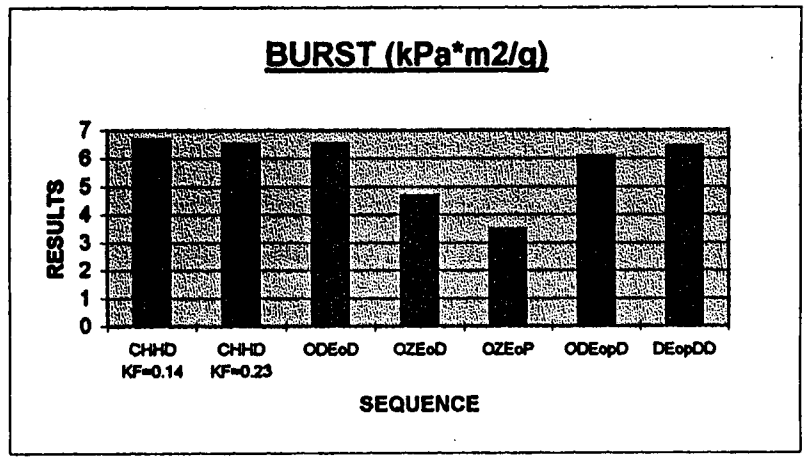
E00011536

TESTS @ 500 CSF



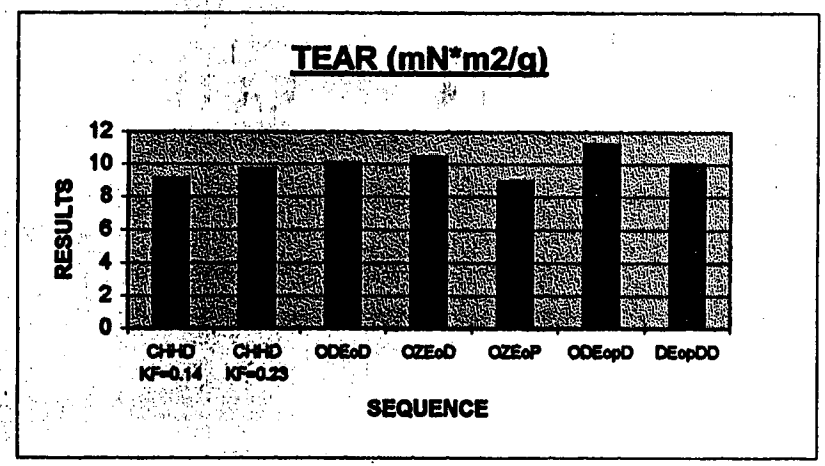


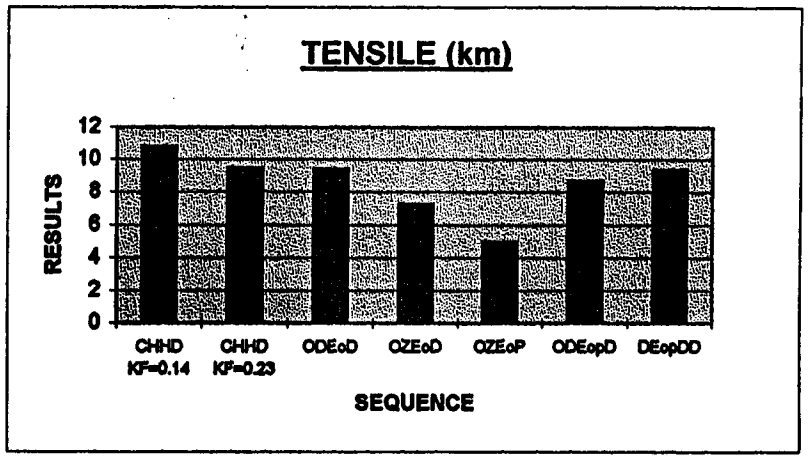


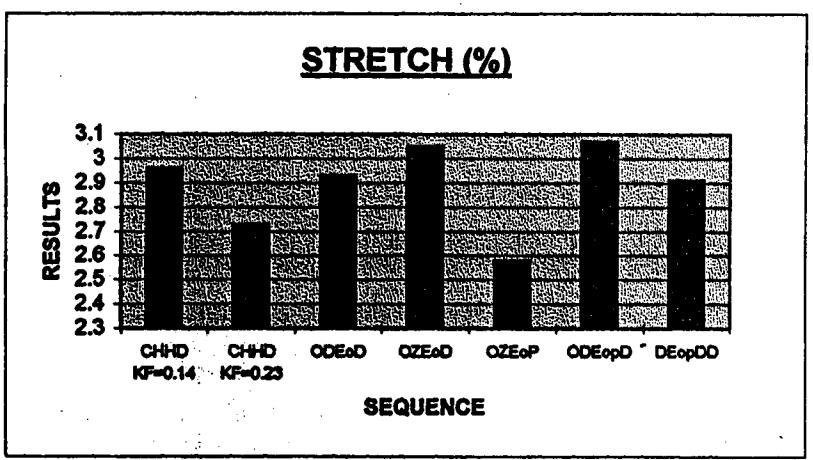


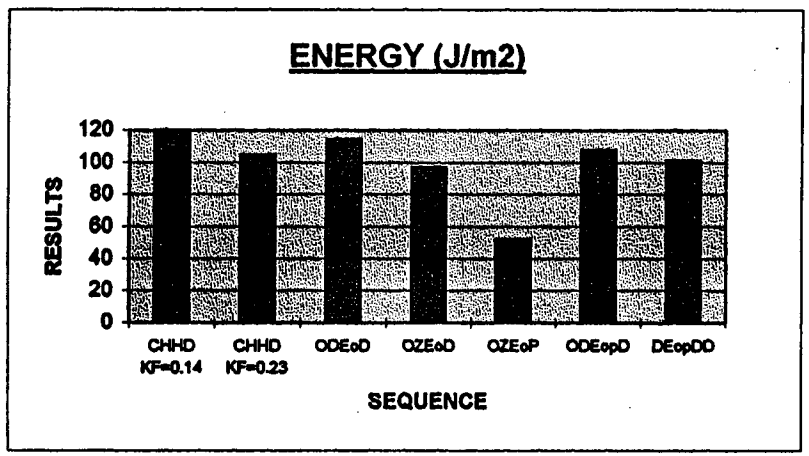
E00011537

TESTS @ 500 CSF





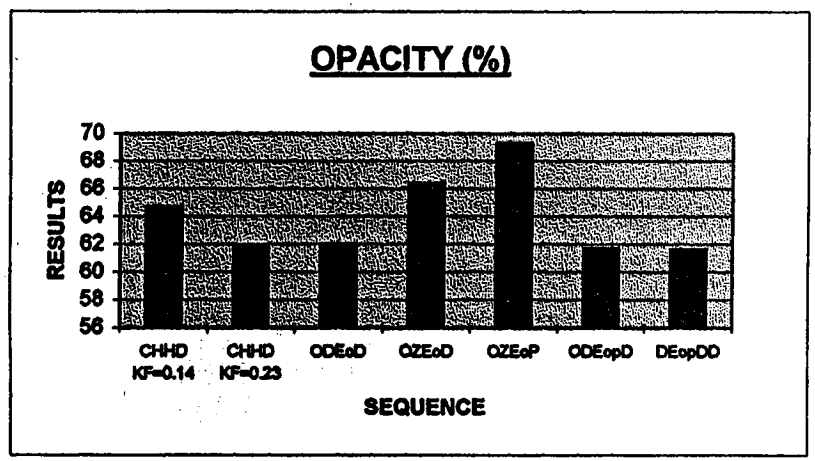


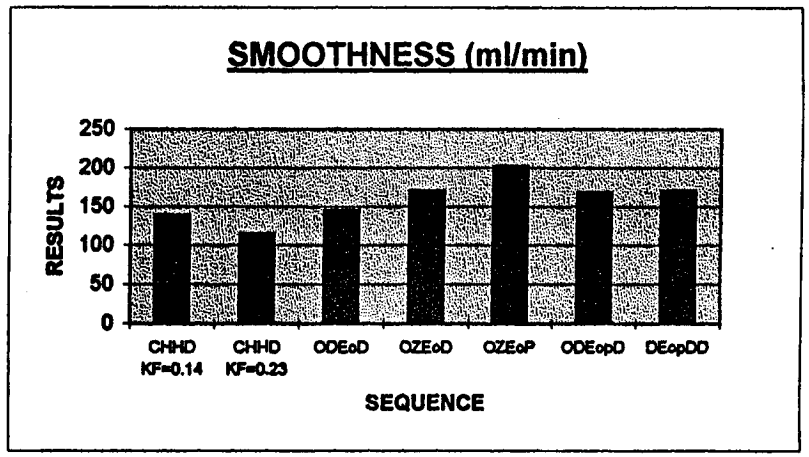


E00011538

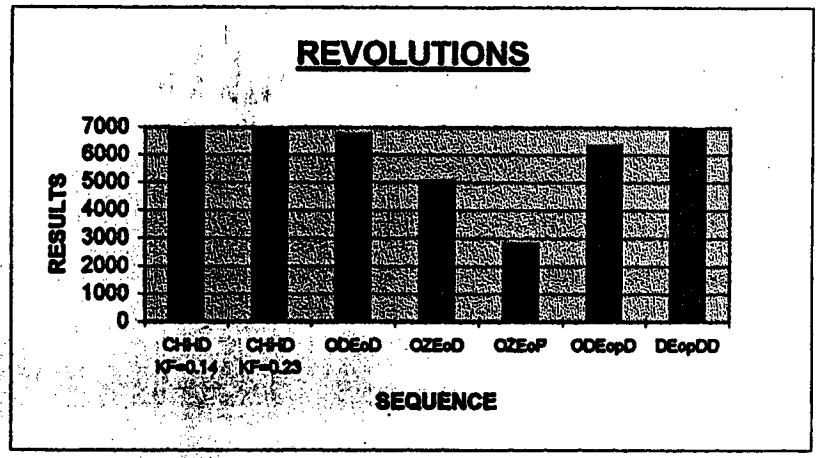
E00011539

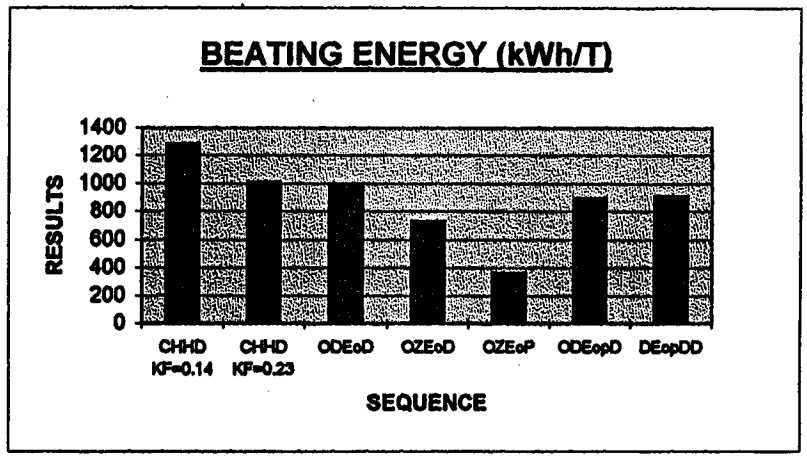
TESTS @ 500 CSF

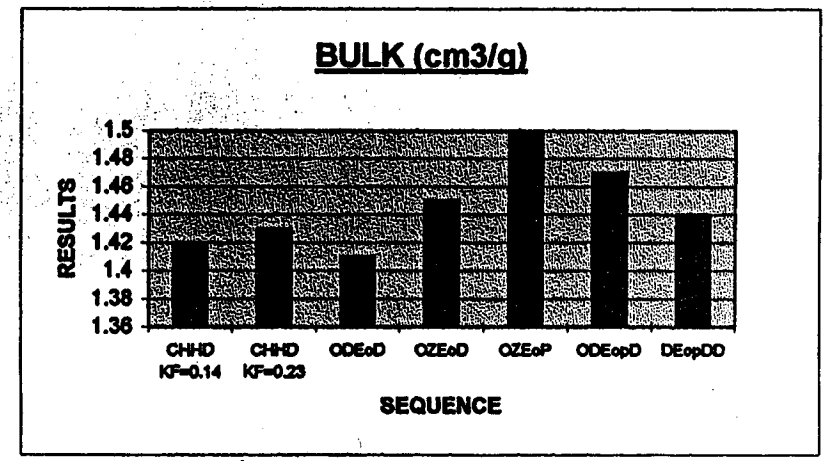


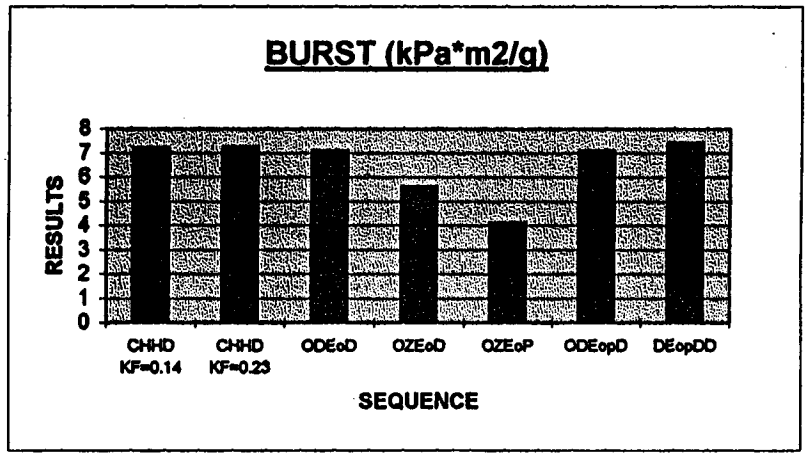


TESTS @ 300 CSF



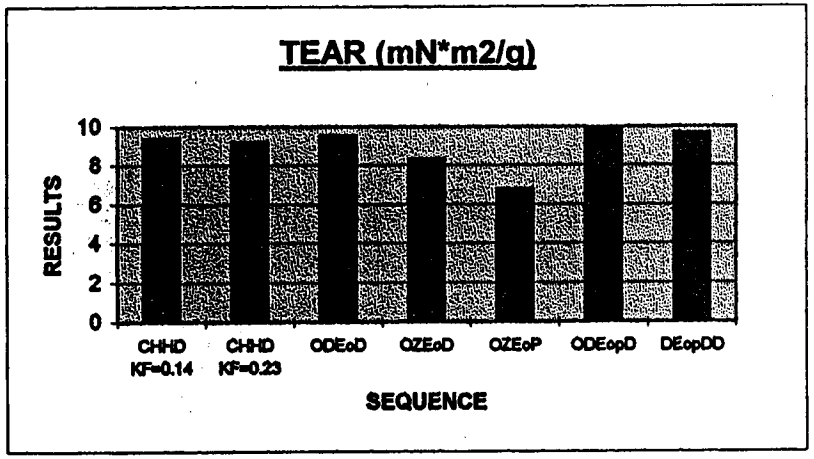


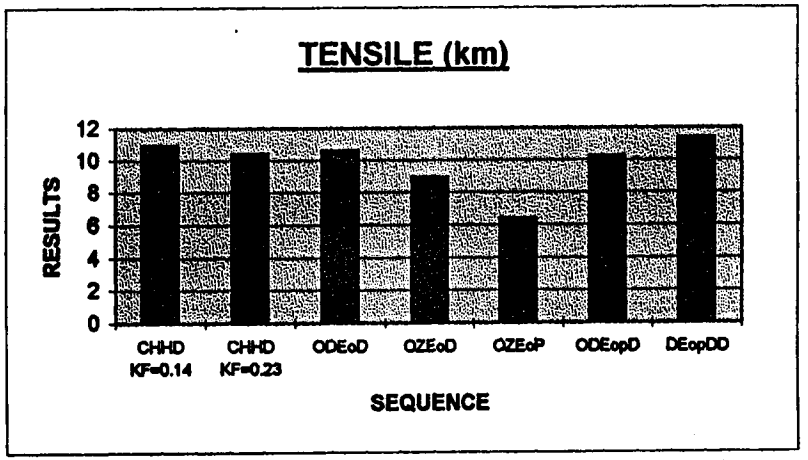


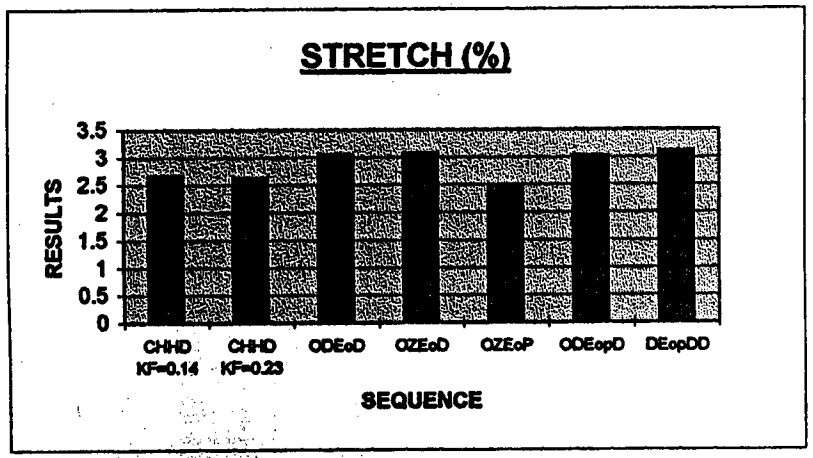


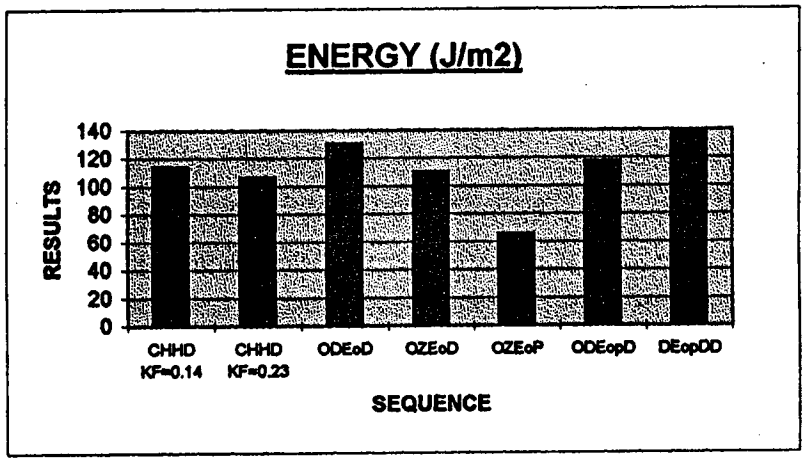
E00011540

TESTS @ 300 CSF



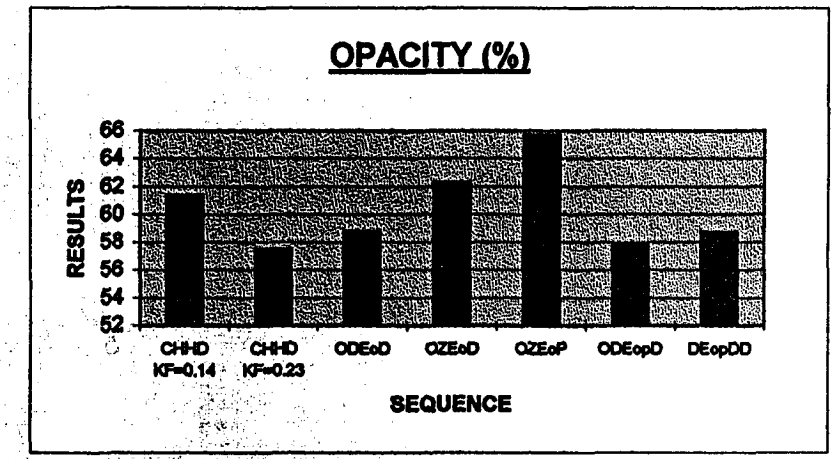


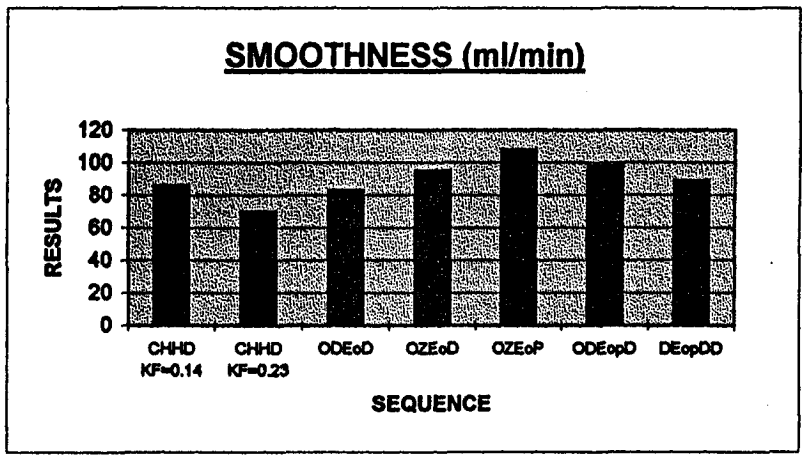




E00011541

TESTS @ 300 CSF





E00011542

	CHHD (KF=0.14)	CHHD (KF=0.23)	ODEoD	OZEoD	OZEoP	ODEopD	DEopDD
TESTS @ 0 REVOLUTIONS							
BRIGHTNESS (%)	65.3	83.9	83.2	83.9	77.1	81.9	75.1
FREENESS (ml)	706	700	703	697	690	693	703
BULK (cm^3/g)	1.74	1.73	1.76	1.86	1.87	1.83	1.77
BURST ($kPa*m^2/g$)	3.56	3.93	2.72	2.12	1.94	3.48	3.38
TEAR ($mN*m^2/g$)	17.72	16.26	20.31	18.95	13.30	20.06	20.91
TENSILE (km)	5.46	5.49	4.08	3.09	3.19	4.98	4.70
STRETCH (%)	3.09	3.01	3.2	2.92	2.93	3.76	3.50
ENERGY (J/m^2)	73.1	71.5	59.1	41.4	41.7	82.2	71.9
OPACITY (%)	78.2	72.2	72.9	74.2	74.9	72.3	73.4
SMOOTHNESS (ml/min)	314	300	320	406	400	292	330
VISCOSITY (mPa*s)	14.7	13.0	14.0	7.8	4.8	14.6	17.2
TESTS @ 500 CSF							
REVOLUTIONS	3400	3450	3250	2150	1000	2820	3200
BEATING ENERGY (kWh/T)	520	500	505	360	105	374	422
BULK (cm^3/g)	1.49	1.47	1.48	1.57	1.62	1.55	1.52
BURST ($kPa*m^2/g$)	6.68	6.53	6.53	4.68	3.49	6.08	6.42
TEAR ($mN*m^2/g$)	9.12	9.72	10.09	10.46	8.96	11.24	10.03
TENSILE (km)	10.80	9.47	9.42	7.26	4.96	8.70	9.38
STRETCH (%)	2.96	2.73	2.93	3.05	2.58	3.07	2.91
ENERGY (J/m^2)	120.0	105.0	114.5	96.8	52.0	107.8	101.3
OPACITY (%)	64.7	61.8	62.0	66.4	69.3	61.7	61.6
SMOOTHNESS (ml/min)	139	115	145	170	202	168	170
TESTS @ 300 CSF							
REVOLUTIONS	6900	6950	6750	5050	2800	6320	6900
BEATING ENERGY (kWh/T)	1280	1010	1000	728	362	896	910
BULK (cm^3/g)	1.42	1.43	1.41	1.45	1.50	1.47	1.44
BURST ($kPa*m^2/g$)	7.21	7.26	7.10	5.6	4.11	7.10	7.42
TEAR ($mN*m^2/g$)	9.40	9.20	9.53	8.33	6.77	9.93	9.67
TENSILE (km)	10.94	10.42	10.63	8.94	6.38	10.21	11.38
STRETCH (%)	2.67	2.63	3.05	3.07	2.49	3.03	3.11
ENERGY (J/m^2)	114.2	106.4	130.6	110.4	65.7	117.4	138.0
OPACITY (%)	61.4	57.5	58.8	62.3	65.7	57.8	58.7
SMOOTHNESS (ml/min)	86	70	83	95	108	98	89

E00011543

E00011544

ACKNOWLEDGEMENTS:

PAOLA BOZZER

- PRESENTATION LAYOUT
- LAB WORK

ROGER VEILLETTE

- LAB WORK

BLEACHING CONDITIONS

PULP SOURCE : UBK - MISSOULA MILL **WORK ORDER # 60225-A** **PROJECT # 572-095**

STAGE	% Cl_2	% ClO_2	O-STAGE CONDITIONS % O_2	@ PSI	Time min.	% H_2O_2	% NaOH	% NaOCl	CONDITIONS Temp. °F	Time min.	Consist. %	final pH	% residual	K# mL	Brightness % ISO
* initial K# = 16															
* Kappa factor =		0.23													
C	5.18								80	45	3.0	1.7	0.07		
H							1.00	3.10	130	49	8	7.6	0.03		51.55
H							0.30	1.20	135	177	14	8.4	0.02		74.51
D		0.68					0.17		150	207	11	3.6	0.08		83.91
$/lb	0.10	0.60	0.05			0.375	0.125	0.35							
$/ADTP	$9.32	$7.34	$0.00			$0.00	$3.31	$27.09							
							TOTAL	$47.07							
ClO_2 t/d		1.70													
(based on a production rate of 250 t/d)															

E00011545

BLEACHING CONDITIONS

PULP SOURCE: UBK - MISSOULA MILL **WORK ORDER # 60225-B** **PROJECT # 572-095**

STAGE	% Cl_2	% ClO_2	O-STAGE CONDITIONS % O_2	@ PSI	Time min.	% H_2O_2	% NaOH	% H_2SO_4	CONDITIONS Temp. °F	Time min.	Cons. %	final pH	% residual	K# mL	Brightness % ISO
* initial K # = 16															
O			2.00	100	60		2.00		203	60	10.5	11.5	N/A		
D		1.13							122	60	10	2.7	trace		
Eo			0.50	75	30		1.50		203	60	10	11.0	N/A	3.1	
D		0.79					0.12		176	180	10	2.9	trace		83.20
$/lb	0.10	0.60	0.05			0.375	0.125	0.10							
$/ADTP	$0.00	$20.68	$2.25			$0.00	$8.15	$0.00							
							TOTAL	$31.08							
ClO_2 t/d		4.79													
(based on a production rate of 250 t/d)															

E00011546

E00011547

BLEACHING CONDITIONS

PULP SOURCE: UBK - MISSOULA MILL **WORK ORDER # 60225-C** **PROJECT # 572-095**

STAGE	% H_2SO_4	% ClO_2	O-STAGE CONDITIONS % O_2	@ PSI	Time min.	%O_3	% NaOH	% H_2SO_4	CONDITIONS Temp. °F	Time min.	Cons. %	final pH	% residual	K# mL	Brightness % ISO
* initial K # = 16															
O			2.00	100	60		2.00		203	60	10.5	11.5	-		
Z	1.00					0.60		1.00	122	60	10	3.1	0.37		50.55
Eo			0.50	75	30		1.50		203	60	10	10.9	-	2.7	
D		0.79					0.12		176	180	10	2.5	nil		83.92
$/lb	0.10	0.60	0.05			1.25	0.125	0.10							
$/ADTP	$1.80	$8.53	$2.25			$13.50	$8.15	$1.80							
							TOTAL	$36.03							
ClO_2 t/d		1.98													
(based on a production rate of 250 t/d)															

BLEACHING CONDITIONS

PULP SOURCE: UBK - MISSOULA MILL **WORK ORDER # 60225** **PROJECT # 572-095**

STAGE	%H_2SO_4	% H_2O_2	O-STAGE CONDITIONS % O_2	@ PSI	Time min.	% O_3	% NaOH	%$MgSO_4$	CONDITIONS Temp. °F	Time min.	Cons. %	final pH	% residual	K# mL	Brightness % ISO
* initial K # = 16															
O			2.00	100	60		2.00		203	60	10.5	11.5	-		
Z	1.00					0.60			122	60	10	3.1	0.37		
Eo			0.50	75	30		1.50		203	60	10	10.8	-		
P		5.00					2.50	0.10	176	60	10	11.8	trace		77.1
$/lb	0.10	0.375	0.05			1.25	0.125	0.19							
$/ADTP	$1.80	$33.75	$2.25			$13.50	$13.50	$0.34							
							TOTAL	$65.14							

E00011548

E00011549

BLEACHING CONDITIONS

PULP SOURCE : UBK - MISSOULA MILL **WORK ORDER # 60225-E** **PROJECT # 572-095**

STAGE	% Cl_2	% ClO_2	O-STAGE CONDITIONS % O_2	@ PSI	Time min.	% H_2O_2	% NaOH	% NaOCl	CONDITIONS Temp. °F	Time min.	Consist. %	final pH	% residual	K# mL	Brightness % ISO
* initial K# = 16															
* Kappa factor =		0.14													
C	3.14								75	41	3.0	2.1	nil		
H								2.15	140	59	10.0	8.8	0.01		
H								2.15	140	129	10.0	10.9	0.01		
D		0.35							190	183	10.0	3.3	nil		65.34
$/lb	0.10	0.60	0.05			0.375	0.125	0.35							
$/ADTP	$5.65	$3.78	$0.00			$0.00	$0.00	$27.09							
							TOTAL	$36.52							
ClO_2 t/d		0.88													
(based on a production rate of 250 t/d)															

BLEACHING CONDITIONS

PULP SOURCE: UBK - MISSOULA MILL **WORK ORDER # 60225-F** **PROJECT # 572-095**

STAGE	% Cl_2	% ClO_2	O-STAGE CONDITIONS % O_2	@ PSI	Time min.	% H_2O_2	% NaOH	% H_2SO_4	CONDITIONS Temp. °F	Time min.	Cons. %	final pH	% residual	K# mL	Brightness % ISO
* initial K # = 16															
O			2.00	100	60		2.00		203	60	10.5	11.5	N/A		
D		1.18						1.00	150	47	10.0	2.0	trace		
Eop			0.50	75	30	0.30	1.25		160	59	10.0	11.0	0.03		
D		0.80							170	129	10.0	2.5	0.03		81.89
$/lb	0.10	0.60	0.05			0.375	0.125	0.10							
$/ADTP	$0.00	$21.38	$2.25			$2.03	$7.31	$1.80							
							TOTAL	$34.77							
ClO_2 t/d		4.95													
(based on a production rate of 250 t/d)															

E00011550

Research Centre & Technical Development

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Telephone : (819) 533-2238
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Stone-Consolidated Corporation

March 27, 1997.

