OCDO--9800 4275

ZIMMER SLIPSTREAM MAGNESIUM HYDROXIDE RECOVERY DEMONSTRATION

GRANT AGREEMENT NO: CDO/D-921-004

VOLUME II OF II

RECEIVED
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DEPARTMENT OF DEVELOPMENT
OHIO COAL DEV OFFICE

APPENDICES

PREPARED FOR

OHIO COAL DEVELOPMENT OFFICE

SUBMITTED BY

THE CINCINNATI GAS AND ELECTRIC COMPANY
DRAVO LIME COMPANY

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DLC-5248

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MG-ENHANCED LIME FGD
MATERIAL BALANCE
BASIS AND ASSUMPTIONS:

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MEGAWATTS (Gross)	1400

COAL AS RECEIVED ANALYSIS PERCENT:

CARBON	66.30
HYDROGEN	3.23
OXYGEN	3.90
NITROGEN	2.41
SULFUR	3.60
CHLORINE	0.06
MOISTURE	10.00
ASH	10.50
TOTAL	100.00

HEATING VALUE,BTU/LB	11490
HEAT UP RATE, BTU/KW	9700
GAS INLET TEMP oF	300
GAS OUTLET TEMP oF	125
ESP REMOVAL EFF.,%	99
SULFUR OVERHEAD,%	100

DENSITY FORMULA COEFFICIENTS:

SLOPE	1.00737
INTERCEPT	0.98388

$Y=b*m^X$

Maysville lack River

LIME ANALYSIS %		Lime Frac. 0	Lime Frac. 1
CaO	95.0	91	95
MgO	3.0	6	3
INERTS	2.0	3	2
	100	100	100

EQUIPMENT (operating)

NO. OF SCRUBBERS	5
NO. OF RECYCLE SUMPS	5
NO. OF THICKENERS	2
NO. OF FILTERS	4

OPERATION

LIME SLURRY FEED %	20	
MODULE SOLIDS %	6	) based on
0.35 THICKENER UNDERFLOW %	30	) bone-dry solids
FILTER CAKE %	30	
FIXATION OPERATION Hrs.	24	
SO2 REMOVAL EFFICIENCY %	92	
ASSUMED STOICHOMETRY	1.03	
OPERATING L/G	21	
CaO IN LIME FEED,LB/HR	68312	
TOTAL LIME FEED,LB/HR	71908	
OPERATING pH SCRUBBER FEED	6.2	
AVAILABLE Mg %	75.0	

SLUDGE COMPOSITION:

COMPONENT	mol.wt.	mol%	mass%
CaSO3*1/2H2O	129	90	89
CaSO4*1/2H2O	145	10	11

AVERAGE MOLECULAR WEIGHT:
130.6

HUMIDITY OF AIR	0 #/# OF AIR
% EXCESS AIR	40

Mg(OH)2 RECOVERY OPERATION	
TOF Bleed to Mg Recovery Plant (GPM)	100
Primary Gyp.sep%	97
Primary Mg(OH)2 sep%	82
Primary Inerts sep.%	50
Primary HCOF Solids %	1.75
Mg(OH)2 TUF Solids %	18
Fraction of Mg(OH)2 TUF to Oxidizer	0.005
Air Stoichiometry	8

Sulfuric Acid Requirements	
TOF pH	6.20
Oxidizer pH	5.00
Sulfuric Conc. (wt. %)	90
Secondary Gyp.sep%	88
Secondary Mg(OH)2 sep%	53
Secondary Inerts sep.%	40
Secondary HCOF Solids %	0.71
raction of Sec. HCUF to Oxid.	0.01

Overall Mg(OH)2 Recovery % 91.54

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MG-ENHANCED LIME FGD

MATERIAL BALANCE

CALCULATIONS:

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HEAT INPUT,MM BTU/HR	13580
FUEL FIRING RATE,LB/HR	1181939
SO2 IN,LB/HR	85100
SO2 OUT,LB/HR	6808
SO2 REMOVED,LB/HR	78292
SO2 REMOVED,MOL/HR	1223.3
SO2 Emission,#/MM BTU	0.50
SLUDGE GENERATED(DRY) LB/HR	154521
SO2 PICUP BY MG(OH)2 MOL/HR	40.1
CAKE LIQUOR #MgSO3/#H2O	0.004
CaO ACTIVE MOLES/100#LIME	1.7
MgO ACTIVE MOLES/100#LIME	1.8
TOTAL ACTIVE MOLES(CaO+MgO)	1.5
LIQ. SO4-/SO3= RATIO	6
pKa VALUE	6.2
pH	

Frac. SO3 0.61

	#MOLES	#/HR	%vol.
STOICH O2 REQD.	76176		
% EXCESS AIR	40		
GROSS O2 REQD.	106646	3412685	
NET O2	31911	1021148	5.99
NITROGEN	402211	11261906	75.47
CARBON DIOXIDE	65302	2873295	12.25
WATER	32200	579603	6.04
SULFUR DIOXIDE	1330	85100	0.25
HYDROGEN CHLORIDE	20	729	0.00
ASH		1241	
TOTAL FLUE GAS	532974	15821780	100.00
SO2 lbs./MMBTU	6.27		
SO2 lbs./MMBTU	0.50		
	19088.323		

STACK GAS OUTLET TEMP	VAPOR PRESSURE (PSIA)
120	1.6927
122	1.7891
124	1.8901
126	1.9959
128	2.1068
130	2.2230
132	2.3445
134	2.4171
136	2.6047
138	2.7438
140	2.8892
150	3.718
160	4.741

TEMP SELECTED: 125

EXIT GAS % SATN (ASSUMED): 100

VAPOR PRESSURE:
1.943 PSIA
0.132 ATM

FLUE GAS OXYGEN, PERCENT:
5.99

Regression Output:

Constant	-7.405054
Std Err of Y Est	0.12703
R Squared	0.9796907
No. of Observations	13
Degrees of Freedom	11
X Coefficient(s)	0.0743802
Std Err of Coef.	0.003229

Black River Lime - Material Balance

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MG-ENHANCED LIME FGD

MATERIAL BALANCE

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STREAM NO BASE CASE COMPONENT	MW	1 LIME FEED	2 SERVICE WATER	3 SLAKED LIME	4 SERVICE WATER	5 LIME SLURRY	6 PER MOD. LIME SLURRY	7 TOTAL FLUE GAS IN	8 TOTAL FLUE GAS OUT	9 PER MOD. FLUE GAS IN	10 PER MOD. FLUE GAS OUT	11 PER MOD. SCRUB. BLWDWN	12 TOTAL BLWDWN	13 FEED TO THICKNR TOTAL	14 FEED TO EACH THICKNR
N2	28.0							11261906	11261906	2252381	2252381				
CO2	44.0							2873295	2873295	574659	574659				
O2	32.0							1021148	1021148	204230	204230				
SO2	64.0							85100	6808	17020	1362				
HCl	36.5							729	0	146	0				
H2O(VAP)	18.0							579603	1369489	115921	273898				
WATER	18.0		215723	192794	186261	379055	75811					494910	2474550	2492812	1246406
MgSO3	104.3											1851	9254	9112	4556
MgSO4	120.3											3447	17234	17234	8617
MgCl2	95.1											1260	6299	6430	3215
CaSO3*1/2H2O	129.0											27473	137365	137542	68771
CaSO4*1/2H2O	145.0											3431	17156	17156	8578
CaSO4*2H2O	172.0													664	332
FLY ASH								1241		248		248	1241	1241	621
MgO	40.3	2157												0	
CaO	56.0	68312												0	
Ca(OH)2	74.0			90270		90270	18054					543	2716	2717	1358
Mg(OH)2	58.3			3128		3128	626					40	199	229	114
INERTS		1438		1366		1366	273					273	1366	1369	685
TOTAL(LB/HR)		71908	215723	287558	186261	473819	94764	15823021	16532646	3164604	3306529	533476	2667381	2686503	1343252
TOTAL GAS								15821780	16532646	3164356	3306529				
TOTAL SOLIDS		71908		94764		94764	18953	1241	0	248	0	32009	160043	160917	80458
TOTAL(MOLS/HR) GAS								532954	575613	106591	115123				
% SOLIDS		100	0	33	0	20	20					6	6	6	6
SP. GR.			1.00	1.25	0.98	1.14	1.14					1.03	1.03	1.03	1.03
LIQUID(GPM)			431	459	379	832	166					1038	5188	5226	2613
AVE.MOL.WT.								29.7	28.7	29.7	28.7				
BULK DENSITY(#/CFT															
TEMP(oF)		60	60		60			300	125	300	125				
PRESS(psia)								14.7	14.7	14.7	14.7				
GAS FLOW (SCFM@60)								3366491	3635956	673298	727191				
(ACFM)								4921562	4089923	984312	817985				
SO2 (PPM) Dry Gas								2655	213	2655	213				

Black River Lime - Material Balance

STREAM NO BASE CASE COMPONENT	MW	15 EACH TUF	16 EACH TOF	17 TOTAL TUF	18 TOTAL TOF	19 TOTAL LIQUOR TO SCRUB.	20 TOTAL FILTER FEED	20A FILTER FEED DESIGN	21 TOTAL FILTER CAKE	21A FILTER CAKE DESIGN	22 TOTAL FILTRATE	23 FILTRATE RETURN	24 SERVICE WATER	26 RECYCLE RATE PER SCRB.
N2	28.0													
CO2	44.0													
O2	32.0													
SO2	64.0													
HCl	35.5													
H2O(VAP)	18.0													
WATER	18.0	185300	1061106	370600	2122212	2104003	370600	370600	370600	370600	0	0	769983	8192832
MgSO3	104.3	677	3878	1355	7757	7579	1355	1355	1355	1355	0	0		30640
MgSO4(l)	120.3	1281	7336	2562	14672	14336	2562	668	2562	2562	0	0		57058
MgCl2	95.1	478	2737	956	5474	5349	956	956	956	956	0	0		20856
CaSO3*1/2H2O	129.0	68771		137542			137542	137542	137542	137542				454793
CaSO4*1/2H2O	145.0	8578		17156			17156	17156	17156	17156				56800
CaSO4*2H2O	172.0	332		664			664		664	664				
FLY ASH		621		1241			1241	1241	1241	1241				4109
MgO	40.3													
CaO	56.0													
Ca(OH)2	74.0	1358		2717	0	0	2717	2717	2717	2717	0	0		8991
Mg(OH)2	58.3	114		229	0	0	229	229	229	229	0	0		659
INERTS		685		1369			1369	1369	1369	1369				4523
TOTAL(LB/HR)		268195	1075057	536389	2150114	2131267	536389	533832	536389	536389	0	0	769983	8831263
TOTAL GAS														
TOTAL SOLIDS		80458	0	160917	0	0	160917	160253	160917	160917	0	0	0	529876
TOTAL(MOLS/HR)														
% SOLIDS		30	0	30	0	0	30	30	30	30	0	0	0	6
SP. GR.		1.23	0.98	1.23	0.98	0.98	1.23	1.23	1.23	1.23	0.98	0.98	0.98	1.03
LIQUID(GPM)		437	2185	875	4371	4332	875	870	875	875	0	0	1565	17178
AVE.MOL.WT.														
BULK DENSITY(#/CFT)														
TEMP(oF)													60	
PRESS(psia)														
GAS FLOW (SCFM@60)														
(ACFM)														
PPM Cl-					2546	2510	1782	1791	3410	3410	3410	3410		2512

MG-ENHANCED LIME FGD
Mg(OH)2 Recovery Process
Material Balance

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tream Number	M.W.	1 Bleed fro TOF	2 Oxid. Feed	3 Acid	4 Oxid. Air	5 Oxid. Vent	6 Oxid. Blwdwn	7 Lime Slurry	8 Lime	9 Regen. Tank	10 Primary HCOF	11 Primary HCUF
Compound												
N2	28.0				819	819						
O2	32.0				218	191						
H2O (VAP)	18.0					97						
H2O	18.0	48556	48751	0			48656	2354		50886	18577	32309
H2SO4	98.1		0	3								
MgSO3(l)	104.3	177	177				0			0	0	0
MgSO4(l)	120.3	336	336				544			0	0	0
MgCl2	95.1	125	126				126					
CaCl2	111.0		0							147	54	93
CaSO3.1/2H2O	129.0		1									
CaSO4.1/2H2O	145.0											
CaSO4.2H2O	172.0	0	7				8			786	24	762
Flyash												
MgO	40.3								11			
CaO	56.1								338			
CaCO3	100.0											
MgCO3	84.3											
Ca(OH)2	74.1	0	0				0	446		13	11	2
Mg(OH)2	58.3	0	2				0	15		356	292	64
Inerts		0	0				0.06	9	9	9	5	5
TOTAL LBS./HR.		49194	49399	4	1037	1010	49333	2824	358	52197	18961	33235
TOTAL SOLIDS		0	8	0	0		8	471	358	1164	331	833
% SOLIDS		0.00	0.00	0.00			0.02	17	100	2	2	3
SPECIFIC GRAV.		0.98	0.98	0.98			0.98	1.11	2.05	1.00	1.00	1.00
LIGUID GPM		100	99	0.01			99	5	0.34	103	38	66
% solids												
GAS FLOW (SCFM@60)					228	257						
(ACFM)					48	286						

Black River Lime - Material Balance

MG-ENHANCED LIME FGD
Mg(OH)2 Recovery Process
Material Balance

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tream Number	M.W.	12 Second. HC Feed	13 Second. HCOF	14 Second. HCUF	15 Sec. HCUF leed to Ox	16 Mg(OH)2 TUF	17 Mg(OH)2 TOF	18 Mg(OH)2 TOF Rec.	19 Mg(OH)2 TUF to Ox	20 Mg(OH)2 Product
Compound										
N2	28.0									
O2	32.0									
H2O (VAP)	18.0									
H2O	18.0	36422	17976	18261	184	2093	34460	4113	10	2082
H2SO4	98.1									
MgSO3(l)	104.3	0	0	0	0	0	0	0	0	0
MgSO4(l)	120.3	0	0	0	0	0	0	0	0	0
MgCl2	95.1									
CaCl2	111.0	105	52	53	1	6	99	12	0.03	6
CaSO3.1/2H2O	129.0									
CaSO4.1/2H2O	145.0									
CaSO4.2H2O	172.0	762	91	664	7	115	0		1	114
Flyash										
MgO	40.3									
CaO	56.1									
CaCO3	100.0									
MgCO3	84.3									
Ca(OH)2	74.1	2	1	1	0.01	12			0.06	12
Mg(OH)2	58.3	64	34	30	0.30	326			2	324
Inerts		5	2	3	0.03	7			0.03	7
TOTAL LBS./HR.		37360	18156	19011	192	2558	34559	4125	13	2546
TOTAL SOLIDS		833	129	698	7	459	0	0	2	457
% SOLIDS		2	1	4	4	18	0.00	0	18	18
SPECIFIC GRAV.		1.00	0.99	1.01	1.01	1.12	0.98	0.98	1.12	1.12
LIGUID GPM		74	36	37	0.38	5	69	8	0.02	4
% solids										
GAS FLOW (SCFM@60)										
(ACFM)										

Black River Lime - Material Balance

STREAM NO		FGD		FGD		Mg(OH)2		Mg(OH)2		FGD		FGD	
BASE CASE		RECYCLE		THCKNR		OXIDIZER		REGENERATION		FILTER		RETURN	
		LIQUOR		FEED		BLWDWN		BLWDWN		FEED		LIQ. TO ABS.	
		lb/hr	mg/l	lb/hr	mg/l	lb/hr	mg/l	lb/hr	mg/l	lb/hr	mg/l	lb/hr	mg/l
ION	MW												
Alka. as CaCO3			1090		1066								1046
H2O	18.0	8192832		2492812		48656		50886		370600		2104003	
Cl-	35.5	15550	1872	4794	1897	0	0	94	1836	713	1907	3988	1870
HSO3-	81.1	9214	1109	2740	1084	0	0	0	0	0	0	0	0
SO3=	80.1	14421	1736	4288	1697	0	0	0	0	1040	2782	5818	2729
SO4=	96.1	45563	5486	13762	5446	434	8798	0	0	2046	5474	11448	5369
S2O3=	112.1		0		0	0	0	0	0	0	0	0	0
Mg+2	24.3	24005	2890	7250	2869	110	2227	0	0	1078	2884	6031	2828
Ca+2	40.1		0		0	0	0	53	1038	0	0	0	0
Total liqu	lb/hr	8301387		2525587		49325		51032		373579		2131267	
	gpm	16603		5051		99		102		747		4263	
	lpm	62847		19120		373		386		2828		16135	
Total soli	lb/hr	529876		160917		8		1164		160917		0	
Total gas	lb/hr					0		0		0		0	
Total stre	lb/hr	8831263		2686503		49333		52197		536389		2131267	
	gpm	17178		5226		99		103		875		4332	
Wt.% solids		6		6		0.02		2		30		0	
pH		6.20		6.20								6.20	

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WATER AND SO2 BALANCE AROUND SCRUBBER

	LB./HR	GPM
WATER IN	3846209	7692
WATER OUT	3854688	7709
DIFFERENCE	-8479	-17
SO2 IN	97377	
SO2 OUT	97377	
DIFFERENCE	0	

Ca AND Mg BALANCE AROUND SCRUBBER

	LB./HR
Ca IN	48794
Ca OUT	48794
DIFFERENCE	0
Mg IN	7332
Mg OUT	7330
DIFFERENCE	2

WATER AND SO2 BALANCE AROUND Plant

	LB./HR	GPM
WATER IN	1730995	3462
WATER OUT	1753092	3506
DIFFERENCE	-22097	-44

SO2 BALANCE AROUND PLANT

	LB./HR
SO2 IN	85102
SO2 OUT	85102

Ca AND Mg BALANCE AROUND THE PLANT

	LB./HR
Ca IN	49035
Ca OUT	49033
DIFFERENCE	2
Mg IN	1307
Mg OUT	1308
DIFFERENCE	-1

Cl BALANCE AROUND THE PLANT

	LB./HR
Cl IN	709
Cl OUT	713
DIFFERENCE	-4

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COAL AS RECEIVED ANALYSIS PERCENT:

CARBON	66.30
HYDROGEN	3.23
OXYGEN	3.90
NITROGEN	2.41
SULFUR	3.60
CHLORINE	0.06
MOISTURE	10.00
ASH	10.50
TOTAL	100.00

HEATING VALUE,BTU/LB	11490
HEAT UP RATE, BTU/KW	9700
GAS INLET TEMP oF	300
GAS OUTLET TEMP oF	125
ESP REMOVAL EFF.,%	99
SULFUR OVERHEAD,%	100

DENSITY FORMULA COEFFICIENTS:

SLOPE	1.00737
INTERCEPT	0.98388

$Y=b*m^X$

LIME ANALYSIS %		Maysville Lack River Lime Frac.	Lime Frac.
		1	0
CaO	91.0	91	95
MgO	6.0	6	3
INERTS	3.0	3	2
	100	100	100

EQUIPMENT (operating)

NO. OF SCRUBBERS	5
NO. OF RECYCLE SUMPS	5
NO. OF THICKENERS	2
NO. OF FILTERS	4

OPERATION

LIME SLURRY FEED %	20	
MODULE SOLIDS %	6	) based on
0.35 THICKENER UNDERFLOW %	30	) bone-dry solids
FILTER CAKE %	30	
FIXATION OPERATION Hrs.	24	
SO2 REMOVAL EFFICIENCY %	92	
ASSUMED STOICHOMETRY	1.03	
OPERATING L/G	21	
CaO IN LIME FEED,LB/HR	66024	
TOTAL LIME FEED,LB/HR	72553	
OPERATING pH SCRUBBER FEED	6.2	
AVAILABLE Mg %	75.0	

SLUDGE COMPOSITION:

COMPONENT	mol.wt.	mol%	mass%
CaSO3*1/2H2O	129	90	89
CaSO4*1/2H2O	145	10	11

AVERAGE MOLECULAR WEIGHT:
130.6

HUMIDITY OF AIR	0 #/# OF AIR
% EXCESS AIR	40

Mg(OH)2 RECOVERY OPERATION	
TOF Bleed to Mg Recovery Plant (GPM)	100
Primary Gyp.sep%	97
Primary Mg(OH)2 sep%	82
Primary Inerts sep.%	50
Primary HCOF Solids %	1.75
Mg(OH)2 TUF Solids %	18
Fraction of Mg(OH)2 TUF to Oxidizer	0.005
Air Stoichiometry	8

Sulfuric Acid Requirements	
TOF pH	6.20
Oxidizer pH	5.00
Sulfuric Conc. (wt. %)	90
Secondary Gyp.sep%	88
Secondary Mg(OH)2 sep%	53
Secondary Inerts sep.%	40
Secondary HCOF Solids %	0.71
raction of Sec. HCUF to Oxid.	0.01

Overall Mg(OH)2 Recovery % 91.54

Maysville Lime - Material Balance

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HEAT INPUT,MM BTU/HR	13580
FUEL FIRING RATE,LB/HR	1181939
SO2 IN,LB/HR	85100
SO2 OUT,LB/HR	6808
SO2 REMOVED,LB/HR	78292
SO2 REMOVED,MOL/HR	1223.3
SO2 Emission,#/MM BTU	0.50
SLUDGE GENERATED(DRY) LB/HR	149183
SO2 PICUP BY MG(OH)2 MOL/HR	81.0
CAKE LIQUOR #MgSO3/#H2O	0.008
CaO ACTIVE MOLES/100#LIME	1.6
MgO ACTIVE MOLES/100#LIME	1.7
TOTAL ACTIVE MOLES(CaO+MgO)	
LIQ. SO4-/SO3= RATIO	1.5
pKa VALUE 6	Frac. SO3 0.61
pH 6.2	

	#MOLES	#/HR	%vol.
STOICH O2 REQD.	76176		
% EXCESS AIR	40		
GROSS O2 REQD.	106646	3412685	
NET O2	31911	1021148	5.99
NITROGEN	402211	11261906	75.47
CARBON DIOXIDE	65302	2873295	12.25
WATER	32200	579603	6.04
SULFUR DIOXIDE	1330	85100	0.25
HYDROGEN CHLORIDE	20	729	0.00
ASH		1241	
TOTAL FLUE GAS	532974	15821780	100.00
SO2 lbs./MMBTU	6.27		
SO2 lbs./MMBTU	0.50		
	19088.323		

STACK GAS OUTLET TEMP	VAPOR PRESSURE (PSIA)
120	1.6927
122	1.7891
124	1.8901
126	1.9959
128	2.1068
130	2.2230
132	2.3445
134	2.4171
136	2.6047
138	2.7438
140	2.8892
150	3.718
160	4.741

TEMP SELECTED: 125

EXIT GAS % SATN (ASSUMED): 100

VAPOR PRESSURE:
1.943 PSIA
0.132 ATM

FLUE GAS OXYGEN, PERCENT:
5.99

Regression Output:

Constant	-7.405054
Std Err of Y Est	0.12703
R Squared	0.9796907
No. of Observations	13
Degrees of Freedom	11
X Coefficient(s)	0.0743802
Std Err of Coef.	0.003229

::
MG-ENHANCED LIME FGD
MATERIAL BALANCE

PRINTED:
13:43
21-Mar-96

STREAM NO BASE CASE COMPONENT	MW	1 LIME FEED	2 SERVICE WATER	3 SLAKED LIME	4 SERVICE WATER	5 LIME SLURRY	6 PER MOD. LIME SLURRY	7 TOTAL FLUE GAS IN	8 TOTAL FLUE GAS OUT	9 PER MOD. FLUE GAS IN	10 PER MOD. FLUE GAS OUT	11 PER MOD. SCRUB. BLWDWN	12 TOTAL BLWDWN	13 FEED TO THICKNR TOTAL	14 FEED TO EACH THICKNR
N2	28.0							11261906	11261906	2252381	2252381				
CO2	44.0							2873295	2873295	574659	574659				
O2	32.0							1021148	1021148	204230	204230				
SO2	64.0							85100	6808	17020	1362				
HCl	36.5							729	0	146	0				
H2O(VAP)	18.0							579603	1369489	115921	273898				
WATER	18.0		217660	194479	187674	382153	76431					477247	2386234	2387307	1193654
MgSO3	104.3											3772	18859	18662	9331
MgSO4	120.3											6856	34280	34280	17140
MgCl2	95.1											1289	6445	6624	3312
CaSO3*1/2H2O	129.0											26524	132620	132863	66432
CaSO4*1/2H2O	145.0											3313	16563	16563	8282
CaSO4*2H2O	172.0													1378	689
FLY ASH								1241		248		248	1241	1241	621
MgO	40.3	4353												0	
CaO	56.0	66024												0	
Ca(OH)2	74.0			87245		87245	17449					543	2716	2718	1359
Mg(OH)2	58.3			6312		6312	1262					199	995	1052	526
INERTS		2177		1981		1981	396					396	1981	1989	994
TOTAL(LB/HR)		72553	217660	290017	187674	477691	95538	15823021	16532646	3164604	3306529	520387	2601933	2604677	1302339
TOTAL GAS								15821780	16532646	3164356	3306529				
TOTAL SOLIDS		72553		95538		95538	19108	1241	0	248	0	31223	156116	157804	78902
TOTAL(MOLS/HR) GAS								532954	575613	106591	115123				
% SOLIDS		100	0	33	0	20	20					6	6	6	6
SP. GR.			1.00	1.25	0.98	1.14	1.14					1.03	1.03	1.03	1.03
LIQUID(GPM)			435	463	381	838	168					1012	5061	5064	2532
AVE.MOL.WT.								29.7	28.7	29.7	28.7				
BULK DENSITY(#/CFT															
TEMP(oF)		60	60		60			300	125	300	125				
PRESS(psia)								14.7	14.7	14.7	14.7				
GAS FLOW (SCFM@60)								3366491	3635956	673298	727191				
(ACFM)								4921562	4089923	984312	817985				
SO2 (PPM) Dry Gas								2655	213	2655	213				

Maysville Lime - Material Balance

::

MG-ENHANCED LIME FGD

MATERIAL BALANCE

PRINTED:
13:43
21-Mar-96

STREAM NO BASE CASE COMPONENT	MW	15 EACH TUF	16 EACH TOF	17 TOTAL TUF	18 TOTAL TOF	19 TOTAL LIQUOR TO SCRUB.	20 TOTAL FILTER FEED	20A FILTER FEED DESIGN	21 TOTAL FILTER CAKE	21A FILTER CAKE DESIGN	22 TOTAL FILTRATE	23 FILTRATE RETURN	24 SERVICE WATER	26 RECYCLE RATE PER SCRB.
N2	28.0													
CO2	44.0													
O2	32.0													
SO2	64.0													
HCl	35.5													
H2O(VAP)	18.0													
WATER	18.0	179623	1014031	359245	2028062	2026958	359245	359245	359245	359245	0	0	756228	8099155
MgSO3	104.3	1404	7927	2808	15854	15479	2808	2808	2808	2808	0	0		64008
MgSO4(l)	120.3	2579	14561	5158	29121	28432	5158	1346	5158	5158	0	0		116349
MgCl2	95.1	498	2814	997	5627	5494	997	997	997	997	0	0		21875
CaSO3*1/2H2O	129.0	66432		132863			132863	132863	132863	132863				450128
CaSO4*1/2H2O	145.0	8282		16563			16563	16563	16563	16563				56218
CaSO4*2H2O	172.0	689		1378			1378		1378	1378				
FLY ASH		621		1241			1241	1241	1241	1241				4212
MgO	40.3													
CaO	56.0													
Ca(OH)2	74.0	1359		2718	0	0	2718	2718	2718	2718	0	0		9218
Mg(OH)2	58.3	526		1052	0	0	1052	1052	1052	1052	0	0		3378
INERTS		994		1989			1989	1989	1989	1989				6723
TOTAL(LB/HR)		263006	1039332	526013	2078665	2076363	526013	520822	526013	526013	0	0	756228	8831263
TOTAL GAS														
TOTAL SOLIDS		78902	0	157804	0	0	157804	156426	157804	157804	0	0	0	529876
TOTAL(MOLS/HR)														
% SOLIDS		30	0	30	0	0	30	30	30	30	0	0	0	6
SP. GR.		1.23	0.98	1.23	0.98	0.98	1.23	1.23	1.23	1.23	0.98	0.98	0.98	1.03
LIQUID(GPM)		429	2113	858	4225	4221	858	849	858	858	0	0	1537	17178
AVE.MOL.WT.														
BULK DENSITY(#/CFT)														
TEMP(oF)													60	
PRESS(psia)														
GAS FLOW (SCFM@60)														
(ACFM)														
PPM Cl-					2707	2646	1895	1914	3626	3626	3626	3626		2635

Maysville Lime - Material Balance

MG-ENHANCED LIME FGD
Mg(OH)2 Recovery Process
Material Balance

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21-Mar-96
File:ZIMMMGREC.XLS

tream Number	M.W.	1 Bleed fro TOF	2 Oxid. Feed	3 Acid	4 Oxid. Air	5 Oxid. Vent	6 Oxid. Blwdwn	7 Lime Slurry	8 Lime	9 Regen. Tank	10 Primary HCOF	11 Primary HCUF
Compound												
N2	28.0				1732	1732						
O2	32.0				460	403						
H2O (VAP)	18.0					204						
H2O	18.0	47997	48028	1			47827	4552		52123	36322	15801
H2SO4	98.1		0	6								
MgSO3(l)	104.3	375	375				0			0	0	0
MgSO4(l)	120.3	689	689				1130			0	0	0
MgCl2	95.1	133	133				133					
CaCl2	111.0		0							156	108	47
CaSO3.1/2H2O	129.0		0									
CaSO4.1/2H2O	145.0											
CaSO4.2H2O	172.0	0	15				15			1630	49	1581
Flyash												
MgO	40.3								41			
CaO	56.1								624			
CaCO3	100.0											
MgCO3	84.3											
Ca(OH)2	74.1	0	0				0	824		24	20	4
Mg(OH)2	58.3	0	4				0	59		689	565	124
Inerts		0	0				0.18	27	27	27	14	14
TOTAL LBS./HR.		49194	49245	7	2193	2135	49105	5462	692	54649	37077	17572
TOTAL SOLIDS		0	15	0	0		15	910	692	2370	647	1723
% SOLIDS		0.00	0.00	0.00			0.03	17	100	4	2	10
SPECIFIC GRAV.		0.98	0.98	0.98			0.98	1.11	2.05	1.02	1.00	1.06
LIGUID GPM		100	99	0.01			99	10	0.67	106	74	33
% solids												
GAS FLOW (SCFM@60)					482	543						
(ACFM)					102	605						

Maysville Lime - Material Balance

MG-ENHANCED LIME FGD
Mg(OH)2 Recovery Process
Material Balance

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File:ZIMMMGREC.XLS

tream Number	M.W.	12 Second. HC Feed	13 Second. HCOF	14 Second. HCUF	15 Sec. HCUF leed to Ox	16 Mg(OH)2 TUF	17 Mg(OH)2 TOF	18 Mg(OH)2 TOF Rec.	19 Mg(OH)2 TUF to Ox	20 Mg(OH)2 Product
Compound										
N2	28.0									
O2	32.0									
H2O (VAP)	18.0									
H2O	18.0	37896	36812	1073	11	4146	68987	22095	21	4126
H2SO4	98.1									
MgSO3(l)	104.3	0	0	0	0	0	0	0	0	0
MgSO4(l)	120.3	0	0	0	0	0	0	0	0	0
MgCl2	95.1									
CaCl2	111.0	113	110	3	0	12	206	66	0.06	12
CaSO3.1/2H2O	129.0									
CaSO4.1/2H2O	145.0									
CaSO4.2H2O	172.0	1581	190	1378	14	239	0		1	237
Flyash										
MgO	40.3									
CaO	56.1									
CaCO3	100.0									
MgCO3	84.3									
Ca(OH)2	74.1	4	2	2	0.02	22			0.11	22
Mg(OH)2	58.3	124	66	58	0.58	630			3	627
Inerts		14	5	8	0.08	19			0.10	19
TOTAL LBS./HR.		39733	37185	2522	25	5069	69193	22161	25	5044
TOTAL SOLIDS		1723	263	1445	15	910	0	0	5	906
% SOLIDS		4	1	57	57	18	0.00	0	18	18
SPECIFIC GRAV.		1.02	0.99	1.50	1.50	1.12	0.98	0.98	1.12	1.12
LIGUID GPM		77	74	3	0.03	9	139	45	0.04	9
% solids										
GAS FLOW (SCFM@60)										
(ACFM)										

Maysville Lime - Material Balance

STREAM NO		FGD		FGD		Mg(OH)2		Mg(OH)2		FGD		FGD	
BASE CASE		RECYCLE LIQUOR		THCKNR FEED		OXIDIZER BLWDWN		REGENERATION BLWDWN		FILTER FEED		RETURN LIQ. TO ABS.	
		lb/hr	mg/l	lb/hr	mg/l	lb/hr	mg/l	lb/hr	mg/l	lb/hr	mg/l	lb/hr	mg/l
ION	MW												
Alka. as CaCO3			2278		2253								2192
H2O	18.0	8099155		2387307		47827		52123		359245		2026958	
Cl-	35.5	16310	1964	4939	2017	0	0	99	1900	743	2039	4096	1972
HSO3-	81.1	19248	2317	5612	2292	0	0	0	0	0	0	0	0
SO3=	80.1	30126	3627	8784	3588	0	0	0	0	2156	5913	11882	5719
SO4=	96.1	92909	11186	27374	11181	902	18364	0	0	4119	11298	22704	10929
S2O3=	112.1		0		0	0	0	0	0	0	0	0	0
Mg+2	24.3	44026	5301	12971	5298	228	4648	0	0	1952	5354	10759	5179
Ca+2	40.1		0		0	0	0	56	1074	0	0	0	0

Total liqu	lb/hr	8301387		2446873		49090		52278		364396		2076363	
	gpm	16603		4894		98		105		729		4153	
	lpm	62847		18524		372		396		2759		15719	
Total soli	lb/hr	529876		157804		15		2370		157804		0	
Total gas	lb/hr					0		0		0		0	
Total stre	lb/hr	8831263		2604677		49105		54649		526013		2076363	
	gpm	17178		5064		99		106		858		4221	
Wt.% solids		6		6		0.03		4		30		0	
pH		6.20		6.20								6.20	

::

WATER AND SO2 BALANCE AROUND SCRUBBER

	LB./HR	GPM
WATER IN	3759889	7520
WATER OUT	3766004	7532
DIFFERENCE	-6115	-12
SO2 IN	109723	
SO2 OUT	109723	
DIFFERENCE	0	

Ca AND Mg BALANCE AROUND SCRUBBER

	LB./HR
Ca IN	47160
Ca OUT	47160
DIFFERENCE	0
Mg IN	13384
Mg OUT	13380
DIFFERENCE	5

WATER AND SO2 BALANCE AROUND Plant

	LB./HR	GPM
WATER IN	1722536	3445
WATER OUT	1743700	3487
DIFFERENCE	-21163	-42

Ca AND Mg BALANCE AROUND THE PLANT

	LB./HR
Ca IN	47604
Ca OUT	47616
DIFFERENCE	-12

Cl BALANCE AROUND THE PLANT

	LB./HR
Cl IN	709
Cl OUT	743
DIFFERENCE	-34

SO2 BALANCE AROUND PLANT

	LB./HR
SO2 IN	85104
SO2 OUT	85104

Mg IN	2650
Mg OUT	2652
DIFFERENCE	-3

Dravo Lime Company
Wm. H. Zimmer $Mg(OH)_2$ Recovery Plant
Test Set-Up Sheet

Date: 6/14/94 Time Period: 6/15-6/16/1994

T-101 Oxidizer Operating Conditions

LIC-104 Control Set Point: 12 ft.
(Note: Specified level is 82.7% of total oxidizer height.)