Mahendra Misra
Project Manager
Stone-Container Corporation
1979 Lakeside Parkway, Suite 300
Tucker, GA 30084
U.S.A

Project #: 60225

Mahendra,

Attached, you will find the physical testing results of the pulps that were bleached according to the following sequences:

- DEopDD
- EoDEopD

as well as four (4) tables depicting the brightness, bleaching costs, AOX and colour levels for all of the sequences carried out at the Research Centre (including the ones which were completed last month). I will be in Missoula on the 3rd of April to present the aforementioned results. I look forward to seeing you there.

Sincerely,

Maurice Leroux
Chef de Discipline - Blanchiment

ML/pb

c.c. N. Marxer - Missoula
G. Wilkinson - Tucker
B. Boschee - Missoula
P. Lamey - Missoula
T. Savage - Missoula
M. Caron - R&DT
Y. Lemay - R&DT
P. Bozzer - R&DT

BLEACHING CONDITIONS

PULP SOURCE: UBK - MISSOULA MILL **WORK ORDER # 60225-K** **PROJECT # 572-095**

STAGE	% Cl_2	% ClO_2	O-STAGE CONDITIONS % O_2	@ PSI	Time min.	% H_2O_2	% NaOH	% H_2SO_4	CONDITIONS Temp. °F	Time min.	Cons. %	final pH	% residual	K# mL	Brightness % ISO	Viscosity mPa*s
* initial K # = 16.7																
* Kappa factor = 0.21																
D		1.87						1.00	150	41	3.0	2.2	nil	8.6		
Eop			0.50	75	30	0.30	1.25		160	59	10.0	10.2	0.01	3.5		
D		1.00					0.30		170	129	10.0	3.1	trace			
D		0.30					0.09		170	183	10.0	3.1	0.01		84.1	17.0
$/lb	0.10	0.60	0.05			0.375	0.125	0.10								
$/ADTP	$0.00	$34.24	$0.45			$2.03	$3.69	$1.80								
							TOTAL	$42.20								
ClO_2 t/d		7.93														
(based on a production rate of 250 t/d)																

E00011552

BLEACHING CONDITIONS

PULP SOURCE: UBK - MISSOULA MILL **WORK ORDER # 60225-L** **PROJECT # 572-095**

STAGE	% Cl_2	% ClO_2	O-STAGE CONDITIONS % O_2	@ PSI	Time min.	% H_2O_2	% NaOH	% H_2SO_4	CONDITIONS Temp. °F	Time min.	Cons. %	final pH	% residual	K# mL	Brightness % ISO
* initial K # = 16.7															
Eo			1.00	30	5		1.50		203	60	10.0	11.9	-	14.5	
D		1.54						1.00	149	41	10.0	1.8	trace	6.6	
Eop			0.50	75	30	0.30	1.25		160	59	10.0	10.5	0.01	3.3	
D		1.50					0.45		170	129	10.0	3.0	0.09		83.9
$/lb	$0.10	$0.60	$0.05			$0.38	$0.13	$0.10							
$/ADTP	$0.00	$32.83	$1.35			$2.03	$7.20	$1.80							
							TOTAL	$45.21							
ClO_2 t/d		7.60													
(based on a production rate of 250 t/d)															

E00011553

MISSOULA BLEACHING STUDY

SUMMARY OF RESULTS

SEQUENCE	% ISO BRIGHTNESS	CHEMICAL COST ($/ADTPD)	t/d ClO_2*	AOX (lb/odt)	VISCOSITY (mPa*s)
CHHD (KF=0.14)	65.3	$36.52	0.88	9.71	14.7
CHHD (KF=0.23)	83.9	$47.07	1.70	12.28	13.0
DEopDD	75.1	$35.71	6.63	2.08	17.2
ODEoD	83.2	$31.08	4.79	0.91	14.0
ODEopD	81.9	$34.77	4.95	1.48	14.6
OZEoD	83.9	$36.03	1.98	0.1	7.8
OZEoP	77.1	$65.14	N/A	N/A	4.8
DEopDD II	84.1	$42.20	7.93	-	17.0
EoDEopD	83.9	$45.21	7.60	2.28	16.9

* based on a production rate of 250 t/d

E00011554

MISSOULA BLEACHING STUDY

BRIGHTNESS

SEQUENCE TESTED	% ISO BRIGHTNESS
CHHD (KF=0.14)	65.3
CHHD (KF=0.23)	83.9
DEopDD	75.1
ODEoD	83.2
ODEopD	81.9
OZEoD	83.9
OZEoP	77.1
DEopDD - II	84.1
EoDEopD	83.9

E00011555

MISSOULA BLEACHING STUDY

ECONOMICS

SEQUENCE TESTED	CHEMICAL COST ($/ADTPD)
CHHD (KF=0.14)	$36.52
CHHD (KF=0.23)	$47.07
DEopDD	$35.71
ODEoD	$31.08
ODEopD	$34.77
OZEoD	$36.03
OZEoP	$65.14
DEopDD - II	$42.20
EoDEopD	$45.21

E00011556

MISSOULA BLEACHING STUDY

AOX LEVELS

SEQUENCE TESTED	AOX	
	(lb/odt)	(kg/adt)
CHHD (KF=0.14)	9.71	4.37
CHHD (KF=0.23)	12.28	5.53
DEopDD	2.08	0.94
ODEoD	0.91	0.41
ODEopD	1.48	0.67
OZEoD	0.10	0.05
OZEoP	N/A	N/A
EoDEopD	2.28	1.03

E00011557

MISSOULA BLEACHING STUDY

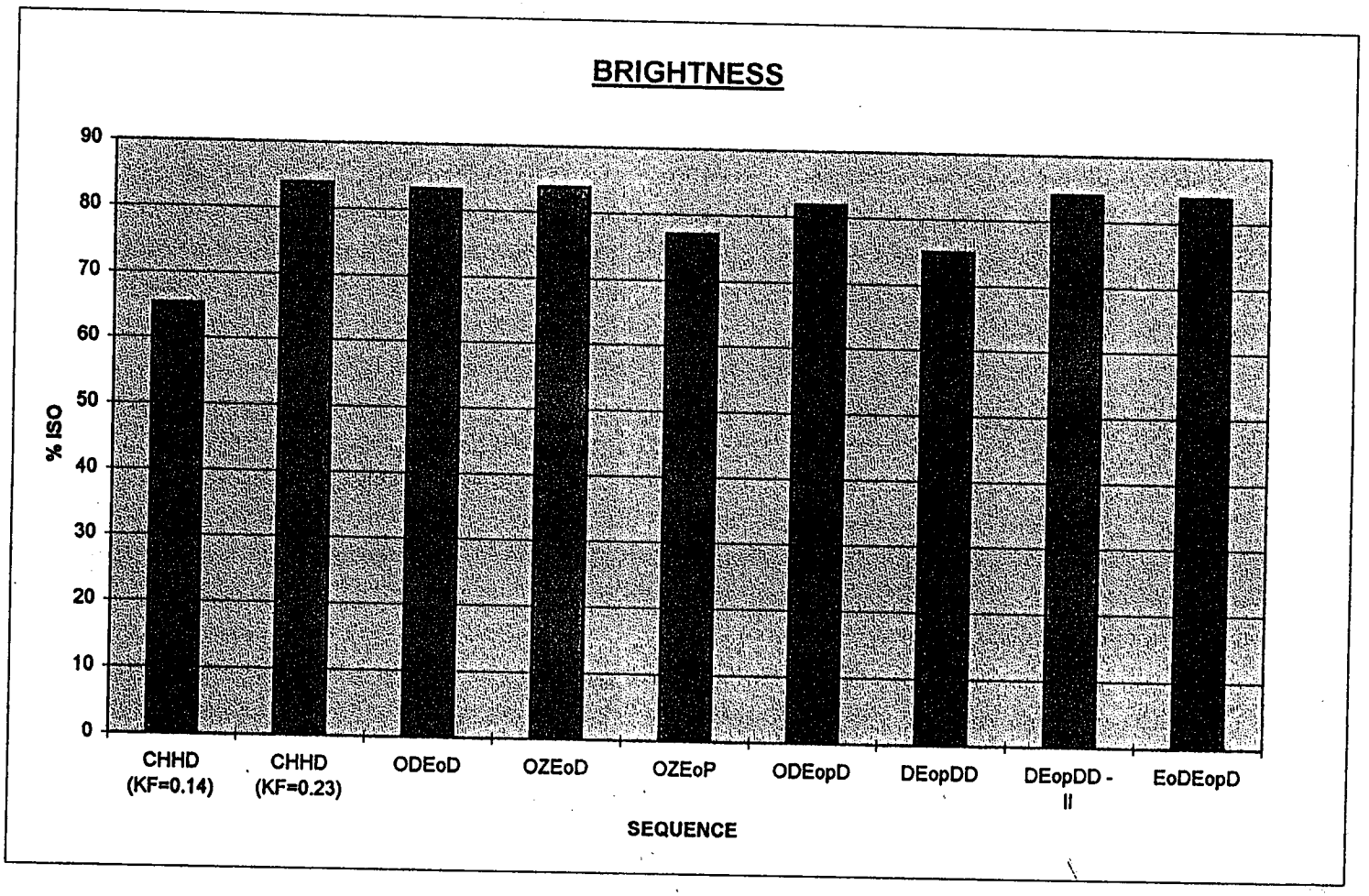
FILTRATE PROPERTIES

SEQUENCE TESTED	COLOUR (Pt-Co units)*
CHHD (KF=0.14)	2040
CHHD (KF=0.23)	1310
DEopDD	930
ODEoD	1770
ODEopD	950
OZEoD	170
OZEoP	N/A
EoDEopD	1200

* TESTS DONE ON FILTRATE COLLECTED FOR AOX ANALYSES.

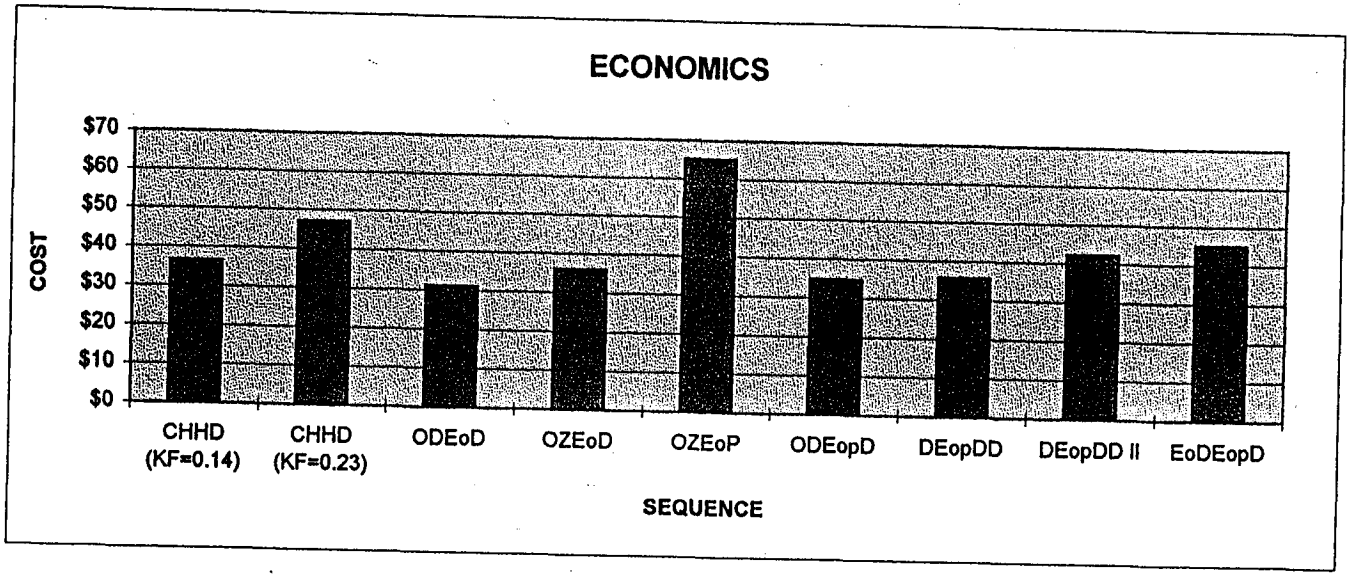
E00011558

MISSOULA BLEACHING STUDY



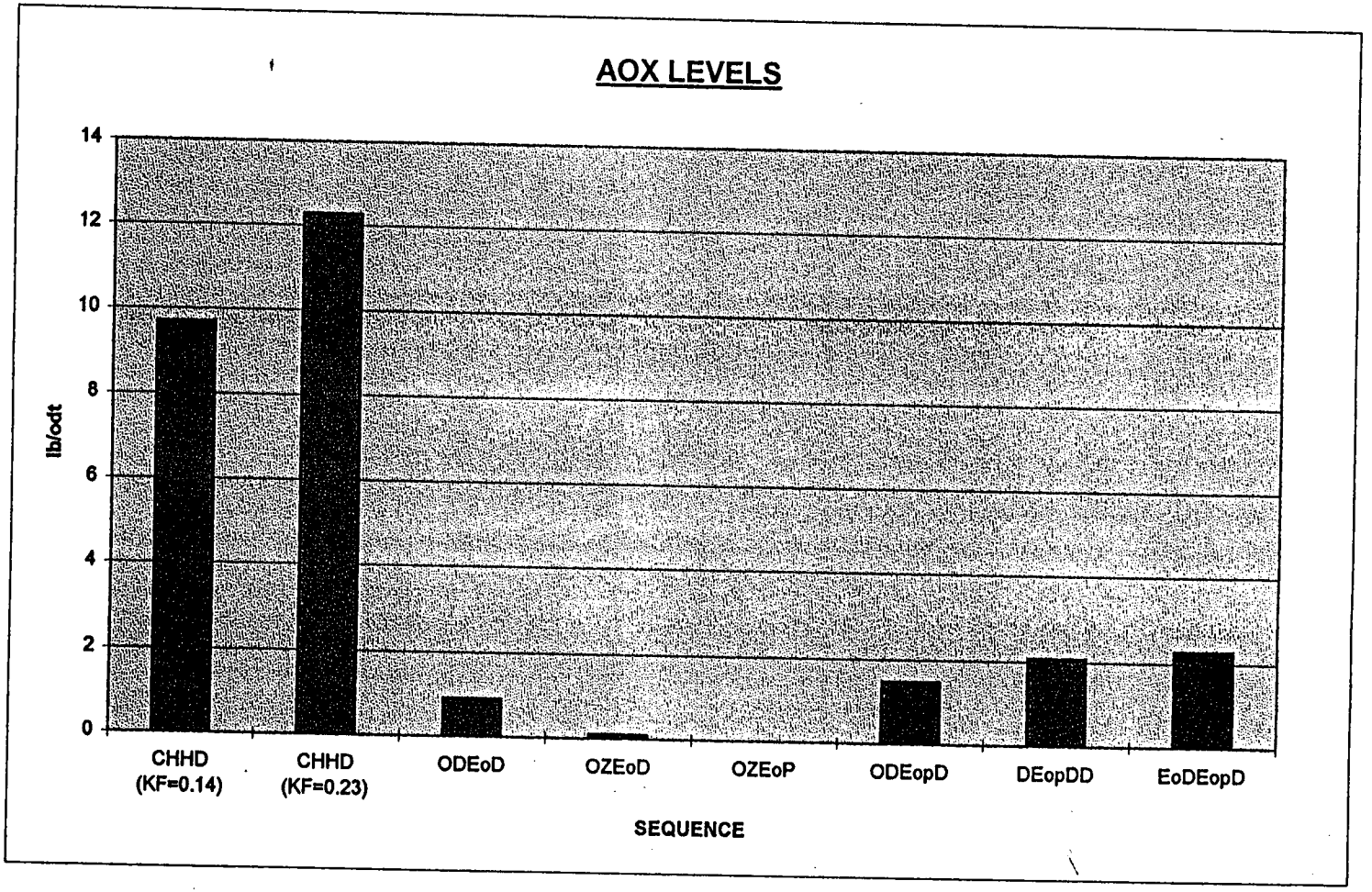
E00011559

MISSOULA BLEACHING STUDY



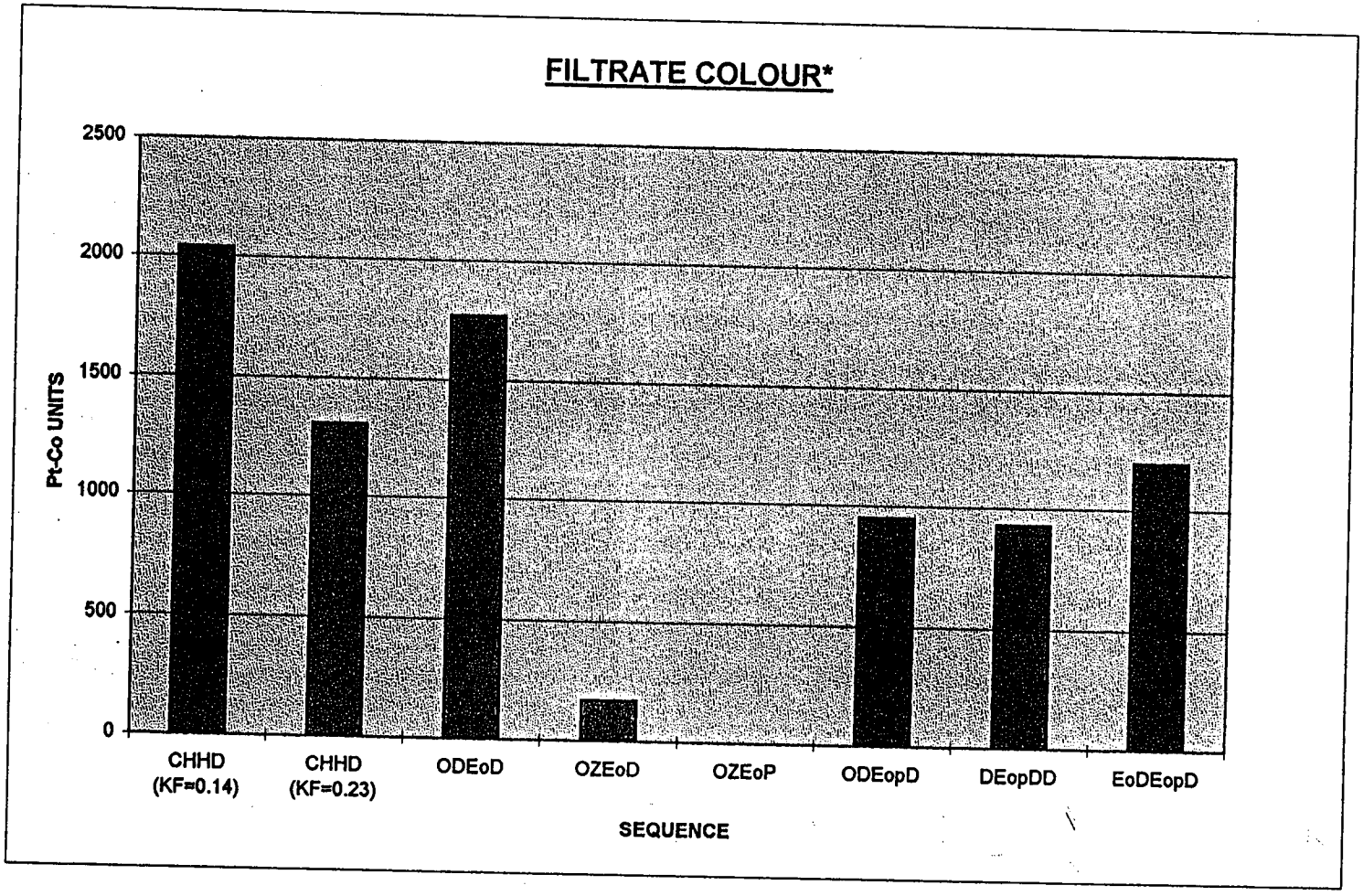
E00011560

MISSOULA BLEACHING STUDY



E00011561

MISSOULA BLEACHING STUDY

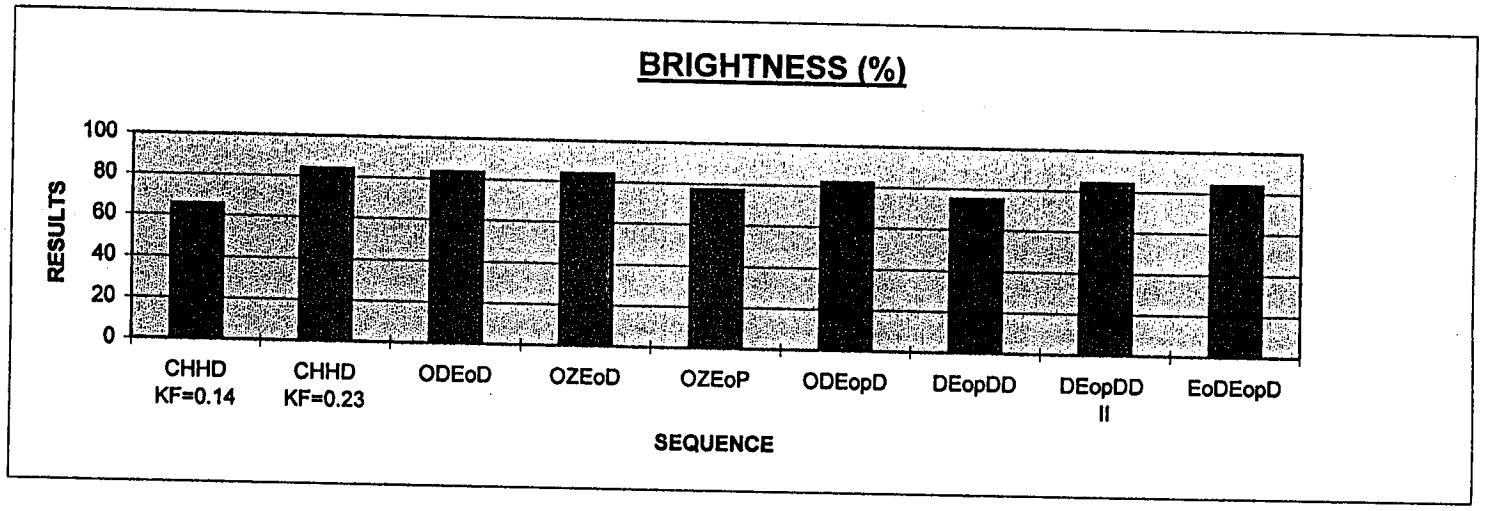


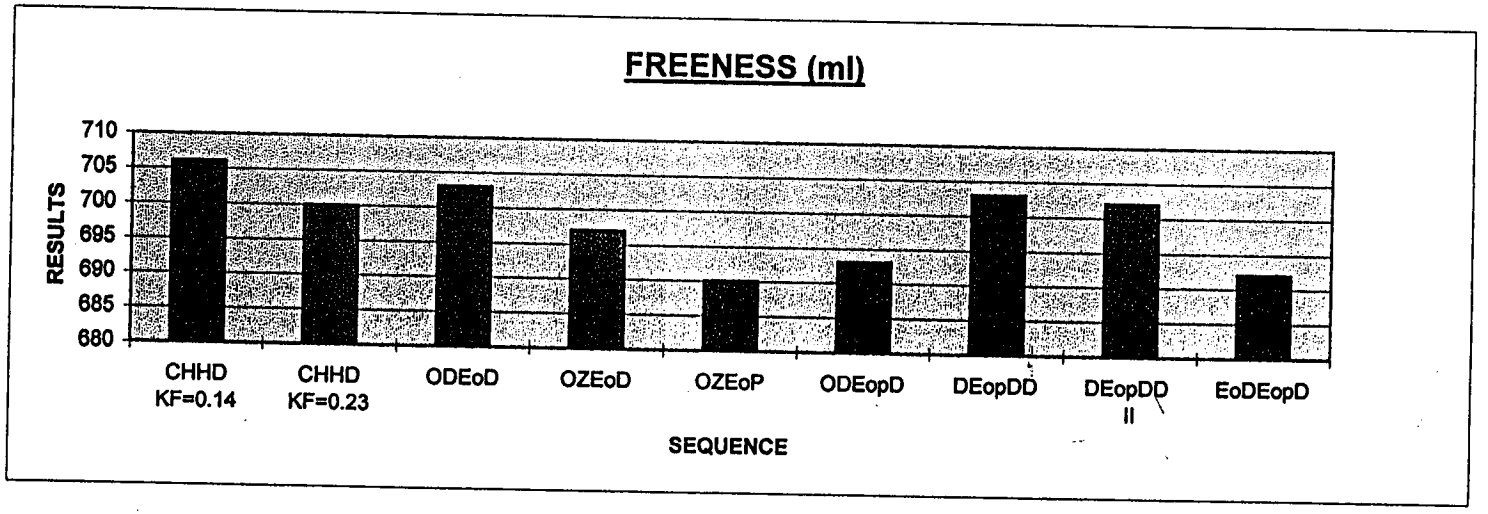
* TESTS DONE ON FILTRATE COLLECTED FOR AOX ANALYSES

E00011562

	CHHD KF=0.14	CHHD KF=0.23	ODEoD	OZEoD	OZEoP	ODEopD	DEopDD	DEopDD II	EoDEopD
TESTS @ 0 REVS									
BRIGHTNESS (%)	65.3	83.9	83.2	83.9	77.1	81.9	75.1	84.1	83.9
FREENESS (ml)	706	700	703	697	690	693	703	702	692
BULK (cm^3/g)	1.74	1.73	1.76	1.86	1.87	1.83	1.77	1.76	1.79
BURST ($kPa*m^2/g$)	3.56	3.93	2.72	2.12	1.94	3.48	3.38	3.27	3.38
TEAR ($mN*m^2/g$)	17.72	16.26	20.31	18.95	13.30	20.06	20.91	21.94	20.79
TENSILE (km)	5.46	5.49	4.08	3.09	3.19	4.98	4.7	4.80	4.62
STRETCH (%)	3.09	3.01	3.2	2.92	2.93	3.76	3.5	3.05	3.30
ENERGY (J/m^2)	73.1	71.5	59.1	41.4	41.7	82.2	71.9	62.0	65.0
OPACITY (%)	78.2	72.2	72.9	74.2	74.9	72.3	73.4	70.7	71.3
SMOOTHNESS (ml/min)	314	300	320	406	400	292	330	331	328
VISCOSITY (mPa*s)	14.7	13.0	14.0	7.8	4.8	14.6	17.2	17.0	16.9
TESTS @ 500 CSF									
REVOLUTIONS	3400	3450	3250	2150	1000	2820	3200	3950	3450
BEATING ENERGY (kWh/T)	520	500	505	360	105	374	422	593	533
BULK (cm^3/g)	1.49	1.47	1.48	1.57	1.62	1.55	1.52	1.45	1.51
BURST ($kPa*m^2/g$)	6.68	6.53	6.53	4.68	3.49	6.08	6.42	7.06	7.02
TEAR ($mN*m^2/g$)	9.12	9.72	10.09	10.46	8.96	11.24	10.03	10.43	10.22
TENSILE (km)	10.8	9.47	9.42	7.26	4.96	8.7	9.38	10.41	10.34
STRETCH (%)	2.96	2.73	2.93	3.05	2.58	3.07	2.91	3.02	3.08
ENERGY (J/m^2)	120	105.0	114.5	96.8	52.0	107.8	101.3	123.5	122.6
OPACITY (%)	64.7	61.8	62.0	66.4	69.3	61.7	61.6	59.4	60.2
SMOOTHNESS (ml/min)	139	115	145	170	202	168	170	118	165
TESTS @ 300 CSF									
REVOLUTIONS	6900	6950	6750	5050	2800	6320	6900	7250	7050
BEATING ENERGY (kWh/T)	1280	1010	1000	728	362	896	910	1050	1050
BULK (cm^3/g)	1.42	1.43	1.41	1.45	1.50	1.47	1.44	1.41	1.42
BURST ($kPa*m^2/g$)	7.21	7.26	7.10	5.6	4.11	7.1	7.42	7.53	7.48
TEAR ($mN*m^2/g$)	9.4	9.20	9.53	8.33	6.77	9.93	9.67	8.73	10.23
TENSILE (km)	10.94	10.42	10.63	8.94	6.38	10.21	11.38	10.56	10.90
STRETCH (%)	2.67	2.63	3.05	3.07	2.49	3.03	3.11	3.08	2.84
ENERGY (J/m^2)	114.2	106.4	130.6	110.4	65.7	117.4	138	128.0	121.6
OPACITY (%)	61.4	57.5	58.8	62.3	65.7	57.8	58.7	57.8	58.7
SMOOTHNESS (ml/min)	86	70	83	95	108	98	89	75	91