Air Flowrate (HCV-101): Full Flow

AIC-106 (Oxid. pH): See note #2

NOTES: P-105 should be set to deliver 0 gpm flow of gypsum slurry to T-101.

T-102 Crystallizer Tank Operating Conditions

LIC-201 Control Set Point: 17 ft.
(Note: Specified level is 85% of total level.)

AIC-202 (Crystallizer Tank pH): 10.5

NOTES: P-105 should be set to deliver 1 gpm flow of gypsum slurry to T-102.

Primary Hydroclone System

FIC-301 (Prim. Hydroclone Feedrate): 100 GPM

No. of Operating Hydroclones: 5

P-105 Gypsum Recycle Pump: See notes above.

NOTES: Set up operating hydroclones in alternating fashion around the feed header.

Secondary Hydroclone System

FSL-401 (Dilution Tank Level): 80%

FIC-401 (Sec. Hydroclone Feedrate): 100 GPM

No. of Operating Hydroclones: 5

NOTES: None.

HE-100 $Mg(OH)_2$ Thickener

P-104 ($Mg(OH)_2$ TUF): As required

Flocculating Agent Flowrate: 0

NOTES: With the new metering pump installed, there will no longer be a need to recycle product in the thickener. Avoid dumping to sump if possible.

Sample and Analysis Schedule

I have changed the sampling schedule a little. Please review and comment.

General Notes

1) With the secondary hydroclone system operating, the effect on $Mg(OH)_2$ product purity will need to be determined. Also, recyle of gypsum crystals to the crystallizer (formerly regen tank) will need to be evaluated. This will need to be evaluated at each pH level that the oxidizer is operated.

2) Sulfite oxidation will be evaluated at three different pH levels. The pH levels should be 5.0, 5.5, & 6.0. Each oxidizer pH level should be operated for a minimum of 4 hours. A set of hydroclone (primary & secondary) and product samples taken for each set point.

3) The solid phase of the hydroclone samples should be dewatered (not filtered) as much as possible and sent to Research. Please obtain as much solid phase sample as can fill a one pint sample jar.

Oxidizer Parametric Testing Matrix			
Level at 85% (5865 gallons)			
Stiochiometry O/SO3= (mole/mole)	80 GPM & 4 Operating Hydroclones	100 GPM & 5 Operating Hydroclones	120 GPM & 6 Operating Hydroclones
Residence Time (hours)	1.22	0.98	0.81
* 8.0		9/1/94 0800-1600	X
*10.0 [redacted]	8/11/94 0800-2200	8/31/94 0800-1600	X
*13.0 [redacted]	9/10/94 0900-2000		X

MINIMUM AIR BEFORE AGITATOR TRIPS

MINIMUM AIR BEFORE TRIPPING OX AGITATOR

MAXIMUM AIR MEASURABLE

MAX AIR MEASURABLE

Notes:

1) The above flowrates will provide for 20 GPM through each individual hydroclone. Run five secondary hydroclones @ 20 GPM/hydroclone for all cases.

2) Use 1/4 inch apexes in both primary & secondary hydroclones.

3) As sulfite concentration of the oxidizer feed stream the air flow rate will need to be adjusted accordingly. Please note these changes in the logbook as you make them.

* with the $SO_3^=$ levels FROM FGD Feed

SEP. 7 '94 9:48AM MG RECVRY ZIMMER P.2

Sample and Analysis Schedule		Liquor Analysis						Solids Analysis			Solid Samples
Sample Location	Frequency	pH	Ca^{+2}	Mg^{+2}	Cl^{-}	SO_3^{-2}	SO_4^{-2}	% Solids	% $Mg(OH)_2$	Settling/Filtration	to Research
FGD TUF	1/week							X		X (see note below)	X
FGD TOF Feed	1 per day	X	X	X	X	X	X			Use Zimmer FGD Analysis	
FGD TOF Feed	1 hour	X				X					
Oxidizer Tank	1 per shift	X	X	X			X				
Oxidizer Tank	1 hour	X				X					
Crystallizer Tank	1 per set point	X						X			X
Primary HCOF	1 per set point							X	X	X (once per 24 hours, see Notes 2 & 3)	X
Primary HCUF	1 per set point							X	X	See Note 3	X
Secondary HC Feed	1 per set point							X			
Secondary HCOF	1 per set point							X	X	See Note 3	X
Secondary HCUF	1 per set point							X	X	See Note 3	X
Sump Return to FGD Thknr.	1/day	X	X	X	X		X	X			
$Mg(OH)_2$ Product	1/shift							X	X		X

Notes:

1) Dilute FGD TUF samples to 10% solids with FGD TOF send to Research for settling rate test.
2) Obtain approximately an equal volume of sample from each operating HCOF hose (primary & secondary).
3) Wt. % $Mg(OH)_2$ determination is optional on all samples except the $Mg(OH)_2$ product.

Dravo Lime Company
Wm. H. Zimmer $Mg(OH)_2$ Recovery Plant
Test Set-Up Sheet

Date: 6/30/94 Time Period: 7/5-7/8/1994

T-101 Oxidizer Operating Conditions

LIC-104 Control Set Point: 12 ft.
(Note: Specified level is 82.7% of total oxidizer height.)

Air Flowrate (HCV-101): Full Flow (200 ACFM)

AIC-106 (Oxid. pH): See note #2

NOTES: P-105 should be set to deliver 0 gpm flow of gypsum slurry to T-101.

T-102 Crystallizer Tank Operating Conditions

LIC-201 Control Set Point: 17 ft.
(Note: Specified level is 85% of total level (15607 gallons).)

AIC-202 (Crystallizer Tank pH): See Gen. Note # 1

NOTES: P-105 should be set to deliver 1 gpm flow of gypsum slurry to T-102.

Primary Hydroclone System

FIC-301 (Prim. Hydroclone Feedrate): See Gen. Note # 1

No. of Operating Hydroclones:

P-105 Gypsum Recycle Pump: See notes above.

NOTES: Set up operating hydroclones in alternating fashion around the feed header.

Secondary Hydroclone System

FSL-401 (Dilution Tank Level): 80%

FIC-401 (Sec. Hydroclone Feedrate): See Gen. Note # 1

No. of Operating Hydroclones: 5

NOTES: None.

HE-100 $Mg(OH)_2$ Thickener

P-104 ($Mg(OH)_2$ TUF): As required

Flocculating Agent Flowrate: 0

NOTES: Pump down solids level as required. At some point, storage tank will be ready to accept $Mg(OH)_2$ product from the thickener.

Sample and Analysis Schedule

See attached sample schedule. This is the same schedule as you have been using.

General Notes

1) Please use the attached test matrix to determine test set points. Each test set point should be conducted for a minimum of 6 hours. Take samples no earlier than 4 hours into each set point to insure that turnover of the entire crystallizer volume has occurred.

2) Use 1/4 inch apexes on all hydroclones. The effect of crystallizer operation on hydroclone operating performance will be important to evaluate.

3) The solid phase of the hydroclone samples should be dewatered (not filtered) as much as possible and sent to Research. Please obtain as much solid phase sample as can fill a one pint sample jar.

Increasing Residence Time →			
	80 GPM & 4 Operating Hydroclones	100 GPM & 5 Operating Hydroclones	120 GPM & 6 Operating Hydroclones
pH	3.25 Hours	2.6 Hours	2.17 Hours
10.0			
10.5			
10.8			
Notes:			
1) The above flowrates will provide for 20 GPM through each individual hydroclone.			
2) Use 1/4 inch apexes in both primary & secondary hydroclones.			

Sample and Analysis Schedule		Liquor Analysis						Solids Analysis			Solid Samples
Sample Location	Frequency	pH	Ca^{+2}	Mg^{+2}	Cl^{-}	SO_3^{-2}	SO_4^{-2}	% Solids	% $Mg(OH)_2$	Settling/Filtration	to Research
FGD TUF	1/week							X		X (see note below)	X
FGD TOF Feed	1 per day	X	X	X	X	X	X			Use Zimmer FGD Analysis	
FGD TOF Feed	1 hour	X				X					
Oxidizer Tank	1 per shift	X	X	X			X				
Oxidizer Tank	1 hour	X				X					
Crystallizer Tank	1 per set point	X						X			X
Primary HCOF	1 per set point							X	X	X (once per 24 hours, see Notes 2 & 3)	X
Primary HCUF	1 per set point							X	X	See Note 3	X
Secondary HC Feed	1 per set point							X			
Secondary HCOF	1 per set point							X	X	See Note 3	X
Secondary HCUF	1 per set point							X	X	See Note 3	X
Sump Return to FGD Thknr.	1/day	X	X	X	X		X	X			
$Mg(OH)_2$ Product	1/shift							X	X		X

Notes:

1) Dilute FGD TUF samples to 10% solids with FGD TOF send to Research for settling rate test.
2) Obtain approximately an equal volume of sample from each operating HCOF hose (primary & secondary).
3) Wt. % $Mg(OH)_2$ determination is optional on all samples except the $Mg(OH)_2$ product.

Dravo Lime Company
Wm. H. Zimmer $Mg(OH)_2$ Recovery Plant
Test Set-Up Sheet

Date: 7/14/94 Time Period: 7/13-7/19/1994

T-101 Oxidizer Operating Conditions

LIC-104 Control Set Point: 12 ft.
(Note: Specified level is 82.7% of total oxidizer height.)

Air Flowrate (HCV-101): Full Flow (200 ACFM)

AIC-106 (Oxid. pH): See note #2

NOTES: P-105 should be set to deliver 0 gpm flow of gypsum slurry to T-101.

T-102 Crystallizer Tank Operating Conditions

LIC-201 Control Set Point: 17 ft.
(Note: Specified level is 85% of total level (15607 gallons).)

AIC-202 (Crystallizer Tank pH): See Gen. Note # 1

NOTES: P-105 should be set to deliver 0 gpm flow of gypsum slurry to T-102.

Primary Hydroclone System

FIC-301 (Prim. Hydroclone Feedrate): See Gen. Note # 1

No. of Operating Hydroclones:

P-105 Gypsum Recycle Pump: See notes above.

NOTES: Set up operating hydroclones in alternating fashion around the feed header.

Secondary Hydroclone System

FSL-401 (Dilution Tank Level): 80%

FIC-401 (Sec. Hydroclone Feedrate): See Gen. Note # 1

No. of Operating Hydroclones: 5

NOTES: None.

HE-100 $Mg(OH)_2$ Thickener

P-104 ($Mg(OH)_2$ TUF): As required

Flocculating Agent Flowrate: 0

NOTES: Pump down solids level as required. At some point, storage tank will be ready to accept $Mg(OH)_2$ product from the thickener.

Sample and Analysis Schedule

See attached sample schedule. This is the same schedule as you have been using.

General Notes

1) Please use the attached test matrix to determine test set points. Each test set point should be conducted for a minimum of 6 hours. Take samples no earlier than 4 hours into each set point to insure that turnover of the entire crystallizer volume has occurred.

2) Use 1/4 inch apexes on all hydroclones. The effect of crystallizer operation on hydroclone operating performance will be important to evaluate.

3) The solid phase of the hydroclone samples should be dewatered (not filtered) as much as possible and sent to Research. Please obtain as much solid phase sample as can fill a one pint sample jar.

4) These test conditions are identical to the crystallizer residence time tests. The only exception is the absence of primary HCUF stream recycle to the crystallizer. A stainless steel coupon is to be placed in the crystallizer and monitored for scale formation.

Sample and Analysis Schedule		Liquor Analysis						Solids Analysis			Solid Samples
Sample Location	Frequency	pH	Ca^{+2}	Mg^{+2}	Cl^{-}	SO_3^{-2}	SO_4^{-2}	% Solids	% $Mg(OH)_2$	Settling/Filtration	to Research
FGD TUF	1/week							X		X (see note below)	X
FGD TOF Feed	1 per day	X	X	X	X	X	X			Use Zimmer FGD Analysis	
FGD TOF Feed	1 hour	X				X					
Oxidizer Tank	1 per shift	X	X	X			X				
Oxidizer Tank	1 hour	X				X					
Crystallizer Tank	1 per set point	X						X			X
Primary HCOF	1 per set point							X	X	X (once per 24 hours, see Notes 2 & 3)	X
Primary HCUF	1 per set point							X	X	See Note 3	X
Secondary HC Feed	1 per set point							X			
Secondary HCOF	1 per set point							X	X	See Note 3	X
Secondary HCUF	1 per set point							X	X	See Note 3	X
Sump Return to FGD Thknr.	1/day	X	X	X	X		X	X			
$Mg(OH)_2$ Product	1/shift							X	X		X

Notes:

1) Dilute FGD TUF samples to 10% solids with FGD TOF send to Research for settling rate test.

2) Obtain approximately an equal volume of sample from each operating HCOF hose (primary & secondary).

3) Wt. % $Mg(OH)_2$ determination is optional on all samples except the $Mg(OH)_2$ product.

4) If flocculation agent is being added to $Mg(OH)_2$ thickener feed stream, do a settling test with and without a the agent added.

Sample and Analysis Schedule		Liquor Analysis						Solids Analysis			Solid Samples
Sample Location	Frequency	pH	Ca^{+2}	Mg^{+2}	Cl^{-}	SO_3^{-2}	SO_4^{-2}	% Solids	% $Mg(OH)_2$	Settling/Filtration	to Research
FGD TUF	1/week							X		X (see note below)	X
FGD TOF Feed	1 per day	X	X	X	X	X	X			Use Zimmer FGD Analysis	
FGD TOF Feed	1 hour	X				X					
Oxidizer Tank	1 per shift	X	X	X			X				
Oxidizer Tank	1 hour	X				X					
Crystallizer Tank	1 per set point	X						X			X
Primary HCOF	1 per set point							X	X	X (once per 24 hours, see Notes 2 & 3)	X
Primary HCUF	1 per set point							X	X	See Note 3	X
Secondary HC Feed	1 per set point							X			
Secondary HCOF	1 per set point							X	X	See Note 3	X
Secondary HCUF	1 per set point							X	X	See Note 3	X
Sump Return to FGD Thknr.	1/day	X	X	X	X		X	X			
$Mg(OH)_2$ Product	1/shift							X	X		X

Notes:

1) Dilute FGD TUF samples to 10% solids with FGD TOF send to Research for settling rate test.

2) Obtain approximately an equal volume of sample from each operating HCOF hose (primary & secondary).

3) Wt. % $Mg(OH)_2$ determination is optional on all samples except the $Mg(OH)_2$ product.

4) If flocculation agent is being added to $Mg(OH)_2$ thickener feed stream, do a settling test with and without a the agent added.

Decreasing Crystallizer Tank Residence Time			
			→
	80 GPM & 4 Operating Hydroclones	100 GPM & 5 Operating Hydroclones	120 GPM & 6 Operating Hydroclones
pH	3.25 Hours	2.6 Hours	2.17 Hours
10.0			
10.5			
10.8			
Notes:			
1) The above flowrates will provide for 20 GPM through each individual hydroclone.			
2) Use 1/4 inch apexes in both primary & secondary hydroclones.			
3) If a polymer flocculating agent is fed to the primary and secondary HCOF collection tank, please note in log book.			

Dravo Lime Company
Wm. H. Zimmer $Mg(OH)_2$ Recovery Plant
Test Set-Up Sheet
Two Stage Precipitation Tank Testing (Part 2)

Date: 9/13/94 Time Period: 9/13 - 9/23/1994

T-101 Oxidizer Operating Conditions

LIC-104 Control Set Point: 85%
(Note: Specified level is 5865 gallons.)

Air Flowrate (HCV-101): Full Flow (~210 SCFM)

AIC-106 (Oxid. pH): 5.5

NOTES:

T-102 Crystallizer Tank Operating Conditions

LIC-201 Control Set Point: 85%
(Note: Specified level is 15607 gallons.)

AIC-202 (Crystallizer Tank pH): See Gen. Note #1

Tank Solids (wt.%) 5 to 6

NOTES: Oxidizer blowdown and $Mg(OH)_2$ product flow will mix in the precipitation tank before draining into the crystallizer.

Primary Hydroclone System

FIC-301 (Prim. Hydroclone Feedrate): See Gen. Note #1

No. of Operating Hydroclones:

P-105 Gypsum Recycle Pump: P-105 set to deliver primary HCUF to T-102 to maintain tank solids between 5 and 6 wt.%.

NOTES: Use 1/4" apexes.

Secondary Hydroclone System

FSL-401 (Dilution Tank Level): 80%

FIC-401 (Sec. Hydroclone Feedrate): See Gen. Note #1

No. of Operating Hydroclones:

NOTES: Use 1/4" apexes

HE-100 $Mg(OH)_2$ Thickener

P-104 ($Mg(OH)_2$ TUF): As required

Flocculating Agent Flowrate: As required

NOTES: Pump down solids level as required. Pump to storage tank when it is ready to accept $Mg(OH)_2$ product from the thickener.

Sample and Analysis Schedule

See attached sample schedule. The latest sample schedule includes checking the overflow of the precipitation tank pH.

General Notes

1) Please use the attached test matrix to determine test set points. Each test set point should be conducted for a minimum of 6 hours. Take samples no earlier than 4 hours into each set point to insure that turnover of the entire crystallizer volume has occurred.

2) It appears that flocculant addition assists in keeping the $Mg(OH)_2$ TOF stream more clear of fine solid particles. I would like to have the flocullant addition system made permanent. As time allows, please change the tubing to CPVC pipe and route the same way as it is currently.

3) Use 1/4 inch apexes on all hydroclones. The effect of two stage precipitation (w/$Mg(OH)_2$ recycle) operation on hydroclone operating performance will be important to evaluate.Maintain precip tank pH between 8 - 9.

Sample and Analysis Schedule		Liquor Analysis						Solids Analysis			Solid Samples
Sample Location	Frequency	pH	Ca^{+2}	Mg^{+2}	Cl^-	SO_3^{-2}	SO_4^{-2}	% Solids	% $Mg(OH)_2$	Settling/Filtration	to Research
FGD TUF	1/week							X		X (see note below)	X
FGD TOF Feed	1 per day	X	X	X	X	X	X			Use Zimmer FGD Analysis	
FGD TOF Feed	1 hour	X				X					
Oxidizer Tank	1 per shift	X	X	X			X				
Oxidizer Tank	1 hour	X				X					
Precipitation Tank	1 hour	X									
Crystallizer Tank	1 per set point	X						X			X
Primary HCOF	1 per set point							X	X	X (once per 24 hours, see Notes 2 & 3)	X
Primary HCUF	1 per set point							X	X	See Note 3	X
Secondary HC Feed	1 per set point							X			
Secondary HCOF	1 per set point							X	X	See Note 3	X
Secondary HCUF	1 per set point							X	X	See Note 3	X
Sump Return to FGD Thknr.	1/day	X	X	X	X		X	X			
$Mg(OH)_2$ Product	1/shift							X	X		X

Notes:

1) Dilute FGD TUF samples to 10% solids with FGD TOF send to Research for settling rate test.

2) Obtain approximately an equal volume of sample from each operating HCOF hose (primary & secondary).

3) Wt. % $Mg(OH)_2$ determination is optional on all samples except the $Mg(OH)_2$ product.

Dravo Lime Company
Wm. H. Zimmer $Mg(OH)_2$ Recovery Plant
Test Set-Up Sheet
Hydroclone testing w/Two Stage Precipitation

Date: 9/26/94 Time Period: 9/27 - 10/7/1994

T-101 Oxidizer Operating Conditions

LIC-104 Control Set Point: 85%
(Note: Specified level is 5865 gallons.)

Air Flowrate (HCV-101): Full Flow (~210 SCFM)

AIC-106 (Oxid. pH): 5.5

NOTES:

T-102 Crystallizer Tank Operating Conditions

LIC-201 Control Set Point: 85%
(Note: Specified level is 15607 gallons.)

AIC-202 (Crystallizer Tank pH): 10.8

Tank Solids (wt.%) 5 to 6

NOTES: Oxidizer blowdown and crystallizer recirculation flow will mix in the precipitation tank before draining into the crystallizer.

Primary Hydroclone System

FIC-301 (Prim. Hydroclone Feedrate): See Gen. Note #1

No. of Operating Hydroclones:

P-105 Gypsum Recycle Pump: P-105 set to deliver primary HCUF to T-102 to maintain tank solids between 5 and 6 wt.%.

NOTES:

Secondary Hydroclone System

FSL-401 (Dilution Tank Level): 80%

FIC-401 (Sec. Hydroclone Feedrate): See Gen. Note #1

No. of Operating Hydroclones:

NOTES:

HE-100 $Mg(OH)_2$ Thickener

P-104 ($Mg(OH)_2$ TUF): As required

Flocculating Agent Flowrate: As required

NOTES: Pump down solids level as required. Pump to storage tank when it is ready to accept $Mg(OH)_2$ product from the thickener.

General Notes

1) Please use the attached test matrix to determine test set points. Each test set point should be conducted for a minimum of 4 hours. Take samples as close to the end of the test point as possible.

2) Maintain use of the flocculating agent.

3) Please note the addition of Ca^{+2} and $SO_4^{=}$ analyses to the crystallizer tank exit stream. A total of three sets of results are desired for each day to determine gypsum relative saturation. Use the Excel file **gyprels.xls**, to input results of the analyses and record the calculated gypsum relative saturation in the log book.

Sample and Analysis Schedule

See attached sample schedule. The latest sample schedule includes checking the overflow of the precipitation tank pH and analyzing for Ca+2 and SO4= in the crystallizer stream. See General Note #3 for more information.

Sample and Analysis Schedule		Liquor Analysis						Solids Analysis			Solid Samples
Sample Location	Frequency	pH	Ca^{+2}	Mg^{+2}	Cl^-	SO_3^{-2}	SO_4^{-2}	% Solids	% $Mg(OH)_2$	Settling/Filtration	to Research
FGD TUF	1/week							X		X (see note below)	X
FGD TOF Feed	1 per day	X	X	X	X	X	X			Use Zimmer FGD Analysis	
FGD TOF Feed	1 hour	X				X					
Oxidizer Tank	1 per shift	X	X	X			X				
Oxidizer Tank	1 hour	X				X					
Precipitation Tank	1 hour	X									
Crystallizer Tank	1 per set point	X	X				X	X			X
Primary HCOF	1 per set point							X	X	X (once per 24 hours, see Notes 2 & 3)	X
Primary HCUF	1 per set point							X	X	See Note 3	X
Secondary HC Feed	1 per set point							X			
Secondary HCOF	1 per set point							X	X	See Note 3	X
Secondary HCUF	1 per set point							X	X	See Note 3	X
Sump Return to FGD Thknr.	1/day	X	X	X	X		X	X			
$Mg(OH)_2$ Product	1/shift							X	X		X

Notes:

1) Dilute FGD TUF samples to 10% solids with FGD TOF send to Research for settling rate test.

2) Obtain approximately an equal volume of sample from each operating HCOF hose (primary & secondary).

3) Wt. % $Mg(OH)_2$ determination is optional on all samples except the $Mg(OH)_2$ product.

Dravo Lime Company
Wm. H. Zimmer $Mg(OH)_2$ Recovery Plant
Test Set-Up Sheet

Date: 6/17/94 **Time Period:** 6/20-6/23/1994

Objective: Primary and Secondary Hydroclone Optimization Tests

T-101 Oxidizer Operating Conditions

LIC-104 Control Set Point: 80%

Air Flowrate (HCV-101): Full Flow

AIC-106 (Oxid. pH): 5.5

NOTES: P-105 should be set to deliver 0 gpm flow of gypsum slurry to T-101.

T-102 Crystallizer Tank Operating Conditions

LIC-201 Control Set Point: 85%

AIC-202 (Crystallizer Tank pH): 10.5

P-105 (Gypsum recycle pump) See Note 1

NOTES: P-105 should be set to deliver 1 gpm flow of gypsum slurry to T-102.

Primary Hydroclone System

FIC-301 (Prim. Hydroclone Feedrate): 100 GPM

No. of Operating Hydroclones: See Gen. Note 2

NOTES: Set up operating hydroclones in alternating fashion around the feed header. The flowrate will be 20 GPM for 5 operating, 25 GPM for 4 operating, and 33.3 GPM for 3 operating hydroclones. See General Note 2 for hydroclone internal configuration.

Secondary Hydroclone System

FSL-401 (Dilution Tank Level): 80%

FIC-401 (Sec. Hydroclone Feedrate): 100 GPM

No. of Operating Hydroclones: See Gen. Note 2

NOTES: 0.25 inch apexes and vortexes are to be used for all test periods.

HE-100 $Mg(OH)_2$ Thickener

P-104 ($Mg(OH)_2$ TUF): As required

Flocculating Agent Flowrate: 0

NOTES: With the new metering pump installed, there will no longer be a need to recycle product in the thickener. Avoid dumping to sump if possible.

Sample and Analysis Schedule

See attached sheet.

General Notes

1) P-105 gypsum recycle pump should be operated to send approximately 1 gpm of flow to T-102. Duplicate General Note 2 with no recycle gypsum from P-105.

2) Both primary and secondary hydroclones will be operated at 100 gpm total flow, with 5, then 4, and finally 3 operating while using the 0.25 inch internals. Each configuration of operating hydroclones will be operated for a minimum of 4 hours. Duplicate these tests using the 0.375 inch internals in the primary hydroclones only.

3) The solid phase of all hydroclone samples should be dewatered (not filtered) as much as possible and sent to Research. Please obtain as much solid phase sample as can fill a one pint sample jar.

Sample and Analysis Schedule		Liquor Analysis						Solids Analysis			Solid Samples
Sample Location	Frequency	pH	Ca^{+2}	Mg^{+2}	Cl^{-}	SO_3^{-2}	SO_4^{-2}	% Solids	% $Mg(OH)_2$	Settling/Filtration	to Research
FGD TUF	1/week							X		X (See Note 1)	X
FGD TOF Feed	1 per day	X	X	X	X	X	X			Use Zimmer FGD Analysis	
FGD TOF Feed	1 hour	X				X					
Oxidizer Tank	1 per shift	X	X	X			X				
Oxidizer Tank	1 hour	X				X					
Crystallizer Tank	1 per set point	X						X			X
Primary HCOF	1 per set point							X	X	X (once per 24 hours, see Notes 2 & 3)	X
Primary HCUF	1 per set point							X	X	See Note 3	X
Secondary HC Feed	1 per set point							X			
Secondary HCOF	1 per set point							X	X	See Note 3	X
Secondary HCUF	1 per set point							X	X	See Note 3	X
Sump Return to FGD Thknr.	1/day	X	X	X	X		X	X			
$Mg(OH)_2$ Product	1/shift							X	X		X

Notes:

1) Dilute FGD TUF samples to 10% solids with FGD TOF send to Research for settling rate test.

2) Obtain approximately an equal volume of sample from each operating HCOF hose (primary & secondary).

3) Wt. % $Mg(OH)_2$ determination is optional on all samples except the $Mg(OH)_2$ product.

For Week of 6/20/94

Sample and Analysis Schedule		Liquor Analysis						Solids Analysis			Solid Samples
Sample Location	Frequency	pH	Ca^{+2}	Mg^{+2}	Cl^{-}	SO_3^{-2}	SO_4^{-2}	% Solids	% $Mg(OH)_2$	Settling/Filtration	to Research
FGD TUF	1/week							X		X (See Note 1)	X
FGD TOF Feed	1 per day	X	X	X	X	X	X			Use Zimmer FGD Analysis	
FGD TOF Feed	1 hour	X				X					
Oxidizer Tank	1 per shift	X	X	X			X				
Oxidizer Tank	1 hour	X				X					
Crystallizer Tank	1 per set point	X						X			X
Primary HCOF	1 per set point							X	X	X (once per 24 hours, see Notes 2 & 3)	X
Primary HCUF	1 per set point							X	X	See Note 3	X
Secondary HC Feed	1 per set point							X			
Secondary HCOF	1 per set point							X	X	See Note 3	X
Secondary HCUF	1 per set point							X	X	See Note 3	X
Sump Return to FGD Thknr.	1/day	X	X	X	X		X	X			
$Mg(OH)_2$ Product	1/shift							X	X		X

Notes:

1) Dilute FGD TUF samples to 10% solids with FGD TOF send to Research for settling rate test.

2) Obtain approximately an equal volume of sample from each operating HCOF hose (primary & secondary).

3) Wt. % $Mg(OH)_2$ determination is optional on all samples except the $Mg(OH)_2$ product.

Dravo Lime Company
Wm. H. Zimmer $Mg(OH)_2$ Recovery Plant
Test Set-Up Sheet
Evaluation of 1 Inch Vortexes in Primary Hydroclones

Date: 11/18/94 Time Period: 11/21 - 11/23/94

T-101 Oxidizer Operating Conditions

LIC-104 Control Set Point: 85%
(Note: Specified level is 5865 gallons.)

Air Flowrate (HCV-101): Full Flow (~210 SCFM)

AIC-106 (Oxid. pH): 5.5

NOTES:

T-102 Crystallizer Tank Operating Conditions

LIC-201 Control Set Point: 85%
(Note: Specified level is 15607 gallons.)

AIC-202 (Crystallizer Tank pH): 10.5

Tank Solids (wt.%) 5 to 6

NOTES: Crystallizer operation will revert to the original configuration (no two stage precipitation tank).

Primary Hydroclone System

FIC-301 (Prim. Hydroclone Feedrate): 100 GPM

No. of Operating Hydroclones: **See Test Matrix**

P-105 Gypsum Recycle Pump: P-105 set to deliver primary HCUF to T-102 to maintain tank solids between 5 and 6 wt.% as required.

NOTES: See General Notes and Test Matrix

Secondary Hydroclone System

FSL-401 (Dilution Tank Level): 80%

FIC-401 (Sec. Hydroclone Feedrate): 100 GPM

No. of Operating Hydroclones: 5

NOTES: Use 1/4" apexes

HE-100 $Mg(OH)_2$ Thickener

P-104 ($Mg(OH)_2$ TUF): As required

Flocculating Agent Flowrate: As required

NOTES: Pump down solids level as required. Pump to storage tank when it is ready to accept $Mg(OH)_2$ product from the thickener.

Sample and Analysis Schedule

See attached sample schedule. Save samples from each hydroclone test for return to the Research Center for further analysis. A sample of FGD thickener underflow should be taken on Teusday, November 22. Dilute this sample to 10% solids and run a settling test. The settled solids are to be saved and sent to the Research center for further analysis.

General Notes

1) An evaluation of primary hydroclone operation using a 1 inch diameter vortex in each hydroclone will be done. See the attached test matrix for details of testing.

Sample and Analysis Schedule		Liquor Analysis						Solids Analysis			Solid Samples
Sample Location	Frequency	pH	Ca^{+2}	Mg^{+2}	Cl^{-}	SO_3^{-2}	SO_4^{-2}	% Solids	% $Mg(OH)_2$	Settling/Filtration	to Research
FGD TUF	2/week							X		X (see note below)	X
FGD TOF Feed	1 per day	X	X	X	X	X	X				
FGD TOF Feed	1 hour	X				X					
Oxidizer Tank	2 per shift	X	X	X			X				
Oxidizer Tank	1 hour	X				X					
Crystallizer Tank	2 per shift	X	X	X	X		X	X			X
Primary HCOF	2 per shift							X	X	X (once per 24 hours, see Notes 2 & 3)	X
Primary HCUF	2 per shift							X	X	See Note 3	X
Secondary HC Feed	2 per shift							X			
Secondary HCOF	2 per shift							X	X	See Note 3	X
Secondary HCUF	2 per shift							X	X	See Note 3	X
Sump Return to FGD Thknr.	1 per day	X	X	X	X		X	X			
$Mg(OH)_2$ Product	2 per shift							X	X		X

Notes:

1) Dilute FGD TUF samples to 10% solids with FGD TOF send to Research for settling rate test.

2) Obtain approximately an equal volume of sample from each operating HCOF hose (primary & secondary).

3) Wt. % $Mg(OH)_2$ determination is optional on all samples except the $Mg(OH)_2$ product.

Dravo Lime Company
Wm. H. Zimmer $Mg(OH)_2$ Recovery Plant
Test Set-Up Sheet

Date: 5/16/94 Time Period: Start-up and commissioning

T-101 Oxidizer Operating Conditions

LIC-104 Control Set Point: 12 ft.
(Note: Specified level is 82.7% of total oxidizer height.)

Air Flowrate (HCV-101): 167 ACFM

AIC-106 (Oxid. pH): 5

NOTES: P-105 should be set to deliver 1 gpm flow of gypsum slurry to T-101.

T-102 Crystallizer Tank Operating Conditions

LIC-201 Control Set Point: 17 ft.
(Note: Specified level is 85% of total level.)

AIC-202 (Crystallizer Tank pH): 10.8

NOTES: P-105 should be set to deliver 1 gpm flow of gypsum slurry to T-102.

Primary Hydroclone System

FIC-301 (Prim. Hydroclone Feedrate): 60 GPM

No. of Operating Hydroclones: 3

P-105 Gypsum Recycle Pump: See notes above.

NOTES: Set up operating hydroclones in alternating fashion around the feed header.

Secondary Hydroclone System

FSL-401 (Dilution Tank Level): 0%

FIC-401 (Sec. Hydroclone Feedrate): 0

No. of Operating Hydroclones: 0

NOTES: The secondary hydroclone system will not be operated initially. Allow dilution tank to overflow into the sump.

HE-100 $Mg(OH)_2$ Thickener

P-104 ($Mg(OH)_2$ TUF): As required

Flocculating Agent Flowrate: 0

NOTES: Until further notice, direct all $Mg(OH)_2$ product to T-104 sump (except as required by T-101 for pH control).

Sample and Analysis Schedule

See attached sheet.

General Notes

1) Start-up gypsum material can be added to the dilution tank T-103 as required to maintain 1 gpm flow to T-101 and T-102 each through P-105. This may be terminated when gypsum begins to accumulate in the system.

2) Start-up $Mg(OH)_2$ material will be dry and in 50 lb. bags. The dry material should be slowly added to HE-100 by tossing small amounts of material to all quadrants of the thickener. Add a total of 1000 lbs. dry $Mg(OH)_2$ to the thickener. All material will need to be added to the thickener before beginning operation of the oxidizer.

Sample and Analysis Schedule		Liquor Analysis						Solids Analysis		
Sample Location	Frequency	pH	Ca^{+2}	Mg^{+2}	Cl^{-}	SO_3^{-2}	SO_4^{-2}	% Solids	% $Mg(OH)_2$	Settling/Filtration
FGD TUF	2/week							X		X (see note below)
FGD TOF Feed	8 hours	X	X	X	X	X	X			
FGD TOF Feed	1 hour	X				X				
Oxidizer Tank	8 hours	X	X	X			X	X		
Oxidizer Tank	1 hour	X				X				
Crystallizer Tank	8 hours	X	X				X	X	X	
Crystallizer Tank	4 hours	X						X		
Primary HCOF	4 hours							X	X	X (once per 24 hours)
Primary HCUF	4 hours							X	X	
Secondary HC Feed	4 hours							X		
Secondary HCOF	4 hours							X	X	
Secondary HCUF	4 hours							X	X	X (filtration only once a week)
Sump Return to FGD Thknr.	1/day	X	X	X	X		X	X	X	

Notes: To monitor effects on the main FGD system, we should look at FGD TUF particle size and settling rate changes. Dilute FGD TUF samples to 10% solids with FGD TOF and do settling rate test.

Dravo Lime Company
Wm. H. Zimmer $Mg(OH)_2$ Recovery Plant
Test Set-Up Sheet

Date: 6/6/94 Time Period: 6/7/94 to 6/10/94

T-101 Oxidizer Operating Conditions

LIC-104 Control Set Point: 12 ft.
(Note: Specified level is 82.7% of total oxidizer height.)

Air Flowrate (HCV-101): Full Flow

AIC-106 (Oxid. pH): 5.5

NOTES: P-105 should be set to deliver 1 gpm flow of gypsum slurry to T-101.

T-102 Crystallizer Tank Operating Conditions

LIC-201 Control Set Point: 17 ft.
(Note: Specified level is 85% of total level.)

AIC-202 (Crystallizer Tank pH): 10.5

NOTES: P-105 should be set to deliver 1 gpm flow of gypsum slurry to T-102.

Primary Hydroclone System

FIC-301 (Prim. Hydroclone Feedrate): 100 GPM

No. of Operating Hydroclones: 5

P-105 Gypsum Recycle Pump: See notes above.

NOTES: Set up operating hydroclones in alternating fashion around the feed header.

Secondary Hydroclone System

FSL-401 (Dilution Tank Level): 80%

FIC-401 (Sec. Hydroclone Feedrate): 100 GPM

No. of Operating Hydroclones: 5

NOTES: The secondary hydroclone system will be operated to determine if the HCOF catch basin can handle flow from both sets of HCOF's.

HE-100 $Mg(OH)_2$ Thickener

P-104 ($Mg(OH)_2$ TUF): As required

Flocculating Agent Flowrate: 0

NOTES: When the new metering pump is installed, there should no longer be a need to recycle product in a hose to the centerwell.

Sample and Analysis Schedule

I have changed the sampling schedule a little. Please review and comment.

General Notes

1) The secondary hydroclone system will need to be checked out and the effect on $Mg(OH)_2$ product purity determined. Also, recyle of gypsum crystals to the oxidizer and crystallizer (formerly regen tank) will need to be evaluated operationally. Doubts have been raised about plugging of the suction piping to the sandpiper.

2) Start-up $Mg(OH)_2$ material will be dry and in 50 lb. bags. The dry material should be slowly added to HE-100 by tossing small amounts of material to all quadrants of the thickener. Add a total of 1000 lbs. dry $Mg(OH)_2$ to the thickener. All material will need to be added to the thickener before beginning operation of the oxidizer.

Sample and Analysis Schedule		Liquor Analysis						Solids Analysis		
Sample Location	Frequency	pH	Ca^{+2}	Mg^{+2}	Cl^{-}	SO_3^{-2}	SO_4^{-2}	% Solids	% $Mg(OH)_2$	Settling/Filtration
FGD TUF	2/week							X		X (see note below)
FGD TOF Feed	8 hours	X	X	X	X	X	X			
FGD TOF Feed	1 hour	X				X				
Oxidizer Tank	8 hours	X	X	X			X	X		
Oxidizer Tank	1 hour	X				X				
Crystallizer Tank	8 hours	X	X				X	X	X	
Crystallizer Tank	4 hours	X						X		
Primary HCOF	4 hours							X	X	X (once per 24 hours)
Primary HCUF	4 hours							X	X	
Secondary HC Feed	4 hours							X		
Secondary HCOF	4 hours							X	X	
Secondary HCUF	4 hours							X	X	X (filtration only once a week)
Sump Return to FGD Thknr.	1/day	X	X	X	X		X	X	X	

Notes: To monitor effects on the main FGD system, we should look at FGD TUF particle size and settling rate changes. Dilute FGD TUF samples to 10% solids with FGD TOF and do settling rate test.

Number of Primary HC Operating	Primary 1/4" Apex Secondary 1/4" Apex	Primary 3/8" Apex Secondary 1/4" Apex	Primary Only 1/4" Apex
5 Oper.	6/28/94 10:00 - 14:00	✓ 6/29/94 14:00 - 18:00	
4 Oper.		✓ 6/30/94 10:00 - 13:30	
3 Oper.			

Notes:
1) All cases, 5 Secondary Hydroclones Operating.

2) Each test set point should have a settling rate test done on the total stream feeding the $Mg(OH)_2$ Thickener.

✓ - settling rate test in progress or completed.