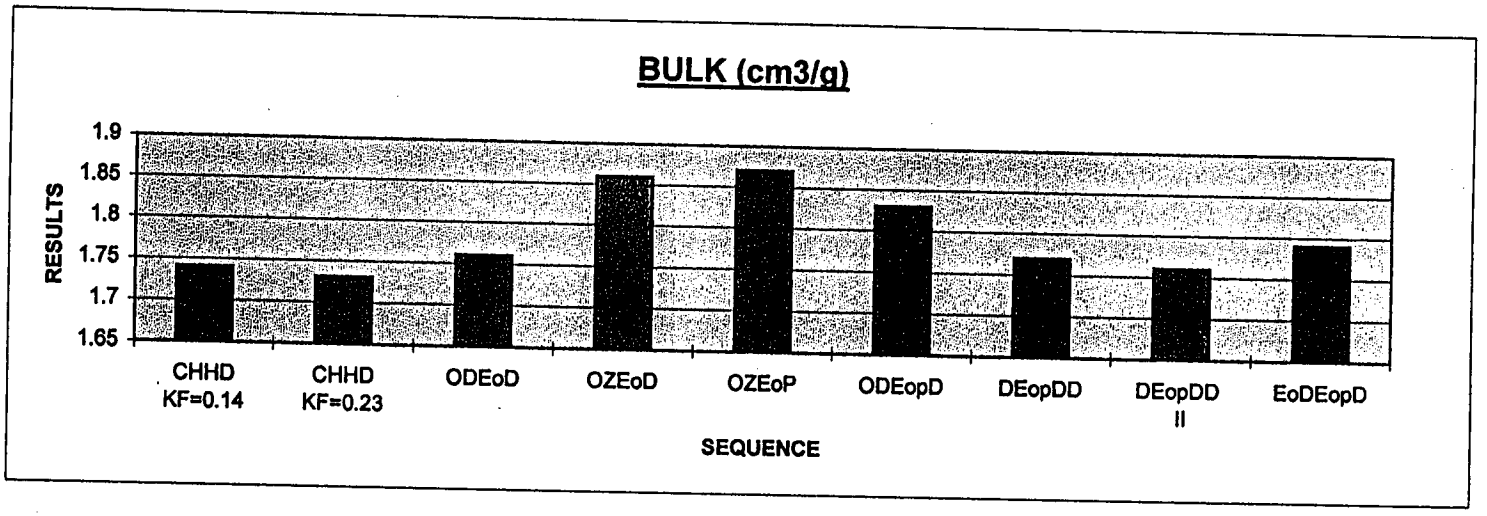
TESTS @ 0 REVOLUTIONS

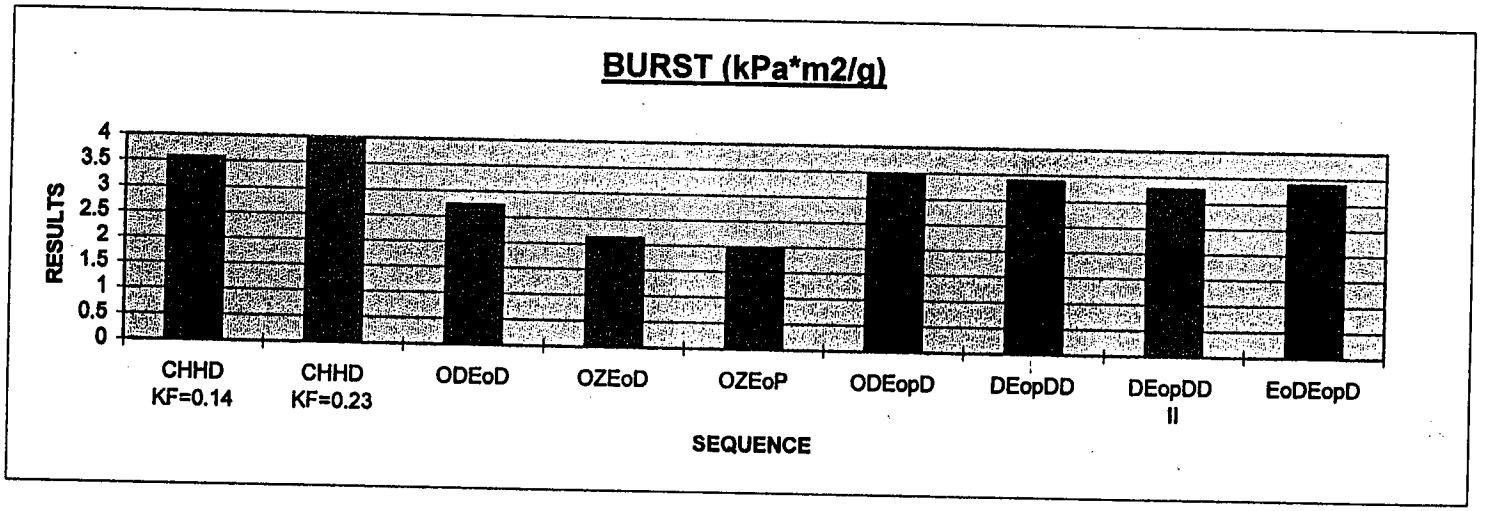




E00011564

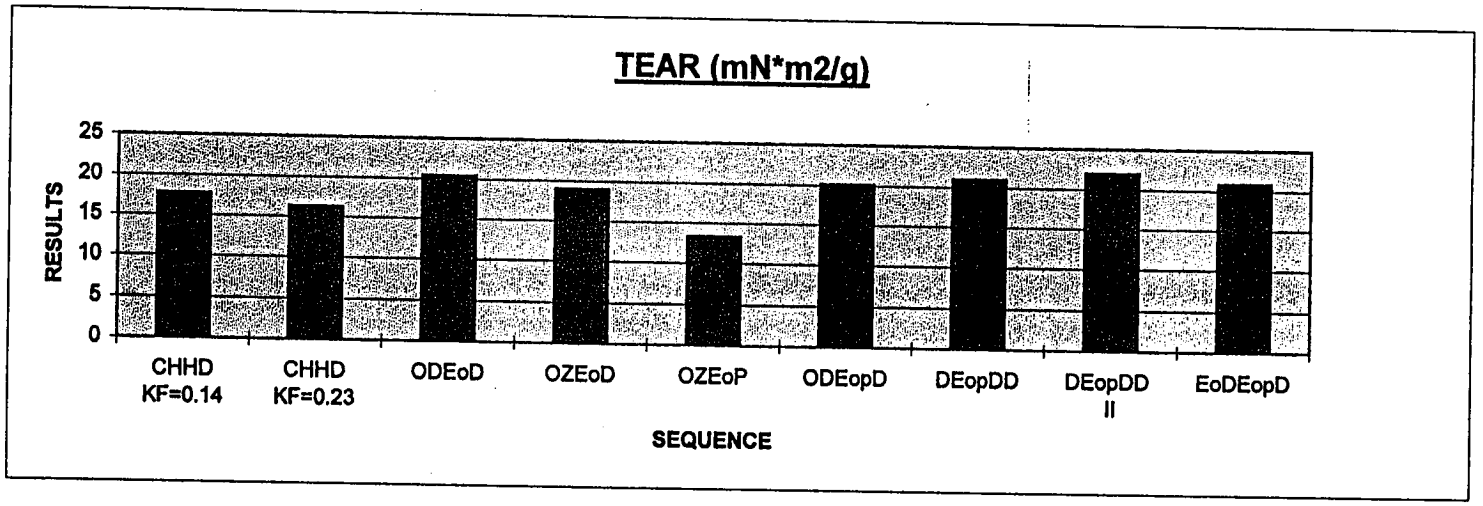
TESTS @ 0 REVOLUTIONS

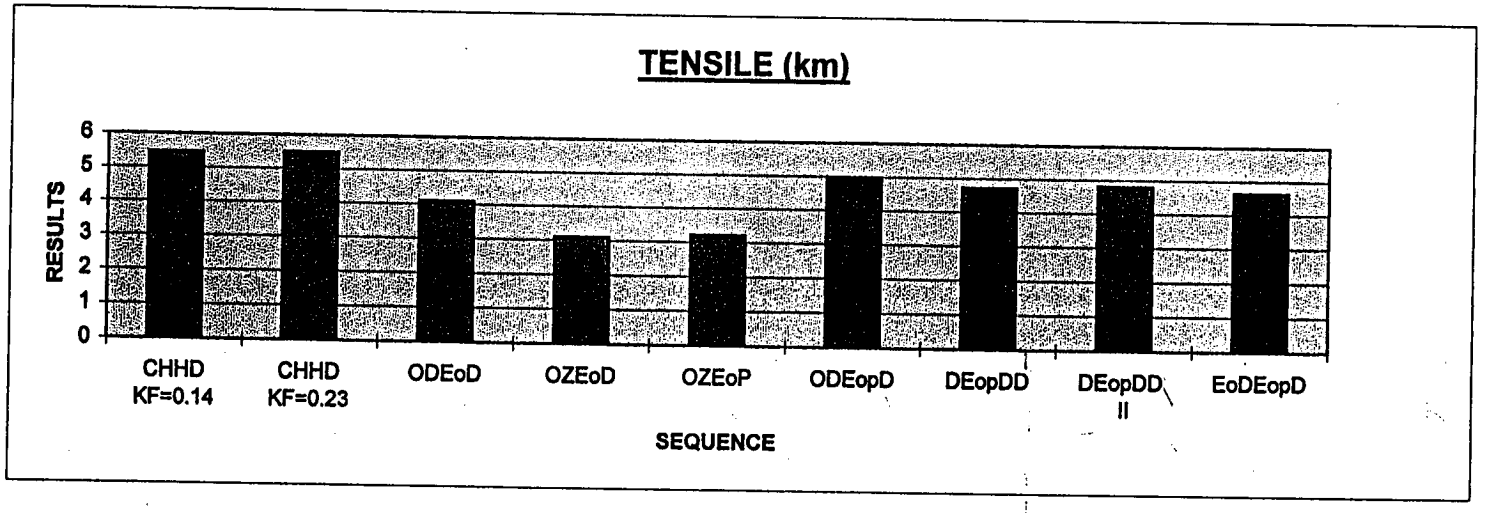




E00011565

TESTS @ 0 REVOLUTIONS





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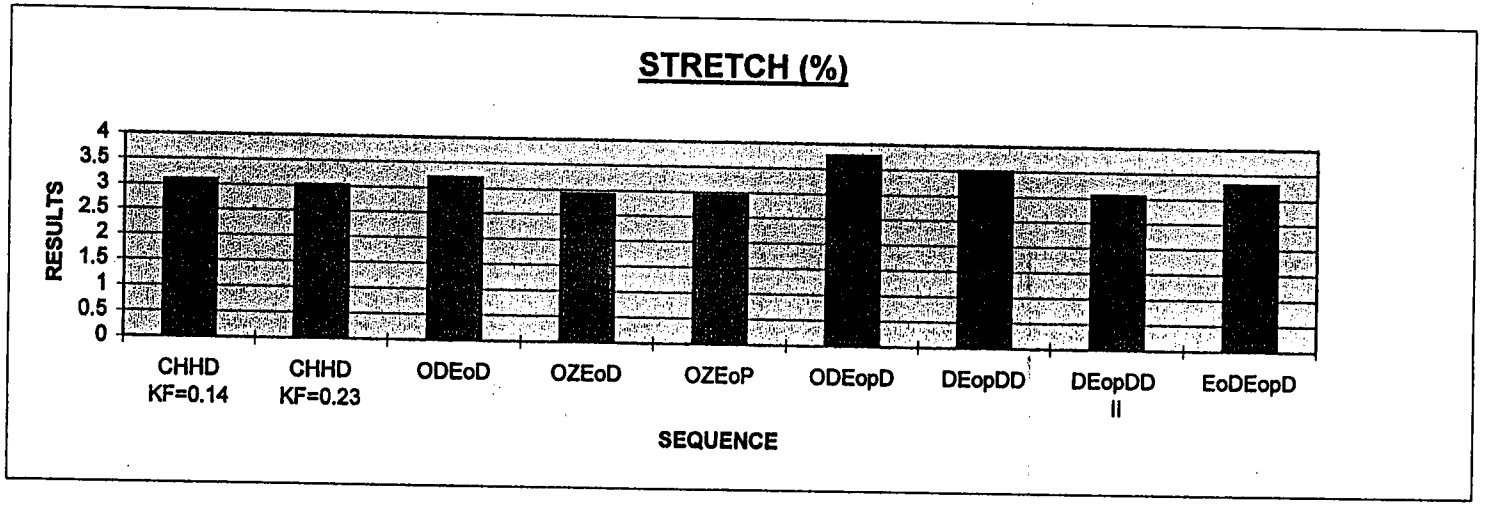
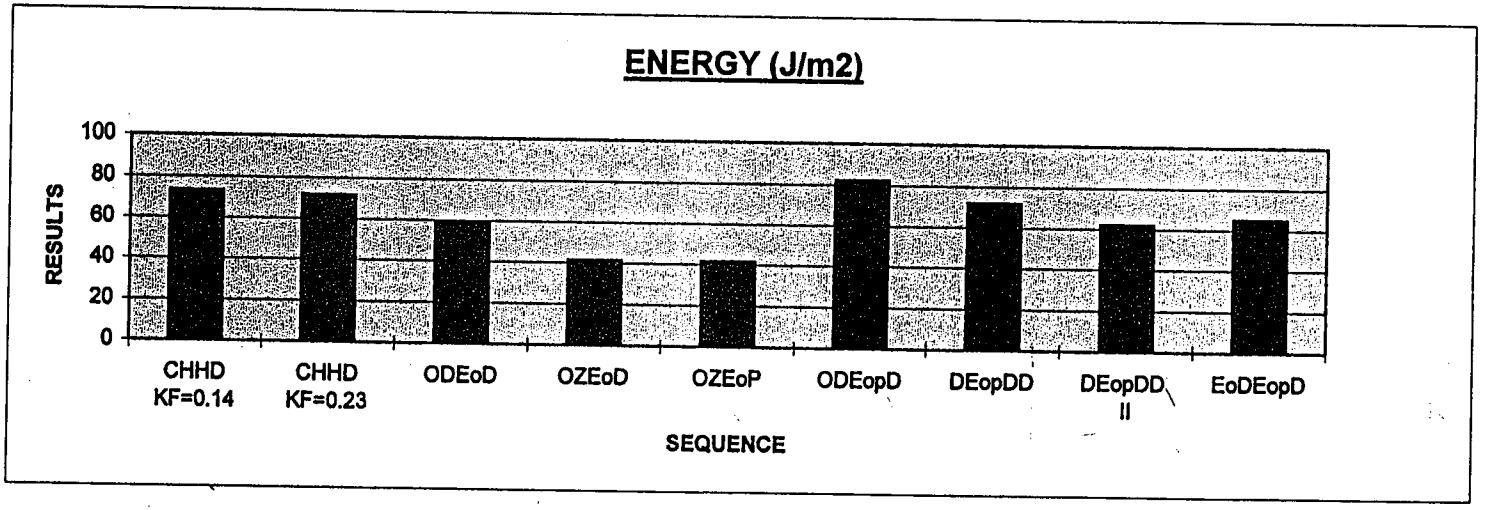
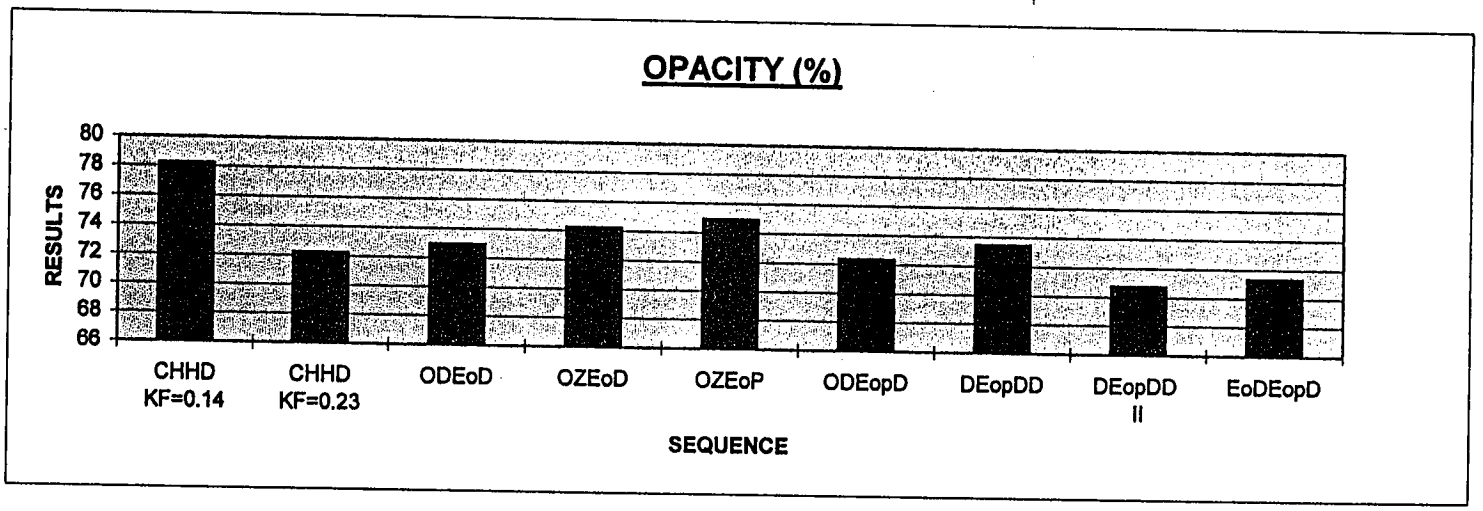
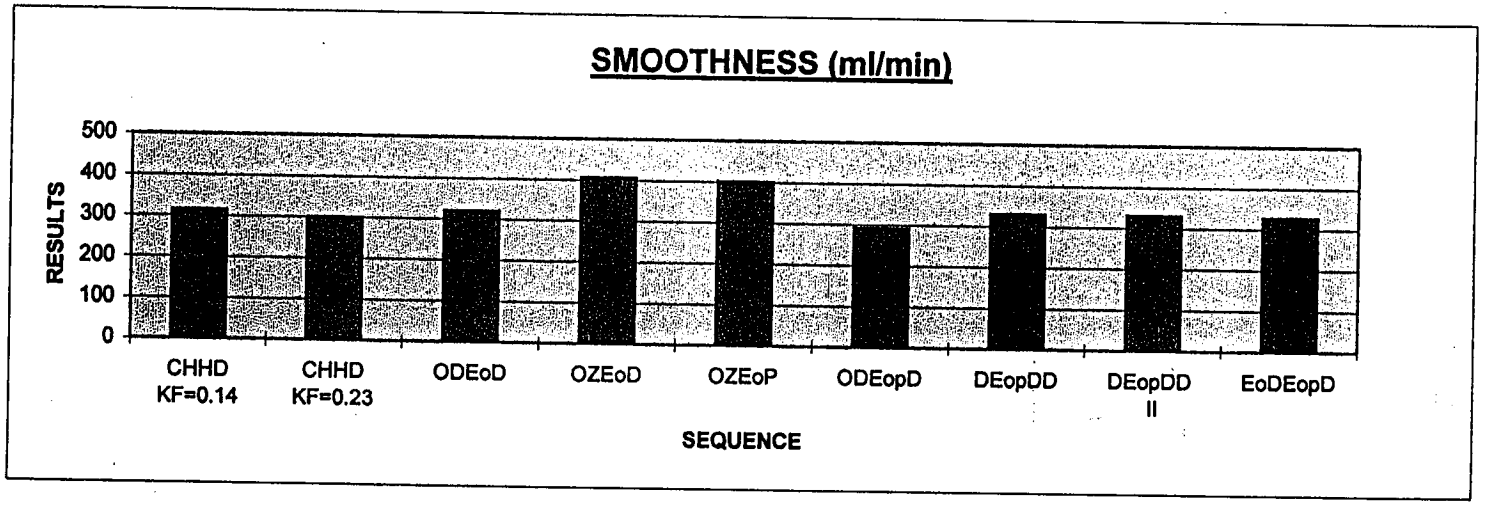




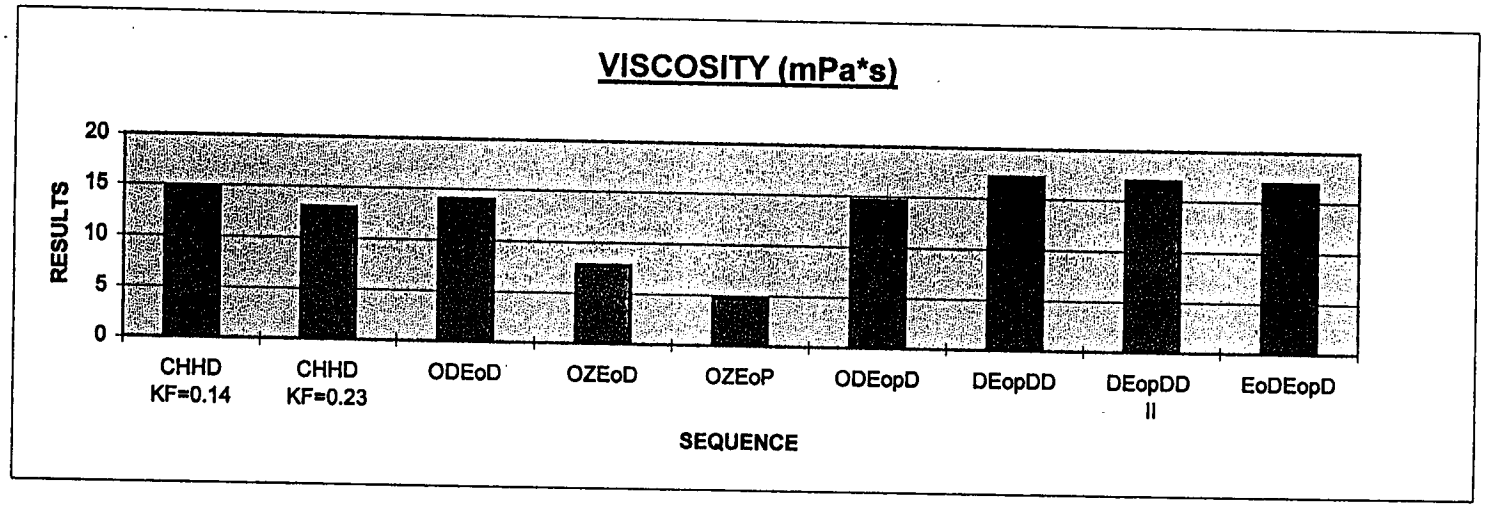
E00011567

TESTS @ 0 REVOLUTIONS



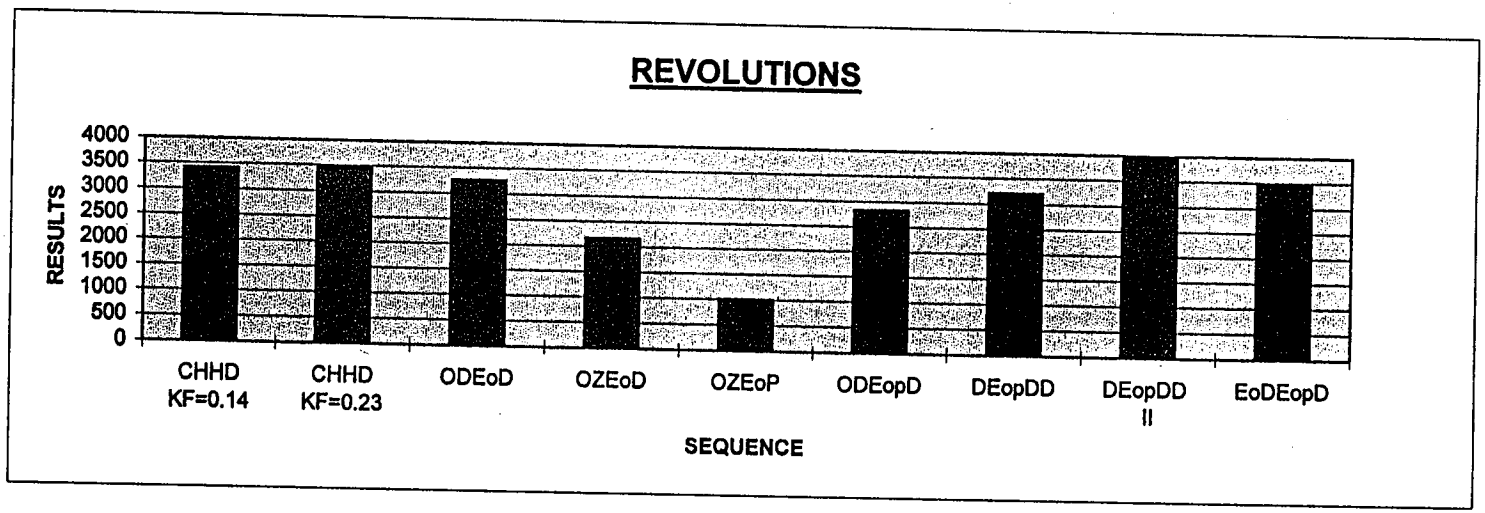


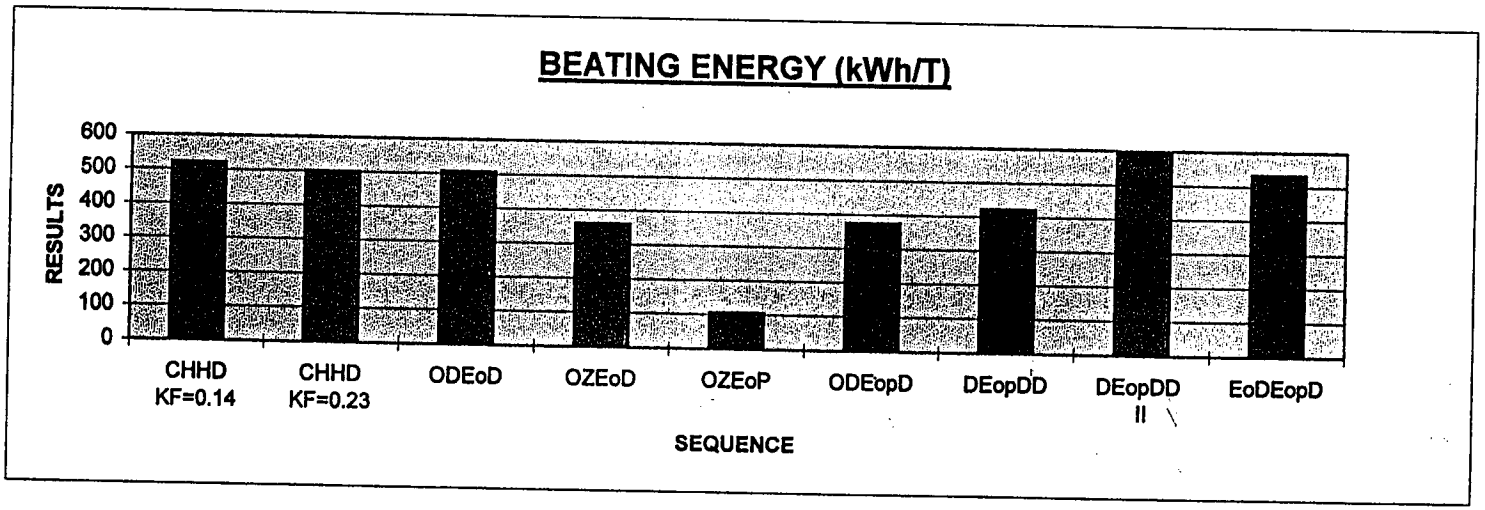
TESTS @ 0 REVOLUTIONS



E00011569

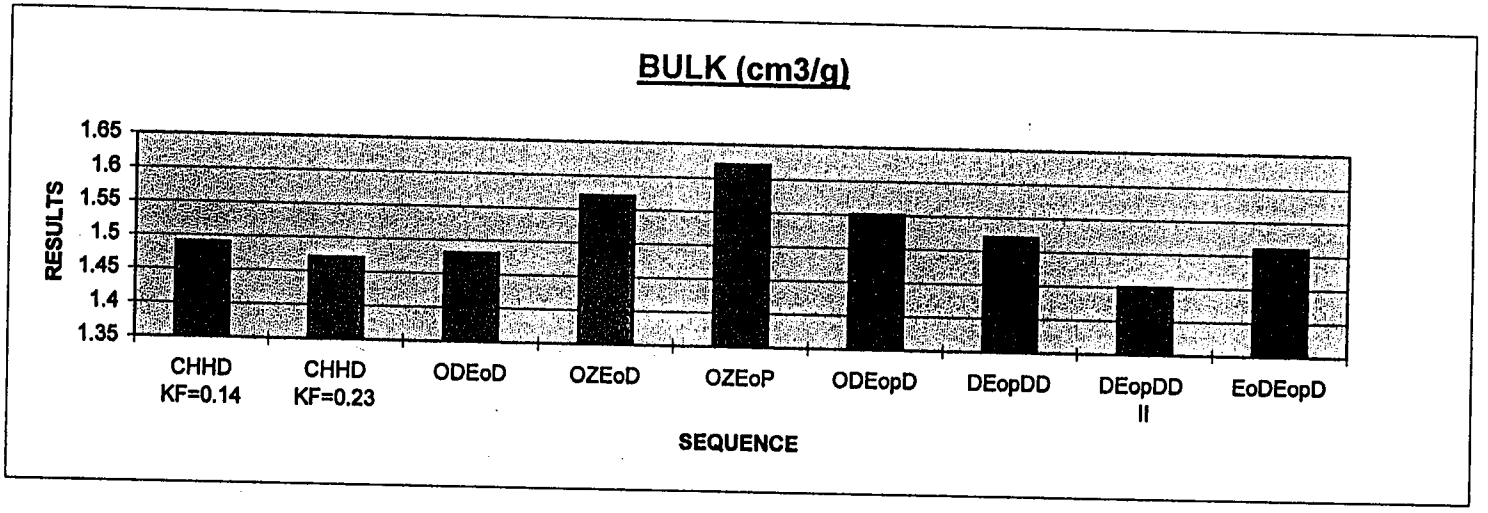
TESTS @ 500 CSF

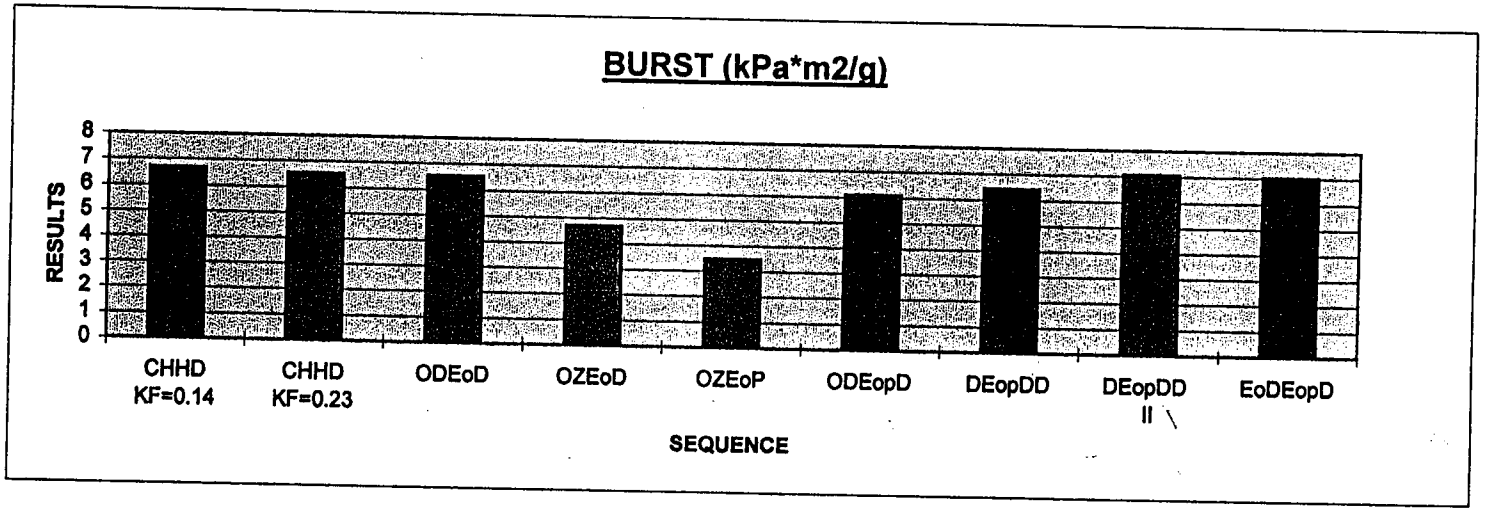




E00011570

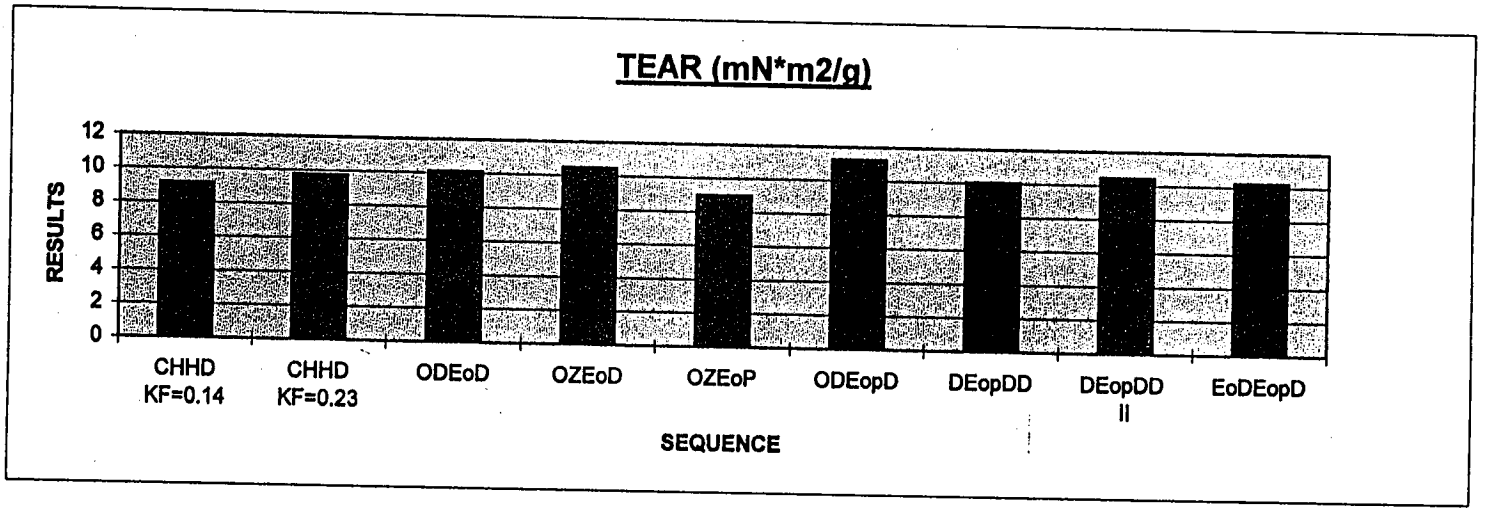
TESTS @ 500 CSF

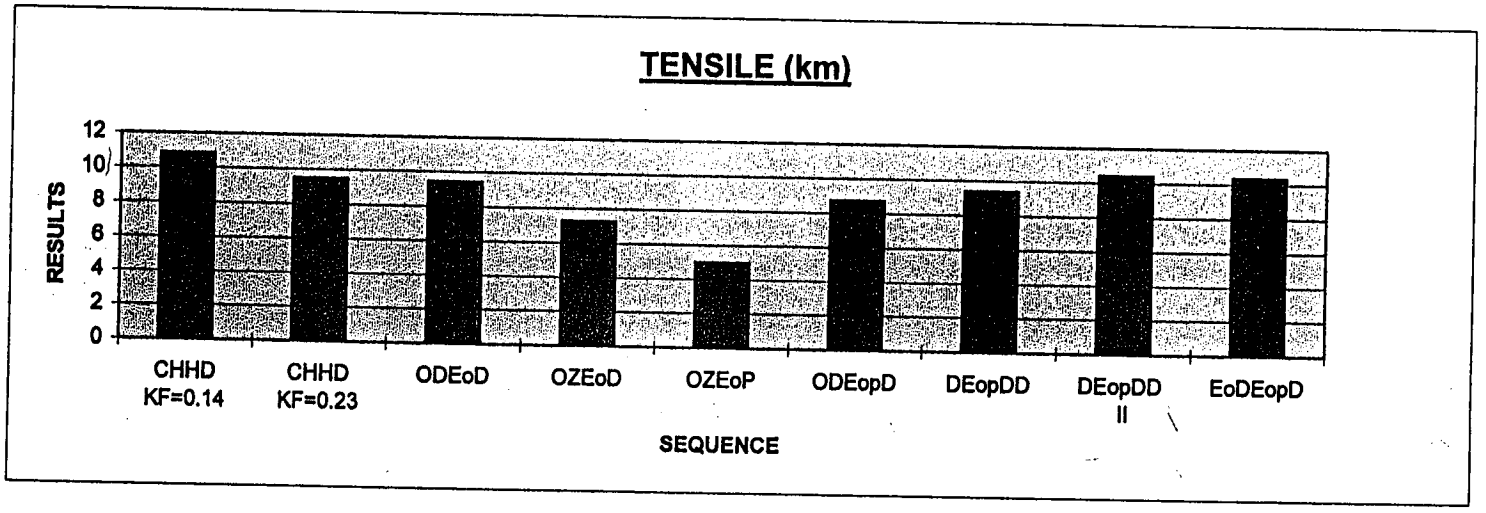




E00011571

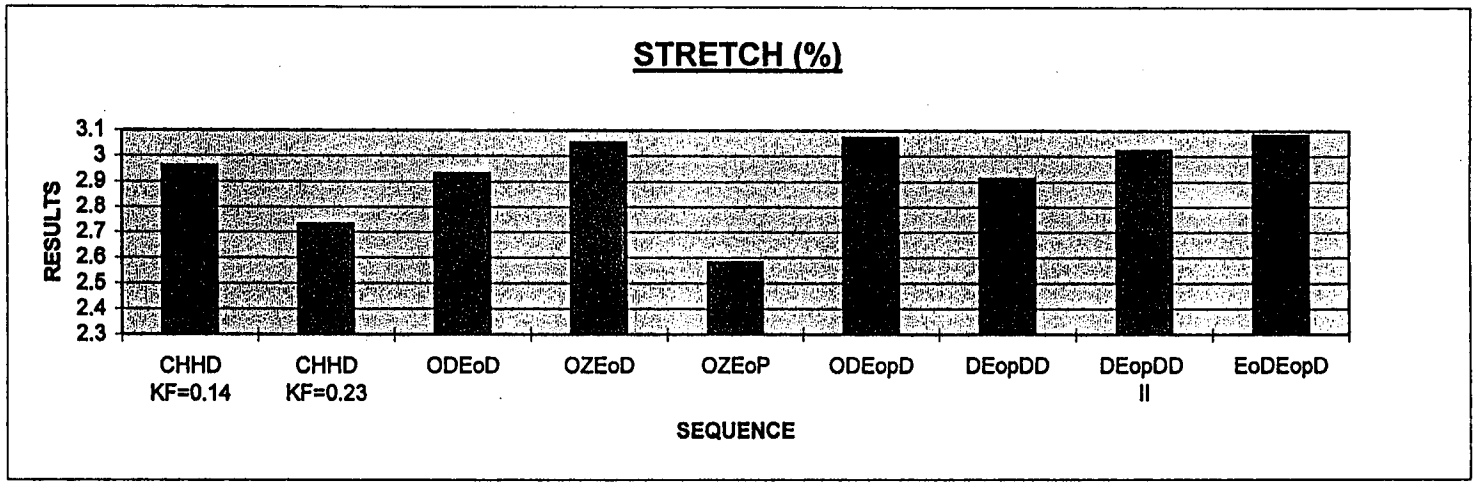
TESTS @ 500 CSF

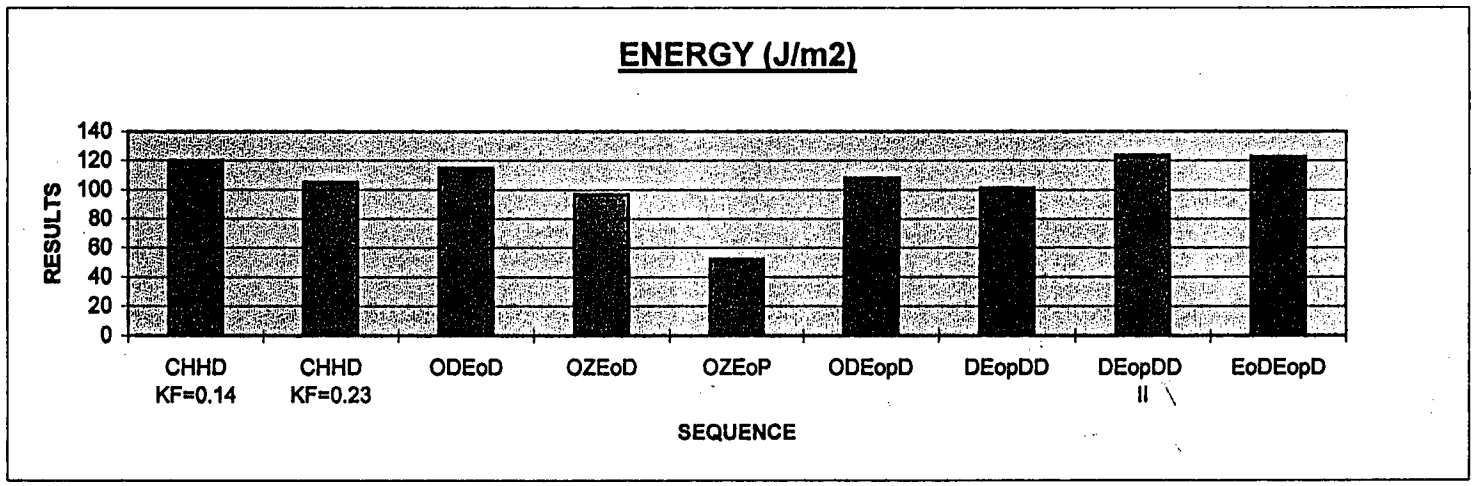




E00011572

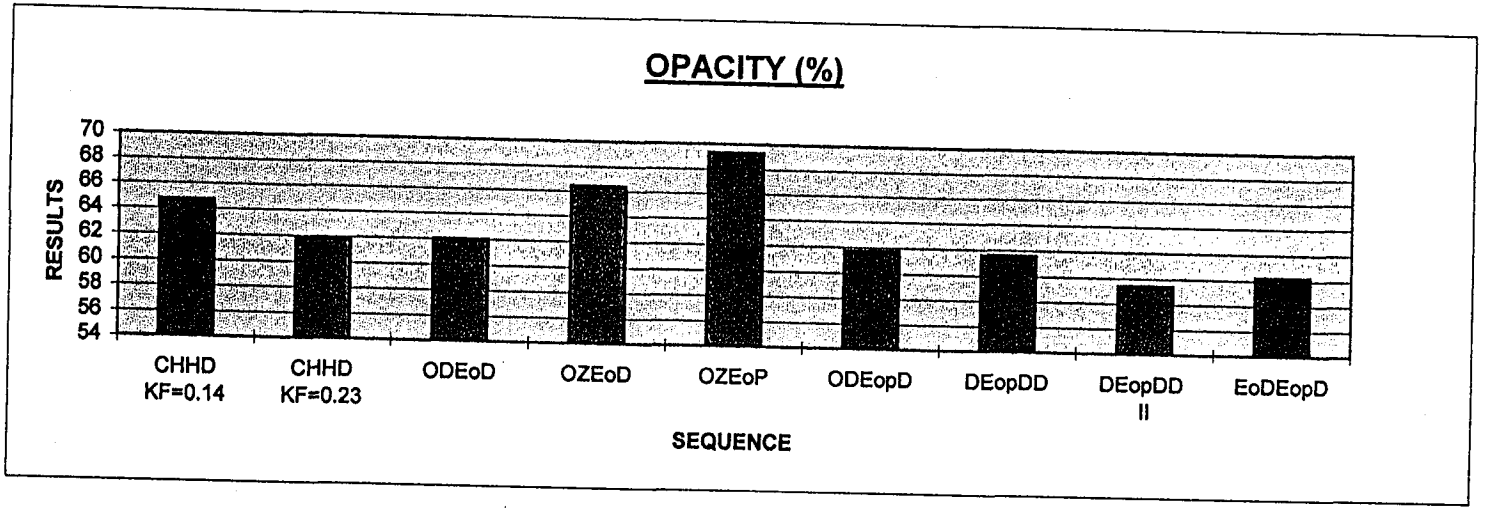
TESTS @ 500 CSF

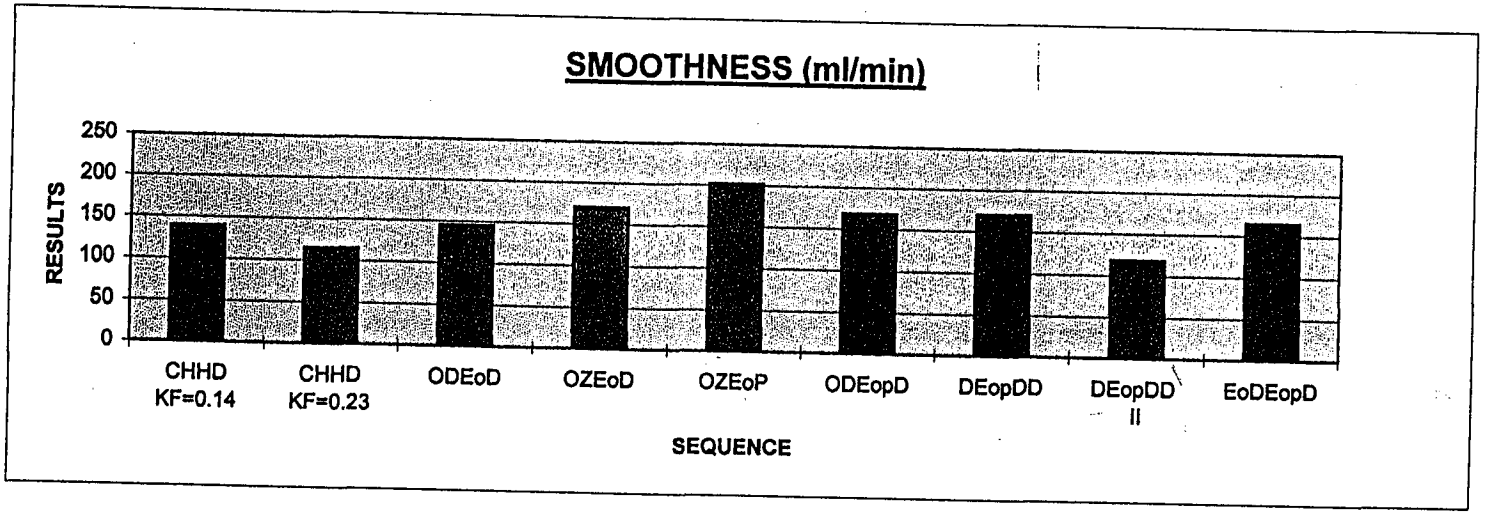




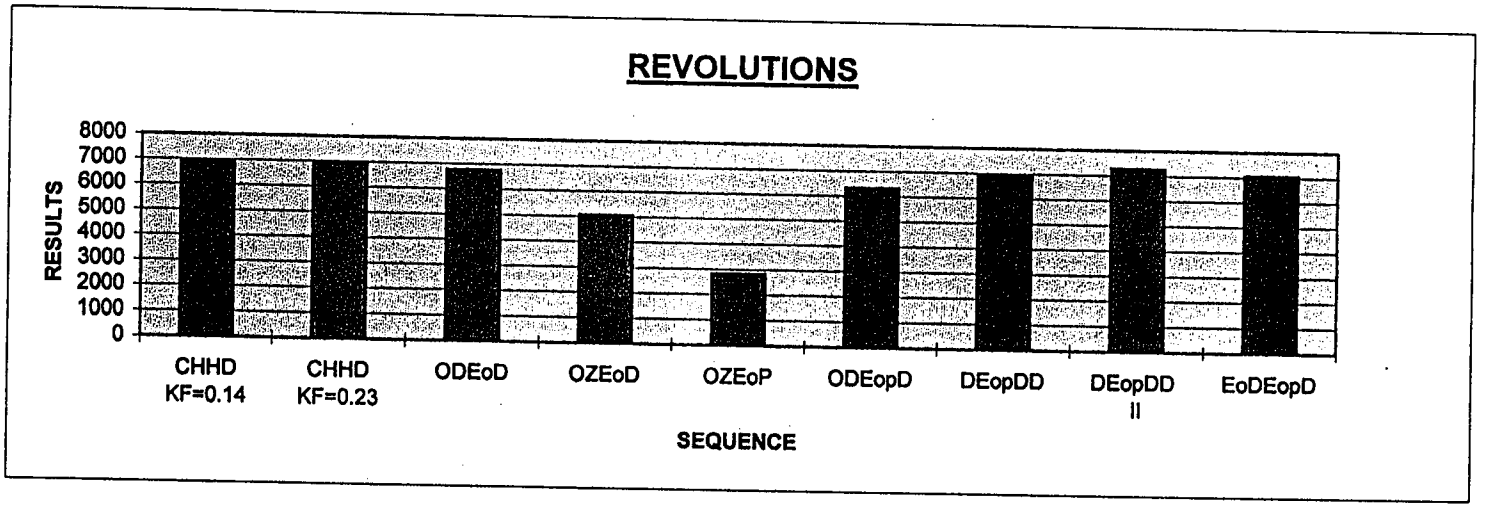
E00011573

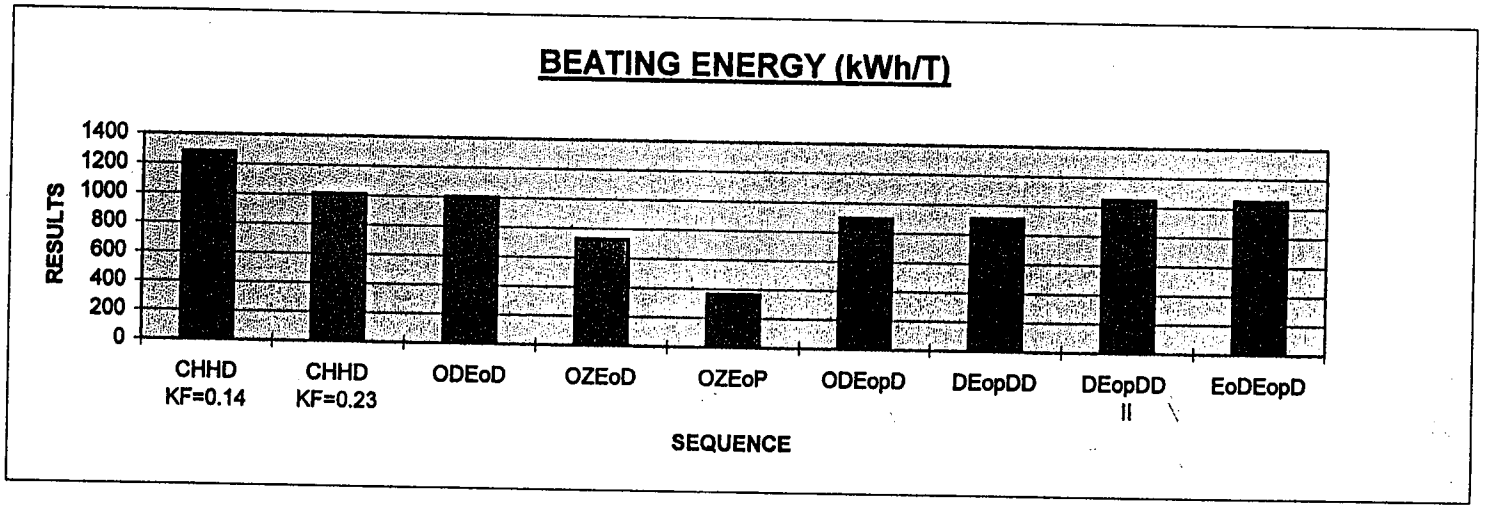
TESTS @ 500 CSF





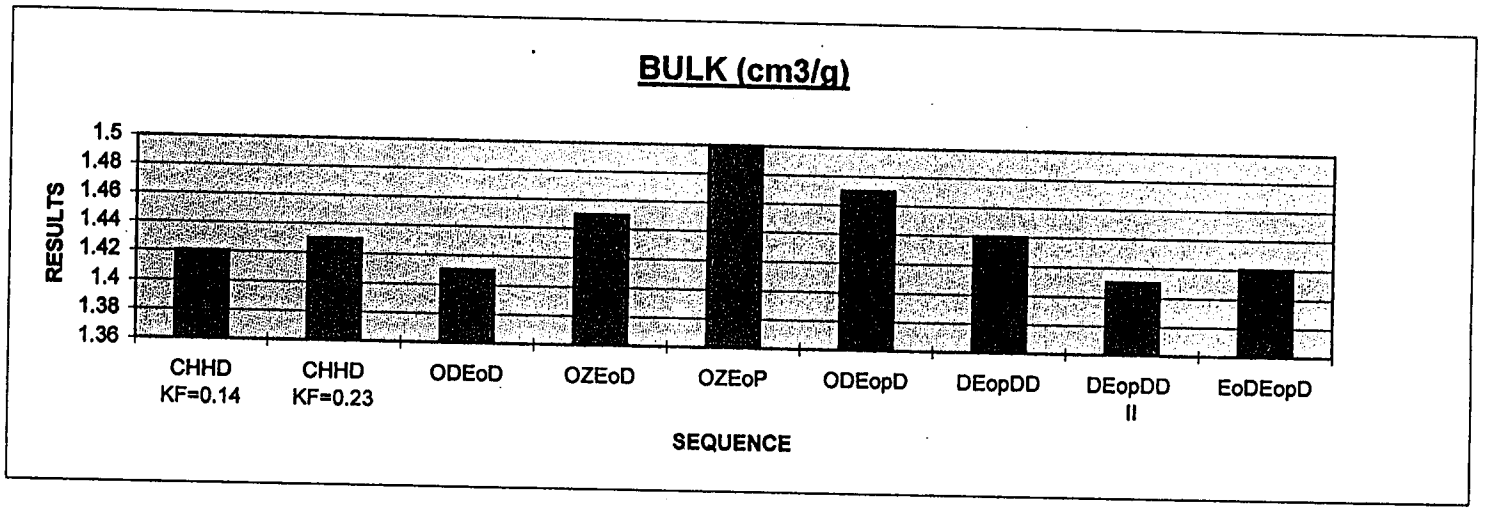
TESTS @ 300 CSF

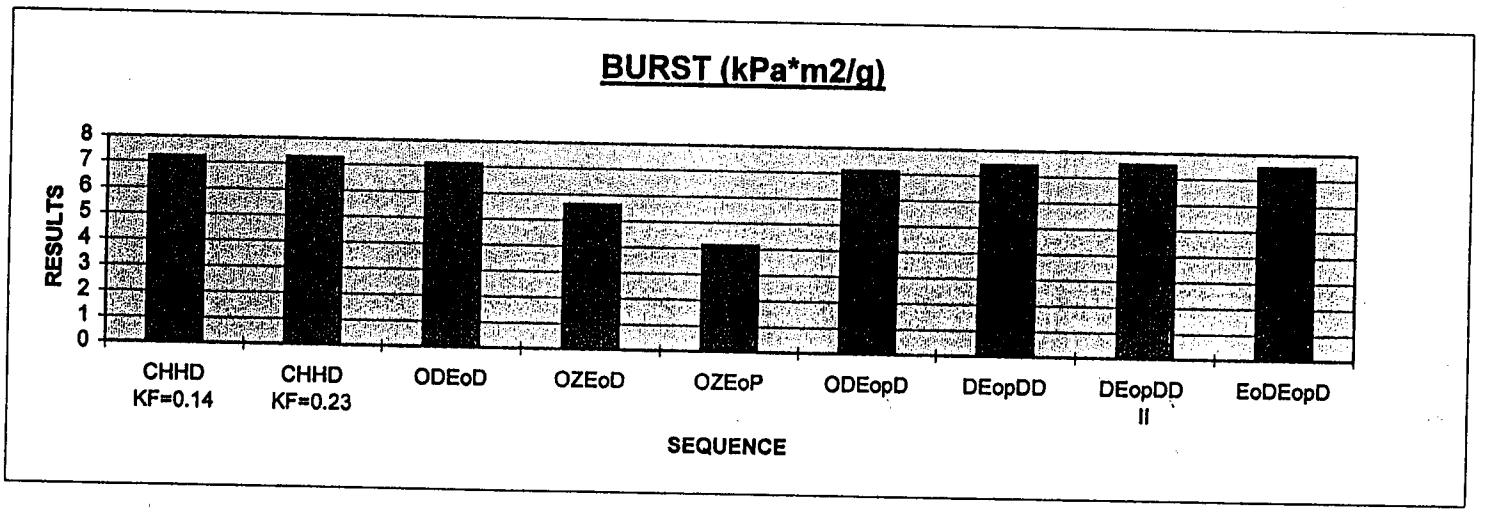




E00011575

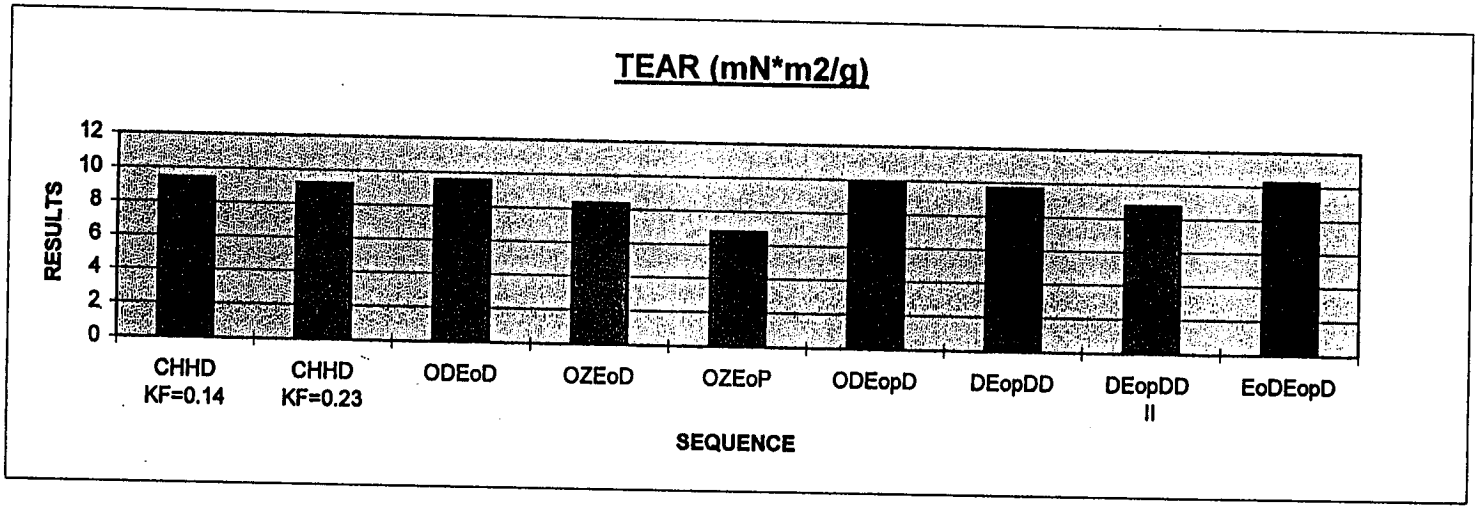
TESTS @ 300 CSF

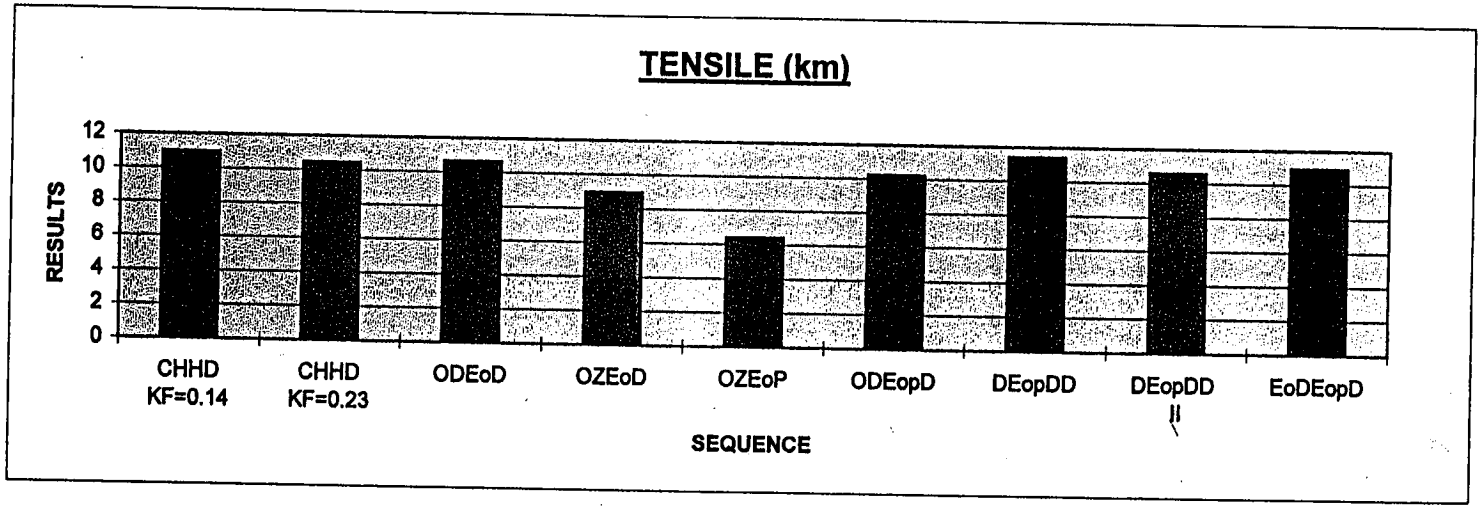




E00011576

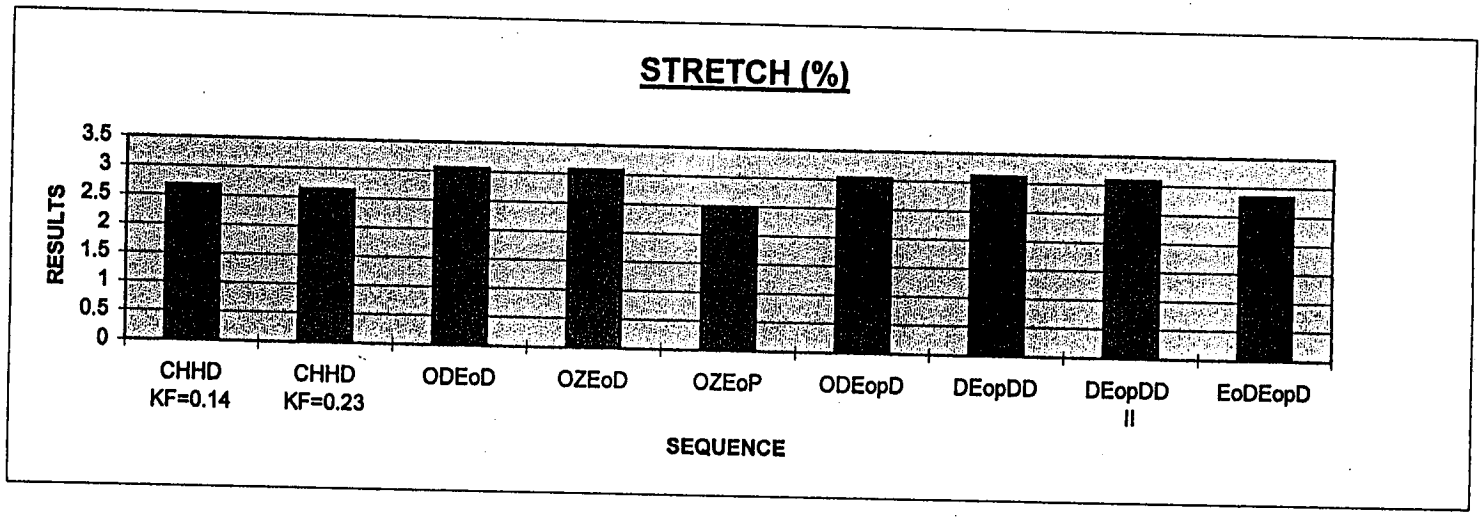
TESTS @ 300 CSF

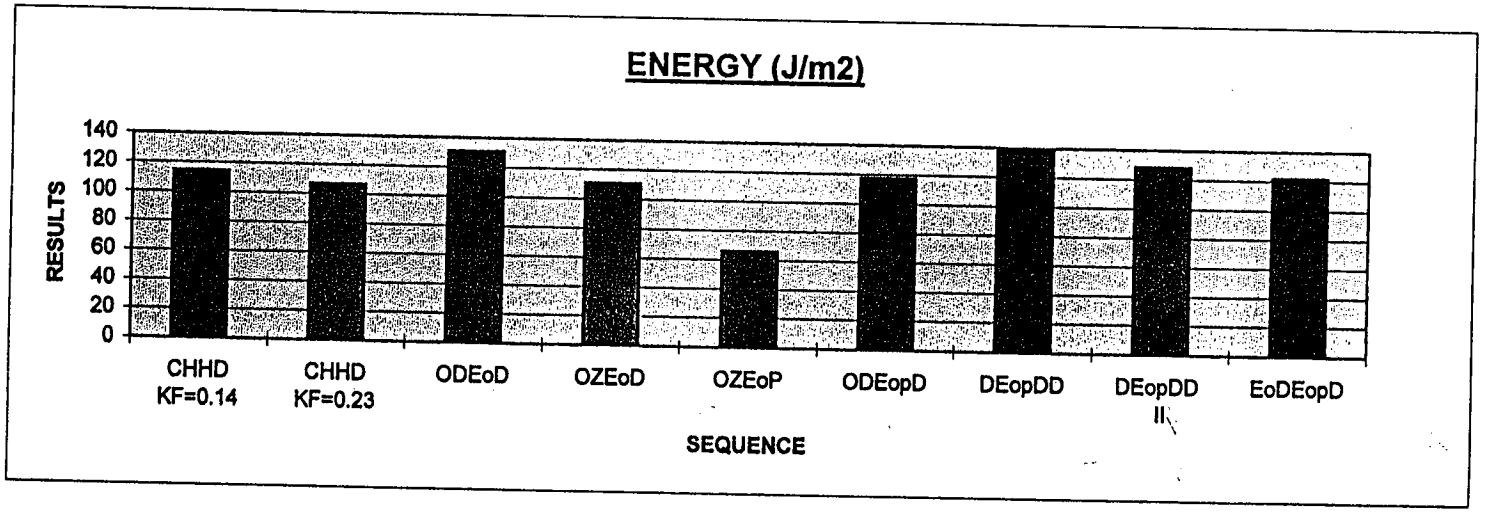




E00011577

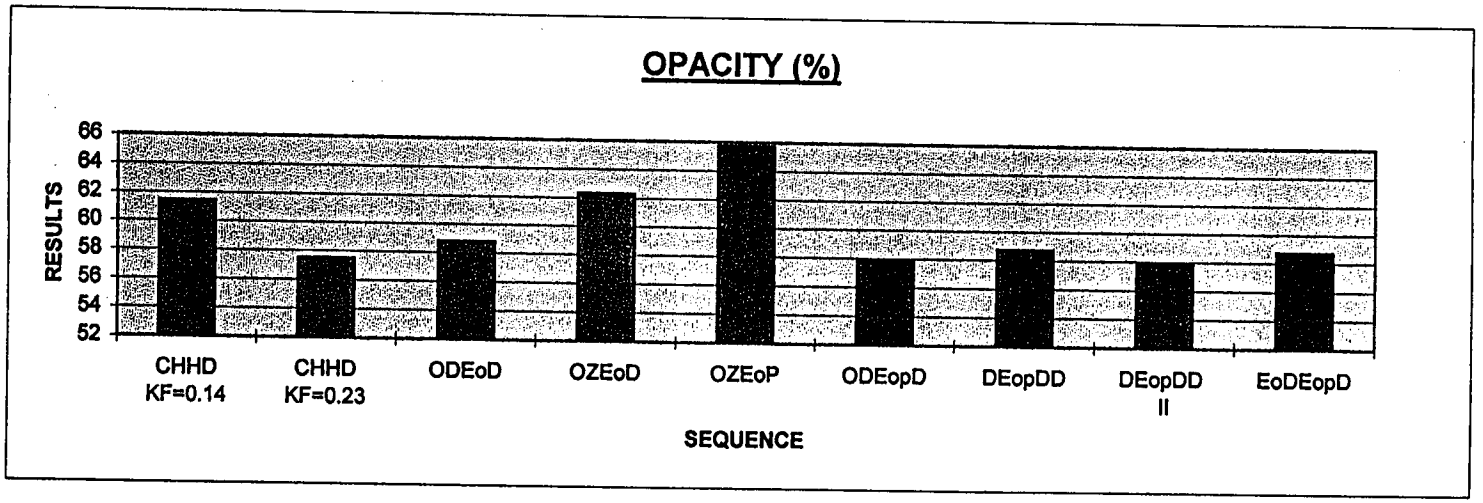
TESTS @ 300 CSF

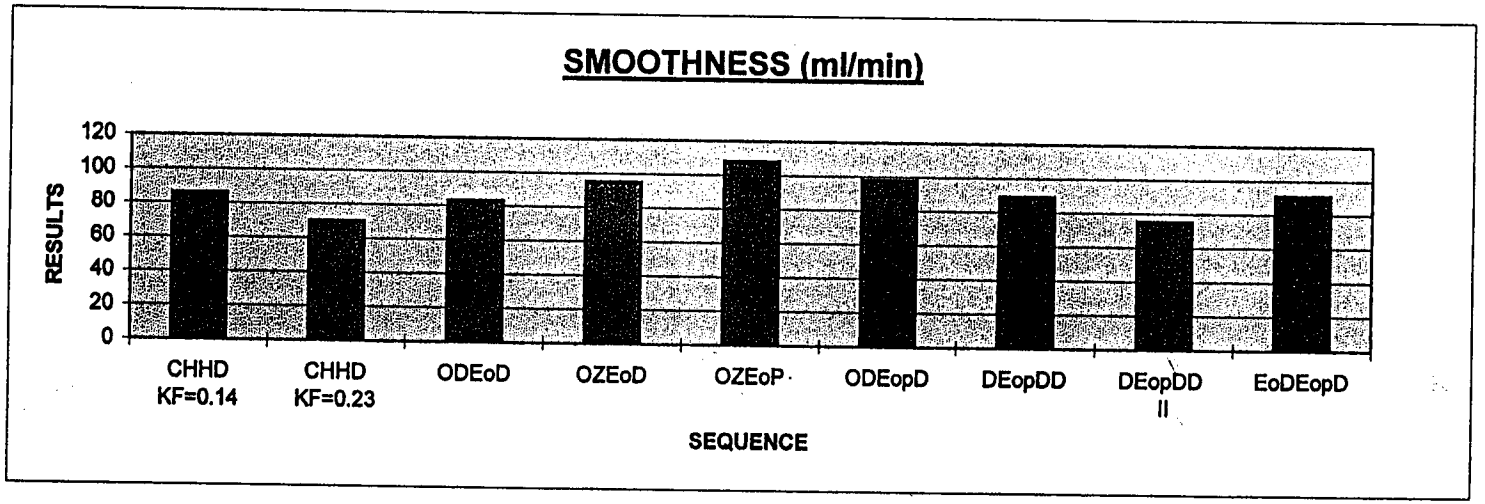




E00011578

TESTS @ 300 CSF





E00011579

MEMORANDUM

To: Ed Scott

From: R.B. Pojasek

Subject: Comments on Bleaching White Paper

Date: March 10, 1997

I have attached my comments on your white paper outline. I have placed in the mail some articles that were sent (unsolicited) to me by Montana CHEER. It looks like they are reading up on bleaching alternatives. Your white paper will have to address their concerns or you will have to find some other means to address these concerns. My feeling is that if the white paper is convincing, it should be able to stand well on its own.

I also wanted you to know that I am beginning to run out of time on your original authorization of $5,000. If you plan to have me work some more on this issue or if you want to have me come to Missoula or Atlanta to interact with the group preparing the bleaching evaluation, you will have to consider extending the initial amount. At any rate, I will only bill you for the time and expenses that are incurred to do what you ask me to do in this regard, as per our agreement. Thank you.

Cambridge Environmental Inc

58 Charles Street Cambridge, Massachusetts 02141
617·225·0810 FAX: 617·225·0813 E-mail: camenv58@aol.com

Stone Container Corporation
Containerboard and Paper Division
Missoula Mill

To: **Distribution**

Date: **March 3, 1997**

From: **Ed Scott**

Subject: **Stone Container Bleach Plant White Paper For Dr. Pojasek**

As we discussed at last Thursday's Staff Meeting, as part of our settlement with Montana CHEER we have agreed to the following:

1. **We will involve Dr. Pojasek as we consider bleaching options.**

2. **We will listen to his comments regarding our analysis of different bleaching options.**

3. **We will reflect these comments in our report to CHEER about our preferred bleaching option.**

In the middle of February, Dr. Pojasek requested that we provide him with some information regarding the mill, the Cluster Rules, bleaching alternatives reviewed thus far, criteria used to evaluate different bleaching sequences, etc. The information he requested is in the attached *Outline For Stone Bleach Plant White Paper.*

To put this White Paper together, I will need the following departments to do the following sections in the attached outline.

Section		Department Responsible For Completing
I.	Mill Description	Production
II.	MACT, Cluster Rules	Environmental
III.	Alternatives For Bleached Fiber	Technical
IV.	Bleaching Processes Considered	Atlanta Tech - Mahendra Misra

There is no deadline to have this completed by other than prior to the time we make a decision as to which bleaching sequence we decide to implement.

If you have any questions, please give me a call.

Distribution: Boschee, Lamey, Frye, Marxer, Mahendra Misra, Willhite

IQS Innovation Quality Service

OUTLINE FOR STONE BLEACH PLANT WHITE PAPER

I. Mill description

A. Brief history

B. Size

1. TPD
2. Employees

C. Processes

1. Virgin pulping
2. Recycle pulping

D. Bleach plant discussion

1. TPD
2. Usage (end product)
3. Present sequence
4. Physical properties required (i.e. strength, brightness, etc.)

II. MACT, Cluster Rules

A. Industry interpretation of Cluster Rules

1. Chemicals allowed/chemicals banned
2. Timing for promulgation
3. Timing for compliance
4. Residual limits (i.e., AOX emissions, etc.)
5. Testing locations (i.e. @ B.P./@ end of pipe)
6. Other issues

B. Impact on Missoula Mill

1. Cl_2 no longer allowed
2. Other issues

III. Alternatives for bleached fiber

A. Market pulp

1. Pros/Cons
2. Why dismissed

B. Recycle office waste

1. Pros/Cons
2. Why dismissed

C. Bleach OCC

1. Pros/Cons
2. Why dismissed

D. Whiteness enhancers (i.e. clays/starches, etc.)

1. Pros/Cons
2. Why dismissed

E. Sawdust bleaching

1. Gearing up for trial
2. Possible impact on bleach sequence

F. Shutdown B.P. altogether (do nothing approach)

1. Impact on Missoula Mill

IV. Bleaching processes considered

A. Criteria for new B.P.

1. Meet specifications - Cluster Rules
2. Meet specifications - customers
3. Low capital cost
4. Low operating cost

B. Discussion of ECF and TCF

C. TCF options considered

1. Pros/Cons
2. Why dismissed
3. Worldwide trends in TCF

D. ECF options considered

1. List all sequences considered

   a. Pros/Cons of each
   b. Why each was dismissed

E. Discussion of final two options

1. $DEopD_ND$ vs. ODEopD
2. Why ODEopD is preferred

   a. How it meets (measures up to) anticipated Cluster Rules

SME 2-17-97

Outline for Stone Bleach Plant Whitepaper

OPERATIONS

I. Mill description → Bob B —

We are preparing to ask Industra to put together the following Bleach Plant Whitepaper for Dr. Pojasek. Any modifications suggested regarding the scope?

Discuss why Skywhite is so important to us?

A. Brief history
B. Size
   1. TPD
   2. Employees
C. Processes
   1. Virgin pulping
   2. Recycle pulping
D. Bleach plant discussion
   1. TPD
   2. Usage (end product)
   3. Present sequence
   4. Physical properties required (i.e. strength, brightness, etc.)

II. IMACT, Cluster Rules

Please Advise

Ed.

A. Industry interpretation of cluster rules
   1. Chemicals allowed/chemicals banned
   2. Timing for promulgation
   3. Timing for compliance
   4. Residual limits (i.e. AOX emmissions etc)
   5. Testing locations (i.e. @ B.P./@ end of pipe)
   6. Other issues
B. Impact on Missoula mill
   1. Cl_2 no longer allowed
   2. Other issues

Why can't this be done in-house?

What will Industra charge?

Tech

III. Alternatives for bleached fiber

I were to 2 weeks effort $5000 +

A. Market pulp
   1. Pro's/Con's
   2. Why dismissed

Talk to Bill K.

B. Recycle office Waste ?
1. Pros/Cons
2. Why dismissed

C. Bleach OCC
1. Pros/Cons
2. Why dismissed

D. Whiteness enhancers (i.e. clays/starches etc.)
1. Pros/Cons
2. Why dismissed

E. Sawdust bleaching
1. Gearing up for trial
2. Possible impact on bleach sequence

F. Shutdown B.P. altogether (do nothing approach)
1. Impact on Missoula mill

MAHONDRA

I. Bleaching processes considered
A. ←
B. Discussion of ECF & TCF
C. TCF options considered
1. Pros/Cons
2. Why dismissed
D. ECF options considered
1. List all sequences considered
a. Pros/cons of each
b. Why each was dismissed
E. Discussion of final two options
1. $DE_{op}D_ND$ vs. $ODE_{op}D$
2. Why $ODE_{op}D$ is prefered
a. How it meets (measures up to) anticipated cluster rules.

A. Criteria for new B.P.
1. Meet specifications - cluster rule
2. Meet specifications - customers
3. Low capital cost
4. Low operating cost
3. Worldwide trends in TCF

To: Ed Scott
From: Mahendra Misra

Sub: Missoula Bleaching Study