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9415212000100	6/1/94 12:00	1	Oxidizer			25390	24	19223		109	6097	3.7	
9415810300100	6/7/94 10:30	1	Oxidizer			29163				402	6834	3.7	
9415910000100	6/8/94 10:00	1	Oxidizer				64					6.5	
9415911000100	6/8/94 11:00	1	Oxidizer				112					5.6	
9415912000100	6/8/94 12:00	1	Oxidizer			26361	32			107	6333	5.1	
9415913000100	6/8/94 13:00	1	Oxidizer				48					5.5	
9415914000100	6/8/94 14:00	1	Oxidizer				96						
9415915000100	6/8/94 15:00	1	Oxidizer				80					5.6	
9416009150100	6/9/94 9:15	1	Oxidizer				104					5.8	
9416010000100	6/9/94 10:00	1	Oxidizer	4884			96					5.6	
9416011000100	6/9/94 11:00	1	Oxidizer			25170	176	19703		150	6018	5.8	
9416012000100	6/9/94 12:00	1	Oxidizer				32					5.5	
9416014000100	6/9/94 14:00	1	Oxidizer				40					6.4	
9416015000100	6/9/94 15:00	1	Oxidizer				48					6.0	
9416609000100	6/15/94 9:00	1	Oxidizer				96					5.1	
9416610000100	6/15/94 10:00	1	Oxidizer				8					5.2	
9416611000100	6/15/94 11:00	1	Oxidizer									5.1	
9416612000100	6/15/94 12:00	1	Oxidizer			22448				107	5384	5.0	
9416613000100	6/15/94 13:00	1	Oxidizer				64					5.1	
9416614000100	6/15/94 14:00	1	Oxidizer	4904			64					5.2	
9416615000100	6/15/94 15:00	1	Oxidizer				40					6.4	
9416700000100	6/16/94 0:00	1	Oxidizer										
9416710000100	6/16/94 10:00	1	Oxidizer				72					6.2	
9416711000100	6/16/94 11:00	1	Oxidizer				48					6.5	
9416712000100	6/16/94 12:00	1	Oxidizer				80					3.9	
9416713000100	6/16/94 13:00	1	Oxidizer				176					6.2	
9416714000100	6/16/94 14:00	1	Oxidizer			24770	32	16270		33	5992	6.2	
9416715000100	6/16/94 15:00	1	Oxidizer				144					6.2	
9416809000100	6/17/94 9:00	1	Oxidizer				64					5.6	
9416810000100	6/17/94 10:00	1	Oxidizer			24069			2872	37	5820	5.7	
9416811000100	6/17/94 11:00	1	Oxidizer				24					5.9	
9416812000100	6/17/94 12:00	1	Oxidizer				32					5.5	
9416813000100	6/17/94 13:00	1	Oxidizer			25620	16	17071		143	6132	5.5	
9417100000100	6/20/94 0:00	1	Oxidizer	2513								6.5	
9417300000100	6/22/94 0:00	1	Oxidizer			21247	32	14267		119	5085	5.5	
9417415250100	6/23/94 15:25	1	Oxidizer	5068								5.7	
9417809300100	6/27/94 9:30	1	Oxidizer				192					5.1	
9417810000100	6/27/94 10:00	1	Oxidizer				248					4.8	
9417811000100	6/27/94 11:00	1	Oxidizer				176					4.8	
9417812300100	6/27/94 12:30	1	Oxidizer				120					4.5	
9417813000100	6/27/94 13:00	1	Oxidizer				120					5.4	
9417814000100	6/27/94 14:00	1	Oxidizer			26721	24	16535		139	6401	4.8	
9417815000100	6/27/94 15:00	1	Oxidizer				160					5.6	
9417910000100	6/28/94 10:00	1	Oxidizer				176					5.7	
9417911000100	6/28/94 11:00	1	Oxidizer				240					5.7	
9417912000100	6/28/94 12:00	1	Oxidizer				96					5.5	
9417913000100	6/28/94 13:00	1	Oxidizer				160					5.5	
9417914000100	6/28/94 14:00	1	Oxidizer			27042	10	21379		99	6504	5.4	
9417915000100	6/28/94 15:00	1	Oxidizer				160						
9417916000100	6/28/94 16:00	1	Oxidizer				112					5.5	
9417917000100	6/28/94 17:00	1	Oxidizer				128					5.5	
9417918000100	6/28/94 18:00	1	Oxidizer				224					5.4	
9417919000100	6/28/94 19:00	1	Oxidizer	2812			160					5.6	
9417920000100	6/28/94 20:00	1	Oxidizer				232					5.4	
9417920000100	6/28/94 20:00	1	Oxidizer			25841	232	17187		111	6205	5.4	
9417921000100	6/28/94 21:00	1	Oxidizer				168					5.7	
9417922000100	6/28/94 22:00	1	Oxidizer				168					5.5	
9418000000100	6/29/94 0:00	1	Oxidizer				120					5.3	
9418015000100	6/29/94 15:00	1	Oxidizer				96					5.3	
9418016000100	6/29/94 16:00	1	Oxidizer				56					6.4	
9418018000100	6/29/94 18:00	1	Oxidizer				72					5.2	
9418018000100	6/29/94 18:00	1	Oxidizer			25701	72	30581		103	6176	5.2	
9418019000100	6/29/94 19:00	1	Oxidizer				136					5.4	
9418020000100	6/29/94 20:00	1	Oxidizer				104					5.6	
9418111000100	6/30/94 11:00	1	Oxidizer				6592					5.6	
9418112000100	6/30/94 12:00	1	Oxidizer				6608					4.5	
9418113000100	6/30/94 13:00	1	Oxidizer				6528					5.4	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9418116000100	6/30/94 16:00	1	Oxidizer				240					5.4	
9418117000100	6/30/94 17:00	1	Oxidizer				120					5.7	
9418118000100	6/30/94 18:00	1	Oxidizer				160					5.7	
9418119000100	6/30/94 19:00	1	Oxidizer				136					5.8	
9418120000100	6/30/94 20:00	1	Oxidizer			25711	160	27198		70	6198	5.1	
9418609000100	7/5/94 9:00	1	Oxidizer				208					5.5	
9418610000100	7/5/94 10:00	1	Oxidizer				104					5.3	
9418611000100	7/5/94 11:00	1	Oxidizer				112					5.3	
9418612000100	7/5/94 12:00	1	Oxidizer				136					5.3	
9418613000100	7/5/94 13:00	1	Oxidizer				168					5.3	
9418614000100	7/5/94 14:00	1	Oxidizer			19275	144	17984	88633	93	4622	5.4	
9418616000100	7/5/94 16:00	1	Oxidizer				176					5.3	
9418617000100	7/5/94 17:00	1	Oxidizer				128					5.6	
9418618000100	7/5/94 18:00	1	Oxidizer			22678	120	18013		95	5447	5.5	
9418619000100	7/5/94 19:00	1	Oxidizer				192					5.3	
9418620000100	7/5/94 20:00	1	Oxidizer				160					5.5	
9418621000100	7/5/94 21:00	1	Oxidizer				152					5.1	
9418622000100	7/5/94 22:00	1	Oxidizer			21107	80	13590		91	5068	5.4	
9418709000100	7/6/94 9:00	1	Oxidizer				120					5.4	
9418710000100	7/6/94 10:00	1	Oxidizer				120					5.0	
9418711000100	7/6/94 11:00	1	Oxidizer				80					5.1	
9418712000100	7/6/94 12:00	1	Oxidizer				80					5.2	
9418713000100	7/6/94 13:00	1	Oxidizer			18395	64	16432		124	4389	5.5	
9418714000100	7/6/94 14:00	1	Oxidizer				224					5.5	
9418715000100	7/6/94 15:00	1	Oxidizer				152					5.5	
9418716000100	7/6/94 16:00	1	Oxidizer				192					5.7	
9418717000100	7/6/94 17:00	1	Oxidizer				160					5.6	
9418718000100	7/6/94 18:00	1	Oxidizer				176					5.4	
9418719000100	7/6/94 19:00	1	Oxidizer				168					5.6	
9418720000100	7/6/94 20:00	1	Oxidizer			18945	104	6474		75	4553	4.8	
9418809000100	7/7/94 9:00	1	Oxidizer				144					5.3	
9418810000100	7/7/94 10:00	1	Oxidizer				168					4.9	
9418811000100	7/7/94 11:00	1	Oxidizer				160					5.3	
9418812000100	7/7/94 12:00	1	Oxidizer				144					5.5	
9418813000100	7/7/94 13:00	1	Oxidizer				176					5.7	
9418814000100	7/7/94 14:00	1	Oxidizer			22208	144	16839		87	5338	5.1	
9418908000100	7/8/94 8:00	1	Oxidizer				88					5.6	
9418909000100	7/8/94 9:00	1	Oxidizer				200					5.2	
9418910000100	7/8/94 10:00	1	Oxidizer				104					5.5	
9418911000100	7/8/94 11:00	1	Oxidizer				24					5.4	
9418912000100	7/8/94 12:00	1	Oxidizer				128					5.3	
9418913000100	7/8/94 13:00	1	Oxidizer				88					5.2	
9418914000100	7/8/94 14:00	1	Oxidizer			23419	80	18295		93	5628	5.2	
9419212000100	7/11/94 12:00	1	Oxidizer				320					5.5	
9419213000100	7/11/94 13:00	1	Oxidizer				136					5.5	
9419214000100	7/11/94 14:00	1	Oxidizer				136					5.3	
9419215000100	7/11/94 15:00	1	Oxidizer				112					5.5	
9419216000100	7/11/94 16:00	1	Oxidizer				176					5.4	
9419217000100	7/11/94 17:00	1	Oxidizer			23759	144	21540		80	5718	5.2	
9419218000100	7/11/94 18:00	1	Oxidizer									5.1	
9419219000100	7/11/94 19:00	1	Oxidizer				88					5.3	
9419220000100	7/11/94 20:00	1	Oxidizer				176					5.4	
9419221000100	7/11/94 21:00	1	Oxidizer				120					5.4	
9419222000100	7/11/94 22:00	1	Oxidizer			21217	4616	12502		45	5123	5.0	
9419309000100	7/12/94 9:00	1	Oxidizer				120					5.4	
9419310000100	7/12/94 10:00	1	Oxidizer				120					5.0	
9419311000100	7/12/94 11:00	1	Oxidizer				120		5317418			5.4	
9419311110100	7/12/94 11:11	1	Oxidizer				112					5.2	
9419313000100	7/12/94 13:00	1	Oxidizer			21487	152	17916		70	5173	5.4	
9419314000100	7/12/94 14:00	1	Oxidizer				56					5.7	
9419315000100	7/12/94 15:00	1	Oxidizer				152					50.2	
9419316000100	7/12/94 16:00	1	Oxidizer				80					5.6	
9419317000100	7/12/94 17:00	1	Oxidizer				72					5.6	
9419317300100	7/12/94 17:30	1	Oxidizer			3747	48	13782			620	4.4	
9419318000100	7/12/94 18:00	1	Oxidizer				96		5318			5.6	
9419319000100	7/12/94 19:00	1	Oxidizer				168					5.5	
9419409000100	7/13/94 9:00	1	Oxidizer				128					5.5	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9419410000100	7/13/94 10:00	1	Oxidizer				96					5.5	
9419411000100	7/13/94 11:00	1	Oxidizer				112					5.5	
9419412000100	7/13/94 12:00	1	Oxidizer				128					5.3	
9419413000100	7/13/94 13:00	1	Oxidizer				120					5.3	
9419414000100	7/13/94 14:00	1	Oxidizer			22338	40	17020		68	5381	5.2	
9419415000100	7/13/94 15:00	1	Oxidizer				104					5.3	
9419416000100	7/13/94 16:00	1	Oxidizer				192					5.5	
9419417000100	7/13/94 17:00	1	Oxidizer				152					5.5	
9419418000100	7/13/94 18:00	1	Oxidizer			22148	48	18158			5318	5.4	
9419509000100	7/14/94 9:00	1	Oxidizer				96					5.6	
9419510000100	7/14/94 10:00	1	Oxidizer				32					5.5	
9419511000100	7/14/94 11:00	1	Oxidizer				48					5.4	
9419512000100	7/14/94 12:00	1	Oxidizer				80					5.7	
9419513000100	7/14/94 13:00	1	Oxidizer			22248	72	18012		54	5367	5.4	
9419514000100	7/14/94 14:00	1	Oxidizer				56					5.7	
9419515000100	7/14/94 15:00	1	Oxidizer				72					5.2	
9419516000100	7/14/94 16:00	1	Oxidizer				88					5.7	
9419517000100	7/14/94 17:00	1	Oxidizer				80						
9419518000100	7/14/94 18:00	1	Oxidizer			19646	32	17484		75	4723	5.4	
9419519000100	7/14/94 19:00	1	Oxidizer				80					5.4	
9419520000100	7/14/94 20:00	1	Oxidizer				64					5.6	
9419521000100	7/14/94 21:00	1	Oxidizer				104					6.0	
9419522000100	7/14/94 22:00	1	Oxidizer			22488	32	17598		52	5427	7.1	
9419909000100	7/18/94 9:00	1	Oxidizer				192					5.6	
9419910000100	7/18/94 10:00	1	Oxidizer				112					5.5	
9419911000100	7/18/94 11:00	1	Oxidizer				80					5.3	
9419912000100	7/18/94 12:00	1	Oxidizer				72					5.3	4.1
9419913000100	7/18/94 13:00	1	Oxidizer				72					5.3	
9419914000100	7/18/94 14:00	1	Oxidizer			23128	96	16840		119	5541	4.9	
9419915000100	7/18/94 15:00	1	Oxidizer				96					5.4	
9419916000100	7/18/94 16:00	1	Oxidizer				88					5.8	
9419917000100	7/18/94 17:00	1	Oxidizer				4600					5.5	
9419918000100	7/18/94 18:00	1	Oxidizer			21417	152	18979		71	5155	5.6	
9419919000100	7/18/94 19:00	1	Oxidizer				208					6.6	
9419920000100	7/18/94 20:00	1	Oxidizer				152					5.8	
9419921000100	7/18/94 21:00	1	Oxidizer				48					5.8	
9419922000100	7/18/94 22:00	1	Oxidizer			22498	32	20531		79	5413	5.0	
9420009000100	7/19/94 9:00	1	Oxidizer				96					5.5	
9420010000100	7/19/94 10:00	1	Oxidizer				136					5.7	
9420011000100	7/19/94 11:00	1	Oxidizer									5.6	
9420012000100	7/19/94 12:00	1	Oxidizer				168					5.7	
9420013000100	7/19/94 13:00	1	Oxidizer				32					5.5	
9420014000100	7/19/94 14:00	1	Oxidizer			22688	96	16282		256	5351	5.4	
9420015000100	7/19/94 15:00	1	Oxidizer				80					5.6	
9420016000100	7/19/94 16:00	1	Oxidizer				112					5.8	
9420017000100	7/19/94 17:00	1	Oxidizer				120					55.5	
9420018000100	7/19/94 18:00	1	Oxidizer			23739	112	19632		264	5602	5.6	
9420019000100	7/19/94 19:00	1	Oxidizer				104					5.8	
9420020000100	7/19/94 20:00	1	Oxidizer				152					5.7	
9420021000100	7/19/94 21:00	1	Oxidizer				112					5.9	
9420022000100	7/19/94 22:00	1	Oxidizer			20747	8	16890		91	4981	5.4	
9420109000100	7/20/94 9:00	1	Oxidizer				88					5.5	
9420110000100	7/20/94 10:00	1	Oxidizer				32					5.6	
9420111000100	7/20/94 11:00	1	Oxidizer				48					5.7	
9420112000100	7/20/94 12:00	1	Oxidizer				88					5.5	
9420113000100	7/20/94 13:00	1	Oxidizer				48					5.4	
9420114000100	7/20/94 14:00	1	Oxidizer			24530	5564	18685		161	5856	5.3	
9420115000100	7/20/94 15:00	1	Oxidizer				72					5.3	
9420116000100	7/20/94 16:00	1	Oxidizer				48					5.8	
9420117000100	7/20/94 17:00	1	Oxidizer				80					6.1	
9420118000100	7/20/94 18:00	1	Oxidizer			25100	112	21708		256	5937	5.8	
9420119000100	7/20/94 19:00	1	Oxidizer				80					6.6	
9420120000100	7/20/94 20:00	1	Oxidizer				144					5.8	
9420121000100	7/20/94 21:00	1	Oxidizer				112					5.9	
9420122000100	7/20/94 22:00	1	Oxidizer			22538	8	20435		312	5281	5.4	
9420209000100	7/21/94 9:00	1	Oxidizer									5.8	
9420210000100	7/21/94 10:00	1	Oxidizer				88					4.9	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9420211000100	7/21/94 11:00	1	Oxidizer				144					5.7	
9420212000100	7/21/94 12:00	1	Oxidizer				96					5.7	
9420213000100	7/21/94 13:00	1	Oxidizer				104					4.9	
9420214000100	7/21/94 14:00	1	Oxidizer			25100	64	16879		2009	4873	5.3	
9420215000100	7/21/94 15:00	1	Oxidizer				104		2127			5.5	
9420216000100	7/21/94 16:00	1	Oxidizer				112					5.6	
9420217000100	7/21/94 17:00	1	Oxidizer				24					5.7	
9420218000100	7/21/94 18:00	1	Oxidizer				40		212718			5.1	
9420219000100	7/21/94 19:00	1	Oxidizer				40					5.5	
9420220000100	7/21/94 20:00	1	Oxidizer				-8					5.2	
9420221000100	7/21/94 21:00	1	Oxidizer			24850	8	21190		114	5963	5.0	
9420609000100	7/25/94 9:00	1	Oxidizer				264					5.6	
9420610000100	7/25/94 10:00	1	Oxidizer				128					4.7	
9420611000100	7/25/94 11:00	1	Oxidizer				64					5.5	
9420612000100	7/25/94 12:00	1	Oxidizer				72					4.9	
9420613000100	7/25/94 13:00	1	Oxidizer				144					5.4	
9420614000100	7/25/94 14:00	1	Oxidizer			23469	112	16263		99	5637	4.9	
9420615000100	7/25/94 15:00	1	Oxidizer				152					5.4	
9420616000100	7/25/94 16:00	1	Oxidizer				104					5.4	
9420617000100	7/25/94 17:00	1	Oxidizer				64					5.6	
9420618000100	7/25/94 18:00	1	Oxidizer			21507	32	11758		115	5150	5.5	
9420619000100	7/25/94 19:00	1	Oxidizer				104					5.1	
9420620000100	7/25/94 20:00	1	Oxidizer				112					5.3	
9420622000100	7/25/94 22:00	1	Oxidizer			24400	72	21114		114	5853	5.3	
9420710000100	7/26/94 10:00	1	Oxidizer									5.8	
9420711000100	7/26/94 11:00	1	Oxidizer				176					5.5	
9420712000100	7/26/94 12:00	1	Oxidizer				128					5.6	
9420713000100	7/26/94 13:00	1	Oxidizer				128					5.4	
9420714000100	7/26/94 14:00	1	Oxidizer			23479	48	16785		71	5656	5.3	
9420715000100	7/26/94 15:00	1	Oxidizer				56					5.7	
9420716000100	7/26/94 16:00	1	Oxidizer				152					5.7	
9420717000100	7/26/94 17:00	1	Oxidizer				104					5.7	
9420718000100	7/26/94 18:00	1	Oxidizer			24039	80	17312		99	5775	5.4	
9420719000100	7/26/94 19:00	1	Oxidizer				40					5.7	
9420720000100	7/26/94 20:00	1	Oxidizer				120					5.7	
9420721000100	7/26/94 21:00	1	Oxidizer				112					5.7	
9420722000100	7/26/94 22:00	1	Oxidizer			23839	72	20734		88	5733	5.0	
9420809000100	7/27/94 9:00	1	Oxidizer				-16					5.61	
9420810000100	7/27/94 10:00	1	Oxidizer				128					5.43	
9420811000100	7/27/94 11:00	1	Oxidizer				24					5.75	
9420812000100	7/27/94 12:00	1	Oxidizer				88					5.62	
9420814000100	7/27/94 14:00	1	Oxidizer				8					5.42	
9420814000100	7/27/94 14:00	1	Oxidizer			24670	64	12751		1974.5	4790	5.22	
9420815000100	7/27/94 15:00	1	Oxidizer				184					5.24	
9420816000100	7/27/94 16:00	1	Oxidizer				112		21272			5.52	
9420817000100	7/27/94 17:00	1	Oxidizer				80					5.75	
9420818000100	7/27/94 18:00	1	Oxidizer				72					5.62	
9420819000100	7/27/94 19:00	1	Oxidizer			21117	40	23728		108.9	5059	5.29	
9420909000100	7/28/94 9:00	1	Oxidizer				96					5.46	
9420910000100	7/28/94 10:00	1	Oxidizer				112					5.45	
9420911000100	7/28/94 11:00	1	Oxidizer				72		436072			5.54	
9420912000100	7/28/94 12:00	1	Oxidizer				56					5.56	
9420913000100	7/28/94 13:00	1	Oxidizer			24860	24	1706	10636	94.5	5977	5.59	
9420917000100	7/28/94 17:00	1	Oxidizer				88					5.66	
9420918000100	7/28/94 18:00	1	Oxidizer				104					5.75	
9420919000100	7/28/94 19:00	1	Oxidizer				112					5.82	
9420920000100	7/28/94 20:00	1	Oxidizer				144					5.73	
9420921000100	7/28/94 21:00	1	Oxidizer			24319	72	21369		105.7	5839	5.70	
9421310000100	8/1/94 10:00	1	Oxidizer				40					5.53	
9421311000100	8/1/94 11:00	1	Oxidizer				56					5.48	
9421312000100	8/1/94 12:00	1	Oxidizer				88					5.62	
9421313000100	8/1/94 13:00	1	Oxidizer				88					5.40	
9421314000100	8/1/94 14:00	1	Oxidizer				80					5.40	
9421315000100	8/1/94 15:00	1	Oxidizer			24720	-40	20320		92.1	5944	5.45	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9421316000100	8/1/94 16:00	1	Oxidizer				72					5.55	
9421317000100	8/1/94 17:00	1	Oxidizer				80					5.70	
9421318000100	8/1/94 18:00	1	Oxidizer				96					5.77	
9421319000100	8/1/94 19:00	1	Oxidizer				72					5.84	
9421320000100	8/1/94 20:00	1	Oxidizer				72					5.59	
9421321000100	8/1/94 21:00	1	Oxidizer				128					5.78	
9421322000100	8/1/94 22:00	1	Oxidizer			22448	64	22953		93.7	5392	5.34	
9421400000100	8/2/94 0:00	1	Oxidizer										
9421400000100	8/2/94 0:00	1	Oxidizer				6640					6.88	
9421413000100	8/2/94 13:00	1	Oxidizer				144					5.80	
9421414000100	8/2/94 14:00	1	Oxidizer				136					5.42	
9421415000100	8/2/94 15:00	1	Oxidizer				200					5.50	
9421415000100	8/2/94 15:00	1	Oxidizer				200						
9421416000100	8/2/94 16:00	1	Oxidizer				184					5.58	
9421419000100	8/2/94 19:00	1	Oxidizer				96					5.56	
9421420000100	8/2/94 20:00	1	Oxidizer				128					5.51	
9421421000100	8/2/94 21:00	1	Oxidizer				208					5.64	
9421421000100	8/2/94 21:00	1	Oxidizer				6576					6.87	
9421509000100	8/3/94 9:00	1	Oxidizer				112					5.53	
9421510000100	8/3/94 10:00	1	Oxidizer				112					5.62	
9421511000100	8/3/94 11:00	1	Oxidizer				176					5.71	
9421512000100	8/3/94 12:00	1	Oxidizer				128					5.67	
9421513000100	8/3/94 13:00	1	Oxidizer				144					5.76	
9421514000100	8/3/94 14:00	1	Oxidizer			25761	144	15785		65.7	6213	5.64	
9421515000100	8/3/94 15:00	1	Oxidizer				272					5.61	
9421516000100	8/3/94 16:00	1	Oxidizer				144					5.71	
9421517000100	8/3/94 17:00	1	Oxidizer				120					5.74	
9421518000100	8/3/94 18:00	1	Oxidizer				96					5.59	
9421519000100	8/3/94 19:00	1	Oxidizer				16					3.74	
9421520000100	8/3/94 20:00	1	Oxidizer				56					3.37	
9421609000100	8/4/94 9:00	1	Oxidizer			1001	184					4.36	
9421610000100	8/4/94 10:00	1	Oxidizer				40					5.63	
9421611000100	8/4/94 11:00	1	Oxidizer				160					5.54	
9421612000100	8/4/94 12:00	1	Oxidizer									5.57	
9421612000100	8/4/94 12:00	1	Oxidizer				8					5.57	
9421613000100	8/4/94 13:00	1	Oxidizer				80					5.67	
9421614000100	8/4/94 14:00	1	Oxidizer			27092	64	18905		98.5	6516	5.47	
9421615000100	8/4/94 15:00	1	Oxidizer				80					5.54	
9421616000100	8/4/94 16:00	1	Oxidizer				144					5.83	
9421617000100	8/4/94 17:00	1	Oxidizer				144					5.30	
9421618000100	8/4/94 18:00	1	Oxidizer			24339	64	16155		121.8	5834	4.75	
9421619000100	8/4/94 19:00	1	Oxidizer				72					5.66	
9421620000100	8/4/94 20:00	1	Oxidizer				184					5.85	
9421621000100	8/4/94 21:00	1	Oxidizer				144					5.67	
9422009000100	8/8/94 9:00	1	Oxidizer				144					5.45	
9422010000100	8/8/94 10:00	1	Oxidizer						0			5.36	
9422010000100	8/8/94 10:00	1	Oxidizer				56					5.36	
9422010000100	8/8/94 10:00	1	Oxidizer				56					5.36	
9422011000100	8/8/94 11:00	1	Oxidizer				16					5.51	
9422012000100	8/8/94 12:00	1	Oxidizer				32		0			5.50	
9422013000100	8/8/94 13:00	1	Oxidizer				56		0			5.35	623.0
9422014000100	8/8/94 14:00	1	Oxidizer			22818	40	18637		97.7	5479	4.98	
9422015000100	8/8/94 15:00	1	Oxidizer				88					5.29	
9422016000100	8/8/94 16:00	1	Oxidizer				72					5.68	
9422017000100	8/8/94 17:00	1	Oxidizer				72					5.50	
9422020000100	8/8/94 20:00	1	Oxidizer				5840					6.52	
9422021000100	8/8/94 21:00	1	Oxidizer				104					5.77	
9422022000100	8/8/94 22:00	1	Oxidizer			20326	16	20801	532	108.9	4867	4.93	
9422100000100	8/9/94 0:00	1	Oxidizer										
9422100000100	8/9/94 0:00	1	Oxidizer				48					5.74	
9422110000100	8/9/94 10:00	1	Oxidizer				40					5.60	
9422111000100	8/9/94 11:00	1	Oxidizer				40					5.51	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9422112000100	8/9/94 12:00	1	Oxidizer				112					5.84	
9422113000100	8/9/94 13:00	1	Oxidizer				104					5.38	
9422113000100	8/9/94 13:00	1	Oxidizer						532				
9422114000100	8/9/94 14:00	1	Oxidizer			19476	128			118.5	4655	5.55	
9422115000100	8/9/94 15:00	1	Oxidizer				56					5.52	
9422116000100	8/9/94 16:00	1	Oxidizer				80					5.54	
9422117000100	8/9/94 17:00	1	Oxidizer				88					5.69	
9422118000100	8/9/94 18:00	1	Oxidizer				120						
9422118000100	8/9/94 18:00	1	Oxidizer			21277	120			90.5	5109	5.48	
9422119000100	8/9/94 19:00	1	Oxidizer				40					3.32	
9422121000100	8/9/94 21:00	1	Oxidizer				56					5.63	
9422122000100	8/9/94 22:00	1	Oxidizer			19806	56			70.5	4765	5.11	
9422209000100	8/10/94 9:00	1	Oxidizer				16					5.57	
9422210000100	8/10/94 10:00	1	Oxidizer				40					4.90	
9422211000100	8/10/94 11:00	1	Oxidizer				-40					5.64	
9422212000100	8/10/94 12:00	1	Oxidizer				96					5.63	
9422213000100	8/10/94 13:00	1	Oxidizer				104					5.57	
9422214000100	8/10/94 14:00	1	Oxidizer			22888	24			113.7	5486	5.68	
9422215000100	8/10/94 15:00	1	Oxidizer				32					5.46	
9422217000100	8/10/94 17:00	1	Oxidizer				80					5.74	
9422219000100	8/10/94 19:00	1	Oxidizer										
9422219000100	8/10/94 19:00	1	Oxidizer				48					5.49	
9422220000100	8/10/94 20:00	1	Oxidizer				40					5.51	
9422221000100	8/10/94 21:00	1	Oxidizer				72		584975			5.77	
9422222000100	8/10/94 22:00	1	Oxidizer			20286	72			90.5	4869	5.38	
9422309000100	8/11/94 9:00	1	Oxidizer				88					5.71	
9422310000100	8/11/94 10:00	1	Oxidizer				88					5.88	
9422311000100	8/11/94 11:00	1	Oxidizer				72					5.70	
9422312000100	8/11/94 12:00	1	Oxidizer				96					5.79	
9422313000100	8/11/94 13:00	1	Oxidizer				88					5.49	
9422314000100	8/11/94 14:00	1	Oxidizer			23128	56	19822	0	93.7	5557	5.69	
9422315000100	8/11/94 15:00	1	Oxidizer									5.81	
9422316000100	8/11/94 16:00	1	Oxidizer				24					5.74	
9422317000100	8/11/94 17:00	1	Oxidizer				104					5.95	
9422318000100	8/11/94 18:00	1	Oxidizer			20236	144	22192		102.5	4849	6.11	
9422319000100	8/11/94 19:00	1	Oxidizer				56					5.88	
9422320000100	8/11/94 20:00	1	Oxidizer				280					5.49	
9422321000100	8/11/94 21:00	1	Oxidizer				88					5.73	
9422413000100	8/12/94 13:00	1	Oxidizer				48					5.37	
9422413000100	8/12/94 13:00	1	Oxidizer				48					5.37	
9423009000100	8/18/94 9:00	1	Oxidizer				2880					5.51	
9423010000100	8/18/94 10:00	1	Oxidizer				120					5.55	
9423011000100	8/18/94 11:00	1	Oxidizer				88					5.66	
9423012000100	8/18/94 12:00	1	Oxidizer				144					5.54	
9423014000100	8/18/94 14:00	1	Oxidizer			25310	120	20992		91.3	6088	5.51	
9423015000100	8/18/94 15:00	1	Oxidizer				-24					5.71	
9423109000100	8/19/94 9:00	1	Oxidizer				128					5.78	
9423110000100	8/19/94 10:00	1	Oxidizer				72					5.50	
9423111000100	8/19/94 11:00	1	Oxidizer				64					5.73	
9423112000100	8/19/94 12:00	1	Oxidizer				88		5318			5.71	
9423113000100	8/19/94 13:00	1	Oxidizer				80					5.67	
9423114000100	8/19/94 14:00	1	Oxidizer			25761	88	21672	1613112	101.7	6191	5.39	
9423409000100	8/22/94 9:00	1	Oxidizer				88					5.59	
9423410000100	8/22/94 10:00	1	Oxidizer				136					5.55	
9423412000100	8/22/94 12:00	1	Oxidizer				168					5.56	
9423413000100	8/22/94 13:00	1	Oxidizer			111	120					5.51	
9423414000100	8/22/94 14:00	1	Oxidizer				88					5.51	
9423415000100	8/22/94 15:00	1	Oxidizer	5004			96		45582			5.76	
9423615000100	8/24/94 15:00	1	Oxidizer				144					5.84	
9423709000100	8/25/94 9:00	1	Oxidizer				56					5.16	
9423710000100	8/25/94 10:00	1	Oxidizer				128					5.69	
9423711000100	8/25/94 11:00	1	Oxidizer				96					5.59	
9423712000100	8/25/94 12:00	1	Oxidizer				104					5.84	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9423713000100	8/25/94 13:00	1	Oxidizer				168		15369			5.80	
9423714000100	8/25/94 14:00	1	Oxidizer				96					5.64	
9423809000100	8/26/94 9:00	1	Oxidizer				88		5318			5.54	
9423809300100	8/26/94 9:30	1	Oxidizer				112					5.52	
9423810000100	8/26/94 10:00	1	Oxidizer				120					5.81	
9423810300100	8/26/94 10:30	1	Oxidizer				160					5.73	
9423811300100	8/26/94 11:30	1	Oxidizer				112					5.81	
9424109000100	8/29/94 9:00	1	Oxidizer				120					5.69	
9424110000100	8/29/94 10:00	1	Oxidizer				120					5.70	
9424111000100	8/29/94 11:00	1	Oxidizer				80					5.58	
9424112000100	8/29/94 12:00	1	Oxidizer				200					5.86	
9424113300100	8/29/94 13:30	1	Oxidizer			24560	112	14748		147.4	5872	5.67	
9424115000100	8/29/94 15:00	1	Oxidizer				120					6.37	
9424209000100	8/30/94 9:00	1	Oxidizer				80					5.30	
9424210000100	8/30/94 10:00	1	Oxidizer				144					5.20	
9424211000100	8/30/94 11:00	1	Oxidizer				16					5.26	
9424212000100	8/30/94 12:00	1	Oxidizer				96					5.48	
9424213000100	8/30/94 13:00	1	Oxidizer				104					5.59	
9424214000100	8/30/94 14:00	1	Oxidizer			23819	96	16560		96.9	5722	5.37	
9424215000100	8/30/94 15:00	1	Oxidizer				152					5.64	
9424216000100	8/30/94 16:00	1	Oxidizer				144					6.06	
9424308300100	8/31/94 8:30	1	Oxidizer				120					5.70	
9424309000100	8/31/94 9:00	1	Oxidizer				152					5.70	
9424310000100	8/31/94 10:00	1	Oxidizer				96					5.63	
9424311000100	8/31/94 11:00	1	Oxidizer				112					5.70	
9424312000100	8/31/94 12:00	1	Oxidizer				200					5.73	
9424313000100	8/31/94 13:00	1	Oxidizer				168					5.57	
9424314000100	8/31/94 14:00	1	Oxidizer			23379	128	16355		89.7	5620	5.25	
9424315000100	8/31/94 15:00	1	Oxidizer				136					5.70	
9424409000100	9/1/94 9:00	1	Oxidizer				80					5.55	
9424410000100	9/1/94 10:00	1	Oxidizer				120					5.36	
9424411000100	9/1/94 11:00	1	Oxidizer				168					5.71	
9424412000100	9/1/94 12:00	1	Oxidizer				96					5.74	
9424413000100	9/1/94 13:00	1	Oxidizer				72					5.44	74.1
9424414000100	9/1/94 14:00	1	Oxidizer			23159	88	17819		129.8	5542	5.41	
9424415000100	9/1/94 15:00	1	Oxidizer				128					5.57	
9424900000100	9/6/94 0:00	1	Oxidizer				184						
9424909000100	9/6/94 9:00	1	Oxidizer				320					5.53	
9424910000100	9/6/94 10:00	1	Oxidizer				184					5.63	
9424911000100	9/6/94 11:00	1	Oxidizer				184					5.62	
9424912000100	9/6/94 12:00	1	Oxidizer				160					5.51	
9424913000100	9/6/94 13:00	1	Oxidizer				184					5.63	
9424914000100	9/6/94 14:00	1	Oxidizer			22308	128	18532		106.5	5350	5.36	
9424915000100	9/6/94 15:00	1	Oxidizer				120					5.39	
9424916000100	9/6/94 16:00	1	Oxidizer				160					5.51	
9424917000100	9/6/94 17:00	1	Oxidizer				136					5.56	
9424918000100	9/6/94 18:00	1	Oxidizer			20016	144	15243		77.7	4811	5.69	
9424919300100	9/6/94 19:30	1	Oxidizer				144					5.65	
9424920000100	9/6/94 20:00	1	Oxidizer				144					5.65	
9425709000100	9/14/94 9:00	1	Oxidizer				304					5.75	
9425709300100	9/14/94 9:30	1	Oxidizer				7608					6.20	
9425710000100	9/14/94 10:00	1	Oxidizer				144					5.10	
9425711000100	9/14/94 11:00	1	Oxidizer				120					6.20	
9425712000100	9/14/94 12:00	1	Oxidizer				32					4.74	
9425713000100	9/14/94 13:00	1	Oxidizer				48					5.62	
9425714000100	9/14/94 14:00	1	Oxidizer			21237	120	11604		129.0	5076	5.16	
9425715000100	9/14/94 15:00	1	Oxidizer				144		39885			5.43	
9425809000100	9/15/94 9:00	1	Oxidizer				40					5.16	
9425810000100	9/15/94 10:00	1	Oxidizer				160					5.41	
9426209000100	9/19/94 9:00	1	Oxidizer				272					5.71	
9426210000100	9/19/94 10:00	1	Oxidizer				88					5.42	
9426211000100	9/19/94 11:00	1	Oxidizer				40					5.48	
9426212000100	9/19/94 12:00	1	Oxidizer				48					5.43	
9426213000100	9/19/94 13:00	1	Oxidizer				88					5.40	
9426214000100	9/19/94 14:00	1	Oxidizer			27352	80	25512	26590	131.4	6559	5.42	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9426215000100	9/19/94 15:00	1	Oxidizer				64					5.57	
9426216000100	9/19/94 16:00	1	Oxidizer				48					5.55	
9426217000100	9/19/94 17:00	1	Oxidizer				88					5.60	
9426218000100	9/19/94 18:00	1	Oxidizer			23729	64	15881		196.2	5640	5.33	
9426219000100	9/19/94 19:00	1	Oxidizer				64					5.54	
9426220000100	9/19/94 20:00	1	Oxidizer				72					5.40	
9426221000100	9/19/94 21:00	1	Oxidizer				56					5.53	
9426222000100	9/19/94 22:00	1	Oxidizer			23179	96	17407		112.1	5558	5.52	
9426309000100	9/20/94 9:00	1	Oxidizer				0					5.00	
9426310000100	9/20/94 10:00	1	Oxidizer				144					5.65	
9426311000100	9/20/94 11:00	1	Oxidizer				136					5.65	
9426312000100	9/20/94 12:00	1	Oxidizer				56					5.35	
9426313000100	9/20/94 13:00	1	Oxidizer				88					5.28	
9426314000100	9/20/94 14:00	1	Oxidizer			27192	72	27152		88.1	6547	5.12	
9426315000100	9/20/94 15:00	1	Oxidizer				104					5.66	
9426316000100	9/20/94 16:00	1	Oxidizer				120					5.50	
9426317000100	9/20/94 17:00	1	Oxidizer				112					5.61	
9426318000100	9/20/94 18:00	1	Oxidizer			23799	88	16570		113.7	5707	4.92	
9426319000100	9/20/94 19:00	1	Oxidizer				96					5.88	
9426320000100	9/20/94 20:00	1	Oxidizer				80					5.64	
9426321000100	9/20/94 21:00	1	Oxidizer				112					5.56	
9426411000100	9/21/94 11:00	1	Oxidizer				64					5.91	
9426412000100	9/21/94 12:00	1	Oxidizer				32					5.40	
9426413000100	9/21/94 13:00	1	Oxidizer				40					5.40	
9426414000100	9/21/94 14:00	1	Oxidizer			23269	136	12565		117.7	5576	4.84	
9426510000100	9/22/94 10:00	1	Oxidizer				416					5.37	
9426510300100	9/22/94 10:30	1	Oxidizer				24					4.88	
9426511000100	9/22/94 11:00	1	Oxidizer			18755	-32	-1633	1925	92.9	4496	5.55	
9426512000100	9/22/94 12:00	1	Oxidizer				80					5.23	
9426513000100	9/22/94 13:00	1	Oxidizer				128					5.74	
9426514000100	9/22/94 14:00	1	Oxidizer				0					5.65	
9426515000100	9/22/94 15:00	1	Oxidizer			21197	80	25081		169.8	5042	5.62	
9426516000100	9/22/94 16:00	1	Oxidizer				32					5.60	
9426517000100	9/22/94 17:00	1	Oxidizer				24					5.51	
9426518000100	9/22/94 18:00	1	Oxidizer			21027	456	14229		125.8	5027	5.22	
9426519000100	9/22/94 19:00	1	Oxidizer				640					5.48	
9426520000100	9/22/94 20:00	1	Oxidizer				480					5.65	
9426520300100	9/22/94 20:30	1	Oxidizer				464						
9426521000100	9/22/94 21:00	1	Oxidizer				128					5.65	
9426522000100	9/22/94 22:00	1	Oxidizer			22788	64	16879		79.3	5483	4.65	
9427021000100	9/27/94 21:00	1	Oxidizer				128					5.34	
9427022000100	9/27/94 22:00	1	Oxidizer				128					5.48	
9427114000100	9/28/94 14:00	1	Oxidizer				104					5.27	
9427115000100	9/28/94 15:00	1	Oxidizer				64					6.20	
9427116000100	9/28/94 16:00	1	Oxidizer				136					6.04	
9427117000100	9/28/94 17:00	1	Oxidizer				216					6.02	
9427118000100	9/28/94 18:00	1	Oxidizer			23359	88	6702		125.8	5593	5.47	
9427119000100	9/28/94 19:00	1	Oxidizer				80					6.01	
9427120000100	9/28/94 20:00	1	Oxidizer				120					6.07	
9427121000100	9/28/94 21:00	1	Oxidizer				256					5.78	
9427122000100	9/28/94 22:00	1	Oxidizer			22458	64	19205		120.2	5378	6.10	
9427208000100	9/29/94 8:00	1	Oxidizer				232					5.59	
9427209300100	9/29/94 9:30	1	Oxidizer				56					5.57	
9427210000100	9/29/94 10:00	1	Oxidizer				32					5.00	
9427211000100	9/29/94 11:00	1	Oxidizer				64					5.85	
9427212000100	9/29/94 12:00	1	Oxidizer				200					6.04	
9427213000100	9/29/94 13:00	1	Oxidizer				192					5.29	
9427214000100	9/29/94 14:00	1	Oxidizer			22348	64	17446		113.7	5355	5.06	
9427215000100	9/29/94 15:00	1	Oxidizer				64					5.30	
9427600000100	10/3/94 0:00	1	Oxidizer			1001				2002.5			
9427609000100	10/3/94 9:00	1	Oxidizer				160					5.50	
9427610000100	10/3/94 10:00	1	Oxidizer				128					5.51	
9427611000100	10/3/94 11:00	1	Oxidizer				64					5.46	
9427612000100	10/3/94 12:00	1	Oxidizer				72					5.35	
9427613000100	10/3/94 13:00	1	Oxidizer				112					5.34	
9427614000100	10/3/94 14:00	1	Oxidizer			22418	32	25860		137.0	5358	4.89	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9427615000100	10/3/94 15:00	1	Oxidizer				200					5.53	
9427616000100	10/3/94 16:00	1	Oxidizer				32					5.55	
9427617000100	10/3/94 17:00	1	Oxidizer				40					5.82	
9427618000100	10/3/94 18:00	1	Oxidizer			22198	72	16311		133.8	5307	5.21	
9427619000100	10/3/94 19:00	1	Oxidizer				64					5.30	
9427619000100	10/3/94 19:00	1	Oxidizer				32					5.62	
9427621000100	10/3/94 21:00	1	Oxidizer				160					5.35	
9427622000100	10/3/94 22:00	1	Oxidizer				48					5.55	
9427622450100	10/3/94 22:45	1	Oxidizer			21267	40	13689		152.2	5070	4.95	
9427710000100	10/4/94 10:00	1	Oxidizer				48					5.31	
9427711000100	10/4/94 11:00	1	Oxidizer				56					5.49	
9427712000100	10/4/94 12:00	1	Oxidizer				56					5.62	
9427713000100	10/4/94 13:00	1	Oxidizer				32					5.76	
9427714000100	10/4/94 14:00	1	Oxidizer			21187	64	23020		153.0	5050	5.10	
9427715000100	10/4/94 15:00	1	Oxidizer				64					5.47	
9427716000100	10/4/94 16:00	1	Oxidizer				32					5.43	
9427716000100	10/4/94 16:00	1	Oxidizer				88					5.42	
9427716000100	10/4/94 16:00	1	Oxidizer				32					5.43	
9427717000100	10/4/94 17:00	1	Oxidizer				88					5.42	
9427718000100	10/4/94 18:00	1	Oxidizer			21737	56	23030		135.4	5194	5.09	
9427719000100	10/4/94 19:00	1	Oxidizer				72					5.65	
9427720000100	10/4/94 20:00	1	Oxidizer				80					5.46	
9427721000100	10/4/94 21:00	1	Oxidizer				24					5.26	
9427721300100	10/4/94 21:30	1	Oxidizer			24029	112	16263		131.4	5753	5.35	
9427809000100	10/5/94 9:00	1	Oxidizer				32					5.88	
9427809000100	10/5/94 9:00	1	Oxidizer				32					5.88	
9427810000100	10/5/94 10:00	1	Oxidizer				144					5.24	
9427811000100	10/5/94 11:00	1	Oxidizer				176					5.75	
9427812000100	10/5/94 12:00	1	Oxidizer				112					5.20	
9427813000100	10/5/94 13:00	1	Oxidizer				32					5.55	
9427814000100	10/5/94 14:00	1	Oxidizer			21737	40	12680		147.4	5187	5.51	
9427815000100	10/5/94 15:00	1	Oxidizer				64					5.57	
9427909000100	10/6/94 9:00	1	Oxidizer				-8					3.65	
9427910000100	10/6/94 10:00	1	Oxidizer				-32					4.63	
9427911000100	10/6/94 11:00	1	Oxidizer				24					4.61	
9427912000100	10/6/94 12:00	1	Oxidizer				32					5.85	
9427913000100	10/6/94 13:00	1	Oxidizer				16					5.15	
9427914000100	10/6/94 14:00	1	Oxidizer			22548	16	16656		36.0	5451	5.18	
9427915000100	10/6/94 15:00	1	Oxidizer				80					5.15	
9428009000100	10/7/94 9:00	1	Oxidizer				-32					4.43	
9428010000100	10/7/94 10:00	1	Oxidizer				72					5.77	
9428011000100	10/7/94 11:00	1	Oxidizer				-96					5.66	
9428012000100	10/7/94 12:00	1	Oxidizer				8					5.63	
9428013000100	10/7/94 13:00	1	Oxidizer				24					5.63	
9428014000100	10/7/94 14:00	1	Oxidizer			22158	-8	19889		204.3	5254	4.95	
9428310000100	10/10/94 10:00	1	Oxidizer				56					5.40	
9428311000100	10/10/94 11:00	1	Oxidizer				16					5.50	
9428312000100	10/10/94 12:00	1	Oxidizer				40					5.72	
9428313000100	10/10/94 13:00	1	Oxidizer				88					5.63	
9428314000100	10/10/94 14:00	1	Oxidizer			21057	48	23787		165.0	5011	4.90	
9428315000100	10/10/94 15:00	1	Oxidizer				48					5.74	
9428316000100	10/10/94 16:00	1	Oxidizer				48					5.02	
9428317000100	10/10/94 17:00	1	Oxidizer				-32					5.82	
9428318000100	10/10/94 18:00	1	Oxidizer			21147	32	25138		383.7	4900	5.82	
9428319000100	10/10/94 19:00	1	Oxidizer				48					5.62	
9428320000100	10/10/94 20:00	1	Oxidizer				48					5.53	
9428321000100	10/10/94 21:00	1	Oxidizer				80					5.04	
9428322000100	10/10/94 22:00	1	Oxidizer			21297	8	23087		210.7	5041	4.68	
9428323000100	10/10/94 23:00	1	Oxidizer				24					5.25	
9428409000100	10/11/94 9:00	1	Oxidizer				56					5.74	
9428410000100	10/11/94 10:00	1	Oxidizer				56					5.52	
9428411000100	10/11/94 11:00	1	Oxidizer										
9428413000100	10/11/94 13:00	1	Oxidizer				40					5.36	
9428414000100	10/11/94 14:00	1	Oxidizer			22188	32	24291		160.2	5288	5.14	
9428415000100	10/11/94 15:00	1	Oxidizer				128					5.72	
9428416000100	10/11/94 16:00	1	Oxidizer				88					5.65	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9428417000100	10/11/94 17:00	1	Oxidizer				24					5.83	
9428418000100	10/11/94 18:00	1	Oxidizer			21287	64	22354		370.1	4942	5.59	
9428419000100	10/11/94 19:00	1	Oxidizer				120					5.67	
9428420000100	10/11/94 20:00	1	Oxidizer				48					5.96	
9428421000100	10/11/94 21:00	1	Oxidizer				128					5.73	
9428422000100	10/11/94 22:00	1	Oxidizer			22038	-8	27390		323.6	5153	4.86	
9428509000100	10/12/94 9:00	1	Oxidizer				32					5.34	
9428510000100	10/12/94 10:00	1	Oxidizer				48					5.40	
9428511000100	10/12/94 11:00	1	Oxidizer				32					5.60	
9428512000100	10/12/94 12:00	1	Oxidizer				16		13295				
9428513000100	10/12/94 13:00	1	Oxidizer				-8					5.25	
9428514000100	10/12/94 14:00	1	Oxidizer			22578	24	23748	159539	212.3	5351	5.39	
9428515000100	10/12/94 15:00	1	Oxidizer				80					5.73	
9428516000100	10/12/94 16:00	1	Oxidizer				72					5.17	
9428517000100	10/12/94 17:00	1	Oxidizer				24					5.62	
9428518000100	10/12/94 18:00	1	Oxidizer			22838	8	23087		222.7	5408	5.16	
9428519000100	10/12/94 19:00	1	Oxidizer				24		0				
9428520000100	10/12/94 20:00	1	Oxidizer				56					5.47	
9428521000100	10/12/94 21:00	1	Oxidizer				64					5.19	
9428522000100	10/12/94 22:00	1	Oxidizer			22008	0	14882		218.7	5209	5.11	
9428523000100	10/12/94 23:00	1	Oxidizer				64					5.57	
9428609000100	10/13/94 9:00	1	Oxidizer				24					5.60	
9428610000100	10/13/94 10:00	1	Oxidizer				32					5.22	
9428611000100	10/13/94 11:00	1	Oxidizer				-40					6.04	
9428612000100	10/13/94 12:00	1	Oxidizer				72					5.15	
9428613000100	10/13/94 13:00	1	Oxidizer				64					5.41	
9428614000100	10/13/94 14:00	1	Oxidizer			21537	32	22393		166.6	5126	6.07	
9428615000100	10/13/94 15:00	1	Oxidizer				24					6.20	
9428616000100	10/13/94 16:00	1	Oxidizer				80		5318			5.82	
9428617000100	10/13/94 17:00	1	Oxidizer				72					5.96	
9428618000100	10/13/94 18:00	1	Oxidizer				48					5.55	
9428619000100	10/13/94 19:00	1	Oxidizer				56					5.90	
9428620000100	10/13/94 20:00	1	Oxidizer			22658	88	26531		188.2	5385	5.84	
9428621000100	10/13/94 21:00	1	Oxidizer				72					5.35	
9428622000100	10/13/94 22:00	1	Oxidizer				64					5.70	
9429000000100	10/17/94 0:00	1	Oxidizer	222								6.50	
9429009000100	10/17/94 9:00	1	Oxidizer				120					5.74	
9429010000100	10/17/94 10:00	1	Oxidizer				24					5.70	
9429010000100	10/17/94 10:00	1	Oxidizer				24					5.70	
9429011000100	10/17/94 11:00	1	Oxidizer				104					5.83	
9429012000100	10/17/94 12:00	1	Oxidizer				48					5.51	
9429013000100	10/17/94 13:00	1	Oxidizer				40					5.71	
9429014000100	10/17/94 14:00	1	Oxidizer			24420	40	19841		211.5	5799	5.33	
9429015000100	10/17/94 15:00	1	Oxidizer				16					5.76	
9429109000100	10/18/94 9:00	1	Oxidizer				136					5.21	
9429110000100	10/18/94 10:00	1	Oxidizer				-88					4.46	
9429111000100	10/18/94 11:00	1	Oxidizer				-80					6.36	
9429112000100	10/18/94 12:00	1	Oxidizer				128					5.30	
9429113000100	10/18/94 13:00	1	Oxidizer				32					6.14	
9429114000100	10/18/94 14:00	1	Oxidizer			25651	16	32280		186.6	6113	6.10	
9429209000100	10/19/94 9:00	1	Oxidizer				8					5.34	
9429210000100	10/19/94 10:00	1	Oxidizer				24					4.66	
9429211000100	10/19/94 11:00	1	Oxidizer				80					4.99	
9429212000100	10/19/94 12:00	1	Oxidizer				48					6.06	
9429213000100	10/19/94 13:00	1	Oxidizer				24					5.18	
9429214000100	10/19/94 14:00	1	Oxidizer			23559	104	30459		157.8	5622	4.45	
9429300000100	10/20/94 0:00	1	Oxidizer			23309	-8	39085		161.8	5559	4.30	
9429310000100	10/20/94 10:00	1	Oxidizer				16					5.85	
9429314000100	10/20/94 14:00	1	Oxidizer			24420	-8	14777		176.2	5820	5.92	
9429700000100	10/24/94 0:00	1	Oxidizer		2.90		24					1.00	
9429709000100	10/24/94 9:00	1	Oxidizer				24					5.66	
9429710000100	10/24/94 10:00	1	Oxidizer				8					4.48	
9429711000100	10/24/94 11:00	1	Oxidizer				32					5.88	
9429712000100	10/24/94 12:00	1	Oxidizer				64					5.14	
9429713000100	10/24/94 13:00	1	Oxidizer				32					5.86	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9429714000100	10/24/94 14:00	1	Oxidizer			22758	40	28113		185.0	5412	5.91	
9429715000100	10/24/94 15:00	1	Oxidizer				40					5.25	
9429717000100	10/24/94 17:00	1	Oxidizer				24					5.70	
9429718000100	10/24/94 18:00	1	Oxidizer			22498	48	27333		244.3	5312	4.40	
9429719000100	10/24/94 19:00	1	Oxidizer				72					5.93	
9429720000100	10/24/94 20:00	1	Oxidizer				0					5.86	
9429721000100	10/24/94 21:00	1	Oxidizer				32					5.17	
9429722000100	10/24/94 22:00	1	Oxidizer			22748	24	29728		254.7	5367	4.68	
9429723000100	10/24/94 23:00	1	Oxidizer				32					5.60	
9429800000100	10/25/94 0:00	1	Oxidizer				72					5.08	
9429801000100	10/25/94 1:00	1	Oxidizer				16					5.16	
9429802000100	10/25/94 2:00	1	Oxidizer			21918	0	22103		162.6	5221	5.56	
9429803000100	10/25/94 3:00	1	Oxidizer				0					5.53	
9429804000100	10/25/94 4:00	1	Oxidizer				0					5.53	
9429805000100	10/25/94 5:00	1	Oxidizer				32					5.56	
9429806000100	10/25/94 6:00	1	Oxidizer			22958	0	27390		138.6	5488	5.27	
9429807000100	10/25/94 7:00	1	Oxidizer				0					5.80	
9429809000100	10/25/94 9:00	1	Oxidizer				8					5.40	
9429810000100	10/25/94 10:00	1	Oxidizer				-40					4.67	
9429811000100	10/25/94 11:00	1	Oxidizer				0					4.95	
9429812000100	10/25/94 12:00	1	Oxidizer				40					6.13	
9429813000100	10/25/94 13:00	1	Oxidizer				24					6.18	
9429814000100	10/25/94 14:00	1	Oxidizer			22578	152	27208		164.2	5380	4.75	
9429815000100	10/25/94 15:00	1	Oxidizer				80					5.84	
9429816000100	10/25/94 16:00	1	Oxidizer				32					5.48	
9429817000100	10/25/94 17:00	1	Oxidizer				48					5.68	
9429818000100	10/25/94 18:00	1	Oxidizer			22818	8	27381		197.0	5419	5.19	
9429819000100	10/25/94 19:00	1	Oxidizer				72					5.47	
9429820000100	10/25/94 20:00	1	Oxidizer				48					5.70	
9429821000100	10/25/94 21:00	1	Oxidizer				16					5.37	
9429823000100	10/25/94 23:00	1	Oxidizer			22218	32	25860		204.3	5269	5.54	
9429823000100	10/25/94 23:00	1	Oxidizer				8					5.88	
9429901000100	10/26/94 1:00	1	Oxidizer				56					5.71	
9429902000100	10/26/94 2:00	1	Oxidizer			22298	0	25536		144.2	5325	5.48	
9429903000100	10/26/94 3:00	1	Oxidizer				56					5.34	
9429904000100	10/26/94 4:00	1	Oxidizer				40					5.83	
9429905000100	10/26/94 5:00	1	Oxidizer				0					5.65	
9429906000100	10/26/94 6:00	1	Oxidizer			22378	64	27314		141.0	5346	4.88	
9429907000100	10/26/94 7:00	1	Oxidizer				8					5.41	
9429909000100	10/26/94 9:00	1	Oxidizer				24					5.40	
9429910000100	10/26/94 10:00	1	Oxidizer				48					5.08	
9429911000100	10/26/94 11:00	1	Oxidizer				56					5.33	
9429912000100	10/26/94 12:00	1	Oxidizer				40					5.53	
9429913000100	10/26/94 13:00	1	Oxidizer				72					5.42	
9429914000100	10/26/94 14:00	1	Oxidizer			23589	24	26608		189.8	5610	5.70	
9429915000100	10/26/94 15:00	1	Oxidizer				32					5.40	
9429916000100	10/26/94 16:00	1	Oxidizer				16					5.98	
9429917000100	10/26/94 17:00	1	Oxidizer				72					6.16	
9429918000100	10/26/94 18:00	1	Oxidizer			23629	16	26617		1345.7	4919	6.29	
9429919000100	10/26/94 19:00	1	Oxidizer				24					5.46	
9429920000100	10/26/94 20:00	1	Oxidizer				24					5.75	
9429921000100	10/26/94 21:00	1	Oxidizer				48					5.92	
9429922000100	10/26/94 22:00	1	Oxidizer			23799	56	23709		273.9	5610	5.50	
9429923000100	10/26/94 23:00	1	Oxidizer				48					5.97	
9430001000100	10/27/94 1:00	1	Oxidizer				48					5.72	
9430002000100	10/27/94 2:00	1	Oxidizer			22778	0	26711		155.4	5434	5.55	
9430003000100	10/27/94 3:00	1	Oxidizer				80					5.89	
9430004000100	10/27/94 4:00	1	Oxidizer				24					5.68	
9430005000100	10/27/94 5:00	1	Oxidizer				32					5.78	
9430006000100	10/27/94 6:00	1	Oxidizer				80						
9430006000100	10/27/94 6:00	1	Oxidizer			22228	80	25803		147.4	5306	5.43	
9430007000100	10/27/94 7:00	1	Oxidizer				24					5.73	
9430008000100	10/27/94 8:00	1	Oxidizer				16					5.48	
9430009000100	10/27/94 9:00	1	Oxidizer				72					5.21	
9430010000100	10/27/94 10:00	1	Oxidizer				40					5.05	
9430011000100	10/27/94 11:00	1	Oxidizer				16					5.63	
9430012000100	10/27/94 12:00	1	Oxidizer				40					5.10	

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9430013000100	10/27/94 13:00	1	Oxidizer				40					5.58	
9430014000100	10/27/94 14:00	1	Oxidizer			23299	40	22915		174.6	5549	4.66	
9430015000100	10/27/94 15:00	1	Oxidizer				-8					5.38	
9430016000100	10/27/94 16:00	1	Oxidizer				40					5.95	
9430017000100	10/27/94 17:00	1	Oxidizer				32					5.70	
9430018000100	10/27/94 18:00	1	Oxidizer			23118	8	24460		177.8	5503	4.67	
9430019000100	10/27/94 19:00	1	Oxidizer				32					5.51	
9430020000100	10/27/94 20:00	1	Oxidizer				128					5.90	
9430021000100	10/27/94 21:00	1	Oxidizer				72					5.50	
9430022000100	10/27/94 22:00	1	Oxidizer			21867	16	25880		193.8	5190	4.82	
9430023000100	10/27/94 23:00	1	Oxidizer				64					5.68	
9430100000100	10/28/94 0:00	1	Oxidizer				40					5.57	
9430101000100	10/28/94 1:00	1	Oxidizer				24					5.85	
9430102000100	10/28/94 2:00	1	Oxidizer			21257	8	25167		144.2	5072	5.67	
9430103000100	10/28/94 3:00	1	Oxidizer				48					5.35	
9430104000100	10/28/94 4:00	1	Oxidizer				48					5.67	
9430106000100	10/28/94 6:00	1	Oxidizer			21447	0	25899		144.2	5118	5.38	
9430107000100	10/28/94 7:00	1	Oxidizer				0					5.76	
9430107000100	10/28/94 7:00	1	Oxidizer				0					5.76	
9430108000100	10/28/94 8:00	1	Oxidizer				8					5.38	
9430109000100	10/28/94 9:00	1	Oxidizer				56					5.79	
9430110000100	10/28/94 10:00	1	Oxidizer				136					5.97	
9430111000100	10/28/94 11:00	1	Oxidizer				64					5.91	
9430112000100	10/28/94 12:00	1	Oxidizer				32					5.93	
9430113000100	10/28/94 13:00	1	Oxidizer				120					5.68	
9430114000100	10/28/94 14:00	1	Oxidizer			21978	56	27323		165.0	5234	5.51	
9430115000100	10/28/94 15:00	1	Oxidizer				72					6.09	
9430116000100	10/28/94 16:00	1	Oxidizer				96					6.17	
9430117000100	10/28/94 17:00	1	Oxidizer				72					6.03	
9430118000100	10/28/94 18:00	1	Oxidizer			21817	16	24450		178.6	5187	5.63	
9430119000100	10/28/94 19:00	1	Oxidizer				128					6.08	
9430120000100	10/28/94 20:00	1	Oxidizer				216					5.90	
9430121000100	10/28/94 21:00	1	Oxidizer				128					5.93	
9430122000100	10/28/94 22:00	1	Oxidizer			21417	64	19205	2255	108.9	5132	6.12	
9430401000100	10/31/94 1:00	1	Oxidizer				104					5.69	
9430402000100	10/31/94 2:00	1	Oxidizer			21938	24	26459		144.2	5237	5.22	
9430403000100	10/31/94 3:00	1	Oxidizer				48					5.95	
9430404000100	10/31/94 4:00	1	Oxidizer				64					5.70	
9430405000100	10/31/94 5:00	1	Oxidizer				56					5.60	
9430406000100	10/31/94 6:00	1	Oxidizer			21918	32	27352		116.9	5249	5.80	
9430407000100	10/31/94 7:00	1	Oxidizer				96					5.93	
9430408000100	10/31/94 8:00	1	Oxidizer				144					5.91	
9430409000100	10/31/94 9:00	1	Oxidizer				88					6.15	
9430410000100	10/31/94 10:00	1	Oxidizer				128					5.98	
9430411000100	10/31/94 11:00	1	Oxidizer				136					6.32	
9430412000100	10/31/94 12:00	1	Oxidizer				88					5.75	
9430413000100	10/31/94 13:00	1	Oxidizer				56					5.84	
9430414000100	10/31/94 14:00	1	Oxidizer			23639	88	28685		116.1	5667	5.28	
9430416000100	10/31/94 16:00	1	Oxidizer				56					6.13	
9430417000100	10/31/94 17:00	1	Oxidizer				104					5.82	
9430418000100	10/31/94 18:00	1	Oxidizer			23709	40	28113		219.5	5621	6.18	
9430419000100	10/31/94 19:00	1	Oxidizer				56					6.80	
9430420000100	10/31/94 20:00	1	Oxidizer				8					6.52	
9430421000100	10/31/94 21:00	1	Oxidizer				168					5.72	
9430421000100	10/31/94 21:00	1	Oxidizer				168					5.72	
9430422000100	10/31/94 22:00	1	Oxidizer			22908	72	25812		200.3	5439	6.15	
9430423000100	10/31/94 23:00	1	Oxidizer				40					5.90	
9430500000100	11/1/94 0:00	1	Oxidizer				56					5.92	
9430501000100	11/1/94 1:00	1	Oxidizer				40					5.99	
9430502000100	11/1/94 2:00	1	Oxidizer			22358	8	28781		41.7	5401	5.62	
9430503000100	11/1/94 3:00	1	Oxidizer				64					4.78	
9430504000100	11/1/94 4:00	1	Oxidizer				8					5.34	
9430505000100	11/1/94 5:00	1	Oxidizer				32					5.60	
9430506000100	11/1/94 6:00	1	Oxidizer			23189	0	27543		144.2	5541	5.12	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9430507000100	11/1/94 7:00	1	Oxidizer				16					5.34	
9430508000100	11/1/94 8:00	1	Oxidizer				32					5.70	
9430509000100	11/1/94 9:00	1	Oxidizer				72					5.29	
9430510000100	11/1/94 10:00	1	Oxidizer				96					5.10	
9430511000100	11/1/94 11:00	1	Oxidizer				56					5.62	
9430512000100	11/1/94 12:00	1	Oxidizer				56					5.62	
9430513000100	11/1/94 13:00	1	Oxidizer				88					5.46	
9430514000100	11/1/94 14:00	1	Oxidizer			23449	16	27754		157.0	5596	5.39	
9430515000100	11/1/94 15:00	1	Oxidizer				64					5.50	
9430516000100	11/1/94 16:00	1	Oxidizer				64					5.14	
9430517000100	11/1/94 17:00	1	Oxidizer				48					5.21	
9430518000100	11/1/94 18:00	1	Oxidizer			23028	8	25167		170.6	5486	6.37	
9430519000100	11/1/94 19:00	1	Oxidizer				96					5.27	
9430520000100	11/1/94 20:00	1	Oxidizer				64					5.15	
9430521000100	11/1/94 21:00	1	Oxidizer				16					5.52	
9430522000100	11/1/94 22:00	1	Oxidizer			22408	16	24802		231.5	5298	4.58	
9430523000100	11/1/94 23:00	1	Oxidizer				64					5.80	
9430600000100	11/2/94 0:00	1	Oxidizer				32					5.50	
9430601000100	11/2/94 1:00	1	Oxidizer				24					5.32	
9430602000100	11/2/94 2:00	1	Oxidizer			23219	8	30574		147.4	5546	4.52	
9430603000100	11/2/94 3:00	1	Oxidizer				56					4.61	
9430604000100	11/2/94 4:00	1	Oxidizer				40		44316			5.65	
9430605000100	11/2/94 5:00	1	Oxidizer				56					5.22	
9430605260100	11/2/94 5:26	1	Oxidizer				80					5.26	
9430606000100	11/2/94 6:00	1	Oxidizer			22578	8	26256		147.4	5391	5.81	
9430607000100	11/2/94 7:00	1	Oxidizer				32					4.99	
9430609000100	11/2/94 9:00	1	Oxidizer				160					5.04	
9430610000100	11/2/94 10:00	1	Oxidizer				32					4.77	
9430611000100	11/2/94 11:00	1	Oxidizer				96					5.02	
9430612000100	11/2/94 12:00	1	Oxidizer				88					4.63	
9430613000100	11/2/94 13:00	1	Oxidizer				40					6.33	
9430614000100	11/2/94 14:00	1	Oxidizer			23018	152	21273		258.7	5430	5.13	
9430615000100	11/2/94 15:00	1	Oxidizer				56					5.99	
9430616000100	11/2/94 16:00	1	Oxidizer				64					5.93	
9430617000100	11/2/94 17:00	1	Oxidizer				160					5.44	
9430618000100	11/2/94 18:00	1	Oxidizer			23579	24	26983		256.3	5568	5.36	
9430619000100	11/2/94 19:00	1	Oxidizer				40					6.05	
9430620000100	11/2/94 20:00	1	Oxidizer				48					6.35	
9430621000100	11/2/94 21:00	1	Oxidizer				6784					5.99	
9430621000100	11/2/94 21:00	1	Oxidizer				80					5.99	
9430621000100	11/2/94 21:00	1	Oxidizer				80					5.68	
9430622000100	11/2/94 22:00	1	Oxidizer			23028	0	25177		270.7	5425	4.96	
9430623000100	11/2/94 23:00	1	Oxidizer				16					6.03	
9430700000100	11/3/94 0:00	1	Oxidizer				88					5.74	
9430701000100	11/3/94 1:00	1	Oxidizer				48					5.65	
9430703000100	11/3/94 3:00	1	Oxidizer			21928	24	27285		166.6	5221	4.68	
9430704000100	11/3/94 4:00	1	Oxidizer				40					5.25	
9430705000100	11/3/94 5:00	1	Oxidizer				32					5.48	
9430706000100	11/3/94 6:00	1	Oxidizer			22258	0	26786		148.2	5313	5.50	
9430707000100	11/3/94 7:00	1	Oxidizer				56					5.34	
9430708000100	11/3/94 8:00	1	Oxidizer				16					5.85	
9430709000100	11/3/94 9:00	1	Oxidizer				48					5.54	
9430710000100	11/3/94 10:00	1	Oxidizer				16					5.79	
9430711000100	11/3/94 11:00	1	Oxidizer				88					4.93	
9430712000100	11/3/94 12:00	1	Oxidizer				104					5.63	
9430713000100	11/3/94 13:00	1	Oxidizer				16					6.59	
9430714000100	11/3/94 14:00	1	Oxidizer			22388	48	24976		157.0	5339	4.62	
9430715000100	11/3/94 15:00	1	Oxidizer				64					5.55	
9430716000100	11/3/94 16:00	1	Oxidizer	129			56					5.51	
9430717000100	11/3/94 17:00	1	Oxidizer				56					5.09	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9430718000100	11/3/94 18:00	1	Oxidizer			22808	24	26608		193.8	5418	5.53	
9430719000100	11/3/94 19:00	1	Oxidizer				40					5.25	
9430720000100	11/3/94 20:00	1	Oxidizer				56					4.78	
9430721000100	11/3/94 21:00	1	Oxidizer				48					5.50	
9430721000100	11/3/94 21:00	1	Oxidizer				48					5.50	
9430722000100	11/3/94 22:00	1	Oxidizer			22378	0	25899		213.9	5302	4.96	
9430723000100	11/3/94 23:00	1	Oxidizer				24					6.13	
9430800000100	11/4/94 0:00	1	Oxidizer				24					5.83	
9430801000100	11/4/94 1:00	1	Oxidizer				48					6.11	
9430802000100	11/4/94 2:00	1	Oxidizer			22138	0	26266		158.6	5277	5.63	
9430803000100	11/4/94 3:00	1	Oxidizer				32		5318			5.48	
9430805000100	11/4/94 5:00	1	Oxidizer				32					5.70	
9430806000100	11/4/94 6:00	1	Oxidizer			22438	8	26627		115.3	5376	5.35	
9430807000100	11/4/94 7:00	1	Oxidizer				72					5.83	
9430808000100	11/4/94 8:00	1	Oxidizer				112					5.46	
9430809000100	11/4/94 9:00	1	Oxidizer				32					5.80	
9430810000100	11/4/94 10:00	1	Oxidizer				24					6.31	
9430811000100	11/4/94 11:00	1	Oxidizer				32					5.78	
9430814000100	11/4/94 14:00	1	Oxidizer			22958	136	24306		201.9	5450	5.78	
9431103000100	11/7/94 3:00	1	Oxidizer				64					6.04	
9431104000100	11/7/94 4:00	1	Oxidizer			22848	32	28279		153.8	5452	5.72	
9431105000100	11/7/94 5:00	1	Oxidizer				80					5.83	
9431106000100	11/7/94 6:00	1	Oxidizer			22958	80	27447		130.6	5493	6.18	
9431107000100	11/7/94 7:00	1	Oxidizer				64					6.03	
9431108000100	11/7/94 8:00	1	Oxidizer				112					6.11	
9431109000100	11/7/94 9:00	1	Oxidizer				48					6.28	
9431110000100	11/7/94 10:00	1	Oxidizer				160					6.33	
9431111000100	11/7/94 11:00	1	Oxidizer				72					6.25	
9431112000100	11/7/94 12:00	1	Oxidizer				80					6.11	
9431113000100	11/7/94 13:00	1	Oxidizer				64					6.19	
9431114000100	11/7/94 14:00	1	Oxidizer			23319	96	27275		147.4	5571	6.29	
9431115000100	11/7/94 15:00	1	Oxidizer				160					5.84	
9431116000100	11/7/94 16:00	1	Oxidizer				80					5.87	
9431117000100	11/7/94 17:00	1	Oxidizer				16					5.90	
9431118000100	11/7/94 18:00	1	Oxidizer			23369	32	16415		136.2	5589	5.03	
9431119000100	11/7/94 19:00	1	Oxidizer				96					5.67	
9431120000100	11/7/94 20:00	1	Oxidizer				8					5.79	
9431121000100	11/7/94 21:00	1	Oxidizer				120					5.70	
9431122000100	11/7/94 22:00	1	Oxidizer			21978	48	16506		140.2	5249	5.81	
9431123000100	11/7/94 23:00	1	Oxidizer				48					5.83	
9431200000100	11/8/94 0:00	1	Oxidizer				56					5.39	
9431201000100	11/8/94 1:00	1	Oxidizer				88					5.76	
9431202000100	11/8/94 2:00	1	Oxidizer			22098	32	27890	5318	143.4	5277	5.71	
9431203000100	11/8/94 3:00	1	Oxidizer				40					5.70	
9431204000100	11/8/94 4:00	1	Oxidizer				72					5.72	
9431205000100	11/8/94 5:00	1	Oxidizer				48					5.69	
9431205000100	11/8/94 5:00	1	Oxidizer				48					5.69	
9431206000100	11/8/94 6:00	1	Oxidizer			22918	24	30388		148.2	5473	5.65	
9431207000100	11/8/94 7:00	1	Oxidizer				40		5318			5.35	
9431208000100	11/8/94 8:00	1	Oxidizer									6.34	
9431208000100	11/8/94 8:00	1	Oxidizer				24						
9431209000100	11/8/94 9:00	1	Oxidizer				56					5.66	
9431210000100	11/8/94 10:00	1	Oxidizer				88					5.52	
9431211000100	11/8/94 11:00	1	Oxidizer				56					5.51	
9431212000100	11/8/94 12:00	1	Oxidizer				152					6.06	
9431216000100	11/8/94 16:00	1	Oxidizer				32					5.90	
9431217000100	11/8/94 17:00	1	Oxidizer				120					5.68	
9431218000100	11/8/94 18:00	1	Oxidizer			23379	96	17122		161.8	5576	5.70	
9431219000100	11/8/94 19:00	1	Oxidizer				104					6.11	
9431220000100	11/8/94 20:00	1	Oxidizer				152					5.72	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9431221000100	11/8/94 21:00	1	Oxidizer				72					5.80	
9431222000100	11/8/94 22:00	1	Oxidizer			23499	40	16907		131.4	5624	5.41	
9431223000100	11/8/94 23:00	1	Oxidizer				112					5.70	
9431300000100	11/9/94 0:00	1	Oxidizer				32		5318			5.82	
9431301000100	11/9/94 1:00	1	Oxidizer				80					5.84	
9431302000100	11/9/94 2:00	1	Oxidizer			23629	0	29110		160.2	5638	5.28	
9431303000100	11/9/94 3:00	1	Oxidizer				96					5.65	
9431304000100	11/9/94 4:00	1	Oxidizer				88					5.62	
9431305000100	11/9/94 5:00	1	Oxidizer				112					5.48	
9431306000100	11/9/94 6:00	1	Oxidizer			23759	8	30324		164.2	5667	5.40	
9431307000100	11/9/94 7:00	1	Oxidizer				16					5.75	
9431308000100	11/9/94 8:00	1	Oxidizer				-184					5.73	
9431308000100	11/9/94 8:00	1	Oxidizer				184					5.73	
9431309000100	11/9/94 9:00	1	Oxidizer				56					5.23	
9431310000100	11/9/94 10:00	1	Oxidizer				16		106359			5.36	
9431311000100	11/9/94 11:00	1	Oxidizer				16		45582			5.76	
9431312000100	11/9/94 12:00	1	Oxidizer				16					5.65	
9431313000100	11/9/94 13:00	1	Oxidizer				1200					5.95	
9431314000100	11/9/94 14:00	1	Oxidizer			23439	40	21088		173.8	5584	5.43	
9431315000100	11/9/94 15:00	1	Oxidizer				80					5.43	
9431316000100	11/9/94 16:00	1	Oxidizer				24					5.65	
9431317000100	11/9/94 17:00	1	Oxidizer				72					5.60	
9431318000100	11/9/94 18:00	1	Oxidizer			22888	64	12701		158.6	5459	5.34	
9431319000100	11/9/94 19:00	1	Oxidizer				96					5.65	
9431320000100	11/9/94 20:00	1	Oxidizer				56					5.58	
9431322000100	11/9/94 22:00	1	Oxidizer			23088	40	17417		137.0	5521	5.02	
9431323000100	11/9/94 23:00	1	Oxidizer				64					5.80	
9431400000100	11/10/94 0:00	1	Oxidizer				40					5.54	
9431401000100	11/10/94 1:00	1	Oxidizer				56					5.76	
9431402000100	11/10/94 2:00	1	Oxidizer			22628	0	27774		157.8	5396	5.46	
9431403000100	11/10/94 3:00	1	Oxidizer				64					5.77	
9431404000100	11/10/94 4:00	1	Oxidizer				16					6.02	
9431405000100	11/10/94 5:00	1	Oxidizer				24					5.87	
9431406000100	11/10/94 6:00	1	Oxidizer			22898	32	24996		137.0	5475	5.34	
9431407000100	11/10/94 7:00	1	Oxidizer				0					5.61	
9431408000100	11/10/94 8:00	1	Oxidizer				16					5.70	
9431409000100	11/10/94 9:00	1	Oxidizer	25020			216					6.21	
9431409000100	11/10/94 9:00	1	Oxidizer				216					6.07	
9431410000100	11/10/94 10:00	1	Oxidizer				32					5.77	
9431412000100	11/10/94 12:00	1	Oxidizer				0					6.07	
9431412000100	11/10/94 12:00	1	Oxidizer				160					6.04	
9431413000100	11/10/94 13:00	1	Oxidizer				192					5.75	
9431414000100	11/10/94 14:00	1	Oxidizer			23048	72	19803		103.3	5531	5.10	
9431415000100	11/10/94 15:00	1	Oxidizer				72					5.80	
9431416000100	11/10/94 16:00	1	Oxidizer				64					5.79	
9431417000100	11/10/94 17:00	1	Oxidizer				48					5.95	
9431418000100	11/10/94 18:00	1	Oxidizer			22688	16	15612		145.8	5418	5.45	
9431419000100	11/10/94 19:00	1	Oxidizer				80					6.02	
9431420000100	11/10/94 20:00	1	Oxidizer				80					5.78	
9431421000100	11/10/94 21:00	1	Oxidizer				80					5.83	
9431422000100	11/10/94 22:00	1	Oxidizer			22858	64	24520		102.5	5486	5.65	
9431423000100	11/10/94 23:00	1	Oxidizer				48					6.12	
9431500000100	11/11/94 0:00	1	Oxidizer				16					5.76	
9431501000100	11/11/94 1:00	1	Oxidizer				40					5.89	
9431502000100	11/11/94 2:00	1	Oxidizer			22158	32	28123		139.4	5294	5.69	
9431503000100	11/11/94 3:00	1	Oxidizer				80					5.69	
9431504000100	11/11/94 4:00	1	Oxidizer				80					5.80	
9431505000100	11/11/94 5:00	1	Oxidizer				72					5.70	
9431506000100	11/11/94 6:00	1	Oxidizer			22748	16	28142		141.0	5436	5.63	
9431507000100	11/11/94 7:00	1	Oxidizer				104					5.81	