You asked me to explain the criteria used for selecting the bleach sequences. Initially, we looked into six different sequences as shown in Table I. These sequences were presented to the mill in August, 1996. All these sequences except the existing sequence can satisfy the EPA proposed cluster rule - AOX below 0.5 Kg/ADMT - no elemental Cl2 and complete elimination of Hypo. A TCF sequence is also listed in Table I which requires a lot of peroxide and the operating cost is extremely high.

We decided to pursue laboratory study of ODEoD and OZEoD sequences because of lower operating cost. Out of curiosity, we also experimented a TCF sequence (OZEoP) in the lab. We could not achieve more than 77.1 Brightness even after using $65/ADT of bleach chemicals. I am enclosing the laboratory results.

Although,the bleach sequence DEoDnD looks attractive, we intentionally avoided that sequence because we were told that EPA is imposing O2-delignification for softwood. That may not be true now.

The Spread sheet (Table I) has been revised based on the projected chemical usage.

MISSOULA BLEACH MODIFICATION
350 ADT/D

			EXISTING	ClO2 SUBS.		O2-DEL	O2-DEL	O2-DEL	
SEQUENCE			CHHD	DEoDnD	(A/D)EopWD	ODEoD	OQ(Pht)D	OZED	O(ZQ)PhtP
			EXIST. EQP	EXIST. EQP.					
KAPPA NO.			27	27	27	27-O-16	27-O-16	27-O-16	27-O-16
CHEMICALS		KF →	0.14	0.2	0.12	0.2			
ADT/D	250	UNITS							
Cl2		lb/adtp	76	0	0	0	0	0	0
NaOH		lb/adtp	53	75	60	80	80	80	70
O2		lb/adtp	0	10	20	50	40	50	40
H2O2		lb/adtp	0	0	20	0	20	0	120
ClO2		lb/adtp	6.3	60	50	55	40	20	0
EDTA		lb/adtp	0	0	0	0	4	0	4
H2SO4		lb/adtp	0	0	12	12	10	10	10
HYPO		lb/adtp	86	0	0	0	0	0	0
OZONE		lb/adtp	0	0	0	0	0	15	12
Tot. ClO2		**t/d**	**0.8**	**7.5**	**6.3**	**6.9**	**5.0**	**2.5**	**0.0**
COST:	$/LB								
Cl2	0.1	$/adtp	7.60	0.00	0.00	0.00	0.00	0.00	0.00
NaOH	0.125	$/adtp	6.63	9.38	7.50	10.00	10.00	10.00	8.75
O2	0.05	$/adtp	0.00	0.50	1.00	2.50	2.00	2.50	2.00
H2O2	0.375	$/adtp	0.00	0.00	7.50	0.00	7.50	0.00	45.00
ClO2	0.55	$/adtp	3.47	33.00	27.50	30.25	22.00	11.00	0.00
EDTA	0.75	$/adtp	0.00	0.00	0.00	0.00	3.00	0.00	3.00
H2SO4	0.1	$/adtp	0.00	0.00	1.20	1.20	1.00	1.00	1.00
HYPO	0.35	$/adtp	30.10	0.00	0.00	0.00	0.00	0.00	0.00
OZONE	0.80	$/adtp	0.00	0.00	0.00	0.00	0.00	12.00	9.60
Bleach Cost		$/adtp	47.79	42.88	44.70	43.95	45.50	36.50	69.35
Credit		$/adtp	0.00	0.00	0.00	-5.00	-5.00	-5.00	-5.00
Net Bl. Cost		$/adtp	47.79	42.88	44.70	38.95	40.50	31.50	64.35
CAPITAL EQUIPMENT									
WASHERS									
TOWERS									
ClO2 PLANT									
MC MIXER									
STEAM MIXER									
O2-DELIG									
EOP REACTOR									
WASH PRESS									
SEAL TANK									
WLO SYSTEM									
O2 BLOW TANK									
EXTENDED TUBE									
REVISION 3- Nov 6-1996									

Stone Container Corporation
Missoula Mill
Containerboard and Paper Division

To: Ed Scott

Date: February 12, 1997

From: Paula Lamey

Subject: Sky White Specifications

Per your request, attached is the current specification sheet for our Sky White. The market is beginning to demand a linerboard sheet that is a much more solid white sheet than the mottled sheet we currently make. Brightness targets are beginning to increase. To remain competitive we will need to make a sheet within the next 2 years, or so, that has an ISO brightness of 75. Smoothness is another demand occurring from the market. A Sheffield smoothness of 250 will be our target.

Viscosity is a measure of our pulp strength. We get into quality problems on the machine if the viscosity is below 10. Kappas of the pulp going to the bleach plant averaged 27 in 1996.

If you have any further questions please let me know.

IQS Innovation Quality Service

SKY WHITE LINER SPECIFICATIONS
#1 PAPER MACHINE
TAPPI GRADE CODE ###MTWREG

GRADE g/m(2)*	26#	30#	31#	33#	35SWST	38#	42#	54#	56# DOLE *	61# DOLE *	69#
MOISTURE											
average moisture target	5.5	5.5	5.5	5.5	6.5	6.5	6.5	6.5	6.5	6.5	7.0
minimum roll average (cull below)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	5.5
max roll average (cull above)	7.0	7.0	7.0	7.0	8.0	8.0	8.0	8.0	8.0	8.0	8.5
max 6" streak #1, #2 PM (cull above)	9.0	9.0	9.0	9.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
max 2 sigma (cull above)	3.0	3.0	3.0	3.0	3.0	3.0	3.5	3.5	3.5	3.5	3.5
NOTE: Run to these moisture specifications unless ringing occurs. Notify foreman if ringing does occur.											
BONE DRY											
target	24.1	27.8	28.7	30.5	32.4	35.2	38.9	50.0	51.8	56.4	63.8
minimum roll average (cull below)	23.1	26.4	27.3	29.6	NS	33.8	37.5	48.2	49.9	54.3	61.5
maximum roll average (cull above)									53.7	58.5	
max 2 sigma (cull above)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
MULLEN											
target	65-70	74-79	76-84	80-90	NS	100-105	107-115	124-133	NS	NS	140-150
minimum (cull below)	60	67	68	72	NS	84	95	110	NS	NS	128
ZDT											
target	40+	40+	40+	40+	40+	40+	40+	40+	40+	40+	40+
minimum (cull below)	30	30	30	30	30	30	30	30	30	30	30
STFI											
target	13.5	15.5	16.0	17.0	21.0	19.5	21.5	27.0	28.3	28.3	34.0
minimum reel	NS	NS	NS	NS	20.0	NS	NS	NS	NS	NS	NS
minimum roll (cull below)	NS	NS	NS	NS	19.0	NS	NS	NS	NS	NS	NS
OFF MACHINE RING CRUSH (50% RH)											
target	NSRT	NSRT	NSRT	NSRT	NSRT	NSRT	NSRT	NSRT	117	117	NSRT
minimum (cull below)									100	100	
CALIPER	NSRT	NSRT	NSRT	NSRT	NSRT	NSRT	NSRT	NSRT	NSRT	NSRT	NSRT
COBB (2 minute)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
COBB (5 minute)											
target	50-70	50-70	50-70	50-70	50-70	50-70	50-70	50-70	50-70	50-70	50-70
maximum (cull above)	86	86	86	86	86	86	86	86	86	86	86
TOP SHEET WAX PICK											
target	18	18	18	18	18	18	18	18	18	18	18
minimum (cull below)	16	16	16	16	16	16	16	16	16	16	16
SCUFF											
min (cull below after recheck)	10	10	10	10	10	10	10	10	10	10	10
POROSITY											
Maximum Action Point	80	80	80	80	80	80	80	80	80	80	80
minimum (cull below)	8	8	8	8	8	13	13	13	13	13	13
maximum (cull above)	100	100	100	100	100	100	100	100	100	100	100
SMOOTHNESS - BEKK	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SMOOTHNESS - SHEFFIELD	NSRT	NSRT	NSRT	NSRT	NSRT	NSRT	NSRT	NSRT	NSRT	NSRT	NSRT
SLIDE ANGLE											
minimum (cull below)	18	18	18	18	18	18	18	18	18	18	18
BRIGHTNESS											
target	65	65	65	65	65	65	65	65	65	65	65
min. (cull below)	60	60	60	60	60	60	60	60	60	60	60
Color 'a'	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Color 'b'											
target	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
min. (cull below) / max. (cull above)	0.1 / 1.7	0.1 / 1.7	0.1 / 1.7	0.1 / 1.7	0.1 / 1.7	0.1 / 1.7	0.1 / 1.7	0.1 / 1.7	0.1 / 1.7	0.1 / 1.7	0.1 / 1.7
LIGHTNESS 'L'	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SCORE CRACK											
maximum (cull above)	3	3	3	3	3	3	3	3	3	3	3
SCOTT BOND											
minimum (cull below)	65	65	65	65	65	65	65	65	80	80	65
APPEARANCE / COVERAGE											
maximum (cull above)	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
HARDNESS											
minimum (cull below)	25	25	25	25	25	25	25	25	25	25	25
maximum range (cull if exceeded)	15	15	15	15	15	15	15	15	15	15	15

It is the discretion of the foreman or operator to hold below cull material for rechecks.
NS - No Specification
NSRT - No Specification - Run Test. Check Testing Frequency report (TE140.D10) for testing frequency.
* Dole Food Company specification only.

Technical Director / Date: 1/15/97

IF THIS BOX IS BLACK, THIS IS NOT A CONTROLLED DOCUMENT.

Mark
for
Pujasek.

SME 2-17-97

Outline for Stone Bleach Plant Whitepaper

I. Mill description → Bob B —

We are preparing to ask Industria to put together the following Bleach Plant Whitepaper for so important to us? Discuss why Skywhite is

A. Brief history

B. Size

1. TPD
2. Employees

C. Processes

1. Virgin pulping
2. Recycle pulping

D. Bleach plant discussion Dr. Pojasek, Any Modifications Suggested Regarding the Scope?

1. TPD
2. Usage (end product)
3. Present sequence
4. Physical properties required (i.e. strength, brightness, etc.)

II. MACT, Cluster Rules

Please Advise

Ed.