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9431508000100	11/11/94 8:00	1	Oxidizer				72					5.92	
9431509000100	11/11/94 9:00	1	Oxidizer				104					5.79	
9431510000100	11/11/94 10:00	1	Oxidizer				56	21163	2638			5.53	
9431511000100	11/11/94 11:00	1	Oxidizer				136		47271			5.98	623.0
9431512000100	11/11/94 12:00	1	Oxidizer				200					6.22	
9431513000100	11/11/94 13:00	1	Oxidizer				64					6.23	
9431514000100	11/11/94 14:00	1	Oxidizer			22828	56	16110		157.8	5445	5.56	
9431516000100	11/11/94 16:00	1	Oxidizer				40					6.14	
9431517000100	11/11/94 17:00	1	Oxidizer				64					5.80	
9431518000100	11/11/94 18:00	1	Oxidizer				96					5.90	
9431519000100	11/11/94 19:00	1	Oxidizer			22838	8	15894		145.0	5455	5.54	
9432109300100	11/17/94 9:30	1	Oxidizer				3592					5.54	
9432111300100	11/17/94 11:30	1	Oxidizer				24					5.83	
9432209000100	11/18/94 9:00	1	Oxidizer				88					5.20	
9432210000100	11/18/94 10:00	1	Oxidizer				96					5.77	
9432211000100	11/18/94 11:00	1	Oxidizer				64					5.66	
9432212000100	11/18/94 12:00	1	Oxidizer				96					5.92	
9432213000100	11/18/94 13:00	1	Oxidizer				48					5.49	
9432214000100	11/18/94 14:00	1	Oxidizer			22138	24	25652		157.8	5278	6.36	
9432509000100	11/21/94 9:00	1	Oxidizer				48					6.09	
9432510000100	11/21/94 10:00	1	Oxidizer				80					4.88	
9432511000100	11/21/94 11:00	1	Oxidizer				88					5.46	
9432512000100	11/21/94 12:00	1	Oxidizer				56					5.81	
9432513000100	11/21/94 13:00	1	Oxidizer				160					5.40	
9432514000100	11/21/94 14:00	1	Oxidizer			22518	96	22982		237.1	5322	5.42	
9432515000100	11/21/94 15:00	1	Oxidizer				128					5.10	
9432611000100	11/22/94 11:00	1	Oxidizer				48					5.38	
9432611300100	11/22/94 11:30	1	Oxidizer				56					5.29	
9432612000100	11/22/94 12:00	1	Oxidizer				104					5.38	
9432613000100	11/22/94 13:00	1	Oxidizer			21397	56	24402		182.6	5083	5.40	
9432614000100	11/22/94 14:00	1	Oxidizer				48					5.42	
9432615000100	11/22/94 15:00	1	Oxidizer				112					5.41	
9432709000100	11/23/94 9:00	1	Oxidizer				80					5.10	
9432710000100	11/23/94 10:00	1	Oxidizer				104					5.79	
9432711000100	11/23/94 11:00	1	Oxidizer				56					5.41	
9432712000100	11/23/94 12:00	1	Oxidizer				104					5.49	
9432713000100	11/23/94 13:00	1	Oxidizer				104					5.28	
9432714000100	11/23/94 14:00	1	Oxidizer			22908	24	32981		153.0	5467	5.66	
9432715000100	11/23/94 15:00	1	Oxidizer				80					5.43	
9433209000100	11/28/94 9:00	1	Oxidizer				352					6.38	
9433209300100	11/28/94 9:30	1	Oxidizer				480					5.90	
9433210000100	11/28/94 10:00	1	Oxidizer				88					5.87	
9433211000100	11/28/94 11:00	1	Oxidizer				328		5318			6.40	
9433211300100	11/28/94 11:30	1	Oxidizer				248					5.49	
9433212000100	11/28/94 12:00	1	Oxidizer				208					5.42	
9433213000100	11/28/94 13:00	1	Oxidizer				152					5.87	
9433214000100	11/28/94 14:00	1	Oxidizer			18114	112	17848		237.9	4252	5.19	
9433215000100	11/28/94 15:00	1	Oxidizer				136					5.04	
9433308150100	11/29/94 8:15	1	Oxidizer				88					6.20	
9433309000100	11/29/94 9:00	1	Oxidizer				192					5.24	
9433310000100	11/29/94 10:00	1	Oxidizer				120					5.00	
9433311000100	11/29/94 11:00	1	Oxidizer				176					5.89	
9433312000100	11/29/94 12:00	1	Oxidizer				128					5.22	
9433313000100	11/29/94 13:00	1	Oxidizer				160					5.31	
9433314000100	11/29/94 14:00	1	Oxidizer			19596	72	14253		158.6	4660	5.12	
9433315000100	11/29/94 15:00	1	Oxidizer				160		5318			5.34	
9433400000100	11/30/94 0:00	1	Oxidizer		0.06		3200					4.50	
9433409000100	11/30/94 9:00	1	Oxidizer				88					6.31	
9433410000100	11/30/94 10:00	1	Oxidizer				96					4.88	
9433411000100	11/30/94 11:00	1	Oxidizer				144					5.64	
9433412000100	11/30/94 12:00	1	Oxidizer				88					5.07	
9433413000100	11/30/94 13:00	1	Oxidizer				112					5.23	
9433414000100	11/30/94 14:00	1	Oxidizer			18715	40	15261		311.6	4353	5.21	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9433415000100	11/30/94 15:00	1	Oxidizer				112					5.56	
9433416000100	11/30/94 16:00	1	Oxidizer				144					5.59	
9433417000100	11/30/94 17:00	1	Oxidizer				168					5.45	
9433418000100	11/30/94 18:00	1	Oxidizer			19085	80	15482		170.6	4529	5.21	
9433419000100	11/30/94 19:00	1	Oxidizer				88					5.36	
9433419000100	11/30/94 19:00	1	Oxidizer				88					5.4	
9433510300100	12/1/94 10:30	1	Oxidizer				104					5.1	
9433511000100	12/1/94 11:00	1	Oxidizer				112					4.8	
9433512000100	12/1/94 12:00	1	Oxidizer				128					4.8	
9433513000100	12/1/94 13:00	1	Oxidizer				88					4.8	
9433514000100	12/1/94 14:00	1	Oxidizer			19135	32	15270		195	4526	4.3	
9433515000100	12/1/94 15:00	1	Oxidizer				48					5.1	
9433609300100	12/2/94 9:30	1	Oxidizer				112					4.9	
9433610000100	12/2/94 10:00	1	Oxidizer				104					4.8	
9433909300100	12/5/94 9:30	1	Oxidizer				256					6.0	
9433910000100	12/5/94 10:00	1	Oxidizer				240					5.5	
9433910300100	12/5/94 10:30	1	Oxidizer									4.9	
9433911000100	12/5/94 11:00	1	Oxidizer				160					5.1	
9433911000100	12/5/94 11:00	1	Oxidizer										
9433912000100	12/5/94 12:00	1	Oxidizer				72					5.1	
9433913000100	12/5/94 13:00	1	Oxidizer				152					5.1	
9433914000100	12/5/94 14:00	1	Oxidizer			18805	48	14299		195	4446	4.6	
9433915000100	12/5/94 15:00	1	Oxidizer				72					4.9	
9434009000100	12/6/94 9:00	1	Oxidizer				176					5.4	
9434010000100	12/6/94 10:00	1	Oxidizer				192					5.0	
9434011000100	12/6/94 11:00	1	Oxidizer				224					5.4	
9434012000100	12/6/94 12:00	1	Oxidizer				152					5.4	
9434013000100	12/6/94 13:00	1	Oxidizer				72					5.4	
9434014000100	12/6/94 14:00	1	Oxidizer			20246	72	15762		134	4833	5.1	
9434015000100	12/6/94 15:00	1	Oxidizer				240					5.1	
9434200000100	12/8/94 0:00	1	Oxidizer				64					5.2	
9434210000100	12/8/94 10:00	1	Oxidizer				48					5.4	
9434211000100	12/8/94 11:00	1	Oxidizer				160					5.0	
9434212000100	12/8/94 12:00	1	Oxidizer				96					5.5	
9434214000100	12/8/94 14:00	1	Oxidizer			20606	64	15285		220	4868	5.0	
9434215000100	12/8/94 15:00	1	Oxidizer				48					5.22	
9434215000100	12/8/94 15:00	1	Oxidizer				48					5.2	
9434309000100	12/9/94 9:00	1	Oxidizer				192					5.2	
9434310000100	12/9/94 10:00	1	Oxidizer				176					5.1	
9434311000100	12/9/94 11:00	1	Oxidizer				176					5.2	
9434312000100	12/9/94 12:00	1	Oxidizer				176					5.7	
9434313000100	12/9/94 13:00	1	Oxidizer				152					5.6	
9434314000100	12/9/94 14:00	1	Oxidizer			20326	72	13908		155	4839	5.5	
9434617000100	12/12/94 17:00	1	Oxidizer				192					5.8	
9434618000100	12/12/94 18:00	1	Oxidizer				224					6.0	
9434620000100	12/12/94 20:00	1	Oxidizer			22388	176	17311		225	5297	5.6	
9434621000100	12/12/94 21:00	1	Oxidizer				224					5.8	
9434622000100	12/12/94 22:00	1	Oxidizer				128					5.7	623.0
9434700010100	12/13/94 0:01	1	Oxidizer				248					5.6	
9434712000100	12/13/94 12:00	1	Oxidizer				248					5.6	
9434713000100	12/13/94 13:00	1	Oxidizer				272					5.6	
9434714000100	12/13/94 14:00	1	Oxidizer			22008	88	25430		109	5276	5.6	
9434715000100	12/13/94 15:00	1	Oxidizer				200					5.6	
9434716000100	12/13/94 16:00	1	Oxidizer				208					5.7	
9434717000100	12/13/94 17:00	1	Oxidizer				136					5.9	
9434718000100	12/13/94 18:00	1	Oxidizer				176					5.9	
9434719000100	12/13/94 19:00	1	Oxidizer				240					5.7	
9434719550100	12/13/94 19:55	1	Oxidizer				240					5.9	
9434720000100	12/13/94 20:00	1	Oxidizer			20717	184	15628		115	4958	5.9	
9434721000100	12/13/94 21:00	1	Oxidizer				128					5.9	
9434722000100	12/13/94 22:00	1	Oxidizer				296					5.9	
9434809000100	12/14/94 9:00	1	Oxidizer				256					5.9	
9434810000100	12/14/94 10:00	1	Oxidizer				248					5.8	
9434811000100	12/14/94 11:00	1	Oxidizer				200					5.8	
9434812000100	12/14/94 12:00	1	Oxidizer				184					5.9	
9434813000100	12/14/94 13:00	1	Oxidizer			22338	224	14773		106	5358	5.6	
9434814000100	12/14/94 14:00	1	Oxidizer				288					5.9	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9434815000100	12/14/94 15:00	1	Oxidizer				232					6.0	
9434816000100	12/14/94 16:00	1	Oxidizer				296					5.8	
9434816300100	12/14/94 16:30	1	Oxidizer				224					5.8	
9434817000100	12/14/94 17:00	1	Oxidizer				232					6.0	
9434818000100	12/14/94 18:00	1	Oxidizer			21797	136	15145		189	5176	5.5	
9434818010100	12/14/94 18:01	1	Oxidizer				176					5.5	
9434819000100	12/14/94 19:00	1	Oxidizer				224					5.7	
9434820000100	12/14/94 20:00	1	Oxidizer				136					5.8	
9434821000100	12/14/94 21:00	1	Oxidizer				168					6.0	
9434821300100	12/14/94 21:30	1	Oxidizer				288					6.0	
9434822000100	12/14/94 22:00	1	Oxidizer			22258	288	15503		161	5305	5.7	
9434822050100	12/14/94 22:05	1	Oxidizer				392					5.7	
9434823000100	12/14/94 23:00	1	Oxidizer				272					6.1	
9434909000100	12/15/94 9:00	1	Oxidizer				480					5.7	
9434910000100	12/15/94 10:00	1	Oxidizer				208					5.8	
9434911000100	12/15/94 11:00	1	Oxidizer				344					5.8	
9434912000100	12/15/94 12:00	1	Oxidizer				432					5.7	
9434917000100	12/15/94 17:00	1	Oxidizer										
9434918000100	12/15/94 18:00	1	Oxidizer			22418	192	16725		168	5339	5.3	
9434918050100	12/15/94 18:05	1	Oxidizer				200					5.4	
9434919000100	12/15/94 19:00	1	Oxidizer				160					5.9	
9434920000100	12/15/94 20:00	1	Oxidizer				176					5.7	
9434921000100	12/15/94 21:00	1	Oxidizer				152					5.6	
9434922000100	12/15/94 22:00	1	Oxidizer			21988	88	15257		172	5232	5.6	
9434922050100	12/15/94 22:05	1	Oxidizer				168					5.6	
9435009000100	12/16/94 9:00	1	Oxidizer				120					5.4	
9435010000100	12/16/94 10:00	1	Oxidizer				184					5.5	
9435011000100	12/16/94 11:00	1	Oxidizer				112					5.4	
9435012000100	12/16/94 12:00	1	Oxidizer			22088	96	17984		150	5270	5.4	
9435012050100	12/16/94 12:05	1	Oxidizer				96					5.4	
9435013000100	12/16/94 13:00	1	Oxidizer				96					5.7	
9435309000100	12/19/94 9:00	1	Oxidizer				216					6.4	
9435310000100	12/19/94 10:00	1	Oxidizer				160					5.8	
9435311000100	12/19/94 11:00	1	Oxidizer				192					5.8	
9435312000100	12/19/94 12:00	1	Oxidizer				208					5.7	
9435313000100	12/19/94 13:00	1	Oxidizer				200					5.7	
9435314000100	12/19/94 14:00	1	Oxidizer			22498	88	17417		204	5337	5.2	
9435315000100	12/19/94 15:00	1	Oxidizer				160					5.6	
9435409300100	12/20/94 9:30	1	Oxidizer				176					5.8	
9435410000100	12/20/94 10:00	1	Oxidizer				136					5.4	
9435411000100	12/20/94 11:00	1	Oxidizer				152					5.5	
9435412000100	12/20/94 12:00	1	Oxidizer				200					5.5	
9435413000100	12/20/94 13:00	1	Oxidizer				152					5.6	
9435414000100	12/20/94 14:00	1	Oxidizer			23149	88	21672		140	5534	5.2	
9435415000100	12/20/94 15:00	1	Oxidizer				176					5.6	
9435509300100	12/21/94 9:30	1	Oxidizer				64					6.3	
9435510000100	12/21/94 10:00	1	Oxidizer				152					5.7	
9435511000100	12/21/94 11:00	1	Oxidizer				96					5.5	
9435512000100	12/21/94 12:00	1	Oxidizer				176					5.5	
9435513000100	12/21/94 13:00	1	Oxidizer				160					5.5	
9435514000100	12/21/94 14:00	1	Oxidizer			23589	88	15907		114	5656	5.6	
9435515000100	12/21/94 15:00	1	Oxidizer				184					5.6	
9435609000100	12/22/94 9:00	1	Oxidizer				160					6.0	
9435610000100	12/22/94 10:00	1	Oxidizer				128					5.4	
9435611000100	12/22/94 11:00	1	Oxidizer				152					5.2	
9435612000100	12/22/94 12:00	1	Oxidizer				104					5.2	
9435613000100	12/22/94 13:00	1	Oxidizer				88					5.6	
9435614000100	12/22/94 14:00	1	Oxidizer			23579	152	16215		115	5654	4.8	
9436109000100	12/27/94 9:00	1	Oxidizer				216					6.0	
9436110000100	12/27/94 10:00	1	Oxidizer				152					5.6	
9436111000100	12/27/94 11:00	1	Oxidizer				96					5.1	
9436112000100	12/27/94 12:00	1	Oxidizer				32					5.2	
9436113000100	12/27/94 13:00	1	Oxidizer				248					5.2	
9436114000100	12/27/94 14:00	1	Oxidizer			23169	112	17560		213	5494	4.9	
9436115000100	12/27/94 15:00	1	Oxidizer				216					5.4	
9436209300100	12/28/94 9:30	1	Oxidizer				96					5.5	
9436210000100	12/28/94 10:00	1	Oxidizer				80					4.7	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9436211000100	12/28/94 11:00	1	Oxidizer				200					5.8	
9436212000100	12/28/94 12:00	1	Oxidizer				24					5.5	
9436213000100	12/28/94 13:00	1	Oxidizer				120					4.9	
9436214000100	12/28/94 14:00	1	Oxidizer			22628	96	13622		134	5411	5.1	
9436310000100	12/29/94 10:00	1	Oxidizer				64					6.2	
9436313000100	12/29/94 13:00	1	Oxidizer				72					4.8	
9436314000100	12/29/94 14:00	1	Oxidizer			22168	96	15462		220	5247	4.4	
9436315000100	12/29/94 15:00	1	Oxidizer				176					4.2	
9436409000100	12/30/94 9:00	1	Oxidizer				120					4.4	
9436410000100	12/30/94 10:00	1	Oxidizer				56					4.2	
9436411000100	12/30/94 11:00	1	Oxidizer				88					5.4	
9500610000100	1/6/95 10:00	1	Oxidizer				1344					6.0	
9500611000100	1/6/95 11:00	1	Oxidizer				144					6.7	
9500612000100	1/6/95 12:00	1	Oxidizer				160					5.6	
9500613000100	1/6/95 13:00	1	Oxidizer				120					5.6	
9500614000100	1/6/95 14:00	1	Oxidizer			20867	24	15820		154	4971	5.2	
9500615000100	1/6/95 15:00	1	Oxidizer				112					5.6	
9500910000100	1/9/95 10:00	1	Oxidizer				160					5.6	
9500911000100	1/9/95 11:00	1	Oxidizer				-112					5.1	
9500911000100	1/9/95 11:00	1	Oxidizer				112					5.1	
9500912000100	1/9/95 12:00	1	Oxidizer				104					5.5	
9500913000100	1/9/95 13:00	1	Oxidizer				120					5.7	
9500914000100	1/9/95 14:00	1	Oxidizer			21867	32	15485		194	5190	5.1	
9500915000100	1/9/95 15:00	1	Oxidizer				136					5.3	
9501009000100	1/10/95 9:00	1	Oxidizer				16					5.4	
9501010000100	1/10/95 10:00	1	Oxidizer				32					5.4	
9501011000100	1/10/95 11:00	1	Oxidizer				112					5.0	
9501012000100	1/10/95 12:00	1	Oxidizer				32					5.3	
9501013000100	1/10/95 13:00	1	Oxidizer				136					5.4	
9501014000100	1/10/95 14:00	1	Oxidizer			21847	40	16294		185	5190	5.5	
9501015000100	1/10/95 15:00	1	Oxidizer				88					5.8	
9501109000100	1/11/95 9:00	1	Oxidizer				136					6.1	
9501110000100	1/11/95 10:00	1	Oxidizer				96					5.2	
9501111000100	1/11/95 11:00	1	Oxidizer				72					5.7	
9501112000100	1/11/95 12:00	1	Oxidizer				72					5.6	
9501113000100	1/11/95 13:00	1	Oxidizer				256					5.7	
9501114000100	1/11/95 14:00	1	Oxidizer			20596	96	16616		183	4888	5.6	
9501115000100	1/11/95 15:00	1	Oxidizer				104					5.8	
9501209000100	1/12/95 9:00	1	Oxidizer				144					5.8	
9501210000100	1/12/95 10:00	1	Oxidizer				280					5.5	
9501211000100	1/12/95 11:00	1	Oxidizer				352					5.6	
9501211200100	1/12/95 11:20	1	Oxidizer				352						
9501212000100	1/12/95 12:00	1	Oxidizer				112					5.6	
9501309000100	1/13/95 9:00	1	Oxidizer				192					5.3	
9501310000100	1/13/95 10:00	1	Oxidizer				192					5.8	
9501311000100	1/13/95 11:00	1	Oxidizer				400					5.9	
9501312000100	1/13/95 12:00	1	Oxidizer				352					5.9	
9501313000100	1/13/95 13:00	1	Oxidizer				128					5.8	
9501314000100	1/13/95 14:00	1	Oxidizer			21037	72	19195		134	5025	5.6	
9501609000100	1/16/95 9:00	1	Oxidizer				176					6.5	
9501610000100	1/16/95 10:00	1	Oxidizer				192					5.8	
9501611000100	1/16/95 11:00	1	Oxidizer				104					5.9	
9501612000100	1/16/95 12:00	1	Oxidizer				136					5.8	
9501613000100	1/16/95 13:00	1	Oxidizer				112					5.7	
9501614000100	1/16/95 14:00	1	Oxidizer			18965	72	14690		195	4485	5.3	
9501615000100	1/16/95 15:00	1	Oxidizer				104					5.8	
9501709000100	1/17/95 9:00	1	Oxidizer				184					5.9	
9501710000100	1/17/95 10:00	1	Oxidizer				128					5.8	
9501711000100	1/17/95 11:00	1	Oxidizer				152					5.9	
9501712000100	1/17/95 12:00	1	Oxidizer				192					5.8	
9501713000100	1/17/95 13:00	1	Oxidizer				488					5.3	
9501713300100	1/17/95 13:30	1	Oxidizer				448						
9501714000100	1/17/95 14:00	1	Oxidizer			19856	352	10373		127	4742	5.6	
9501715000100	1/17/95 15:00	1	Oxidizer				176					5.9	
9501809000100	1/18/95 9:00	1	Oxidizer				128					5.9	
9501810000100	1/18/95 10:00	1	Oxidizer				1136					5.9	
9501812000100	1/18/95 12:00	1	Oxidizer				112					5.6	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9501813000100	1/18/95 13:00	1	Oxidizer				128					5.7	
9501814000100	1/18/95 14:00	1	Oxidizer			18425	112	13603		148	4382	5.7	
9501815000100	1/18/95 15:00	1	Oxidizer				104					5.8	
9501909000100	1/19/95 9:00	1	Oxidizer				112					6.3	
9501910000100	1/19/95 10:00	1	Oxidizer				16					5.6	
9501911000100	1/19/95 11:00	1	Oxidizer				168					6.0	
9501912000100	1/19/95 12:00	1	Oxidizer				144					5.4	
9501913000100	1/19/95 13:00	1	Oxidizer				40					5.2	
9501914000100	1/19/95 14:00	1	Oxidizer			21167	16	12166		157	5042	4.9	
9501915000100	1/19/95 15:00	1	Oxidizer									5.1	
9502007000100	1/20/95 7:00	1	Oxidizer				64					5.3	
9502008000100	1/20/95 8:00	1	Oxidizer				160					5.6	
9502009000100	1/20/95 9:00	1	Oxidizer				184					5.0	
9502010000100	1/20/95 10:00	1	Oxidizer				160					5.4	
9502011000100	1/20/95 11:00	1	Oxidizer				48					5.2	
9502012000100	1/20/95 12:00	1	Oxidizer				-40					5.4	
9502013000100	1/20/95 13:00	1	Oxidizer			19406	88	12672		91	4655	5.6	
9502014000100	1/20/95 14:00	1	Oxidizer				-16					5.2	
9502015000100	1/20/95 15:00	1	Oxidizer				112					5.5	
9502016000100	1/20/95 16:00	1	Oxidizer				64					5.3	
9502017000100	1/20/95 17:00	1	Oxidizer				40					5.2	
9502310000100	1/23/95 10:00	1	Oxidizer				40					5.3	
9502311000100	1/23/95 11:00	1	Oxidizer				32					5.5	
9502312000100	1/23/95 12:00	1	Oxidizer				0					5.4	
9502313000100	1/23/95 13:00	1	Oxidizer				200					5.3	
9502314000100	1/23/95 14:00	1	Oxidizer			21707	72	14219		82	5219	5.5	
9502315000100	1/23/95 15:00	1	Oxidizer				80					5.7	
9502409000100	1/24/95 9:00	1	Oxidizer				96					6.3	
9502409000100	1/24/95 9:00	1	Oxidizer				96					6.3	
9502609000100	1/26/95 9:00	1	Oxidizer				112					4.9	
9502609000100	1/26/95 9:00	1	Oxidizer				112					4.9	
9502610000100	1/26/95 10:00	1	Oxidizer				96					4.9	
9502610000100	1/26/95 10:00	1	Oxidizer				96					4.9	
9502611000100	1/26/95 11:00	1	Oxidizer				56					5.5	
9502611000100	1/26/95 11:00	1	Oxidizer				56					5.5	
9502612000100	1/26/95 12:00	1	Oxidizer				80					4.7	
9502612000100	1/26/95 12:00	1	Oxidizer				80					4.7	
9502613000100	1/26/95 13:00	1	Oxidizer				48					5.5	
9502613000100	1/26/95 13:00	1	Oxidizer				48					5.5	
9502614000100	1/26/95 14:00	1	Oxidizer			22518	8	14820		136	5383	5.8	
9502614000100	1/26/95 14:00	1	Oxidizer			22518	8	14820		136	5383	5.8	
9502615000100	1/26/95 15:00	1	Oxidizer				40					5.3	
9502615000100	1/26/95 15:00	1	Oxidizer				40					5.3	
9503309000100	2/2/95 9:00	1	Oxidizer				120					5.6	
9503310000100	2/2/95 10:00	1	Oxidizer				64					6.0	
9503311000100	2/2/95 11:00	1	Oxidizer				328					5.9	
9503312000100	2/2/95 12:00	1	Oxidizer				248					5.7	
9503313000100	2/2/95 13:00	1	Oxidizer				104					5.8	
9503314000100	2/2/95 14:00	1	Oxidizer			19996	72	13549		163	4755	5.4	
9503315000100	2/2/95 15:00	1	Oxidizer				40					5.6	
9503811000100	2/7/95 11:00	1	Oxidizer				152					6.1	
9503812000100	2/7/95 12:00	1	Oxidizer				152					6.3	
9503813000100	2/7/95 13:00	1	Oxidizer				184					6.2	
9503814000100	2/7/95 14:00	1	Oxidizer			22598	88	16398		162	5386	5.0	
9503815000100	2/7/95 15:00	1	Oxidizer				48					5.3	
9503910300100	2/8/95 10:30	1	Oxidizer				80					5.7	
9503911000100	2/8/95 11:00	1	Oxidizer				80					5.7	
9503912000100	2/8/95 12:00	1	Oxidizer				80					5.6	
9503913000100	2/8/95 13:00	1	Oxidizer				104					5.2	
9503914000100	2/8/95 14:00	1	Oxidizer			22958	240	14489		163	5473	5.2	
9503915000100	2/8/95 15:00	1	Oxidizer				152					5.6	
9504010000100	2/9/95 10:00	1	Oxidizer				192					5.6	
9504011000100	2/9/95 11:00	1	Oxidizer				192					5.4	
9504012000100	2/9/95 12:00	1	Oxidizer				192					5.7	
9504013000100	2/9/95 13:00	1	Oxidizer				168					5.6	
9504014000100	2/9/95 14:00	1	Oxidizer			23529	136	17936		171	5607	4.9	
9504015000100	2/9/95 15:00	1	Oxidizer				120					5.4	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9504412000100	2/13/95 12:00	1	Oxidizer				192					5.7	
9504413000100	2/13/95 13:00	1	Oxidizer				96					5.5	
9504414000100	2/13/95 14:00	1	Oxidizer				152					5.5	
9504415000100	2/13/95 15:00	1	Oxidizer				112					5.3	
9504509000100	2/14/95 9:00	1	Oxidizer				160					5.5	
9504510000100	2/14/95 10:00	1	Oxidizer				72					5.5	
9504511000100	2/14/95 11:00	1	Oxidizer				88					5.4	
9504512000100	2/14/95 12:00	1	Oxidizer				152					5.4	
9504513000100	2/14/95 13:00	1	Oxidizer				176					5.5	
9504514000100	2/14/95 14:00	1	Oxidizer			20296	96	11633		257	4770	5.2	
9504515000100	2/14/95 15:00	1	Oxidizer				168					5.4	
9504709300100	2/16/95 9:30	1	Oxidizer				176					5.6	
9504710000100	2/16/95 10:00	1	Oxidizer				88					5.6	
9504711000100	2/16/95 11:00	1	Oxidizer				128					5.4	
9504712000100	2/16/95 12:00	1	Oxidizer				96					5.6	
9504713000100	2/16/95 13:00	1	Oxidizer				88					5.3	
9504714000100	2/16/95 14:00	1	Oxidizer			20737	72	11421		125	4957	5.3	
9504715000100	2/16/95 15:00	1	Oxidizer				120					5.5	
9505110000100	2/20/95 10:00	1	Oxidizer				168					5.7	
9505111000100	2/20/95 11:00	1	Oxidizer				184					5.1	
9505112000100	2/20/95 12:00	1	Oxidizer				152					5.7	
9505113000100	2/20/95 13:00	1	Oxidizer				176					5.5	
9505114000100	2/20/95 14:00	1	Oxidizer			21587	152	11566		139	5155	5.7	
9505210000100	2/21/95 10:00	1	Oxidizer				144					5.5	
9505211000100	2/21/95 11:00	1	Oxidizer				192					5.6	
9505213000100	2/21/95 13:00	1	Oxidizer				104					5.4	
9505214000100	2/21/95 14:00	1	Oxidizer			20396	160	15224		146	4862	5.6	
9505309000100	2/22/95 9:00	1	Oxidizer				152					5.6	
9505310000100	2/22/95 10:00	1	Oxidizer				128					5.4	
9505311000100	2/22/95 11:00	1	Oxidizer				176					5.6	
9505312000100	2/22/95 12:00	1	Oxidizer				136					5.4	
9505313000100	2/22/95 13:00	1	Oxidizer				168					5.7	
9505314000100	2/22/95 14:00	1	Oxidizer			23589	40	18051		140	5640	5.7	
9505315000100	2/22/95 15:00	1	Oxidizer				88					5.8	
9505509300100	2/24/95 9:30	1	Oxidizer				88					6.5	
9505510150100	2/24/95 10:15	1	Oxidizer				56					5.8	
9505813000100	2/27/95 13:00	1	Oxidizer				88					5.2	
9505909000100	2/28/95 9:00	1	Oxidizer				88					5.5	
9505910000100	2/28/95 10:00	1	Oxidizer				128					5.2	
9505911000100	2/28/95 11:00	1	Oxidizer				32					5.5	
9505912000100	2/28/95 12:00	1	Oxidizer				72					5.7	
9505913000100	2/28/95 13:00	1	Oxidizer				56					5.5	
9505914000100	2/28/95 14:00	1	Oxidizer			23939	64	19205		143	5723	6.0	
9506109000100	3/2/95 9:00	1	Oxidizer				136					5.9	
9506110000100	3/2/95 10:00	1	Oxidizer				72					5.6	
9506209000100	3/3/95 9:00	1	Oxidizer				96					4.3	
9506210000100	3/3/95 10:00	1	Oxidizer				152					4.8	
9506211000100	3/3/95 11:00	1	Oxidizer				120					5.3	
9506212000100	3/3/95 12:00	1	Oxidizer				88					5.3	
9506213000100	3/3/95 13:00	1	Oxidizer			23479	40	15692		115	5629	4.7	
9506610450100	3/7/95 10:45	1	Oxidizer				144					4.7	
9506611000100	3/7/95 11:00	1	Oxidizer				112					6.0	
9506709350100	3/8/95 9:35	1	Oxidizer				192					5.6	
9506710000100	3/8/95 10:00	1	Oxidizer				72					5.7	
9506713000100	3/8/95 13:00	1	Oxidizer			22398	168	1597		106	5372	5.6	
9506810000100	3/9/95 10:00	1	Oxidizer				176					5.8	
9506910000100	3/10/95 10:00	1	Oxidizer				136					5.5	
9415212000200	6/1/94 12:00	2	Crystallizer			4988		1770		1922	43	10.8	6.7
9415311000200	6/2/94 11:00	2	Crystallizer			5064				2070			
9415810300200	6/7/94 10:30	2	Crystallizer		14684	5074				1826	123	8.9	
9415912000200	6/8/94 12:00	2	Crystallizer		12754					2023		11.4	
9416011000200	6/9/94 11:00	2	Crystallizer		15386	5635		1648		2144	67	11.6	
9416612000200	6/15/94 12:00	2	Crystallizer									10.7	
9416714000200	6/16/94 14:00	2	Crystallizer									10.7	5.9
9416813000200	6/17/94 13:00	2	Crystallizer										6.7
9417100000200	6/20/94 0:00	2	Crystallizer										
9417814000200	6/27/94 14:00	2	Crystallizer									11.2	5.9

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9417914000200	6/28/94 14:00	2	Crystallizer									10.9	6.0
9417920000200	6/28/94 20:00	2	Crystallizer									11.0	6.0
9418018000200	6/29/94 18:00	2	Crystallizer									11.0	6.1
9418120000200	6/30/94 20:00	2	Crystallizer									11.3	5.8
9418614000200	7/5/94 14:00	2	Crystallizer									11.1	5.0
9418618000200	7/5/94 18:00	2	Crystallizer									11.3	4.6
9418622000200	7/5/94 22:00	2	Crystallizer									11.0	4.8
9418713000200	7/6/94 13:00	2	Crystallizer									10.4	4.6
9418720000200	7/6/94 20:00	2	Crystallizer									11.0	4.3
9418814000200	7/7/94 14:00	2	Crystallizer									10.2	4.8
9418914000200	7/8/94 14:00	2	Crystallizer									10.9	5.0
9419217000200	7/11/94 17:00	2	Crystallizer									11.0	4.6
9419222000200	7/11/94 22:00	2	Crystallizer									10.8	4.7
9419313000200	7/12/94 13:00	2	Crystallizer									11.2	5.1
9419317300200	7/12/94 17:30	2	Crystallizer									11.4	4.5
9419414000200	7/13/94 14:00	2	Crystallizer									11.5	3.9
9419418000200	7/13/94 18:00	2	Crystallizer									11.2	4.9
9419513000200	7/14/94 13:00	2	Crystallizer									11.2	4.3
9419518000200	7/14/94 18:00	2	Crystallizer									10.9	4.9
9419522000200	7/14/94 22:00	2	Crystallizer									10.5	4.6
9419914000200	7/18/94 14:00	2	Crystallizer									10.9	5.0
9419918000200	7/18/94 18:00	2	Crystallizer									10.1	4.8
9419922000200	7/18/94 22:00	2	Crystallizer									10.8	4.8
9420011000200	7/19/94 11:00	2	Crystallizer			7496		1600		2723	167	10.8	
9420014000200	7/19/94 14:00	2	Crystallizer									10.8	4.9
9420018000200	7/19/94 18:00	2	Crystallizer									10.5	4.8
9420022000200	7/19/94 22:00	2	Crystallizer		0.16							10.2	4.8
9420114000200	7/20/94 14:00	2	Crystallizer									10.3	5.3
9420118000200	7/20/94 18:00	2	Crystallizer									10.6	5.2
9420122000200	7/20/94 22:00	2	Crystallizer									10.6	5.1
9420214000200	7/21/94 14:00	2	Crystallizer									10.0	5.2
9420221000200	7/21/94 21:00	2	Crystallizer									10.2	4.9
9420614000200	7/25/94 14:00	2	Crystallizer									10.8	4.6
9420618000200	7/25/94 18:00	2	Crystallizer									10.9	5.3
9420622000200	7/25/94 22:00	2	Crystallizer									10.6	4.8
9420714000200	7/26/94 14:00	2	Crystallizer									10.8	4.7
9420718000200	7/26/94 18:00	2	Crystallizer									10.6	5.1
9420722000200	7/26/94 22:00	2	Crystallizer									10.3	5.2
9420814000200	7/27/94 14:00	2	Crystallizer									9.95	5.1
9420819000200	7/27/94 19:00	2	Crystallizer									10.54	5.3
9420913000200	7/28/94 13:00	2	Crystallizer									9.64	5.7
9420921000200	7/28/94 21:00	2	Crystallizer									9.90	6.5
9421315000200	8/1/94 15:00	2	Crystallizer									10.80	6.0
9421322000200	8/1/94 22:00	2	Crystallizer									10.64	5.8
9421400000200	8/2/94 0:00	2	Crystallizer										5.8
9421400000200	8/2/94 0:00	2	Crystallizer										5.6
9421400000200	8/2/94 0:00	2	Crystallizer										5.1
9421400000200	8/2/94 0:00	2	Crystallizer										
9421400000200	8/2/94 0:00	2	Crystallizer										5.1
9421400000200	8/2/94 0:00	2	Crystallizer										5.7
9421414300200	8/2/94 14:30	2	Crystallizer										6.0
9421500000200	8/3/94 0:00	2	Crystallizer										4.2
9421509000200	8/3/94 9:00	2	Crystallizer										5.4
9421510000200	8/3/94 10:00	2	Crystallizer										5.5
9421512000200	8/3/94 12:00	2	Crystallizer										5.4
9421514000200	8/3/94 14:00	2	Crystallizer									10.32	5.4
9421516000200	8/3/94 16:00	2	Crystallizer										5.2
9421517000200	8/3/94 17:00	2	Crystallizer										5.4
9421518000200	8/3/94 18:00	2	Crystallizer										5.6
9421519000200	8/3/94 19:00	2	Crystallizer										5.8
9421520000200	8/3/94 20:00	2	Crystallizer										3.9
9421600000200	8/4/94 0:00	2	Crystallizer										5.6
9421600000200	8/4/94 0:00	2	Crystallizer										
9421609000200	8/4/94 9:00	2	Crystallizer										5.1
9421610000200	8/4/94 10:00	2	Crystallizer										5.2
9421611000200	8/4/94 11:00	2	Crystallizer										5.2
9421611000200	8/4/94 11:00	2	Crystallizer									10.71	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9421612000200	8/4/94 12:00	2	Crystallizer										5.7
9421612000200	8/4/94 12:00	2	Crystallizer									10.49	
9421613000200	8/4/94 13:00	2	Crystallizer										5.4
9421614000200	8/4/94 14:00	2	Crystallizer									10.52	5.3
9421615000200	8/4/94 15:00	2	Crystallizer									10.50	5.4
9421616000200	8/4/94 16:00	2	Crystallizer										5.6
9421617000200	8/4/94 17:00	2	Crystallizer										5.5
9421618000200	8/4/94 18:00	2	Crystallizer									10.53	5.4
9421620000200	8/4/94 20:00	2	Crystallizer										5.5
9422010000200	8/8/94 10:00	2	Crystallizer									10.70	5.3
9422012000200	8/8/94 12:00	2	Crystallizer									10.64	5.1
9422014000200	8/8/94 14:00	2	Crystallizer									10.68	4.9
9422015000200	8/8/94 15:00	2	Crystallizer									10.90	5.0
9422016000200	8/8/94 16:00	2	Crystallizer										5.2
9422017000200	8/8/94 17:00	2	Crystallizer										3.2
9422019300200	8/8/94 19:30	2	Crystallizer										5.1
9422020000200	8/8/94 20:00	2	Crystallizer										4.6
9422020000200	8/8/94 20:00	2	Crystallizer										4.6
9422020300200	8/8/94 20:30	2	Crystallizer										5.3
9422021000200	8/8/94 21:00	2	Crystallizer										5.3
9422022000200	8/8/94 22:00	2	Crystallizer									10.22	4.7
9422100000200	8/9/94 0:00	2	Crystallizer										5.3
9422110000200	8/9/94 10:00	2	Crystallizer									10.33	5.2
9422110300200	8/9/94 10:30	2	Crystallizer									10.63	5.1
9422112000200	8/9/94 12:00	2	Crystallizer									10.65	5.2
9422114000200	8/9/94 14:00	2	Crystallizer									10.56	5.0
9422116000200	8/9/94 16:00	2	Crystallizer										5.5
9422117000200	8/9/94 17:00	2	Crystallizer										4.6
9422118000200	8/9/94 18:00	2	Crystallizer										5.0
9422118000200	8/9/94 18:00	2	Crystallizer									10.67	5.0
9422121000200	8/9/94 21:00	2	Crystallizer										5.0
9422122000200	8/9/94 22:00	2	Crystallizer									10.53	4.8
9422209000200	8/10/94 9:00	2	Crystallizer									10.88	4.9
9422210000200	8/10/94 10:00	2	Crystallizer									10.97	5.0
9422211000200	8/10/94 11:00	2	Crystallizer										4.5
9422211000200	8/10/94 11:00	2	Crystallizer									10.94	
9422211000200	8/10/94 11:00	2	Crystallizer									10.94	4.5
9422212000200	8/10/94 12:00	2	Crystallizer									10.84	4.8
9422214000200	8/10/94 14:00	2	Crystallizer									10.79	5.7
9422217000200	8/10/94 17:00	2	Crystallizer										4.9
9422219000200	8/10/94 19:00	2	Crystallizer										4.9
9422220000200	8/10/94 20:00	2	Crystallizer										4.6
9422221000200	8/10/94 21:00	2	Crystallizer										4.8
9422222000200	8/10/94 22:00	2	Crystallizer		7.91								12.9
9422309000200	8/11/94 9:00	2	Crystallizer										4.7
9422309000200	8/11/94 9:00	2	Crystallizer									10.52	
9422310000200	8/11/94 10:00	2	Crystallizer									10.96	4.9
9422312000200	8/11/94 12:00	2	Crystallizer									10.80	5.2
9422314000200	8/11/94 14:00	2	Crystallizer										5.0
9422314000200	8/11/94 14:00	2	Crystallizer									10.78	5.0
9422316000200	8/11/94 16:00	2	Crystallizer										4.3
9422317000200	8/11/94 17:00	2	Crystallizer										4.5
9422318000200	8/11/94 18:00	2	Crystallizer										5.2
9422319000200	8/11/94 19:00	2	Crystallizer										4.4
9422320000200	8/11/94 20:00	2	Crystallizer										4.5
9422321000200	8/11/94 21:00	2	Crystallizer										5.0
9422322000200	8/11/94 22:00	2	Crystallizer										5.7
9422413000200	8/12/94 13:00	2	Crystallizer									10.91	5.0
9422413000200	8/12/94 13:00	2	Crystallizer									10.91	5.0
9423012000200	8/18/94 12:00	2	Crystallizer										5.8
9423014000200	8/18/94 14:00	2	Crystallizer									11.17	5.6
9423109000200	8/19/94 9:00	2	Crystallizer									10.78	5.7
9423111000200	8/19/94 11:00	2	Crystallizer										5.3
9423113000200	8/19/94 13:00	2	Crystallizer										5.8
9423114000200	8/19/94 14:00	2	Crystallizer									10.00	5.3
9423409000200	8/22/94 9:00	2	Crystallizer									9.95	4.9
9423409200200	8/22/94 9:20	2	Crystallizer									10.41	5.4