A. Industry interpretation of cluster rules

1. Chemicals allowed/chemicals banned
2. Timing for promulgation
3. Timing for compliance
4. Residual limits (i.e. AOX emmissions etc)
5. Testing locations (i.e. @ B.P./@ end of pipe)
6. Other issues

B. Impact on Missoula mill

1. Cl_2 no longer allowed
2. Other issues

III. Alternatives for bleached fiber

A. Market pulp

1. Pros/Cons
2. Why dismissed

B. Recycle office Waste
1. Pros/Cons
2. Why dismissed

C. Bleach OCC
1. Pros/Cons
2. Why dismissed

D. Whiteness enhancers (i.e. clays/starches etc.)
1. Pros/Cons
2. Why dismissed

E. Sawdust bleaching
1. Gearing up for trial
2. Possible impact on bleach sequence

F. Shutdown B.P. altogether (do nothing approach)
1. impact on Missoula mill

I. Bleaching processes considered
A. Criteria for new B.P.
1. Meet specifications - Customers
2. Meet specifications - customers
3. Low capital cost
4. Low operating cost
B. Discussion of ECF & TCF
3. Worldwide trends in TCF
C. TCF options considered
1. Pros/Cons
2. Why dismissed
D. ECF options considered
1. listed sequences considered
a. Pros/cons of each
b. Why each was dismissed
E. Discussion of final two options
1. $DEopD_ND$ vs. $ODEopD$
2. Why $ODEopD$ is preferred
a. How it meets (measures up to) anticipated cluster rules.

Production Meeting
@ 3pm

1. Questions Asked from Mill as to the thought process (Including Mahindra's Summary).

Industrial

Description of thought process White Paper of Missoula's.

Including TCF (was Seriously Considered).

2. See #1
3. See #1

75-80% of white = what

(4) Steve Answered (Put Into White Paper)

No W.T. (5) Steve Answered (Clay, TiO_2) Step Gap measure

(6) Steve Answered. (Extremely Expensive).

(7) $\boxed{\text{ED will Answer, (White paper)}}$

(8) TCF v.s ECF (Industry Help).

(9) Meeting between Selection Committee & Bob. (ED get Back to him).

Steve (10) Milestone Chart (Steve)

(11) Pitot Plant trials (Steve)

(12) What internal Approvals (ED)? (Bled Into)

#10.

White Paper — Industry.

1/2

(1) Supporting info in writing of Mahendra's One page. Summary.

(2) How Stone will choose to balance operating costs over the life of the equipment v.s. the capital cost amortized over that lifetime.

X (3) Why has Stone Not Chosen to go to Extended Delignification OR O_2 Delignification

X Capital - OCC availability (4). Has Stone Considered bleaching only OCC pulp to lower Bleaching Requirements? Is it a viable concept?

Trials (5) Can the Whiteness be enhanced using Clays to Reduce the need for Bleaching.

X Looked at purchasing market pulp $ Prohibitive (6) If #4 would not work, are there other sources of market pulp or wood furnish that would decrease the need to Bleach.

E00011597

2/2

X (5) Can Bob review the product Spec Sheet for (Sky-White)
- Kappa # - Strength
- reflectivity - Viscosity.

yes

(8) Determine the most cost effective TCF Sequence and compare to most cost effective ECF Sequence

Industry

Back to him.

(9) Meeting between Selection Committee and Pojasek prior to Final Decision

yes - Eastlick

(10) Milestone Chart of the timing for the rest of the decision Making Process.

yes

X (10) Lab / Pilot Sheets Coming along?

ED - generally

(11) What internal Approvals required within Store to complete Selection Process.

E00011598

Stone Container Corporation
Containerboard and Paper Division
Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707

Missoula Mill

406.626.4451
406.626.5986 Fax

March 3, 1997

Dr. Robert B. Pojasek, Ph.D.
Cambridge Environmental Inc.
58 Charles Street (3rd Floor)
Cambridge, Massachusetts 02141

(VIA FAX: (617) 225 - 0813)

Dear Bob:

In response to the discussions we had during our last conference call which took place on February 10, 1997, Steve Eastlick and myself have drafted an outline for the *Stone Container Bleach Plant White Paper* (Please See Attached Outline).

Please review the outline we intend to follow in putting this white paper together and let me know if you have any questions or comments.

Sincerely,

Ed Scott
Environmental Manager

cc: Boschee
Willhite
Frye

OUTLINE FOR STONE BLEACH PLANT WHITE PAPER

I. Mill description

A. Brief history

B. Size

1. TPD
2. Employees

C. Processes

1. Virgin pulping
2. Recycle pulping

D. Bleach plant discussion

1. TPD
2. Usage (end product)
3. Present sequence
4. Physical properties required (i.e. strength, brightness, etc.)

II. MACT, Cluster Rules

A. Industry interpretation of Cluster Rules

1. Chemicals allowed/chemicals banned
2. Timing for promulgation
3. Timing for compliance
4. Residual limits (i.e., AOX emissions, etc.)
5. Testing locations (i.e. @ B.P./@ end of pipe)
6. Other issues

B. Impact on Missoula Mill

1. Cl_2 no longer allowed
2. Other issues

III. Alternatives for bleached fiber

A. Market pulp

1. Pros/Cons
2. Why dismissed

B. Recycle office waste

1. Pros/Cons
2. Why dismissed

C. Bleach OCC

1. Pros/Cons
2. Why dismissed

D. Whiteness enhancers (i.e. clays/starches, etc.)

1. Pros/Cons
2. Why dismissed

E. Sawdust bleaching

1. Gearing up for trial
2. Possible impact on bleach sequence

F. Shutdown B.P. altogether (do nothing approach)

1. Impact on Missoula Mill

IV. Bleaching processes considered

A. Criteria for new B.P.

1. Meet specifications - Cluster Rules
2. Meet specifications - customers
3. Low capital cost
4. Low operating cost

B. Discussion of ECF and TCF

C. TCF options considered

1. Pros/Cons
2. Why dismissed
3. Worldwide trends in TCF

D. ECF options considered

1. List all sequences considered

   a. Pros/Cons of each
   b. Why each was dismissed

E. Discussion of final two options

1. $DEopD_ND$ vs. ODEopD
2. Why ODEopD is preferred

   a. How it meets (measures up to) anticipated Cluster Rules

Received 1/20/97

XC: Boschke
Kohl
Marxer
Anderson → Eastlick
Willhite.

Memo

To: Ed Scott

From: R.B. Pojasek

Subject: Bleaching Evaluation

Date: January 20, 1997

Thank you for sending the sheet Mahendra sent to you regarding his evaluation of bleaching sequences. It would be great to have some supporting information in writing. Could Steve Eastlick provide me with a brief written overview?

1 or 2 page Document

Previous information that you sent to me indicates that Stone Container chose to restrict its evaluation to bleaching sequences that involve no modification of the digestion steps. Mahendra has told me that one of his three criteria was using as much of the existing equipment as possible to keep the capital costs down. I would like to know how Stone Container would choose to balance ***operating*** costs over the life of the equipment versus the capital costs amortized over that lifetime. A configuration which is more expensive could be cheaper to run and cost less over some period of time. It seems that many firms have chose to go to extended delignification or oxygen delignification prior to bleaching in order to keep the operating costs of the bleaching sequence at a low level. Why did Stone Container choose not to do this? Was the decision based solely on containing capital costs?

The decision to upgrade the bleaching seems to be tied to one product (sky-white linerboard) according to Steve Eastlick and your letter of January 8th. Has Stone Container considered bleaching only OCC pulp for this product to lower the bleaching requirements? Is this a viable concept? Can the whiteness be enhanced using clays to reduce the need for bleaching? If this would not work, are there other sources of market pulp or wood furnish that would decrease the need to bleach? It would be interesting to review the product spec sheet for this one product to see the Kappa Number requirement, reflectivity, strength, viscosity, etc. and to see if other methods available to the mill could meet these numbers without increasing the cost over what it will be with the new bleaching sequence.

I believe that Stone Container should determine the most cost effective total chlorine free bleaching sequence that would meet its requirements and carry this through the same analysis as the elemental chlorine free alternatives. This is sort of like the "no action alternative" in an environmental impact statement as required by the National Environmental Policy Act. Of course you would have to show that the alternatives in the paragraphs above would not significantly reduce the cost of this alternative. If TCF is very much more expensive (as Mahendra tells me) than ECF options, this analysis will clearly demonstrate this fact. On the

Cambridge Environmental Inc
58 Charles Street Cambridge, Massachusetts 02141
617-225-0810 FAX: 617-225-0813 E-mail: camenv58@aol.com

other hand, if TCF is not feasible at the present time in your opinion, this will have to be clearly demonstrated to have any credibility with the community. This latter case will be more difficult to do than the former case. We need to talk about this demonstration.

Are there any plans to have a face to face review meeting for this effort once you have assembled all the testing information? It would be very useful to meet with the selection committee just prior to its final decision? The questioning and interaction would provide useful information that you can present to the community and the regulators as the basis for your selection of the sequence you decide to construct. I wish to know your thoughts on this. In addition, I would like a written milestone chart of the timing for the rest of the decision making process in this project. How is the pilot/laboratory testing coming along? What internal approvals are required within Stone Container to complete the selection process? (1) (2)

Thank you for facilitating this review. I have appreciated your responsiveness, Ed.

(1) Bob B —
What do you think?

(2) Steve E —
Can you help me with this?

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617-225-0810 FAX: 617-225-0813 E-mail: camenv58@aol.com

Stone Container Corporation
Containerboard and Paper Division
Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707

Missoula Mill

406.626.4451
406.626.5986 Fax

January 8, 1997

Dr. Robert B. Pojasek, Ph.D.
Cambridge Environmental Inc.
58 Charles Street (3rd Floor)
Cambridge, Massachusetts 02141

(VIA Fax (617)225-0813)

Dear Bob:

As per your request, I have put together the following information you requested in your correspondence dated January 4 and received January 6, 1997.

Request For Description of Current Bleaching System

Please see attachments taken from mill's Title V Permit Application. Note that the modification of the bleaching sequence is not expected to require modification of any of the pulp digesters.

Production Information

Presently, the mill's 1997 operating budget is as follows:

Amount of pulp budgeted to be bleached: 63,624 tons
Amount of sky-white linerboard budgeted to be manufactured using bleached pulp: 162,099 tons
Total amount of all linerboard budgeted to be manufactured: 737,414 tons

Please note that Stone Container Corporation considers this production information to be confidential information.

Also note that the sky-white linerboard that is manufactured by the Missoula Mill is a two ply sheet that is made up of one brown (non-bleached) sheet and one white (bleached) sheet.

Mahendra's Analysis of Six Alternative Bleaching Sequences

Please see attachment. This is the written assessment received from Mahendra.

If you have any questions regarding this information, please contact me.

Sincerely,

Ed Scott
Environmental Manager

cc: Boschee
McLaughlin
Marxer
Kohl-->Anderson
Eastlick
Misra (Atlanta)
Frye
Barton (Atlanta) --> Willhite

Bleach Plant

Brownstock pulp from the PC stock high density storage is bleached in the bleach plant. The bleach plant is a four-stage bleaching process that uses standard pulp mill bleaching chemicals. The bleached pulp is stored in the bleached high density storage tank until used as top stock for linerboard, which provides a good printing surface and is a premium product produced at the mill.

Equipment maintenance and breakdowns may require a change in standard bleaching strategy and chemical usage beyond the variations normally expected due to raw material and process variability. Shortages of bleaching chemicals may require using a combination of hydrogen peroxide, additional chlorine, and possibly other bleaching chemicals in the chip fiberline bleach plant.

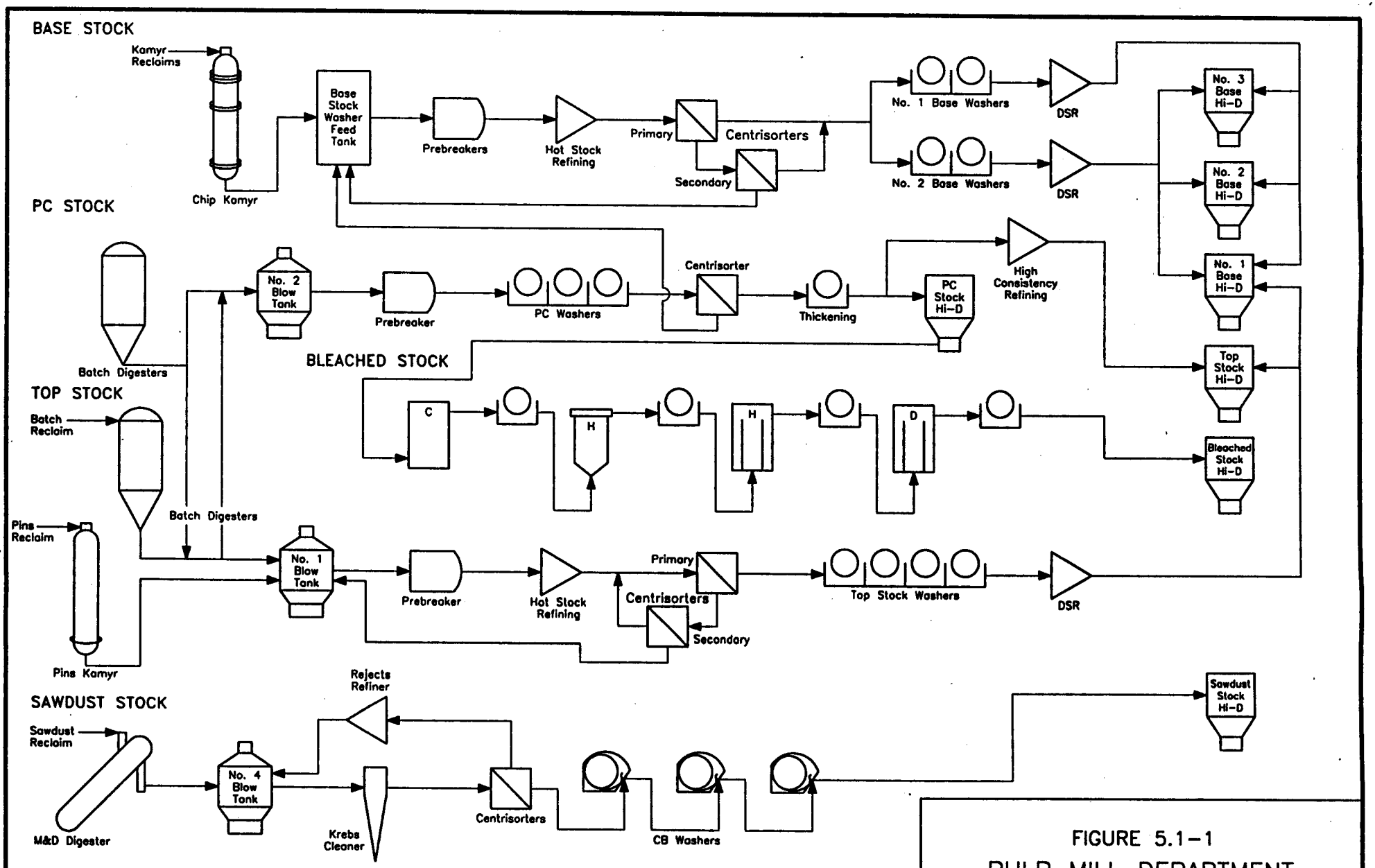
Secondary Fiber/OCC Area

The overall flow block diagram for the secondary fiber line is shown in Figure 5.1-2. The mill uses post-consumer waste paper including OCC, old newsprint (ONP), mixed office waste (MOW), or mixed wastepaper for part of its furnish. The paper comes in wired bales. In the repulper, the paper and water are mixed with enough agitation to reduce the paper to a pulp. Various process chemicals can be added to enhance the pulping process. The wire and stringy waste are extracted with a rope that entangles the larger waste. The rope is continuously withdrawn from the repulper for disposal to the solid waste site. The pulp goes through several stages of cleaning to remove sand and similar materials, which are sent to the solid waste site. A subsequent cleaning stage removes lightweight contaminants such as bark, plastic, styrofoam, and considerable pulp fiber. The lightweight rejects ultimately are burned in the waste fuel boiler.

Causticizing Area, Liquor Generation

The black liquor from the brownstock washing is evaporated, then burned in the recovery boilers. The boilers produce smelt which is dissolved in the smelt dissolving tank to produce green liquor. The overall flow diagram for the chemical causticizing plant is shown in Figure 5.1-3. The dissolved smelt solution (green liquor) from the recovery boiler smelt tanks is sent to the green liquor clarifiers. The green liquor clarifiers are gravity settling clarifiers. The bottom has a rake mechanism to move the settled solids to a discharge point at the bottom. The discharged material, called green liquor dregs, is the purge point for minerals brought in with the wood chips and for products of corrosion and erosion from all the pulp mill equipment. The dregs are washed, and the wash water is returned to the lime recovery cycle or sent to the effluent treatment system.

E00011607



Process flow diagrams shown here are for information purposes only and are not intended, nor should they be construed, to contain enforceable permit conditions or limitations. Variations of the process depicted can be expected.

FIGURE 5.1-1

PULP MILL DEPARTMENT

Base, PC, Top and Sawdust Fiberlines

Project: 6403-009-800

File: SC009801

Date: May 29, 1996

E00011608

MISSOULA BLEACH MODIFICATION
200 ADT/D

			EXISTING	ClO2 SUBS.	PRES. EOP	O2-DEL	O2-DEL	O2-DEL	O2-DEL
SEQUENCE			**CHHD**	**DEoDnD**	**(A/D)EopWD**	**ODEoD**	**OQ(Pht)D**	**OZEoD**	**O(ZQ)Pht P**
			EXIST. EQP	EXIST. EQP.					
KAPPA NO.			27	27	27	27-O-16	27-O-16	27-O-16	27-O-16
CHEMICALS		KF →	0.14	0.2	0.12	0.2			
ADT/D	200	UNITS							
Cl2		lb/adtp	76	0	0	0	0	0	0
NaOH		lb/adtp	53	65	40	80	60	80	70
O2		lb/adtp	0	10	20	50	40	40	40
H2O2		lb/adtp	0	0	20	0	20	0	60
ClO2		lb/adtp	6.3	61	40	40	20	12	0
EDTA		lb/adtp	0	0	0	0	4	0	4
H2SO4		lb/adtp	0	0	12	10	10	10	10
HYPO		lb/adtp	86	0	0	0	0	0	0
OZONE		lb/adtp	0	0	0	0	0	12	12
Tot. ClO2		**t/d**	**0.6**	**6.1**	**4.0**	**4.0**	**2.0**	**1.2**	**0.0**
COST:	$/LB								
Cl2	0.1	$/adtp	7.60	0.00	0.00	0.00	0.00	0.00	0.00
NaOH	0.125	$/adtp	6.63	8.13	5.00	10.00	7.50	10.00	8.75
O2	0.05	$/adtp	0.00	0.50	1.00	2.50	2.00	2.00	2.00
H2O2	0.375	$/adtp	0.00	0.00	7.50	0.00	7.50	0.00	22.50
ClO2	0.5	$/adtp	3.15	30.50	20.00	20.00	10.00	6.00	0.00
EDTA	0.75	$/adtp	0.00	0.00	0.00	0.00	3.00	0.00	3.00
H2SO4	0.1	$/adtp	0.00	0.00	1.20	1.00	1.00	1.00	1.00
HYPO	0.35	$/adtp	30.10	0.00	0.00	0.00	0.00	0.00	0.00
OZONE	1.25	$/adtp	0.00	0.00	0.00	0.00	0.00	15.00	15.00
Bleach Cost		$/adtp	47.48	39.13	34.70	33.50	31.00	34.00	52.25
Credit		$/adtp	0.00	0.00	0.00	-5.00	-5.00	-5.00	-5.00
Net Bl. Cost		$/adtp	47.48	39.13	34.70	28.50	26.00	29.00	47.25
CAPITAL EQUIPMENT									
WASHERS				NO	NO	YES	YES	YES	YES
TOWERS				NO	YES	NO	NO	NO	NO
ClO2 PLANT				YES	YES	YES	MODIFY	NO	NO
MC MIXER				YES	YES	YES	YES	YES	YES
STEAM MIXER				NO	YES	NO	YES	YES	YES
O2-DELIG				NO	NO	YES	YES	YES	YES
EOP REACTOR				NO	YES	NO	NO	NO	NO
WASH PRESS				NO	NO	NO	NO	NO	NO
SEAL TANK				NO	NO	YES	YES	YES	YES
WLO SYSTEM				NO	NO	YES	YES	YES	YES
O2 BLOW TANK				NO	NO	?	?	?	?
EXTENDED TUBE				NO	NO	NO	YES	NO	YES
REVISION 3- JULY-8-1996									

WITH H_2O_2

WITH H_2O_2

AVERAGE 160 T/D BASED ON 1995 FIGURES

Memo

Received 1/6/97
Neal + Russ —
Can you Please provide me with this Info By the proposed deadline.
Thanks
Ed.

To: Ed Scott

From: R.B. Pojasek Bl

Subject: Review of Bleaching System Modifications (B-799)

Date: January 4, 1997

In my conversation with Mahendra, I learned that one of the three initial constraints in selecting the new bleaching sequence was to consider using as much of the current equipment as possible. This would certainly lower the capital costs of the new system.

I would like a ***written*** description of the current bleaching system. It would help if you could include a copy of the process flow diagrams that were prepared in support of your Title V Air Operating Permit Application (Bleaching only). If any of the bleaching sequences in the evaluation require modification of any of the pulp digesters, I want those process flow diagrams as well. Ed

Troy?

Please provide me with a listing of the products that are currently bleached and the approximate tonnage of each product on an annual basis. As a comparison, please provide me with the approximate tonnage of all products produced at the mill on an annual basis. Neal

Mahendra also told me that he provided you with a copy of the evaluation that he prepared on the six bleaching sequences. I do not have that memo. Please send it to me. Ross

1/8/97

I would like to have this material in my office by the close of business on Wednesday. Could you send it via some type of express mail. I will be in the office on Thursday morning. However, you can reach me via my voice mail (617/225-0812) if you have any questions in the meantime. Thanks for all the help, Ed.

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406.626.4451
406.626.5986 Fax

January 2, 1997

Dr. Robert B. Pojasek, Ph.D.
Cambridge Environmental Inc.
58 Charles Street (3rd Floor)
Cambridge, Massachusetts 02141

(VIA FAX: (617) 225 - 0813)

Dear Bob:

As Steve Eastlick outlined in his fax to you dated December 31, 1996, I have put together the attached information which describes the anticipated effluent limits under the Cluster Rules.

Please note that the Missoula Mill falls under the following production categories:

1. Unbleached Kraft
2. Bleached Kraft
3. Secondary Fiber

If you have any questions regarding this information, please contact me.

Sincerely,

Ed Scott
Environmental Manager

cc: Boschee
McLaughlin
Marxer
Kohl-->Anderson
Eastlick
Misra (Atlanta)
Frye
Barton (Atlanta) --> Willhite

12/11/96
XC: Inchostra
McLaughlin

UPDATE
Effluent Guidelines

Bleached Papergrade Kraft

Promulgation Schedule - January 1997

Compliance Date - January 2000

Standards - BAT, BCT, BMPs, PSES, NSPS & PSNS

Unbleached Kraft & SemiChem

Promulgation Schedule - mid to late 1997

Compliance Date - mid to late 2000

Standards - BAT, BCT, BMPs, PSES, NSPS, & PSNS

Secondary Fiber

Promulgation Schedule - late 1997 to early 1998

Compliance Date - late 2000 to early 2001

Standards - BCT, NSPS, PSES & PSNS

E00011612

E00011613

Bleached Papergrade Kraft

Best Available Technology

Technology Basis

100% Substitution of Chlorine Dioxide for Chlorine gas

Likely Bleach Plant Effluent Limitations

Parameter	Daily Max...
TCDD	Non-Detect
TCDF	24.1 ppq
Chlorinated Phenolics	Non-Detect
Chloroform	5.33 g/kkg
	(2.8 g/kkg - mo. avg...)

Bleached Papergrade Kraft
BAT (contd.)

Likely End-of-Pipe Effluent Limitations

Parameter	Long Term Avg.. (Kg/KKg)	Monthly Avg.. (Kg/KKg)	Max.. Daily (Kg/KKg)
AOX	0.413	0.448	0.769
COD	38.2	45.6	64.0

Likely Pretreatment Limitations

AOX
COD
} No limitations or limitations based on removal through POTW

E00011614

Bleached Papergrade Kraft Best Conventional Technology BOD & TSS

- EPA will likely not revise Best Practical Technology Effluent Limitations
- EPA will only revise Best Conventional Technology Effluent Limitations if a Candidate Technology passes the "cost reasonableness test"
- Likely Worst-Case BOD & TSS Effluent Limits*

	Daily Max. (Kg/ton)	Monthly Avg. (Kg/ton)
BOD	4.52	2.38
TSS	9.55	3.86

*If these do not pass "cost reasonableness test" BOD/TSS should not change.

Bleached Papergrade Kraft
Pulping Liquor Collection, Containment & Diversion Facilities

- Bulk Turpentine Storage Tanks

  Secondary Containment Required

- Bulk Soap Storage Tanks

  Secondary Containment Probably Required

- Bulk Storage of Pulping Liquor (Black Liquor)

  Secondary Containment for largest tank <u>or</u> a Tank Integrity Testing Program and other Containment or Diversion Structures

- Process Water Diversion Facilities

  Must do an engineering review of the need to install process water diversion facilities to protect end-of-pipe wastewater treatment facilities from adverse effects of spills and diversion of spent pulping liquors or prevent contamination of stormwater.

E00011616

Bleached Papergrade Kraft

Continuous Wastewater Influent and Effluent Monitoring

- Requires daily 24 hour composite samples of influent and effluent to wastewater treatment system for COD, TOC or other short-term measure of organic content. Color, + Conductivity on 24 hour Composite

- Requires establishment of upper control limits based on 75th percentile and 90th percentile of the 7-day running average of the influent to the treatment system (mass loadings).

- Whenever the 75th percentile (seven day running average mass loading) is exceeded, an investigation to determine the cause and any necessary corrective action must be conducted.

E00011617

Bleached Paper Kraft
Elements of Best Management Practices Plan

- Approval by Mill Manager and Certified by Senior Technical Manager
- Engineering Analysis
- Engineered Controls and Containment
- Work Practices
- Preventative Maintenance
- Dedicated Monitoring & Alarm Systems
- Surveillance and Repair Systems
- Employee Training
- Boards of Review
- Review of Planned Modifications and modification of BMP
- Continuous Wastewater Treatment Influent Monitoring and Tracking

E00011618

Bleached Papergrade Kraft Best Management Practices

- Applies to spent pulping liquor which is defined as black liquor and not white or green liquor
- Also applies to Soap and Turpentine
- Requires Preparation, Certification and Implementation of a Best Management Practices Plan
- Required for direct and indirect discharges
- Schedule - Prepare Plan with 6 months of promulgation

  Begin implementing Plan within 6 months of promulgation

  Finish implementation within 36 months of promulgation
- Regulatory approval is not initially required, but a BMP plan may be reviewed by the regulatory authority as the result of an incident

E00011619

E00011620

Effluent Monitoring (contd.)

- Whenever the 90th percentile (seven day running average mass loading) is exceeded, corrective action must be initiated to bring the influent mass loading below the control limits.

- After installation of any new spent pulping liquor collection/control systems pursuant to the BMP plan, new upper contral limits based on the 75th and 90th percentiles must be established.

- Exceedances of these upper control limits shall not be considered a violation of an NPDES or pretreatment permit limit. However, failure to respond to an exceedance of the 90th percentile upper control limit may constitute a violation of a NPDES or Pretreatment permit.

E00011621

Unbleached Kraft & SemiChem
Best Available Technology

Technology Basis

Effective Brownstock washing, closed screen rooms, BMPs and BPT level secondary treatment

Likely End-of-Pipe Effluent Limitations

Parameter	1993 Proposal		1997
COD	Max Day 40.2 Kg/KKg	Mo Avg 24.6 Kg/KKg	Probably Slightly Higher

Likely Pretreatment Limitations

Parameter	1992 Proposal		1997
COD	Max Day 40.2 Kg/KKg	Mo Avg 24.6 Kg/KKg	No Limits or Higher limits based on removal thru POTW

Unbleached Kraft & SemiChem
Best Conventional Technology
BOD & TSS

- EPA will likely not revise Best Practical Technology Limitations

- EPA will only revise Best Conventional Technology Limitations if a candidate technology passes the "cost reasonableness test"

E00011622

E00011623

Unbleached Kraft & SemiChem
Best Conventional Technology
BOD & TSS
(contd.)

- Likely worst case BOD & TSS Effluent Limits*

		Unbleached Kraft Kg/KKg		SemiChem (KG/KKg)	
		Daily Max.	Monthly Avg.	Daily Max.	Monthly Avg.
1993 Proposal	BOD	4.19	1.9	2.96	1.43
	TSS	8.14	3.45	6.71	2.90
1997 Final	BOD	5-6	2-3	3-4	2-3
	TSS	8-10	4-5	7-9	3-5

*If no technology passes "cost reasonableness test", BOD & TSS should not change

Secondary Fiber
Best Conventional Technology

- EPA will likely not revise Best Practical Technology Limitations

- EPA will only Revise Best Conventional Technology Limitations if a candidate technology passes the "cost reasonableness test"

E00011624

E00011625

Secondary Fiber
Best Conventional Technology
(contd.)