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9423410000200	8/22/94 10:00	2	Crystallizer									10.39	5.5
9423413000200	8/22/94 13:00	2	Crystallizer									10.51	6.0
9423414000200	8/22/94 14:00	2	Crystallizer									10.43	5.8
9423615000200	8/24/94 15:00	2	Crystallizer										5.2
9423615300200	8/24/94 15:30	2	Crystallizer										5.5
9423709000200	8/25/94 9:00	2	Crystallizer									10.24	5.3
9423711000200	8/25/94 11:00	2	Crystallizer									10.43	6.0
9423712000200	8/25/94 12:00	2	Crystallizer									10.79	5.6
9423714000200	8/25/94 14:00	2	Crystallizer	5004								1.00	5.7
9423809000200	8/26/94 9:00	2	Crystallizer										5.6
9423809300200	8/26/94 9:30	2	Crystallizer									10.60	5.8
9423810000200	8/26/94 10:00	2	Crystallizer										5.8
9423810300200	8/26/94 10:30	2	Crystallizer									10.77	5.7
9423811300200	8/26/94 11:30	2	Crystallizer	5004								10.69	5.8
9424109000200	8/29/94 9:00	2	Crystallizer									10.33	5.6
9424110000200	8/29/94 10:00	2	Crystallizer				0					10.59	6.0
9424111000200	8/29/94 11:00	2	Crystallizer									10.77	6.0
9424112000200	8/29/94 12:00	2	Crystallizer									10.61	6.0
9424113300200	8/29/94 13:30	2	Crystallizer									10.60	6.0
9424115000200	8/29/94 15:00	2	Crystallizer									10.34	5.6
9424209000200	8/30/94 9:00	2	Crystallizer									11.24	5.6
9424210000200	8/30/94 10:00	2	Crystallizer									10.33	5.7
9424212000200	8/30/94 12:00	2	Crystallizer									10.21	6.1
9424214000200	8/30/94 14:00	2	Crystallizer									10.20	5.5
9424216000200	8/30/94 16:00	2	Crystallizer										5.4
9424308300200	8/31/94 8:30	2	Crystallizer										5.4
9424309000200	8/31/94 9:00	2	Crystallizer									10.11	5.6
9424310000200	8/31/94 10:00	2	Crystallizer									10.23	6.1
9424311000200	8/31/94 11:00	2	Crystallizer									10.30	5.3
9424313000200	8/31/94 13:00	2	Crystallizer									10.26	5.9
9424314000200	8/31/94 14:00	2	Crystallizer									10.66	5.9
9424315000200	8/31/94 15:00	2	Crystallizer									10.53	5.8
9424409000200	9/1/94 9:00	2	Crystallizer									9.94	5.2
9424410000200	9/1/94 10:00	2	Crystallizer									9.08	5.5
9424411000200	9/1/94 11:00	2	Crystallizer									10.40	5.5
9424412000200	9/1/94 12:00	2	Crystallizer									10.24	5.8
9424413000200	9/1/94 13:00	2	Crystallizer									10.34	5.8
9424414000200	9/1/94 14:00	2	Crystallizer									10.44	5.8
9424415000200	9/1/94 15:00	2	Crystallizer									10.42	5.7
9424909000200	9/6/94 9:00	2	Crystallizer									10.13	5.4
9424910000200	9/6/94 10:00	2	Crystallizer									10.66	5.7
9424911000200	9/6/94 11:00	2	Crystallizer									10.60	5.7
9424912000200	9/6/94 12:00	2	Crystallizer										5.7
9424913000200	9/6/94 13:00	2	Crystallizer									11.50	5.1
9424914000200	9/6/94 14:00	2	Crystallizer									10.29	4.7
9424915000200	9/6/94 15:00	2	Crystallizer									10.33	5.4
9424917000200	9/6/94 17:00	2	Crystallizer										5.1
9424918000200	9/6/94 18:00	2	Crystallizer									10.30	5.0
9424920000200	9/6/94 20:00	2	Crystallizer									10.44	5.0
9425709000200	9/14/94 9:00	2	Crystallizer									10.66	4.5
9425710000200	9/14/94 10:00	2	Crystallizer									10.45	4.9
9425711000200	9/14/94 11:00	2	Crystallizer										5.2
9425713000200	9/14/94 13:00	2	Crystallizer										5.2
9425714000200	9/14/94 14:00	2	Crystallizer									10.90	5.2
9425715000200	9/14/94 15:00	2	Crystallizer									11.02	5.2
9425809000200	9/15/94 9:00	2	Crystallizer									10.12	4.8
9425810000200	9/15/94 10:00	2	Crystallizer									9.97	5.0
9426209000200	9/19/94 9:00	2	Crystallizer									10.01	5.1
9426211000200	9/19/94 11:00	2	Crystallizer									10.03	4.8
9426212000200	9/19/94 12:00	2	Crystallizer									10.34	5.0
9426213000200	9/19/94 13:00	2	Crystallizer									10.18	5.4
9426214000200	9/19/94 14:00	2	Crystallizer			1001		1468	2021	1982.5		10.04	5.3
9426215420200	9/19/94 15:42	2	Crystallizer									10.51	5.4
9426217000200	9/19/94 17:00	2	Crystallizer									10.52	5.3
9426218000200	9/19/94 18:00	2	Crystallizer									10.20	5.2
9426220000200	9/19/94 20:00	2	Crystallizer									10.74	5.6
9426222000200	9/19/94 22:00	2	Crystallizer									10.72	5.4

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9426309000200	9/20/94 9:00	2	Crystallizer									9.87	5.1
9426310000200	9/20/94 10:00	2	Crystallizer									10.09	5.3
9426311000200	9/20/94 11:00	2	Crystallizer									9.93	5.6
9426312000200	9/20/94 12:00	2	Crystallizer									10.10	5.5
9426314000200	9/20/94 14:00	2	Crystallizer			0	0	1915	2255	1994.5		10.07	5.6
9426315300200	9/20/94 15:30	2	Crystallizer									10.88	5.5
9426316000200	9/20/94 16:00	2	Crystallizer									10.72	5.6
9426318000200	9/20/94 18:00	2	Crystallizer			0		11		1704.5		10.36	5.3
9426319000200	9/20/94 19:00	2	Crystallizer									11.22	
9426320000200	9/20/94 20:00	2	Crystallizer									11.40	5.6
9426411000200	9/21/94 11:00	2	Crystallizer									11.32	5.4
9426412000200	9/21/94 12:00	2	Crystallizer									10.58	5.5
9426413000200	9/21/94 13:00	2	Crystallizer									10.49	5.3
9426414000200	9/21/94 14:00	2	Crystallizer			0		919		1646.1		10.30	
9426510000200	9/22/94 10:00	2	Crystallizer									11.55	5.4
9426511000200	9/22/94 11:00	2	Crystallizer									11.18	5.3
9426512000200	9/22/94 12:00	2	Crystallizer									10.92	5.1
9426513000200	9/22/94 13:00	2	Crystallizer									10.62	5.0
9426515000200	9/22/94 15:00	2	Crystallizer			0		2613	1925	1766.2		10.75	6.5
9426516000200	9/22/94 16:00	2	Crystallizer									10.75	5.0
9426517000200	9/22/94 17:00	2	Crystallizer									10.64	4.9
9426518000200	9/22/94 18:00	2	Crystallizer			0		621		1710.1		10.69	5.3
9426520000200	9/22/94 20:00	2	Crystallizer									10.84	5.2
9426522000200	9/22/94 22:00	2	Crystallizer			0		1527		1698.1		11.00	4.9
9427021000200	9/27/94 21:00	2	Crystallizer									10.86	5.1
9427022000200	9/27/94 22:00	2	Crystallizer									10.99	5.0
9427114000200	9/28/94 14:00	2	Crystallizer									10.47	4.9
9427115000200	9/28/94 15:00	2	Crystallizer									10.53	4.9
9427116000200	9/28/94 16:00	2	Crystallizer									10.49	5.3
9427117000200	9/28/94 17:00	2	Crystallizer									10.95	5.3
9427118000200	9/28/94 18:00	2	Crystallizer			1001		255		1678.1		11.05	5.4
9427119000200	9/28/94 19:00	2	Crystallizer									11.00	5.4
9427120000200	9/28/94 20:00	2	Crystallizer									10.83	5.3
9427121000200	9/28/94 21:00	2	Crystallizer									10.11	5.3
9427122000200	9/28/94 22:00	2	Crystallizer			1001		1587		2002.5		10.37	5.3
9427208000200	9/29/94 8:00	2	Crystallizer									10.78	5.3
9427209300200	9/29/94 9:30	2	Crystallizer									10.94	5.4
9427211000200	9/29/94 11:00	2	Crystallizer									11.02	5.5
9427212000200	9/29/94 12:00	2	Crystallizer									10.75	5.2
9427213000200	9/29/94 13:00	2	Crystallizer									10.39	5.4
9427214000200	9/29/94 14:00	2	Crystallizer			1001		1130	2021	1666.1		10.64	5.4
9427215000200	9/29/94 15:00	2	Crystallizer									10.45	5.5
9427609000200	10/3/94 9:00	2	Crystallizer									10.61	5.3
9427612000200	10/3/94 12:00	2	Crystallizer									10.19	5.5
9427613000200	10/3/94 13:00	2	Crystallizer									9.59	5.4
9427614000200	10/3/94 14:00	2	Crystallizer					1335	2106	1930.4		11.03	5.2
9427615000200	10/3/94 15:00	2	Crystallizer									10.45	5.2
9427616000200	10/3/94 16:00	2	Crystallizer									10.64	5.5
9427617000200	10/3/94 17:00	2	Crystallizer									10.48	5.3
9427618000200	10/3/94 18:00	2	Crystallizer					1130		1674.1		10.39	4.9
9427619000200	10/3/94 19:00	2	Crystallizer									9.82	5.1
9427619000200	10/3/94 19:00	2	Crystallizer									10.22	5.3
9427621000200	10/3/94 21:00	2	Crystallizer									10.09	5.3
9427622000200	10/3/94 22:00	2	Crystallizer									10.20	5.3
9427622450200	10/3/94 22:45	2	Crystallizer									10.16	5.0
9427710000200	10/4/94 10:00	2	Crystallizer									10.42	5.2
9427712000200	10/4/94 12:00	2	Crystallizer									10.36	5.3
9427713000200	10/4/94 13:00	2	Crystallizer									10.54	5.2
9427714000200	10/4/94 14:00	2	Crystallizer					2228	2180	1806.3		10.31	5.2
9427716000200	10/4/94 16:00	2	Crystallizer									9.71	5.6
9427716000200	10/4/94 16:00	2	Crystallizer									9.71	5.6
9427717000200	10/4/94 17:00	2	Crystallizer									9.91	5.5
9427718000200	10/4/94 18:00	2	Crystallizer					2613		1614.0		10.16	5.3
9427719000200	10/4/94 19:00	2	Crystallizer									11.63	5.2
9427720000200	10/4/94 20:00	2	Crystallizer									11.61	5.5
9427721000200	10/4/94 21:00	2	Crystallizer									10.67	5.1
9427721300200	10/4/94 21:30	2	Crystallizer					1773		1602.0		10.58	5.3

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9427809000200	10/5/94 9:00	2	Crystallizer									11.03	5.6
9427809000200	10/5/94 9:00	2	Crystallizer									11.03	5.6
9427810000200	10/5/94 10:00	2	Crystallizer									10.36	5.3
9427811000200	10/5/94 11:00	2	Crystallizer									10.14	5.4
9427812000200	10/5/94 12:00	2	Crystallizer									10.05	5.3
9427813000200	10/5/94 13:00	2	Crystallizer									10.17	5.6
9427814000200	10/5/94 14:00	2	Crystallizer					1239	2127	1678.1		10.19	5.5
9427815000200	10/5/94 15:00	2	Crystallizer										5.4
9427909000200	10/6/94 9:00	2	Crystallizer									9.80	5.3
9427910000200	10/6/94 10:00	2	Crystallizer									10.25	5.4
9427910000200	10/6/94 10:00	2	Crystallizer									9.90	
9427911000200	10/6/94 11:00	2	Crystallizer									10.02	5.3
9427912000200	10/6/94 12:00	2	Crystallizer									9.90	5.6
9427913000200	10/6/94 13:00	2	Crystallizer									9.85	5.7
9427914000200	10/6/94 14:00	2	Crystallizer					1184	2170	1594.0		9.98	5.6
9427915000200	10/6/94 15:00	2	Crystallizer									10.05	5.7
9428009000200	10/7/94 9:00	2	Crystallizer									10.79	5.4
9428010000200	10/7/94 10:00	2	Crystallizer									10.76	5.7
9428011000200	10/7/94 11:00	2	Crystallizer									11.01	5.5
9428012000200	10/7/94 12:00	2	Crystallizer									10.55	5.4
9428013000200	10/7/94 13:00	2	Crystallizer									10.55	5.5
9428014000200	10/7/94 14:00	2	Crystallizer					1341	2074	1806.3		10.69	5.6
9428310000200	10/10/94 10:00	2	Crystallizer									11.02	5.6
9428311000200	10/10/94 11:00	2	Crystallizer									10.63	5.7
9428313000200	10/10/94 13:00	2	Crystallizer									10.71	6.2
9428314000200	10/10/94 14:00	2	Crystallizer					1805	2085	1714.1		10.18	6.1
9428315000200	10/10/94 15:00	2	Crystallizer									10.66	5.5
9428316000200	10/10/94 16:00	2	Crystallizer									10.11	5.4
9428317000200	10/10/94 17:00	2	Crystallizer									9.88	5.5
9428318000200	10/10/94 18:00	2	Crystallizer					1902		1253.6		9.75	5.3
9428319000200	10/10/94 19:00	2	Crystallizer									9.87	5.2
9428320000200	10/10/94 20:00	2	Crystallizer									9.98	5.7
9428321000200	10/10/94 21:00	2	Crystallizer									10.20	5.6
9428322000200	10/10/94 22:00	2	Crystallizer					1076		1602.0		10.51	5.4
9428323000200	10/10/94 23:00	2	Crystallizer									10.33	5.5
9428409000200	10/11/94 9:00	2	Crystallizer									10.84	5.4
9428410000200	10/11/94 10:00	2	Crystallizer									10.45	5.6
9428413000200	10/11/94 13:00	2	Crystallizer									10.19	5.5
9428414000200	10/11/94 14:00	2	Crystallizer					1981	2180	1766.2		10.44	5.6
9428415000200	10/11/94 15:00	2	Crystallizer									10.50	5.5
9428417000200	10/11/94 17:00	2	Crystallizer									9.74	5.5
9428418000200	10/11/94 18:00	2	Crystallizer					1902		957.2		9.39	5.3
9428420000200	10/11/94 20:00	2	Crystallizer									10.66	5.6
9428422000200	10/11/94 22:00	2	Crystallizer					1295		1854.3		10.59	5.3
9428509000200	10/12/94 9:00	2	Crystallizer									10.39	5.6
9428510000200	10/12/94 10:00	2	Crystallizer									9.98	6.9
9428510000200	10/12/94 10:00	2	Crystallizer										6.4
9428511000200	10/12/94 11:00	2	Crystallizer									10.19	5.8
9428512000200	10/12/94 12:00	2	Crystallizer									10.88	5.7
9428514000200	10/12/94 14:00	2	Crystallizer					1837	2361	1706.1		10.36	5.8
9428515000200	10/12/94 15:00	2	Crystallizer									10.20	5.5
9428517000200	10/12/94 17:00	2	Crystallizer									10.06	5.6
9428518000200	10/12/94 18:00	2	Crystallizer					867		1894.4		10.02	5.6
9428520000200	10/12/94 20:00	2	Crystallizer									9.80	5.5
9428522000200	10/12/94 22:00	2	Crystallizer					1190		1646.1		9.88	1.9
9428523000200	10/12/94 23:00	2	Crystallizer									9.84	5.8
9428609000200	10/13/94 9:00	2	Crystallizer									10.98	5.1
9428610000200	10/13/94 10:00	2	Crystallizer	3336								10.13	5.8
9428612000200	10/13/94 12:00	2	Crystallizer										5.2
9428613000200	10/13/94 13:00	2	Crystallizer									10.90	5.5
9428614000200	10/13/94 14:00	2	Crystallizer					3241	2510	1918.4		10.93	5.3
9428617000200	10/13/94 17:00	2	Crystallizer									10.57	5.4
9428619000200	10/13/94 19:00	2	Crystallizer									10.84	5.6
9428620000200	10/13/94 20:00	2	Crystallizer					1352		1814.3		10.82	5.2
9428622000200	10/13/94 22:00	2	Crystallizer									10.54	5.1
9429009000200	10/17/94 9:00	2	Crystallizer									11.06	5.5
9429010000200	10/17/94 10:00	2	Crystallizer									10.76	5.7

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9429011000200	10/17/94 11:00	2	Crystallizer									10.54	5.7
9429012000200	10/17/94 12:00	2	Crystallizer									10.43	5.8
9429014000200	10/17/94 14:00	2	Crystallizer					1410	2446	1978.5		10.90	6.0
9429015000200	10/17/94 15:00	2	Crystallizer									11.19	5.9
9429109000200	10/18/94 9:00	2	Crystallizer									11.43	5.9
9429110000200	10/18/94 10:00	2	Crystallizer									10.27	5.8
9429111000200	10/18/94 11:00	2	Crystallizer									10.76	6.1
9429112000200	10/18/94 12:00	2	Crystallizer									10.25	6.2
9429113000200	10/18/94 13:00	2	Crystallizer										5.9
9429114000200	10/18/94 14:00	2	Crystallizer					817	2436	917.1		10.38	6.1
9429209000200	10/19/94 9:00	2	Crystallizer	34								10.12	5.8
9429210000200	10/19/94 10:00	2	Crystallizer									10.50	5.7
9429212000200	10/19/94 12:00	2	Crystallizer									10.64	5.9
9429214000200	10/19/94 14:00	2	Crystallizer					1103	2308	1734.2		10.80	5.8
9429300000200	10/20/94 0:00	2	Crystallizer					1352		1622.0		11.22	6.3
9429314000200	10/20/94 14:00	2	Crystallizer					817		1674.1		10.95	6.6
9429700000200	10/24/94 0:00	2	Crystallizer									10.27	5.7
9429709000200	10/24/94 9:00	2	Crystallizer									10.21	5.7
9429710000200	10/24/94 10:00	2	Crystallizer									10.72	5.7
9429711000200	10/24/94 11:00	2	Crystallizer									10.24	5.5
9429712000200	10/24/94 12:00	2	Crystallizer									10.40	5.6
9429714000200	10/24/94 14:00	2	Crystallizer					2207	2106	1670.1		10.52	5.7
9429718000200	10/24/94 18:00	2	Crystallizer					1239		1890.4		10.39	5.4
9429720000200	10/24/94 20:00	2	Crystallizer									10.80	5.6
9429722000200	10/24/94 22:00	2	Crystallizer					1239		1802.3		10.70	5.5
9429800000200	10/25/94 0:00	2	Crystallizer									10.76	5.2
9429801000200	10/25/94 1:00	2	Crystallizer									11.02	5.4
9429802000200	10/25/94 2:00	2	Crystallizer					1427		1646.1		11.08	5.0
9429803000200	10/25/94 3:00	2	Crystallizer									10.92	5.4
9429804000200	10/25/94 4:00	2	Crystallizer									10.86	5.2
9429805000200	10/25/94 5:00	2	Crystallizer									10.73	5.3
9429806000200	10/25/94 6:00	2	Crystallizer					1312		1626.0		11.13	5.4
9429807000200	10/25/94 7:00	2	Crystallizer									10.95	5.2
9429809000200	10/25/94 9:00	2	Crystallizer									10.82	5.6
9429810000200	10/25/94 10:00	2	Crystallizer									10.65	5.4
9429811000200	10/25/94 11:00	2	Crystallizer									10.94	5.5
9429814000200	10/25/94 14:00	2	Crystallizer					1557	2234	1806.3		10.40	5.5
9429815000200	10/25/94 15:00	2	Crystallizer									10.20	5.5
9429817000200	10/25/94 17:00	2	Crystallizer									11.11	5.5
9429818000200	10/25/94 18:00	2	Crystallizer					1076		1834.3		10.93	5.6
9429820000200	10/25/94 20:00	2	Crystallizer									10.86	5.5
9429823000200	10/25/94 23:00	2	Crystallizer					1130		1958.4		10.96	5.6
9429901000200	10/26/94 1:00	2	Crystallizer									10.69	5.2
9429902000200	10/26/94 2:00	2	Crystallizer					1033		1654.1		10.68	5.7
9429903000200	10/26/94 3:00	2	Crystallizer									11.15	5.3
9429904000200	10/26/94 4:00	2	Crystallizer									11.15	5.3
9429905000200	10/26/94 5:00	2	Crystallizer									10.65	5.3
9429906000200	10/26/94 6:00	2	Crystallizer					1284		1746.2		10.70	5.2
9429907000200	10/26/94 7:00	2	Crystallizer									10.45	5.2
9429909000200	10/26/94 9:00	2	Crystallizer									10.35	5.5
9429910000200	10/26/94 10:00	2	Crystallizer									10.69	5.7
9429912000200	10/26/94 12:00	2	Crystallizer									10.22	5.6
9429914000200	10/26/94 14:00	2	Crystallizer					1352	2319	1594.0		10.14	5.5
9429916000200	10/26/94 16:00	2	Crystallizer									10.68	5.7
9429918000200	10/26/94 18:00	2	Crystallizer					1184		1842.3		10.82	5.8
9429920000200	10/26/94 20:00	2	Crystallizer									10.72	5.5
9429922000200	10/26/94 22:00	2	Crystallizer					1076		1838.3		10.53	5.6
9430001000200	10/27/94 1:00	2	Crystallizer									10.54	5.4
9430002000200	10/27/94 2:00	2	Crystallizer					1358		1670.1		10.83	5.5
9430004000200	10/27/94 4:00	2	Crystallizer									10.57	5.3
9430006000200	10/27/94 6:00	2	Crystallizer					1587		1630.0		10.53	5.4
9430009000200	10/27/94 9:00	2	Crystallizer									10.84	5.6
9430010000200	10/27/94 10:00	2	Crystallizer									10.60	5.5
9430013000200	10/27/94 13:00	2	Crystallizer									10.28	5.4
9430014000200	10/27/94 14:00	2	Crystallizer			5554		2172	2287	1549.9	408	10.20	5.4
9430015000200	10/27/94 15:00	2	Crystallizer									10.67	
9430018000200	10/27/94 18:00	2	Crystallizer					1587		1674.1		10.26	5.6

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9430020000200	10/27/94 20:00	2	Crystallizer									10.32	5.4
9430022000200	10/27/94 22:00	2	Crystallizer					1130		1782.2		10.48	5.3
9430100000200	10/28/94 0:00	2	Crystallizer									10.22	5.3
9430101000200	10/28/94 1:00	2	Crystallizer									10.68	
9430102000200	10/28/94 2:00	2	Crystallizer					1773		1618.0		10.60	5.1
9430106000200	10/28/94 6:00	2	Crystallizer					1587		1642.1		10.38	5.2
9430109000200	10/28/94 9:00	2	Crystallizer									10.56	5.3
9430110000200	10/28/94 10:00	2	Crystallizer									10.46	
9430112000200	10/28/94 12:00	2	Crystallizer									10.53	5.5
9430114000200	10/28/94 14:00	2	Crystallizer			5064		1902	2234	1758.2	162	10.58	5.5
9430118000200	10/28/94 18:00	2	Crystallizer					1239		1782.2		10.46	5.6
9430122000200	10/28/94 22:00	2	Crystallizer			4654		1439		1626.0	143	10.42	
9430122000200	10/28/94 22:00	2	Crystallizer										5.5
9430401000200	10/31/94 1:00	2	Crystallizer									10.97	5.2
9430402000200	10/31/94 2:00	2	Crystallizer					1773		1762.2		10.47	5.1
9430405000200	10/31/94 5:00	2	Crystallizer									10.43	5.1
9430406000200	10/31/94 6:00	2	Crystallizer					1468		1706.1		10.44	5.1
9430409000200	10/31/94 9:00	2	Crystallizer									10.57	5.3
9430410000200	10/31/94 10:00	2	Crystallizer									10.42	5.4
9430411000200	10/31/94 11:00	2	Crystallizer									10.68	
9430412000200	10/31/94 12:00	2	Crystallizer									10.90	5.4
9430414000200	10/31/94 14:00	2	Crystallizer					1533	2265	1574.0		10.40	5.4
9430418000200	10/31/94 18:00	2	Crystallizer					1410		1686.1		10.76	5.7
9430422000200	10/31/94 22:00	2	Crystallizer					1295		1894.4		10.75	5.7
9430501000200	11/1/94 1:00	2	Crystallizer									10.63	5.5
9430502000200	11/1/94 2:00	2	Crystallizer					1527		1666.1		10.67	5.2
9430505000200	11/1/94 5:00	2	Crystallizer									10.76	5.4
9430506000200	11/1/94 6:00	2	Crystallizer					1410		1770.2		10.71	5.2
9430509000200	11/1/94 9:00	2	Crystallizer									10.36	5.7
9430511000200	11/1/94 11:00	2	Crystallizer									10.51	5.6
9430514000200	11/1/94 14:00	2	Crystallizer			5564		1786	2457	1814.3		10.44	5.5
9430515000200	11/1/94 15:00	2	Crystallizer									10.64	
9430518000200	11/1/94 18:00	2	Crystallizer			4874		1468		1890.4		10.35	5.4
9430519000200	11/1/94 19:00	2	Crystallizer									10.30	
9430522000200	11/1/94 22:00	2	Crystallizer			4494		1648		1846.3		10.00	5.4
9430601000200	11/2/94 1:00	2	Crystallizer									10.16	5.2
9430602000200	11/2/94 2:00	2	Crystallizer			4934		1648		1730.2	148	10.95	5.4
9430604000200	11/2/94 4:00	2	Crystallizer									11.06	
9430605000200	11/2/94 5:00	2	Crystallizer									10.62	5.3
9430606000200	11/2/94 6:00	2	Crystallizer			5084		1498		1698.1	204	10.81	5.3
9430609000200	11/2/94 9:00	2	Crystallizer									10.98	5.6
9430612000200	11/2/94 12:00	2	Crystallizer									10.50	5.7
9430614000200	11/2/94 14:00	2	Crystallizer			6555		1587	2404	1786.2		10.83	5.6
9430615000200	11/2/94 15:00	2	Crystallizer									10.57	
9430618000200	11/2/94 18:00	2	Crystallizer			5204		1239		1862.3		10.66	5.6
9430622000200	11/2/94 22:00	2	Crystallizer			4494		1184		1930.4		10.21	5.4
9430701000200	11/3/94 1:00	2	Crystallizer									10.30	5.4
9430703000200	11/3/94 3:00	2	Crystallizer			4834		1594		1738.2	119	10.47	5.2
9430705000200	11/3/94 5:00	2	Crystallizer									10.41	5.2
9430706000200	11/3/94 6:00	2	Crystallizer			4854		1655		1718.1	136	10.69	
9430710000200	11/3/94 10:00	2	Crystallizer									10.25	5.5
9430711000200	11/3/94 11:00	2	Crystallizer									10.29	
9430714000200	11/3/94 14:00	2	Crystallizer			5584		1698	2361	1782.2	274	10.05	5.5
9430715000200	11/3/94 15:00	2	Crystallizer									10.30	
9430718000200	11/3/94 18:00	2	Crystallizer			5084		1648		1826.3	126	10.34	5.5
9430722000200	11/3/94 22:00	2	Crystallizer			4854		1295		1778.2	99	10.42	5.5
9430801000200	11/4/94 1:00	2	Crystallizer									10.57	5.2
9430802000200	11/4/94 2:00	2	Crystallizer			4854		1474		1726.2	131	10.31	5.2
9430805000200	11/4/94 5:00	2	Crystallizer									9.97	5.3
9430806000200	11/4/94 6:00	2	Crystallizer			4914		1850		1618.0	211	10.13	5.2
9430809000200	11/4/94 9:00	2	Crystallizer									10.42	5.4
9430810000200	11/4/94 10:00	2	Crystallizer									10.51	5.5
9430814000200	11/4/94 14:00	2	Crystallizer			5925		1648	2382	1802.3	345	10.42	5.3
9431103000200	11/7/94 3:00	2	Crystallizer									10.80	4.9
9431104000200	11/7/94 4:00	2	Crystallizer			5675		1837		1910.4	218	11.01	5.2
9431105000200	11/7/94 5:00	2	Crystallizer									10.96	
9431106000200	11/7/94 6:00	2	Crystallizer			5214		1895		1982.5	63	10.64	5.0

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9431109000200	11/7/94 9:00	2	Crystallizer									10.18	5.5
9431110000200	11/7/94 10:00	2	Crystallizer									10.20	
9431111000200	11/7/94 11:00	2	Crystallizer									10.78	5.6
9431112000200	11/7/94 12:00	2	Crystallizer									10.95	
9431114000200	11/7/94 14:00	2	Crystallizer			5334		1410		1858.3	167	10.76	5.3
9431118000200	11/7/94 18:00	2	Crystallizer			5244		1184		1942.4	94	10.04	5.4
9431120000200	11/7/94 20:00	2	Crystallizer									10.37	
9431122000200	11/7/94 22:00	2	Crystallizer			4924		1256		1850.3	72	10.65	5.4
9431201000200	11/8/94 1:00	2	Crystallizer									10.70	5.3
9431202000200	11/8/94 2:00	2	Crystallizer			4994		1667		1766.2	140	10.60	5.0
9431205000200	11/8/94 5:00	2	Crystallizer									10.68	
9431205000200	11/8/94 5:00	2	Crystallizer									10.68	5.3
9431206000200	11/8/94 6:00	2	Crystallizer			5114		1786		1754.2	177	10.75	5.3
9431209000200	11/8/94 9:00	2	Crystallizer									10.92	5.7
9431211000200	11/8/94 11:00	2	Crystallizer									10.90	5.3
9431218000200	11/8/94 18:00	2	Crystallizer			5214		1217		1890.4	118	10.80	5.7
9431219000200	11/8/94 19:00	2	Crystallizer									11.04	
9431220000200	11/8/94 20:00	2	Crystallizer									10.81	
9431222000200	11/8/94 22:00	2	Crystallizer			4984		1184		1874.3	72	10.80	5.9
9431301000200	11/9/94 1:00	2	Crystallizer									10.69	5.5
9431302000200	11/9/94 2:00	2	Crystallizer			5144		1600		1762.2	179	10.64	5.2
9431304000200	11/9/94 4:00	2	Crystallizer									10.78	5.5
9431306000200	11/9/94 6:00	2	Crystallizer			5254		1575		1842.3	157	10.74	5.5
9431309000200	11/9/94 9:00	2	Crystallizer				7200					10.88	
9431309000200	11/9/94 9:00	2	Crystallizer										5.5
9431314000200	11/9/94 14:00	2	Crystallizer			6685		1515	2351	1822.3	517	10.65	
9431314000200	11/9/94 14:00	2	Crystallizer										5.8
9431315000200	11/9/94 15:00	2	Crystallizer										
9431315000200	11/9/94 15:00	2	Crystallizer									10.74	
9431317000200	11/9/94 17:00	2	Crystallizer									10.49	
9431318000200	11/9/94 18:00	2	Crystallizer			5665		406		1874.3	238	10.28	5.8
9431320000200	11/9/94 20:00	2	Crystallizer									10.75	
9431322000200	11/9/94 22:00	2	Crystallizer			4794		1108		1814.3	63	10.75	5.5
9431401000200	11/10/94 1:00	2	Crystallizer									10.52	5.1
9431402000200	11/10/94 2:00	2	Crystallizer			4984		996		1782.2	128	10.55	5.0
9431404000200	11/10/94 4:00	2	Crystallizer									10.76	5.3
9431406000200	11/10/94 6:00	2	Crystallizer			5214		1648		1814.3	165	10.60	5.3
9431409000200	11/10/94 9:00	2	Crystallizer										5.4
9431410000200	11/10/94 10:00	2	Crystallizer									11.04	5.4
9431414000200	11/10/94 14:00	2	Crystallizer			5544		1352	2510	1754.2	281	11.02	5.5
9431418000200	11/10/94 18:00	2	Crystallizer			4954		919		1842.3	85	10.15	5.5
9431419000200	11/10/94 19:00	2	Crystallizer									10.50	
9431422000200	11/10/94 22:00	2	Crystallizer			5004		1140		660.8	814	10.24	5.4
9431423000200	11/10/94 23:00	2	Crystallizer									10.85	
9431501000200	11/11/94 1:00	2	Crystallizer									10.96	5.4
9431502000200	11/11/94 2:00	2	Crystallizer			4984		1527		1826.3	102	10.29	5.1
9431504000200	11/11/94 4:00	2	Crystallizer									10.55	5.3
9431506000200	11/11/94 6:00	2	Crystallizer			5134		1655		1838.3	131	10.35	5.2
9431509000200	11/11/94 9:00	2	Crystallizer									10.65	
9431510000200	11/11/94 10:00	2	Crystallizer									10.81	5.4
9431512000200	11/11/94 12:00	2	Crystallizer									10.66	625.0
9431514000200	11/11/94 14:00	2	Crystallizer			5745		1856	2521	1938.4	218	11.11	5.3
9431516000200	11/11/94 16:00	2	Crystallizer									10.80	
9431518000200	11/11/94 18:00	2	Crystallizer									10.40	
9431519000200	11/11/94 19:00	2	Crystallizer			4894		1201		1878.3	48	10.20	5.3
9432209000200	11/18/94 9:00	2	Crystallizer										5.3
9432212000200	11/18/94 12:00	2	Crystallizer									11.39	5.4
9432214000200	11/18/94 14:00	2	Crystallizer			57346		1869	2616	1838.3	12803	10.56	5.4
9432509000200	11/21/94 9:00	2	Crystallizer									10.38	5.3
9432511000200	11/21/94 11:00	2	Crystallizer									10.64	
9432514000200	11/21/94 14:00	2	Crystallizer			5594		1648	2670	2002.5	143	10.63	5.3
9432611000200	11/22/94 11:00	2	Crystallizer									10.53	5.0
9432613000200	11/22/94 13:00	2	Crystallizer			6205		1869	2457	1946.4	325	10.81	5.1
9432614000200	11/22/94 14:00	2	Crystallizer									10.90	
9432709000200	11/23/94 9:00	2	Crystallizer									10.90	
9432712000200	11/23/94 12:00	2	Crystallizer									10.93	5.1
9432714000200	11/23/94 14:00	2	Crystallizer			5805		3038	2595	2250.8	43	10.65	5.1