- Likely Worst Case BOD & TSS Effluent Limitations*

	1993 Proposal (Kg/KKg)		1997 Final (Kg/KKg)	
	Daily Max.	Monthly Avg.	Daily Max.	Monthly Avg.
BOD	1.34	0.534	1.5-2.0	1-1.5
TSS	2.20	0.781	2.5-3.5	1.0-2.0

*If no technology passes the "cost reasonableness test" BOD & TSS should not change

Stephen M. Eastlick
Senior Project Engineer

Stone Container Corporation

Containerboard and Paper Division

Missoula Mill
P.O. Box 4707
Missoula, Montana 59806

Phone 406-626-4451
FAX 406-626-5572

xc → Ed Scott
F.Y.I.
SME

FAXED 12-31 SME

DATE: 12-31-96 TIME: 1:30 P.M.

TOTAL NUMBER OF PAGES 1 INCLUDING COVER SHEET

TO: Bob Pojasek FAX NO: 617-225-0813

COMPANY: TELEPHONE: 617-225-0812

PLEASE DELIVER COPIES OF THIS TO:

COMMENTS:

Bob;

Just a note to let you know that Ed Scott is putting together the data on anticipated Cluster Rules that you had requested. Should be ready to fax to you by Thursday, Jan. 2nd. Also wanted to clarify that we have considered the option of TCF bleaching also, not just ECF. Ed tried to contact Mahendra Misra today but it appears that the Atlanta office is closed for New years.

Happy New Year,
Steve

P.S. In my absence 1-6-97 thru 1-17-97, please work directly with Ed Scott. SME

JAGUAR
SPOKEN HERE

E00011626

To: Ed Scott
From: Mahendra Misra

Sub: Missoula Bleaching Study

You asked me to explain the criteria used for selecting the bleach sequences. Initially, we looked into six different sequences as shown in Table I. These sequences were presented to the mill in August, 1996. All these sequences except the existing sequence can satisfy the EPA proposed cluster rule - AOX below 0.5 Kg/ADMT - no elemental Cl2 and complete elimination of Hypo. A TCF sequence is also listed in Table I which requires a lot of peroxide and the operating cost is extremely high ($69.75).

We decided to pursue laboratory study of ODEoD and OZEoD sequences because of lower operating cost. Out of curiosity, we also experimented a TCF sequence (OZEoP) in the lab. We could not achieve more than 77.1 Brightness even after using $65/ADT of bleach chemicals. I am enclosing the laboratory results.

Although,the bleach sequence DEoDnD looks attractive, we intentionally avoided that sequence because we were told that EPA is imposing O2-delignification for softwood. That may not be true now.

Table I

MISSOULA BLEACH MODIFICATION

			EXISTING	ClO2 SUBS.	PRES. EOP	O2-DEL	O2-DEL	O2-DEL	O2-DEL
SEQUENCE			CHHD	DEoDnD	(A/D)EopWD	ODEoD	OQ(Pht)D	OZEoD	O(ZQ)Pht P
			EXIST. EQP	EXIST. EQP.					
KAPPA NO.			27	27	27	27-O-16	27-O-16	27-O-16	27-O-16
CHEMICALS		KF →	0.14	0.2	0.12	0.2			
ADT/D	250	UNITS							
Cl2		lb/adtp	76	0	0	0	0	0	0
NaOH		lb/adtp	53	75	60	80	80	80	70
O2		lb/adtp	0	10	20	50	40	50	40
H2O2		lb/adtp	0	0	20	0	20	0	120
ClO2		lb/adtp	6.3	60	50	55	40	20	0
EDTA		lb/adtp	0	0	0	0	4	0	4
H2SO4		lb/adtp	0	0	12	12	10	10	10
HYPO		lb/adtp	86	0	0	0	0	0	0
OZONE		lb/adtp	0	0	0	0	0	15	12
Tot. ClO2		**t/d**	**0.8**	**7.5**	**6.3**	**6.9**	**5.0**	**2.5**	**0.0**
COST:	$/LB								
Cl2	0.1	$/adtp	7.60	0.00	0.00	0.00	0.00	0.00	0.00
NaOH	0.125	$/adtp	6.63	9.38	7.50	10.00	10.00	10.00	8.75
O2	0.05	$/adtp	0.00	0.50	1.00	2.50	2.00	2.50	2.00
H2O2	0.375	$/adtp	0.00	0.00	7.50	0.00	7.50	0.00	45.00
ClO2	0.55	$/adtp	3.47	33.00	27.50	30.25	22.00	11.00	0.00
EDTA	0.75	$/adtp	0.00	0.00	0.00	0.00	3.00	0.00	3.00
H2SO4	0.1	$/adtp	0.00	0.00	1.20	1.20	1.00	1.00	1.00
HYPO	0.35	$/adtp	30.10	0.00	0.00	0.00	0.00	0.00	0.00
OZONE	1.25	$/adtp	0.00	0.00	0.00	0.00	0.00	18.75	15.00
Bleach Cost		$/adtp	47.79	42.88	44.70	43.95	45.50	43.25	74.75
Credit		$/adtp	0.00	0.00	0.00	-5.00	-5.00	-5.00	-5.00
Net Bl. Cost		$/adtp	47.79	42.88	44.70	38.95	40.50	38.25	69.75
CAPITAL EQUIPMENT									
WASHERS				NO	NO	YES	YES	YES	YES
TOWERS				NO	YES	NO	NO	NO	NO
ClO2 PLANT				YES	YES	YES	MODIFY	NO	NO
MC MIXER				YES	YES	YES	YES	YES	YES
STEAM MIXER				NO	YES	NO	YES	YES	YES
O2-DELIG				NO	NO	YES	YES	YES	YES
EOP REACTOR				NO	YES	NO	NO	NO	NO
WASH PRESS				NO	NO	NO	NO	NO	NO
SEAL TANK				NO	NO	YES	YES	YES	YES
WLO SYSTEM				NO	NO	YES	YES	YES	YES
O2 BLOW TANK				NO	NO	?	?	?	?
EXTENDED TUBE				NO	NO	NO	YES	NO	YES
REVISION 3- JULY-8-1996									

BLEACHING CONDITIONS

PULP SOURCE : UBK - MISSOULA MILL **WORK ORDER # 60225-A** **PROJECT # 572-095**

STAGE	% O_2	% ClO_2	O-STAGE CONDITIONS % O_2	@ PSI	Time min	% H_2O_2	% NaOH	% NaOCl	CONDITIONS Temp. °F	Time min.	Consist. %	final pH	% residual	K# mL	Brightness % ISO
* Initial K# = 16															
* Kappa factor = 0.23															
C	5.18								80	45	3.0	1.71	0.07		
H							1.00	3.10	130	49	8	7.55	0.03		51.55
H							0.30	1.20	135	177	14	8.38	0.02		74.51
D		0.68					0.17		150	207	11	3.59	0.08		83.91
$/lb	0.10	0.60	0.05			0.375	0.125	0.35							
$/ADTP	$9.32	$7.34	$0.00			$0.00	$3.31	$27.09							
							TOTAL	$47.07							
ClO_2 t/d		1.36													

(based on a production rate of 204 t/d)

E00011630

BLEACHING CONDITIONS

PULP SOURCE: UBK - MISSOULA MILL **WORK ORDER # 60225-C** **PROJECT # 572-095**

STAGE	% Cl2	% ClO2	O-STAGE CONDITIONS % O2	@ PSI	Time min.	%O3	% NaOH	% H2SO4	CONDITIONS Temp. °F	Time min.	Cons. %	final pH	% residual	KN cuL	Brightness % ISO
* initial K # = 16															
O			2.00	100	60		2.00		203	60	10.5	11.51	-		
Z						0.60		1.00	122	60	10	3.10	0.37		50.55
Eo			0.50	75	30		1.50		203	60	10	10.94	-	2.7	
D		0.79					0.12		176	180	10	2.54	nil		83.92
						0.8									
$/lb	0.10	0.60	0.05			1.25	0.125	0.10							
$/ADTP	$0.00	$8.53	$2.25			~~$13.50~~ 9.60	$8.15	$1.80							
							TOTAL	~~$34.23~~ 30.33							
ClO2 t/d		1.58													
(based on a production rate of 200 t/d)															

E00011631

BLEACHING CONDITIONS

PULP SOURCE: UBK - MISSOULA MILL **WORK ORDER # 60225-B** **PROJECT # 572-095**

STAGE	% Cl₂	% ClO₂	O-STAGE CONDITIONS % O₂	@ PSI	Time min.	% H₂O₂	% NaOH	% H₂SO₄	CONDITIONS Temp. °F	Time min.	Cons. %	final pH	% residual	KM mL	Brightness % ISO
* initial K # = 16															
O			2.00	100	60		2.00		203	60	10.5	11.51	N/A		
D		1.13							122	60	10	2.69	trace		
Eo			0.50	75	30		1.50		203	60	10	10.96	N/A	3.1	
D		0.79					0.12		176	180	10	2.85	trace		83.20
$/lb	0.10	0.60	0.05			0.375	0.125	0.10							
$/ADTP	$0.00	$20.68	$2.25			$0.00	$8.15	$0.00							
							TOTAL	$31.08							
ClO₂ t/d		3.83													

(based on a production rate of 200 t/d)

BLEACHING CONDITIONS

PULP SOURCE: UBK - MISSOULA MILL **WORK ORDER # 60225** **PROJECT # 572-095**

STAGE	%H_2SO_4	% H_2O_2	O-STAGE CONDITIONS % O_2	@ PSI	Time min.	% O_3	% NaOH	%$MgSO_4$	CONDITIONS Temp. °F	Time min.	Cons. %	final pH	% residual	K# mL	Brightness % ISO
* initial K # = 16															
O			2.00	100	60		2.00		203	60	10.5	11.51	-		
Z	1.00					0.60			122	60	10	3.10	0.37		
Eo			0.50	75	30		1.50		203	60	10	10.82	-		
P		5.00					2.50	0.10	176	60	10	11.81	trace		77.1
$/lb	0.10	0.375	0.05			1.25	0.125	0.19							
$/ADTP	$1.60	$33.75	$2.25			$13.50	$13.50	$0.34							
							TOTAL	$65.14							

CHADBOURNE & PARKE LLP

FACSIMILE TRANSMISSION

1101 VERMONT AVENUE, N.W. • WASHINGTON, D.C. 20005-3521 • TELEPHONE (202) 289-3000 • FACSIMILE (202) 289-3002

To:

NAME/COMPANY	FACSIMILE NO.	VERIFICATION PHONE NO.
Ed Scott/Stone - Missoula	406 626 5986	406 626 4451
Curt Barton/Stone - Atlanta	770 621 6733	770 621 6700

From: Russell Frye

Date: December 19, 1996

Phone: (202) 289-3036

XC: Boschee

NUMBER OF PAGES (including this page): 3

MESSAGE:

I'll call you about this.

Russ

Mihaela Misoiae
770 621-6752.

THIS FACSIMILE IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY TO WHICH IT IS ADDRESSED AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL, AND EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW. IF THE READER OF THIS FACSIMILE IS NOT THE INTENDED RECIPIENT OR THE EMPLOYEE OR AGENT RESPONSIBLE FOR DELIVERING THE FACSIMILE TO THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT ANY DISSEMINATION, DISTRIBUTION, OR COPYING OF THIS COMMUNICATION IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS COMMUNICATION IN ERROR, PLEASE NOTIFY US IMMEDIATELY BY TELEPHONE AND RETURN THE ORIGINAL FACSIMILE TO US AT THE ABOVE ADDRESS VIA THE U.S. POSTAL SERVICE. THANK YOU.

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Western Environmental Law Center

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Linda Velarde

December 18, 1996

Via Fax 202-289-3002 and Regular Mail

Russell Frye, Esq.
Chadbourne & Parke
1101 Vermont Avenue, N.W.
Suite 900
Washington, D.C. 20005

Re: United States v. Stone Container, CV 96 003 BLG
Montana CHEER, et al. v. Stone Container, CV 96 24 M CCL

Dear Russ:

In order to ensure that there is no confusion about the scope of Dr. Pojasek's role in the TCF/ECF analyses presently being undertaken by Stone, I am enclosing an excerpt from the draft Consent Decree. I hope to have the full draft to you by the end of the week. As you assured me last week that Dr. Pojasek has already been brought into the TCF/ECF project, it is important that his role is clearly understood and communicated to Stone personnel and Dr. Pojasek.

The language enclosed reflects the general parameters of the agreement in principle which has been discussed concerning the extent of Dr. Pojasek's role. While you may wish to do some wordsmithing for the final document, I ask that you promptly forward this language to appropriate Stone personnel and Dr. Pojasek as their general guidance concerning this one issue.

Sincerely,

Charles M. Tebbutt

Charles M. Tebbutt

cc: Katherine Schmidt
Darrell Geist
Jack Tuholske

unbleached • 100% postconsumer waste • soy ink

Conversion to Alternative Bleaching Process

1. Stone has already included Dr. Pojasek in Stone's on-going evaluation of alternative bleaching technologies, specifically regarding Stone's decision to change to Totally Chlorine Free ("TCF") or Elementally Chlorine Free ("ECF") technology, to ensure that the people responsible for that evaluation are incorporating all of the relevant pollution prevention factors outlined in Addendum A, particularly section 5, into the process used to identify TCF technologies that would be subject to further evaluation, and the activity-based costing analyses of the various technology options. Dr. Pojasek shall remain involved in Stone's evaluation of alternative bleaching technologies throughout the decision-making process and the period of the P2 Program.

2. Dr. Pojasek shall provide a written review including, but not limited to, the completeness of the selection and review of TCF processes and vendors, consistency of the TCF evaluation with other process alternatives, the extent to which the environmental benefits of switching to TCF bleaching were properly reflected in the activity-based costing financial analysis, and an assessment, in conjunction with the P2 Program evaluation discussed in subsection B.3., of Stone's on-going efforts to determine the most environmentally sound technologies.

CHADBOURNE & PARKE LLP

FACSIMILE TRANSMISSION

1101 VERMONT AVENUE N.W. • WASHINGTON, DC 20005-3521 • TELEPHONE: (202) 289-3000 • FACSIMILE: (202) 289-3002

To:

NAME/COMPANY	FACSIMILE NO.	VERIFICATION PHONE NO.
1. Ed Scott/Stone - Missoula	(406) 626-5986	(406) 626-4451

From: Russ Frye

Date: December 16, 1996

Phone: (202) 289-3036

NUMBER OF PAGES (including this page): 2

MESSAGE:

Ed--

Here is the relevant portion of the last communication with CHEER et al.'s counsel on Dr. Pojasek's review of Stone's analysis of bleaching alternatives, which letter was combined with oral communications and faxes on other issues to arrive at our agreement in principle to settle the case. Note that having Dr. Pojasek look at this issue prior to a final settlement was something that we agreed to do in our agreement in principle, because the final settlement agreement is unlikely to be signed before Stone decides on its technology option. His involvement is intended to address the plaintiffs' concerns that Stone do a thorough analysis of the pros and cons of different bleaching technologies. He is expected to review what Stone is doing and suggest any additional considerations that should be factored into the analysis, but he is not expected to suggest technology options for consideration or attempt to evaluate the pros and cons of different options himself.

Russ

THIS FACSIMILE IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY TO WHICH IT IS ADDRESSED AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL, AND EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW. IF THE READER OF THIS FACSIMILE IS NOT THE INTENDED RECIPIENT OR THE EMPLOYEE OR AGENT RESPONSIBLE FOR DELIVERING THE FACSIMILE TO THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT ANY DISSEMINATION, DISTRIBUTION, OR COPYING OF THIS COMMUNICATION IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS COMMUNICATION IN ERROR, PLEASE NOTIFY US IMMEDIATELY BY TELEPHONE AND RETURN THE ORIGINAL FACSIMILE TO US AT THE ABOVE ADDRESS VIA THE U.S. POSTAL SERVICE. THANK YOU.

PLEASE CALL US IMMEDIATELY IF THE FACSIMILE YOU RECEIVE IS INCOMPLETE OR ILLEGIBLE. OUR FACSIMILE OPERATOR CAN BE REACHED AT (202) 862-4584.

Dr. Pojasek would promptly discuss, with the officials responsible for that analysis, the factors that Stone is evaluating, including the process Stone used to identify TCF technologies for further evaluation and the extent to which environmental costs and benefits of the various technology options are being included in the analysis. Stone would take Dr. Pojasek's comments and suggestions into account and would reflect or respond to those comments, as appropriate, in its discussion of its analysis of bleaching alternatives with the plaintiffs that would be held after Stone has completed the analysis, probably towards the end of this year.

from 10/11/96 letter from R.Frye to C. Tebbutt

Mahindra / Eastfield

(1) Bleaching Sequences looked at

(2) Factors used to evaluate.

→ Send to Pojasek.

→ Call if you have any questions.

XC: Boschee
Frye
Inlillhite.

Memo

To: Ed Scott

From: R.B. Pojasek

Subject: Conference Call

Date: December 17, 1996

It was not clear from your voicemail message that you received my other memo. There are some other things that I need before I can participate in this call.

1. I still need to see the portion of your Agreement with MT CHEER that specifies what my scope in this evaluation will be. I also need a purchase order or contract to cover our time and expenses to provide the required services. Hopefully you will be able to provide me with this information tomorrow when we speak.

2. You should prepare a detailed process map for the selected bleaching sequence which shows all the process work steps and the materials used and lost from each step. The losses should include those to the air (including fugitive losses), water, solid wastes (including hazardous wastes), all spills/leaks, and accidental losses (especially during start-up and shut-down). I have attached a sample process map to this memo to show basically what I am looking for.

3. We are aware that there is detailed total chlorine free research being done at the University of Maine, North Carolina State University and Georgia Tech. I am sure there are other places doing this research. We are also aware of a vendor in Boston that offers full scale total chlorine free bleaching technology to the pulp and paper industry. I know you have looked at a couple of alternative vendors. In order to test the thoroughness of your alternative evaluation, we will require some time to see what these engineers are offering and to see if you should have considered these alternatives in your evaluation. We need a contract to support the time necessary to do this background check. In addition, we would like to see the ***Cluster Rules*** guidance and any ***MACT*** information that you may have to guide your evaluation efforts.

4. You were not clear on the voicemail message as to whether tree-free fiber evaluation is included in the conference call. If it is, we have some leads to pursue on this topic as well.

Cambridge Environmental Inc
58 Charles Street Cambridge, Massachusetts 02141
617-225-0810 FAX: 617-225-0813 E-mail: camenv58@aol.com

If you have a contract mechanism in mind, we can still have the conference call. However, we will want to follow it up with the independent information gathering that is discussed above. As you know, we are rapidly approaching Christmas. Friday is my last day in the office until perhaps December 30, 1996. You may also start loosing some of your people as well. Let's see what we can do to get this moving. I have been in the office every day for the past two weeks.

My colleagues and I are real excited about this opportunity to work with you and the folks at the Missoula mill.

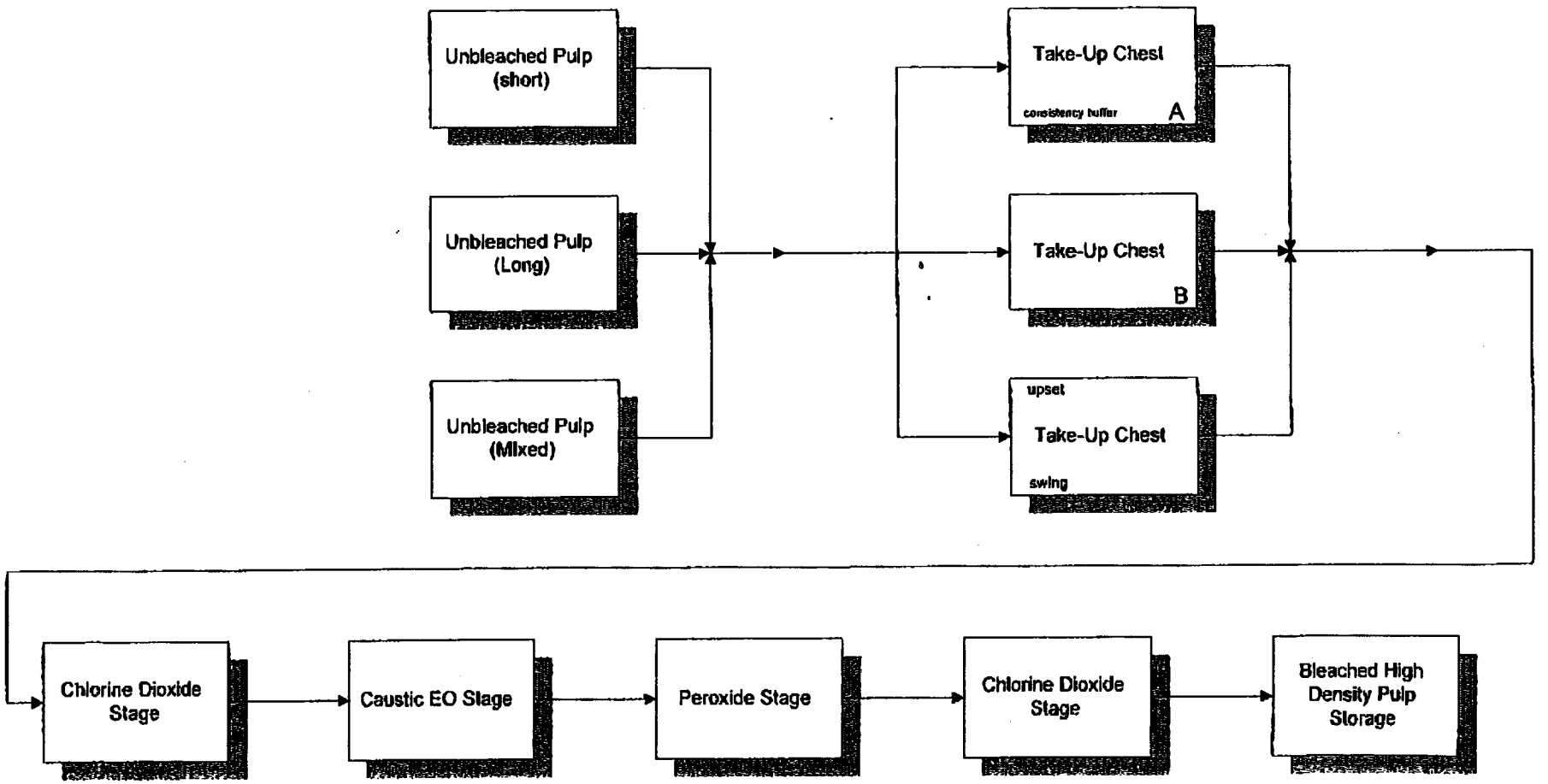
Cambridge Environmental Inc
58 Charles Street Cambridge, Massachusetts 02141
617·225·0810 FAX: 617·225·0813 E-mail: camenv58@aol.com

Cambridge Environmental Inc
58 Charles Street
Cambridge, Massachusetts 02141
617-225-0810 FAX: 617-225-0813
E-mail: rpojasek@sprynet.com

Robert B. Pojasek, Ph.D.
Senior Program Director

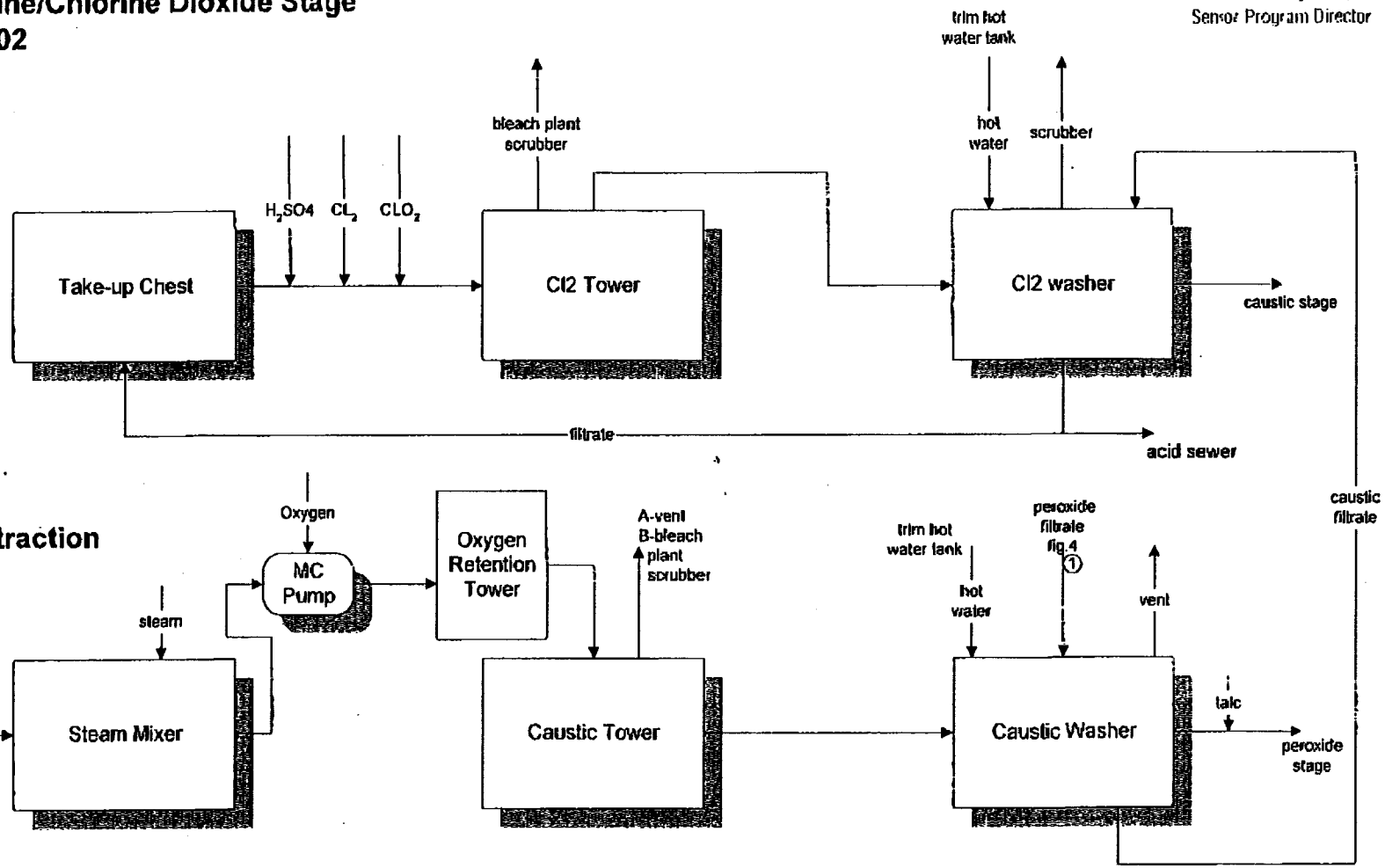
Bleach Plant

General Overview
Fig. 301

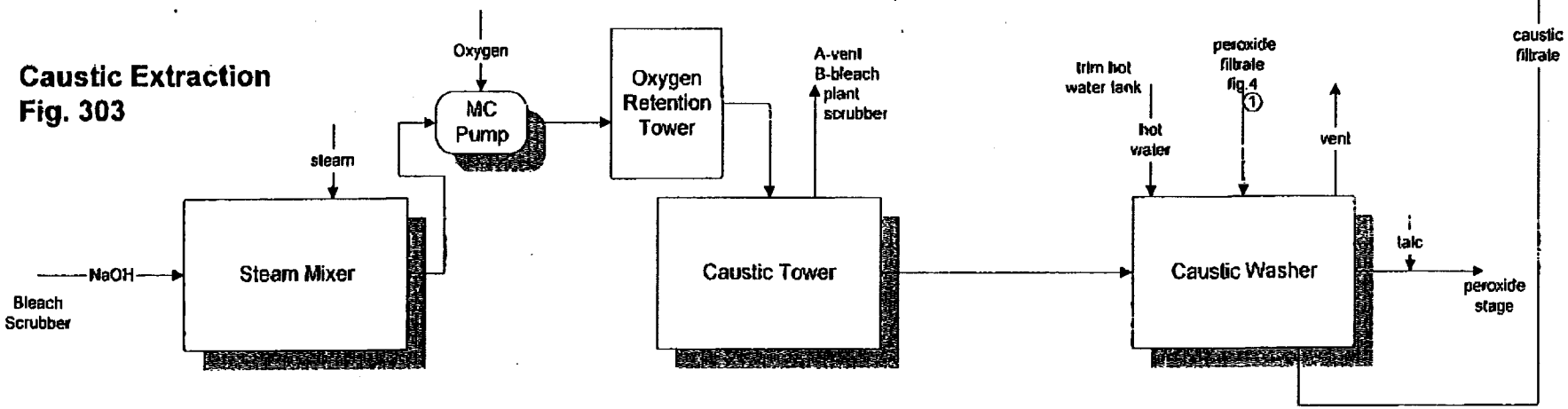


Cambridge Environmental Ir
58 Charles Street
Cambridge, Massachusetts 02141
617-225-0810 FAX: 617-225-0813
E-mail: rpojasek@sprynet.com
Robert B. Pojasek, Ph.D.
Senior Program Director

Chlorine/Chlorine Dioxide Stage
Fig. 302



Caustic Extraction
Fig. 303

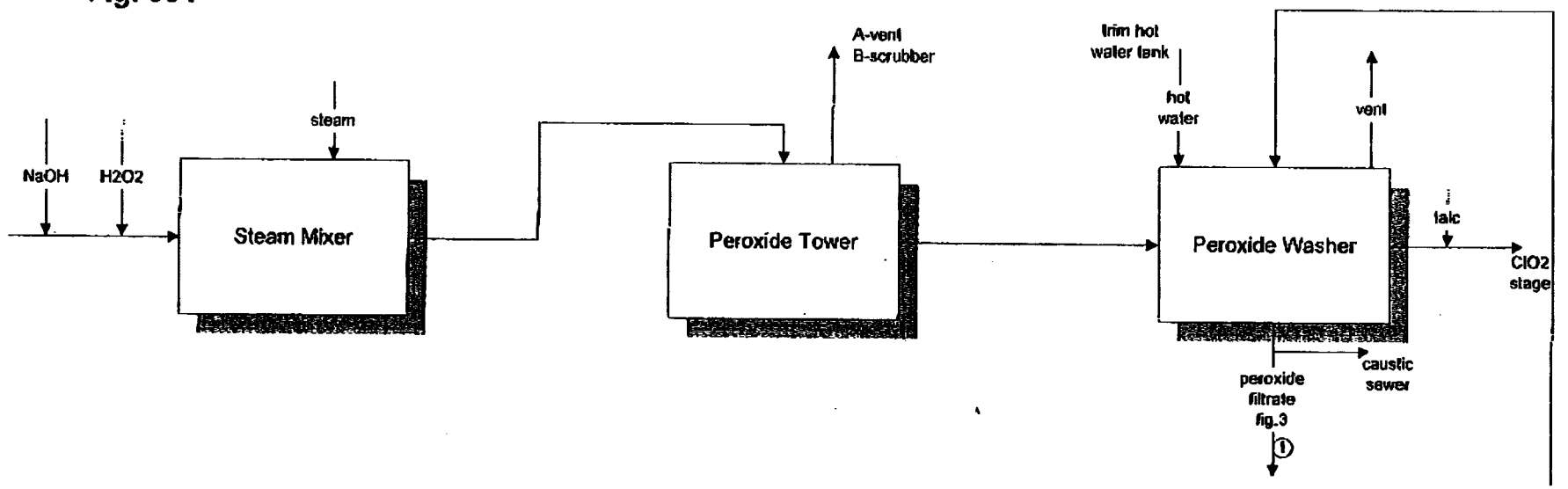


DEC-17-1996 08:23 CAMBRIDGE ENV. INC. 6172250813 P.05
E00011641

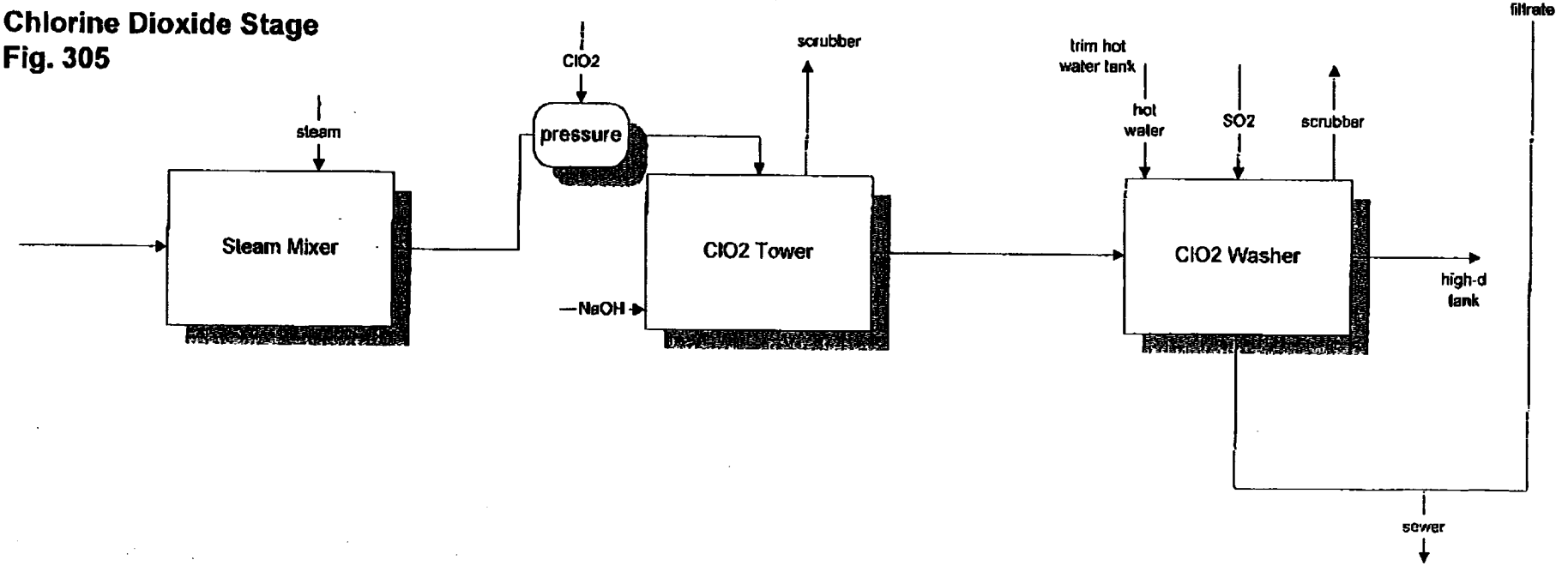
Cambridge Enviro[illegible]ental Inc
58 Charles Street
Cambridge, Massachusetts 02141
617-225-0810 FAX: 617-225-0813
E-mail: rpojasek@sprynet.com

Robert B. Pojasek, Ph.D.
Senior Program Director

Hydrogen Peroxide Stage
Fig. 304



Chlorine Dioxide Stage
Fig. 305



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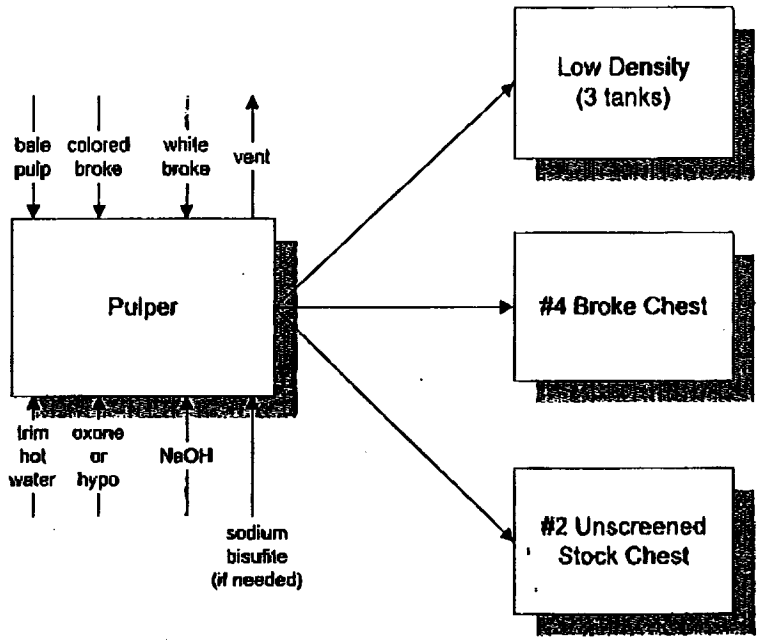
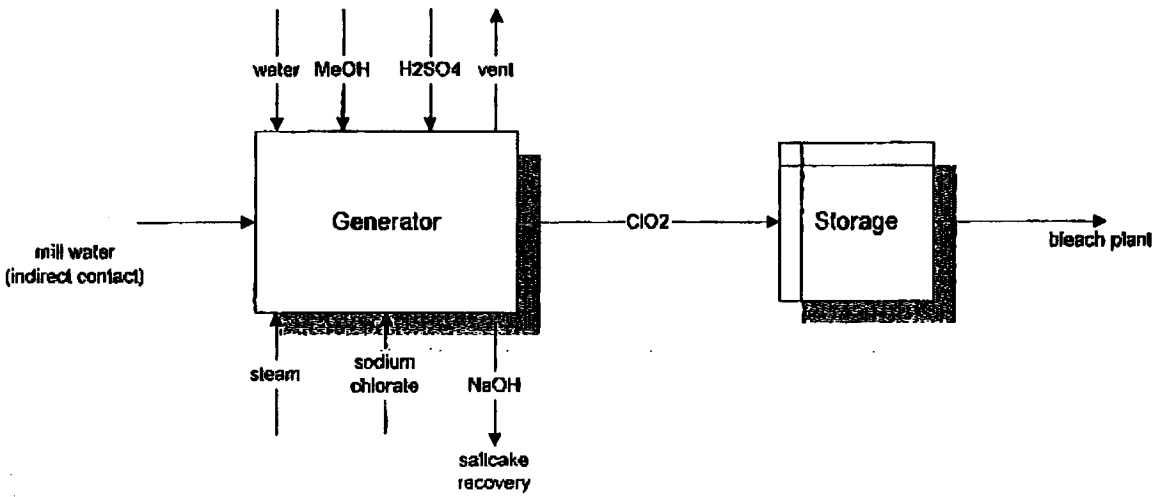
email:rpojasek@spynet.com

Robert B. Pojasek, Ph.D.
Senior Program Director

Pulper
Fig. 306



ClO_2 Generator
Fig. 307



Recevd 12/16/96

XC: Boschee
Eastlick
Frye
Willhite

Memo

To: Ed Scott

From: R.B. Pojasek RBP

Subject: Upcoming Telephone Call - Preparation

Date: December 16, 1996

In preparation for our discussion on Wednesday, December 18, 1996 at 11:00 am MST, I would like to raise a few questions. Any information you could fax to me prior to our conversation would be quite helpful.

1. I would like to see the wording in the Agreement for my involvement in the evaluation of the new bleaching system and the use of tree-free fiber sources. Do you plan to go with a "time and materials" contract for this effort or will you be looking to prepare a scope with a defined level of effort? I plan to use a junior associate @ $55/hr. To gather some information on alternatives for your review. We have found some reliable sources with experience in this area. We will want to construct a process map for the chlorine dioxide sequence that you are currently considering. This can be done by talking to Troy Savage or someone else that you designate.

2. When do you expect to start the pollution prevention planning work? Could you send me the wording that you agreed to. We will need to agree on a scope and level of effort for this work. I plan to have Kerry Bartlett spend a week at the mill to facilitate the process mapping sessions and to gather information for the plan. It will take approximately four months to complete the plan if the iterations go smoothly. Do you expect this to start in January? We would recommend that you get an early start on this effort. We need to get this project on our planning schedule.

3. Is there any other project that I need to know about? What happened to the risk management planning issue?

I look forward to receiving information from you today or tomorrow. We will talk on Wednesday.

Cambridge Environmental Inc
58 Charles Street Cambridge, Massachusetts 02141
617-225-0810 FAX: 617-225-0813 E-mail: camenv58@aol.com

(1) Pojasek - Take a look at what Factors we looked at. (Bleaching).

(2) 9 A.M. @ [Resume Street 4B's]

(3) ~~[illegible]~~ Conf Call Wed Offm → EAS Hdqs

Pre-Meeting @ 10:30 AM

(1) Brad Madison
(2) Steve Bastick
(3) Ed Scott

Bleach Plant - Financial

E00011646

Pojasek & Associates
P.O. Box 1333
E. Arlington, MA 02474-0071
Tax ID # 04-3407178

8/19/98
O.K. to $
G.S.

INVOICE Submitted To:

Ed Scott
Stone Container Corp.
P.O. Box 4707
Missoula, MT 59806-4707

August 6, 1998

In Reference To: P.O. 184-00138; Project B-20 (Bleaching Process Evaluation)

Invoice # 1026

7/15/98	Prepare for bleaching process briefing-review files 4 hrs @ $150	$600.00
7/22/98	Bleaching process briefing 1 hour @ $150	$150.00
TOTAL DUE		$750.00

PLEASE MAKE CHECK PAYABLE TO: POJASEK & ASSOCIATES

Payment Terms Net 30 Days. Please contact Dr. Robert Pojasek if there are any problems with this invoice at (781) 641-2422. Thank you.

Received 5/27/97
XC: Bob B
Paul M
Russ F
Bob May we Proceed? Please Advise
Ed.

MEMORANDUM

To: Ed Scott

From: R.B. Pojasek RBP

Subject: Bleaching Modification Evaluation

Date: May 23, 1997

I am awaiting your authorization of the extension of my contract before starting work on the qualitative criteria determinations for the criteria matrix you plan to use in your final evaluation. I would like to get some idea of your time frame in needing this information so you can complete your white paper. I understand that I will be providing you with a critique of this paper as well on this contract.

Is Stone Container close to an agreement with CHEER on the pollution prevention planning effort? Is so, do you have any timing in mind as to when the project would start? I will need some notice so we can schedule personnel to work on this assignment. Thank you.

Cambridge Environmental Inc
58 Charles Street Cambridge Massachusetts 02141
617-225-0810 FAX:617-225-0813 E-mail:camenv58@aol.com

XC: Bob B

Memo

To: Ed Scott

From: R.B. Pojasek RBP

Subject: Extension of Contract for Bleach Plant Modifications

Date: May 13, 1997

Should WE Proceed? Please Advise, Ed

With this memorandum, I am requesting additional funding to complete the evaluation of the bleach plant modifications. The additional funds will cover two new tasks which were agreed upon as a result of your discussions with the attorney for CHEER: 1.) I will prepare a critique of your "white paper" once it is complete; and 2.) I will prepare a listing of "qualitative factors" that can be used to rate the bleaching alternatives. If you require additional input from me during the preparation of your "white paper," I will be happy to assist.

I would suggest that you provide an additional $5,000. I will continue to bill on a time and materials basis with this as a not-to-exceed amount. Although my hourly billing rate has been increased to $175, we have decided to extend this contract at my old billing rate of $170. Please let me know when I can expect to receive the purchase order. Thank you.

Cambridge Environmental Inc

58 Charles Street Cambridge, Massachusetts 02141
617-225-0810 FAX: 617-225-0813 E-mail: camenv58@aol.com

Stone Container Corporation
Containerboard and Paper Division
Missoula Mill

To: **Steve Eastlick**
Mahendra Misra (Atlanta)

Date: **December 20, 1996**

From: **Ed Scott**

Subject: **Dr. Pojasek's Review of Stone's Evaluation Process for Selecting Bleaching Alternatives**

As we previously discussed, Stone Container (Stone) and a local environmental activist group (MT CHEER) have recently come to an agreement in principle regarding their lawsuit against Stone Container Corporation. One element in this agreement requires Stone to hire an *independent* consultant to review the process Stone has used to evaluate different bleaching alternatives. The consultant is as follows:

Dr. Robert B. Pojasek, Ph.D.
Cambridge Environmental Inc.
58 Charles Street (3rd Floor)
Cambridge, Massachusetts 02141

Phone: (617) 225- 0812
Fax: (617) 225 -0813

For a more detailed description of Dr. Pojasek's scope of work, please refer to the attached letter to Mr. Pojasek dated December 20, 1996.

If at any time you feel that Dr. Pojasek is requesting information *outside* the scope defined in the December 20, 1996, letter, please contact either Bob Boschee or myself.

Dr. Pojasek will be requesting information from both of you in the near future.

If you have any other questions, please contact me.

Thanks for your help,

Ed Scott

cc: Boschee
Clayton Smith(Atlanta)
Marxer
Frye
Barton (Atlanta) -->Willhite
Kohl --> Anderson

IQS Innovation Quality Service

Stone Container Corporation
Containerboard and Paper Division
Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707

Missoula Mill
406.626.4451
406.626.5986 Fax

December 20, 1996

Dr. Robert B. Pojasek, Ph.D.
Cambridge Environmental Inc.
58 Charles Street (3rd Floor)
Cambridge, Massachusetts 02141

(VIA FAX: (617) 225 - 0813)

Dear Bob:

As we discussed last week (December 11, 1996), Stone Container and MT. CHEER have come to an agreement in principle regarding their lawsuit. The agreement in principle includes that you will look at the bleaching sequences Stone is evaluating for use at the Missoula Mill. Time is of essence in order to be able to give your comments and recomendations timely consideration. This was agreed to because the final settlement agreement is unlikely to be signed before Stone Container decides on its technology option. There is no written agreement between Stone and MT CHEER concerning your involvement in Stone's analysis of bleaching alternatives (or any other issue for that matter).

Scope of Involvement in Bleaching Issue

You will promptly discuss, with the officials responsible for the bleaching analysis, the factors that Stone is evaluating, including the process Stone used to identify TCF technologies for further evaluation and the extent to which environmental costs and benefits of the various technology options are being included in the analysis. Stone will take your comments and suggestions into account and will reflect or respond to those comments, as appropriate, in its discussion of its analysis of bleaching alternatives with MT. CHEER that will be held after Stone has completed the analysis.

In otherwords, your involvement is limited in scope in order to address MT. CHEER's concerns that Stone adequately consider environmental issues in review of the different bleaching technologies. You are being hired to review Stone Container's evaluation process for bleaching alternatives and to suggest any additional considerations that should be factored into the analysis, but you are not being hired to suggest technology options for consideration or attempt to evaluate the pros and cons of different options yourself. After reviewing what Stone is doing, you might want to suggest that Stone consider alternatives, but you are not being retained to develop alternatives for us. We would not expect you, for example, to be contacting vendors.

There is not yet a "selected bleaching sequence" for which to prepare the "detailed process map" you requested. Stone will describe to you the information it has evaluated to date on the inputs to and outputs (including wastes) from the alternatives being evaluated.

After reviewing the analytical process Stone is using to identify and select a bleaching sequence, you can provide comments and suggestions to us, either orally or in writing, about that process.

Stone Officials Responsible For Bleaching Analysis

The following Stone personnel will provide you with information relative to your scope of work.

	Name	Phone #	Location
1.	Steve Eastlick	(406) 626 - 4451 Ext. 316	Missoula, MT
2.	Mahendra Misra	(770) 621 - 6752	Atlanta, GA

As we discussed earlier this week, these two individuals are presently putting together a summary of the bleaching sequences and factors used to evaluate them. This information will be faxed to you as soon as it is completed. If you have any questions regarding this information or need additional information, we will then coordinate either a conference call or mill visit (if necessary).

As we also discussed earlier this week, the fiber issue and pollution prevention plan will not start until further notice.

The work you are being hired to complete on the bleaching issue will be completed on a "time and materials basis" not to exceed $5,000 without further authorization. The purchase order number is 184 - 40653.

If you have any questions regarding this information, please contact me.

Sincerely,

Ed Scott
Environmental Manager

cc: Boschee
Marxer
Kohl
Eastlick
Misra (Atlanta)
Frye
Barton (Atlanta) --> Willhite

Comp. Reports

E00011653

P 168 580 084

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★ U.S.G.P.O. 1984-446-014

PS Form 3800, Feb. 1982

E00011654

Aug '99 Air Report

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3. Article Addressed to:

Darrell Geist
Montana CHEER
P.O. Box 7941
Missoula, MT 59807

Darrell Geist

4a. Article Number
P 168 580 084

4b. Service Type

- ☐ Registered
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- ☐ Return Receipt for Merchandise
- ☒ Certified
- ☐ Insured
- ☐ COD

Date of Delivery

HELLGATE STA. MISSOULA MT. 59802 USPS SEP 22 1999

5. Received By: *(Print Name)*

Darrell Geist

6. Signature *(Addressee or Agent)*

8. Addressee's Address *(Only if requested and fee is paid)*
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Missoula, MT 59806

PS Form **3811**, December 1994 102595-99-B-0223 Domestic Return Receipt

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Stone Container Corporation

Containerboard and Paper Division

Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707

Attn: Lisa Philips

E00011656

Stone Container Corporation
Containerboard and Paper Division
Mullan Road P.O. Box 4707 Missoula, Montana 59806-4707

Missoula Mill
406.626.4451
406.626.5986 Fax

September 20, 1999

Karen Wilson
Air and Waste Management Bureau
Permitting and Compliance Division
Department of Environmental Quality
301 West Alder
Missoula, MT 59802

Dear Karen:

Please find enclosed the air emission data recorded during August 1999 at Stone Container's Missoula Mill. This report provides the following source monitoring data:

- Exceedances and Malfunctions
- Total Reduced Sulfur (TRS) - Recovery Boilers and Lime Kilns
- Particulate and Opacity Data - Recovery Boilers
- Nitrogen Oxides (NO_x) and Sulfur Dioxide (SO_2) - Waste Fuel Boiler
- Waste Fuel Boiler - Steam Production Data
- Mill Production Rates
- Source Test Data

As you know, the mill installed a new TRS analyzer on the No. 3 Lime Kiln in February of this year. On August 11, 1999 the mill started using the new analyzer for compliance monitoring following certification. If you have any questions concerning the enclosed report, please contact me at (406) 626-4451.

Sincerely,

Lisa Philips

Lisa K. Philips
Environmental Engineer

cc: Boschee → Marxer → Kohl → Evans
Scott
Mills → Stengel
Olson → Madison → Heath
Willhite
Wahl, U.S. EPA
Carlson, Missoula County Health Dept.
Smith, Missoula City Health Board
Norton, DEQ (Air and Waste Management Bureau)
Geist, MT CHEER (via Certified Mail)
Bile B.3

PS Form 3811, July 1983

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. **The return receipt fee will provide you the name of the person delivered to and the date of delivery.** For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

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President
Cold Mtn / Cold Rivers
P.O Box 7941
Missoula MT 59807

4. Type of Service:

☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature – Addressee

X Darrell Gt

6. Signature – Agent

X

7. Date of Delivery

8. Addressee's Address *(ONLY if requested and fee paid)*

HELLGATE STA. MISSOULA, MT. 59802-4598
SEP 2 2 1999
USPS

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E00011658

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PENALTY FOR PRIVATE USE, $300

RETURN TO

T. McLaughlin - Smurfit-Stone

(Name of Sender)

14377 Pulp Mill Rd

(No. and Street, Apt., Suite, P.O. Box or R.D. No.)

Missoula MT 59802

(City, State, and ZIP Code)

E00011659

P 168 580 105

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Street and No.	
P.O., State and ZIP Code P.O. Box 7941, Mslla 59807	
Postage	$
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Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date August QP Report 9/20/99	

★ U.S.G.P.O. 1984-446-014

PS Form 3800, Feb. 1982

E00011660

Stone Container Corporation
Containerboard, Paper and Pulp Division
14377 Pulp Mill Rd., P.O. Box 4707, Missoula, Montana 59806-4707

Robert C. Boschee
General Manager
Missoula Mill
406.626.4451
406.626.5986 Fax

September 15, 1999

Water Protection Bureau
DEQ
PO Box 200901
Helena, Mt. 59620-0901

U.S. EPA
Federal Building
Drawer 10096
Helena, Mt. 59626

Re: Smurfit-Stone Container Corporation NPDES Discharge Report for: **August 1999**

Enclosed are the Smurfit-Stone Container Corporation's Missoula mill NPDES discharge report and discharge monitoring report (DMR) for August 1999.

There was no Direct discharge to the Clark Fork river during the month and there were no instances where the in-stream color difference was greater than 5 SCU. During the period of 8/11-17 the recording pen on the temperature recorder at the 6-mile monitoring station was not contacting the chart paper. Note that direct discharge was **not** occurring during this period.

Should you have any questions regarding this report, please contact me at (406) 626-4451, x226.

Sincerely,

Terrance J. McLaughlin
Environmental Engineer – Water/Wastewater

Cc: ~~Boschee~~ → Marxer → Scott → file
Director, Clark Fork – Pend Orielle Coalition
President, Cold Mountains, Cold Rivers (Via Certified Mail)
File: DMR/98-99
Lamey w/o Attachments
Willhite (Atlanta)
Berg; Fish, Wildlife & Parks
Control Testers

P 168 580 131

RECEIPT FOR CERTIFIED MAIL

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Sent to Darrell Geist Montana CHEER	
Street, Apt. No., or PO Box No. P.O. Box 7941	
P.O., State and ZIP Code Missoula, MT 59807 July Monthly Air Report	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
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PS Form 3800, Feb. 1982 ★ U.S.G.P.O. 1984-446-014

E00011662

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2. ☐ Restricted Delivery

3. Article Addressed to:

Darrell Geist
Montana CHEER
P.O. Box 7941
Missoula, MT 59807

4a. Article Number
P 168 580 131

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
8/23/99

5. Received By: *(Print Name)*

6. Signature *(Addressee or Agent)*
X Aaron Coffe

8. Addressee's Address *(Only if requested and fee is paid)*

PS Form **3811**, December 1994 102595-99-B-0223 Domestic Return Receipt

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USPS
Permit No. G-10

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Attn. Lisa Philips
Smurfit-Stone Container
P.O. Box 4707
Missoula, MT 59806

RE: Monthly Air Report

E00011664

Smurfit-Stone
Containerboard and Paper Division

August 20, 1999

Karen Wilson
Air and Waste Management Bureau
Permitting and Compliance Division
Department of Environmental Quality
301 West Alder
Missoula, MT 59802

Dear Karen:

Please find enclosed the air emission data recorded during July 1999 at Stone Container's Missoula Mill. This report provides the following source monitoring data:

- Exceedances and Malfunctions
- Total Reduced Sulfur (TRS) - Recovery Boilers and Lime Kilns
- Particulate and Opacity Data - Recovery Boilers
- Nitrogen Oxides (NO_x) and Sulfur Dioxide (SO_2) - Waste Fuel Boiler
- Waste Fuel Boiler - Steam Production Data
- Mill Production Rates

As you are aware, the Missoula Mill performed its annual maintenance outage in July. If you have any questions concerning the enclosed report, please contact me at (406) 626-4451.

Sincerely,

Lisa Philips

Lisa K. Philips
Environmental Engineer

cc: Boschee → Marxer → Kohl → Evans
Scott
Mills → Stengel
Olson → Madison → Heath
Willhite
Wahl, U.S. EPA
Carlson, Missoula County Health Dept.
Smith, Missoula City Health Board
Norton, DEQ (Air and Waste Management Bureau)
Geist, MT CHEER (via Certified Mail)

Smurfit-Stone Container Corporation
Missoula Mill
14377 Pulp Mill Road P.O. Box 4707 Missoula, Montana 59806-4707 phone 406-626-4451 fax 406-626-5986

PS Form 3811, July 1983

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. **The return receipt fee will provide you the name of the person delivered to and the date of delivery.** For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

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2. ☐ Restricted Delivery.

3. Article Addressed to:

President
Cold Mountain/Cold Rivers
PO Box 7941
Missoula MT 59807

4. Type of Service:

☐ Registered ☐ Insured
☐ Certified ☐ COD
☐ Express Mail

Article Number

P168580417

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature – Addressee

X X [signature]

6. Signature – Agent

X

7. Date of Delivery

HELIGATE STA. MISSOULA MT. 59802-4598
AUG 13 1999
USPS

8. Addressee's Address (*ONLY if requested and fee paid*)

DOMESTIC RETURN RECEIPT

E00011666

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U.S. MAIL

PENALTY FOR PRIVATE USE, $300

RETURN TO

Ed Scott % Smuggler Stone

(Name of Sender)

PO Box 4707

(No. and Street, Apt., Suite, P.O. Box or R.D. No.)

Missoula MT 59806-4707

(City, State, and ZIP Code)

E00011667

Stone Container Corporation
Container board, Paper and Pulp Division
14377 Pulp Mill Rd., P.O. Box 4707, Missoula, Montana 59806-4707

Robert C. Boschee
General Manager
Missoula Mill
406.626.4451
406.626.5966 Fax

August 11, 1999

Water Protection Bureau
DEQ
PO Box 200901
Helena, Mt. 59620-0901

U.S. EPA
Federal Building
Drawer 10096
Helena, Mt. 59626

Re: Stone Container Corporation NPDES Discharge Report for: **July 1999**

Enclosed are Stone Container Corporation's Missoula mill NPDES discharge report and discharge monitoring report (DMR) for **July 1999**.

Direct discharge to the Clark Fork river occurred as follows:

Outfall #	Date Started	Time Started	Date Stopped	Time Stopped	Notes:
001	NA	NA	7/6/99	15:30	Discharge shut off due to problems with the flow meter.
001	7/9/99	07:10	7/11/99	08:55	River temperature >/= 65 deg. F
001	7/16/99	07:00	7/19/99	06:30	River temperature >/= 65 deg. F

There were no instances where the in-stream color difference was greater than 5 SCU.

Should you have any questions regarding this report, please contact me at (406) 626-4451, x226.

Sincerely,

Terrance J. McLaughlin
Environmental Engineer – Water/Wastewater

Cc: ~~Boschee~~ Scott Griffin
Willhite; Atlanta
File: DMR/98-99
Control Testers
Director, Clark Fork – Pend Orielle Coalition
Berg; Fish, Wildlife & Parks
Lamey w/o Attachments
President, Cold Mountains, Cold Rivers (Via Certified Mail)

Smurfit-Stone
Containerboard and Paper Division

July 23, 1999

Chief
c/o Katherine Schmidt (DOJ-Denver)
Environmental & Natural Resources
U.S. Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, D.C. 20044
Re: DOJ #90-5-2-1-1975

Dear Chief:

Enclosed is an addendum, providing data from the second quarter of 1999, for Stone Container's Missoula Mill. This report provides the data required by Civil Action No. CV 96-017-M.

A new data acquisition system (DAS) was installed for the recovery boilers in February of this year. In June, Stone completed the second phase of this project: reconfiguration of the relationship between the new DAS and the Honeywell system (process control system for the No. 4 Recovery Boiler). During this phase of the project, it was necessary to reprogram the new DAS and the Honeywell system. As a result of this project, Stone experienced some monitor downtime (details can be found in Section 1.2 of this addendum).

If you have any questions or comments concerning this report, please call me at 406/626-4451.

Sincerely,

Lisa Philips

Lisa Philips
Environmental Engineer

cc: Tebbutt, Western Environmental Law Center
Scott

Smurfit-Stone Container Corporation
Missoula Mill
14377 Pulp Mill Road P.O. Box 4707 Missoula, Montana 59806-4707 phone 406-626-4451 fax 406-626-5986