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9433209000200	11/28/94 9:00	2	Crystallizer									10.19	5.0
9433213000200	11/28/94 13:00	2	Crystallizer									10.63	
9433213300200	11/28/94 13:30	2	Crystallizer									10.53	4.5
9433214000200	11/28/94 14:00	2	Crystallizer			5825		2772	2531	2062.6	162	10.61	4.6
9433310000200	11/29/94 10:00	2	Crystallizer									10.35	5.1
9433312000200	11/29/94 12:00	2	Crystallizer									10.70	5.4
9433314000200	11/29/94 14:00	2	Crystallizer			5464		2035	2499	2190.7		10.67	4.8
9433409000200	11/30/94 9:00	2	Crystallizer									10.24	
9433410000200	11/30/94 10:00	2	Crystallizer									10.17	4.7
9433414000200	11/30/94 14:00	2	Crystallizer			5604		1710	2670	2054.6	113	10.42	4.7
9433415000200	11/30/94 15:00	2	Crystallizer									10.90	
9433416000200	11/30/94 16:00	2	Crystallizer									10.60	
9433417000200	11/30/94 17:00	2	Crystallizer									10.96	4.9
9433418000200	11/30/94 18:00	2	Crystallizer			5855		1968	2521	2082.6	157	10.99	4.7
9433511000200	12/1/94 11:00	2	Crystallizer									10.2	4.4
9433514000200	12/1/94 14:00	2	Crystallizer			5344		1811	2531	1850	174	10.3	4.5
9433609300200	12/2/94 9:30	2	Crystallizer									10.2	
9433610000200	12/2/94 10:00	2	Crystallizer									10.1	4.4
9433909300200	12/5/94 9:30	2	Crystallizer									10.1	
9433911000200	12/5/94 11:00	2	Crystallizer									10.0	4.5
9433914000200	12/5/94 14:00	2	Crystallizer			5685		1837	2616	2099	106	10.1	4.6
9434010000200	12/6/94 10:00	2	Crystallizer									10.2	4.4
9434014000200	12/6/94 14:00	2	Crystallizer			6685		2668	2819	1954	437	10.2	4.8
9434211000200	12/8/94 11:00	2	Crystallizer									10.0	4.6
9434214000200	12/8/94 14:00	2	Crystallizer			6035		1184	2691	1987	259	10.1	
9434310000200	12/9/94 10:00	2	Crystallizer									10.2	4.6
9434314000200	12/9/94 14:00	2	Crystallizer			6725		2035	2787	2051	388	10.2	4.6
9434620000200	12/12/94 20:00	2	Crystallizer			6115		2089	3063	1242	731	10.4	5.6
9434712300200	12/13/94 12:30	2	Crystallizer									10.8	5.4
9434714000200	12/13/94 14:00	2	Crystallizer			6105		2082	3042	2067	228	10.9	5.3
9434720000200	12/13/94 20:00	2	Crystallizer			6525		2035	2819	1878	444	10.4	5.1
9434810000200	12/14/94 10:00	2	Crystallizer									10.2	5.0
9434813000200	12/14/94 13:00	2	Crystallizer			6285		2116	2861	2039	289	10.4	4.7
9434818000200	12/14/94 18:00	2	Crystallizer			5895		1352	2882	2039	194	10.1	5.3
9434822000200	12/14/94 22:00	2	Crystallizer			6255		2103	2840	1870	383	9.9	4.7
9434909000200	12/15/94 9:00	2	Crystallizer									10.4	4.9
9434910000200	12/15/94 10:00	2	Crystallizer									10.4	5.1
9434918000200	12/15/94 18:00	2	Crystallizer			5885		1618	2819	2003	213	10.2	5.1
9434922000200	12/15/94 22:00	2	Crystallizer			6155		2278	2765	1582	534	9.7	5.0
9435010000200	12/16/94 10:00	2	Crystallizer									10.2	4.9
9435012000200	12/16/94 12:00	2	Crystallizer			5404		1295	2744	1963	121	10.3	5.2
9435309000200	12/19/94 9:00	2	Crystallizer									10.1	
9435310000200	12/19/94 10:00	2	Crystallizer									10.3	5.2
9435312000200	12/19/94 12:00	2	Crystallizer									10.5	5.3
9435314000200	12/19/94 14:00	2	Crystallizer			5494		1698	2680	2059	84	10.7	5.4
9435410000200	12/20/94 10:00	2	Crystallizer									10.5	5.3
9435412000200	12/20/94 12:00	2	Crystallizer									10.9	
9435414000200	12/20/94 14:00	2	Crystallizer			5604		1655	2648	1930	189	10.3	5.4
9435509300200	12/21/94 9:30	2	Crystallizer									10.9	
9435510000200	12/21/94 10:00	2	Crystallizer									11.1	5.5
9435512000200	12/21/94 12:00	2	Crystallizer									11.0	
9435514000200	12/21/94 14:00	2	Crystallizer			5795		1498	2595	2023	179	10.9	5.6
9435609000200	12/22/94 9:00	2	Crystallizer									10.5	
9435610000200	12/22/94 10:00	2	Crystallizer									10.3	5.5
9435614000200	12/22/94 14:00	2	Crystallizer			5785		1587	2563	2015	182	10.3	5.3
9436109000200	12/27/94 9:00	2	Crystallizer									10.1	
9436111000200	12/27/94 11:00	2	Crystallizer									10.2	5.2
9436114000200	12/27/94 14:00	2	Crystallizer			5965		1587	2712	2199	114	10.8	5.5
9436210000200	12/28/94 10:00	2	Crystallizer									10.4	5.3
9436214000200	12/28/94 14:00	2	Crystallizer			6455		1968	2648	1846	446	10.6	5.5
9436310000200	12/29/94 10:00	2	Crystallizer									10.7	
9436314000200	12/29/94 14:00	2	Crystallizer			5564		1364	2489	1971	155	10.2	5.3
9436409000200	12/30/94 9:00	2	Crystallizer									10.5	
9436410000200	12/30/94 10:00	2	Crystallizer									10.1	5.3
9500610000200	1/6/95 10:00	2	Crystallizer									10.9	5.9
9500614000200	1/6/95 14:00	2	Crystallizer			5835	0	1468	2521	2075	157	11.0	5.7
9500910000200	1/9/95 10:00	2	Crystallizer									11.5	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9500911000200	1/9/95 11:00	2	Crystallizer									11.0	5.2
9500914000200	1/9/95 14:00	2	Crystallizer			5544		1587	2648	2183	21	11.3	5.7
9501010000200	1/10/95 10:00	2	Crystallizer									11.1	5.7
9501014000200	1/10/95 14:00	2	Crystallizer			5454		1630	2829	1754	259	10.6	5.3
9501109000200	1/11/95 9:00	2	Crystallizer									11.3	
9501110000200	1/11/95 10:00	2	Crystallizer									11.5	5.4
9501111000200	1/11/95 11:00	2	Crystallizer									10.9	
9501114000200	1/11/95 14:00	2	Crystallizer			6105		2103	2861	2059	233	10.5	5.5
9501209000200	1/12/95 9:00	2	Crystallizer									10.8	
9501210000200	1/12/95 10:00	2	Crystallizer									10.2	5.1
9501309000200	1/13/95 9:00	2	Crystallizer									10.3	
9501310000200	1/13/95 10:00	2	Crystallizer	23								10.2	4.9
9501314000200	1/13/95 14:00	2	Crystallizer			6906		1618	2893	2183	352	9.9	4.1
9501609000200	1/16/95 9:00	2	Crystallizer									10.8	
9501610000200	1/16/95 10:00	2	Crystallizer									10.8	4.7
9501614000200	1/16/95 14:00	2	Crystallizer			5635		1527	2670	2111	87	10.4	4.1
9501709000200	1/17/95 9:00	2	Crystallizer									10.8	
9501710000200	1/17/95 10:00	2	Crystallizer									10.5	4.5
9501714000200	1/17/95 14:00	2	Crystallizer			5845		2035	2606	2067	165	11.0	4.6
9501809000200	1/18/95 9:00	2	Crystallizer									10.7	
9501810000200	1/18/95 10:00	2	Crystallizer									10.8	4.5
9501814000200	1/18/95 14:00	2	Crystallizer			5404		1710	2585	1963	121	10.6	4.7
9501909000200	1/19/95 9:00	2	Crystallizer									11.3	
9501910000200	1/19/95 10:00	2	Crystallizer									10.7	4.7
9501911000200	1/19/95 11:00	2	Crystallizer									10.7	4.7
9501912000200	1/19/95 12:00	2	Crystallizer				7200					10.8	4.7
9501914000200	1/19/95 14:00	2	Crystallizer			5875		1587	2521	2071	170	10.7	4.9
9502007000200	1/20/95 7:00	2	Crystallizer									11.0	
9502008000200	1/20/95 8:00	2	Crystallizer									10.5	4.8
9502009000200	1/20/95 9:00	2	Crystallizer									10.3	4.7
9502010000200	1/20/95 10:00	2	Crystallizer									10.3	4.7
9502011000200	1/20/95 11:00	2	Crystallizer									10.7	4.8
9502013000200	1/20/95 13:00	2	Crystallizer			5464		1786	2627	2083	63	11.1	4.9
9502310000200	1/23/95 10:00	2	Crystallizer									10.6	
9502311000200	1/23/95 11:00	2	Crystallizer									10.5	4.7
9502314000200	1/23/95 14:00	2	Crystallizer			6555		2144	2595	2083	327	10.9	5.0
9502409000200	1/24/95 9:00	2	Crystallizer									10.7	
9502409000200	1/24/95 9:00	2	Crystallizer									10.7	
9502609000200	1/26/95 9:00	2	Crystallizer									11.1	
9502609000200	1/26/95 9:00	2	Crystallizer									11.1	
9502610000200	1/26/95 10:00	2	Crystallizer										5.1
9502610000200	1/26/95 10:00	2	Crystallizer										5.1
9502614000200	1/26/95 14:00	2	Crystallizer			5945		1710	2574	1974	245	10.3	5.3
9502614000200	1/26/95 14:00	2	Crystallizer			5945		1710	2574	1974	245	10.3	5.3
9503309000200	2/2/95 9:00	2	Crystallizer									10.1	
9503310000200	2/2/95 10:00	2	Crystallizer										5.5
9503314000200	2/2/95 14:00	2	Crystallizer			6635		2476	2691	2103	335	10.6	5.8
9503811000200	2/7/95 11:00	2	Crystallizer										5.6
9503814000200	2/7/95 14:00	2	Crystallizer			6185		1968	2797	451	1227	10.5	5.1
9503911000200	2/8/95 11:00	2	Crystallizer									10.7	5.2
9503914000200	2/8/95 14:00	2	Crystallizer			6285		1863	2733	2251	160	10.7	5.6
9504010000200	2/9/95 10:00	2	Crystallizer										5.5
9504014000200	2/9/95 14:00	2	Crystallizer			6535		1837	3127	2303	189	10.4	6.1
9504412000200	2/13/95 12:00	2	Crystallizer									10.4	
9504510000200	2/14/95 10:00	2	Crystallizer									10.5	5.4
9504514000200	2/14/95 14:00	2	Crystallizer			6475		1837	3606	2319	165	10.5	5.5
9504710000200	2/16/95 10:00	2	Crystallizer									10.8	5.1
9504714000200	2/16/95 14:00	2	Crystallizer			6695		1792	3552	2443	143	10.7	4.7
9505111000200	2/20/95 11:00	2	Crystallizer									10.3	5.5
9505114000200	2/20/95 14:00	2	Crystallizer			6295		1968	3021	2183	203	10.7	6.2
9505211000200	2/21/95 11:00	2	Crystallizer									10.4	5.9
9505214000200	2/21/95 14:00	2	Crystallizer			6576		2021	3308	2347	172	10.4	6.0
9505310000200	2/22/95 10:00	2	Crystallizer									10.6	5.8
9505314000200	2/22/95 14:00	2	Crystallizer			7226		2008	3595	2427	281	10.6	6.1
9505509300200	2/24/95 9:30	2	Crystallizer									11.0	
9505813000200	2/27/95 13:00	2	Crystallizer									10.5	
9505909000200	2/28/95 9:00	2	Crystallizer									10.5	6.4

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9505910000200	2/28/95 10:00	2	Crystallizer									10.8	5.7
9505914000200	2/28/95 14:00	2	Crystallizer			5925		1587	2223	1954	252	10.7	6.3
9506210000200	3/3/95 10:00	2	Crystallizer									10.6	5.9
9506213000200	3/3/95 13:00	2	Crystallizer			5765		1587	2648	1974	201	10.5	6.0
9506610450200	3/7/95 10:45	2	Crystallizer									10.3	5.8
9506710000200	3/8/95 10:00	2	Crystallizer									10.1	5.5
9506713000200	3/8/95 13:00	2	Crystallizer			6765		1618	2503	2275	262	10.6	5.6
9506810000200	3/9/95 10:00	2	Crystallizer									10.4	5.2
9506910000200	3/10/95 10:00	2	Crystallizer									10.2	5.7
9415212000300	6/1/94 12:00	3	HCOF#1		13200								3.2
9415311000300	6/2/94 11:00	3	HCOF#1		13404							10.5	
9415810300300	6/7/94 10:30	3	HCOF#1	2429									
9415912000300	6/8/94 12:00	3	HCOF#1		14317								3.3
9416612000300	6/15/94 12:00	3	HCOF#1		1.26								3.1
9416714000300	6/16/94 14:00	3	HCOF#1		1.21								3.1
9416813000300	6/17/94 13:00	3	HCOF#1		1.38								3.3
9417814000300	6/27/94 14:00	3	HCOF#1		1.42								
9417914000300	6/28/94 14:00	3	HCOF#1		1.61								3.4
9417920000300	6/28/94 20:00	3	HCOF#1		1.36								3.2
9418018000300	6/29/94 18:00	3	HCOF#1		1.35								2.6
9418120000300	6/30/94 20:00	3	HCOF#1		1.35								3.2
9418614000300	7/5/94 14:00	3	HCOF#1		1.1								3.0
9418618000300	7/5/94 18:00	3	HCOF#1		1.05								3.0
9418622000300	7/5/94 22:00	3	HCOF#1		0.96								3.0
9418713000300	7/6/94 13:00	3	HCOF#1		1								3.1
9418720000300	7/6/94 20:00	3	HCOF#1		1.55								2.0
9418814000300	7/7/94 14:00	3	HCOF#1		0.9								3.0
9418914000300	7/8/94 14:00	3	HCOF#1		1.09								3.1
9419217000300	7/11/94 17:00	3	HCOF#1		1.67								3.0
9419222000300	7/11/94 22:00	3	HCOF#1		1.16								3.0
9419313000300	7/12/94 13:00	3	HCOF#1		1.08								1.7
9419317300300	7/12/94 17:30	3	HCOF#1		1.27								2.9
9419414000300	7/13/94 14:00	3	HCOF#1		1.13								2.7
9419418000300	7/13/94 18:00	3	HCOF#1		1.24								3.8
9419513000300	7/14/94 13:00	3	HCOF#1		1.12								2.9
9419518000300	7/14/94 18:00	3	HCOF#1		1.22								2.6
9419522000300	7/14/94 22:00	3	HCOF#1		1.25								2.8
9419914000300	7/18/94 14:00	3	HCOF#1		1.05								2.9
9419918000300	7/18/94 18:00	3	HCOF#1		1.01								3.0
9419922000300	7/18/94 22:00	3	HCOF#1		1.55								3.0
9420014000300	7/19/94 14:00	3	HCOF#1		1.11								2.9
9420018000300	7/19/94 18:00	3	HCOF#1		1.04								3.1
9420022000300	7/19/94 22:00	3	HCOF#1		1.1								3.0
9420114000300	7/20/94 14:00	3	HCOF#1		1.11								2.9
9420118000300	7/20/94 18:00	3	HCOF#1		1.15								3.1
9420122000300	7/20/94 22:00	3	HCOF#1		1.1								3.1
9420214000300	7/21/94 14:00	3	HCOF#1		1.13								2.5
9420221000300	7/21/94 21:00	3	HCOF#1		1.09								3.1
9420614000300	7/25/94 14:00	3	HCOF#1		1.17								2.8
9420618000300	7/25/94 18:00	3	HCOF#1		1.17								3.0
9420622000300	7/25/94 22:00	3	HCOF#1		1.14								3.0
9420714000300	7/26/94 14:00	3	HCOF#1		1.16								2.8
9420718000300	7/26/94 18:00	3	HCOF#1		0.15								2.0
9420722000300	7/26/94 22:00	3	HCOF#1		1.1								3.1
9420814000300	7/27/94 14:00	3	HCOF#1		1.13								2.7
9420819000300	7/27/94 19:00	3	HCOF#1		1.11								2.9
9420913000300	7/28/94 13:00	3	HCOF#1		1.1								2.9
9420921000300	7/28/94 21:00	3	HCOF#1		1.15								3.3
9421315000300	8/1/94 15:00	3	HCOF#1		1.2								2.9
9421322000300	8/1/94 22:00	3	HCOF#1		1.16								3.3
9421514000300	8/3/94 14:00	3	HCOF#1		1.25								2.9
9421614000300	8/4/94 14:00	3	HCOF#1		1.3								2.9
9421618000300	8/4/94 18:00	3	HCOF#1		1.27								3.1
9422014000300	8/8/94 14:00	3	HCOF#1		1.04								2.0
9422022000300	8/8/94 22:00	3	HCOF#1		1.06								2.9
9422114000300	8/9/94 14:00	3	HCOF#1		1.09								2.6
9422118000300	8/9/94 18:00	3	HCOF#1		1.08								2.9

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9422122000300	8/9/94 22:00	3	HCOF#1		1.09								2.9
9422214000300	8/10/94 14:00	3	HCOF#1		1.1								2.6
9422222000300	8/10/94 22:00	3	HCOF#1		1.17								2.9
9422314000300	8/11/94 14:00	3	HCOF#1		1.08								2.2
9422318000300	8/11/94 18:00	3	HCOF#1		1.09								2.7
9422322000300	8/11/94 22:00	3	HCOF#1		1.09								2.8
9423014000300	8/18/94 14:00	3	HCOF#1		1.22							0.00	3.1
9423114000300	8/19/94 14:00	3	HCOF#1		1.15							0.00	2.6
9424113300300	8/29/94 13:30	3	HCOF#1		1.37							0.00	3.1
9424214000300	8/30/94 14:00	3	HCOF#1		1.26							0.00	3.1
9424314000300	8/31/94 14:00	3	HCOF#1		1.26							0.00	3.0
9424414000300	9/1/94 14:00	3	HCOF#1		1.24							0.00	2.4
9424914000300	9/6/94 14:00	3	HCOF#1		1.12							0.00	2.8
9424918000300	9/6/94 18:00	3	HCOF#1		1.06							0.00	2.8
9425714000300	9/14/94 14:00	3	HCOF#1		1.13							0.00	2.9
9426214000300	9/19/94 14:00	3	HCOF#1		1.12							0.00	2.8
9426218000300	9/19/94 18:00	3	HCOF#1		1.29							0.00	3.0
9426222000300	9/19/94 22:00	3	HCOF#1		1.22							0.00	3.2
9426314000300	9/20/94 14:00	3	HCOF#1		1.27							0.00	2.8
9426318000300	9/20/94 18:00	3	HCOF#1		1.05							0.00	3.1
9426414000300	9/21/94 14:00	3	HCOF#1		1.45							16.28	3.0
9426515000300	9/22/94 15:00	3	HCOF#1		1.21							0.00	2.6
9426518000300	9/22/94 18:00	3	HCOF#1		1.16							0.00	2.8
9426522000300	9/22/94 22:00	3	HCOF#1		1.06							0.00	2.8
9427118000300	9/28/94 18:00	3	HCOF#1		1.22							0.00	3.0
9427122000300	9/28/94 22:00	3	HCOF#1		1.09							0.00	2.9
9427214000300	9/29/94 14:00	3	HCOF#1		1.21							0.00	3.0
9427614000300	10/3/94 14:00	3	HCOF#1		1.25							0.00	2.9
9427618000300	10/3/94 18:00	3	HCOF#1		1.08							0.00	3.0
9427622450300	10/3/94 22:45	3	HCOF#1		1.03							0.00	3.1
9427714000300	10/4/94 14:00	3	HCOF#1		1.38							0.00	3.0
9427718000300	10/4/94 18:00	3	HCOF#1		1.37							0.00	3.2
9427721300300	10/4/94 21:30	3	HCOF#1		1.28							0.00	3.3
9427814000300	10/5/94 14:00	3	HCOF#1		1.36							0.00	3.3
9427914000300	10/6/94 14:00	3	HCOF#1		1.39							0.00	3.2
9428014000300	10/7/94 14:00	3	HCOF#1		1.21							0.00	3.2
9428314000300	10/10/94 14:00	3	HCOF#1		1.35							0.00	2.9
9428318000300	10/10/94 18:00	3	HCOF#1		1.22							0.00	3.4
9428322000300	10/10/94 22:00	3	HCOF#1		1.36							0.00	3.3
9428414000300	10/11/94 14:00	3	HCOF#1		1.47							0.00	3.2
9428418000300	10/11/94 18:00	3	HCOF#1		1.03							0.00	3.4
9428422000300	10/11/94 22:00	3	HCOF#1		1.32							0.00	3.2
9428514000300	10/12/94 14:00	3	HCOF#1		1.14							0.00	3.0
9428518000300	10/12/94 18:00	3	HCOF#1		1.18							0.00	3.0
9428522000300	10/12/94 22:00	3	HCOF#1		0.96							0.00	3.0
9428614000300	10/13/94 14:00	3	HCOF#1		1.25							17.11	2.2
9428620000300	10/13/94 20:00	3	HCOF#1		1.20							0.00	3.1
9429014000300	10/17/94 14:00	3	HCOF#1		1.25							0.00	2.8
9429114000300	10/18/94 14:00	3	HCOF#1		1.39							0.00	3.1
9429214000300	10/19/94 14:00	3	HCOF#1		1.32							0.00	3.2
9429300000300	10/20/94 0:00	3	HCOF#1	2318								0.00	3.1
9429314000300	10/20/94 14:00	3	HCOF#1	2296								0.00	3.1
9429714000300	10/24/94 14:00	3	HCOF#1		1.21							0.00	2.8
9429718000300	10/24/94 18:00	3	HCOF#1		1.21							0.00	3.0
9429722000300	10/24/94 22:00	3	HCOF#1		1.20							0.00	3.1
9429802000300	10/25/94 2:00	3	HCOF#1		1.18							0.00	2.9
9429806000300	10/25/94 6:00	3	HCOF#1		1.10							0.00	2.9
9429814000300	10/25/94 14:00	3	HCOF#1		1.35							11.11	2.9
9429818000300	10/25/94 18:00	3	HCOF#1		1.19							0.00	3.1
9429823000300	10/25/94 23:00	3	HCOF#1		1.17							0.00	3.2
9429902000300	10/26/94 2:00	3	HCOF#1		1.15							0.00	2.8
9429906000300	10/26/94 6:00	3	HCOF#1		1.14							0.00	2.7
9429914000300	10/26/94 14:00	3	HCOF#1		1.20							17.74	2.9
9429918000300	10/26/94 18:00	3	HCOF#1		1.16							0.00	3.0
9429922000300	10/26/94 22:00	3	HCOF#1		1.21							0.00	3.2
9430002000300	10/27/94 2:00	3	HCOF#1		1.22							0.00	
9430002000300	10/27/94 2:00	3	HCOF#1			10							2.9

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9430006000300	10/27/94 6:00	3	HCOF#1		1.18							0.00	2.7
9430014000300	10/27/94 14:00	3	HCOF#1		1.16							0.00	2.7
9430018000300	10/27/94 18:00	3	HCOF#1		1.20							0.00	3.0
9430022000300	10/27/94 22:00	3	HCOF#1		1.16							0.00	2.9
9430102000300	10/28/94 2:00	3	HCOF#1		1.14							0.00	2.7
9430106000300	10/28/94 6:00	3	HCOF#1		1.14							0.00	2.8
9430114000300	10/28/94 14:00	3	HCOF#1		1.20							0.00	2.6
9430118000300	10/28/94 18:00	3	HCOF#1		1.13							0.00	3.0
9430122000300	10/28/94 22:00	3	HCOF#1		1.20							0.00	3.1
9430402000300	10/31/94 2:00	3	HCOF#1		1.18							0.00	2.8
9430406000300	10/31/94 6:00	3	HCOF#1		1.19							0.00	2.9
9430414000300	10/31/94 14:00	3	HCOF#1		1.17							0.00	2.9
9430418000300	10/31/94 18:00	3	HCOF#1		1.20							0.00	3.0
9430422000300	10/31/94 22:00	3	HCOF#1		1.19							0.00	3.1
9430502000300	11/1/94 2:00	3	HCOF#1		1.17							0.00	2.8
9430506000300	11/1/94 6:00	3	HCOF#1		1.16							0.00	2.8
9430514000300	11/1/94 14:00	3	HCOF#1		1.18							0.00	2.9
9430518000300	11/1/94 18:00	3	HCOF#1		1.23							0.00	3.1
9430522000300	11/1/94 22:00	3	HCOF#1		1.17							0.00	3.2
9430602000300	11/2/94 2:00	3	HCOF#1		1.17							0.00	2.8
9430606000300	11/2/94 6:00	3	HCOF#1		1.17							0.00	2.9
9430614000300	11/2/94 14:00	3	HCOF#1		1.20							0.00	2.9
9430618000300	11/2/94 18:00	3	HCOF#1		1.18							0.00	3.1
9430622000300	11/2/94 22:00	3	HCOF#1		1.18							0.00	2.9
9430703000300	11/3/94 3:00	3	HCOF#1		1.14							0.00	2.8
9430706000300	11/3/94 6:00	3	HCOF#1		0.97							0.00	2.8
9430714000300	11/3/94 14:00	3	HCOF#1		1.16							0.00	3.0
9430718000300	11/3/94 18:00	3	HCOF#1		1.19							0.00	3.2
9430722000300	11/3/94 22:00	3	HCOF#1		1.20							0.00	3.1
9430802000300	11/4/94 2:00	3	HCOF#1		1.14							0.00	2.8
9430806000300	11/4/94 6:00	3	HCOF#1		1.15							0.00	2.8
9430814000300	11/4/94 14:00	3	HCOF#1		1.22							0.00	2.9
9431104000300	11/7/94 4:00	3	HCOF#1		1.57							0.00	2.8
9431106000300	11/7/94 6:00	3	HCOF#1		1.20							0.00	2.9
9431114000300	11/7/94 14:00	3	HCOF#1		1.23							0.00	2.9
9431118000300	11/7/94 18:00	3	HCOF#1		1.20							0.00	3.0
9431122000300	11/7/94 22:00	3	HCOF#1		1.18							0.00	3.1
9431202000300	11/8/94 2:00	3	HCOF#1		1.18							0.00	2.8
9431206000300	11/8/94 6:00	3	HCOF#1		1.18							0.00	2.8
9431218000300	11/8/94 18:00	3	HCOF#1		1.26							0.00	3.0
9431222000300	11/8/94 22:00	3	HCOF#1		1.16							0.00	3.0
9431302000300	11/9/94 2:00	3	HCOF#1		1.22							0.00	2.9
9431306000300	11/9/94 6:00	3	HCOF#1		1.23							0.00	2.9
9431314000300	11/9/94 14:00	3	HCOF#1		1.26							0.00	
9431314000300	11/9/94 14:00	3	HCOF#1		1.26							0.00	2.8
9431318000300	11/9/94 18:00	3	HCOF#1		1.22							0.00	3.0
9431322000300	11/9/94 22:00	3	HCOF#1		1.20							0.00	3.0
9431402000300	11/10/94 2:00	3	HCOF#1		1.18							0.00	2.8
9431406000300	11/10/94 6:00	3	HCOF#1		1.18							0.00	2.9
9431414000300	11/10/94 14:00	3	HCOF#1		1.29							0.00	3.0
9431418000300	11/10/94 18:00	3	HCOF#1		1.28							0.00	3.0
9431422000300	11/10/94 22:00	3	HCOF#1		1.22							0.00	3.0
9431502000300	11/11/94 2:00	3	HCOF#1		1.2							0.00	2.9
9431506000300	11/11/94 6:00	3	HCOF#1		1.16							0.00	2.9
9431514000300	11/11/94 14:00	3	HCOF#1		1.21							0.00	2.8
9431519000300	11/11/94 19:00	3	HCOF#1		1.2							0.00	3.3
9432214000300	11/18/94 14:00	3	HCOF#1		1.03							0.00	3.2
9432514000300	11/21/94 14:00	3	HCOF#1		1.37							0.00	3.2
9432613000300	11/22/94 13:00	3	HCOF#1		1.17							0.00	2.8
9432714000300	11/23/94 14:00	3	HCOF#1		1.17							0.00	3.1
9433214000300	11/28/94 14:00	3	HCOF#1		1.14							0.00	2.9
9433314000300	11/29/94 14:00	3	HCOF#1		1.35							0.00	3.0
9433414000300	11/30/94 14:00	3	HCOF#1		1.22							0.00	2.6
9433418000300	11/30/94 18:00	3	HCOF#1		1.03							0.00	2.8
9433514000300	12/1/94 14:00	3	HCOF#1		0.97							0.0	3.0
9433914000300	12/5/94 14:00	3	HCOF#1		1.09							0.0	2.9
9434014000300	12/6/94 14:00	3	HCOF#1		1.08							0.0	3.1

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9434214000300	12/8/94 14:00	3	HCOF#1		0.96							0.0	3.0
9434314000300	12/9/94 14:00	3	HCOF#1		1.22							0.0	2.8
9434620000300	12/12/94 20:00	3	HCOF#1		1.19							0.0	3.1
9434714000300	12/13/94 14:00	3	HCOF#1		1.26							0.0	2.8
9434720000300	12/13/94 20:00	3	HCOF#1		1.08							0.0	3.0
9434813000300	12/14/94 13:00	3	HCOF#1		1.25							0.0	2.5
9434818000300	12/14/94 18:00	3	HCOF#1		1.02							0.0	2.9
9434822000300	12/14/94 22:00	3	HCOF#1		1.12							0.0	3.0
9434918000300	12/15/94 18:00	3	HCOF#1		1.18							0.0	3.0
9434922000300	12/15/94 22:00	3	HCOF#1		1.12							0.0	2.9
9435012000300	12/16/94 12:00	3	HCOF#1		1.19							0.0	2.8
9435314000300	12/19/94 14:00	3	HCOF#1		1.26							0.0	3.1
9435414000300	12/20/94 14:00	3	HCOF#1		1.29							0.0	3.0
9435514000300	12/21/94 14:00	3	HCOF#1		1.23							0.0	3.1
9435614000300	12/22/94 14:00	3	HCOF#1		1.29							0.0	3.2
9436114000300	12/27/94 14:00	3	HCOF#1		1.3							0.0	3.0
9436214000300	12/28/94 14:00	3	HCOF#1		1.27							0.0	3.1
9436314000300	12/29/94 14:00	3	HCOF#1		1.45							0.0	3.0
9500614000300	1/6/95 14:00	3	HCOF#1		1.22							0.0	3.0
9500914000300	1/9/95 14:00	3	HCOF#1		1.3							0.0	3.1
9501014000300	1/10/95 14:00	3	HCOF#1		1.22							0.0	3.1
9501114000300	1/11/95 14:00	3	HCOF#1		1.15							0.0	2.9
9501314000300	1/13/95 14:00	3	HCOF#1		1.05							0.0	3.0
9501614000300	1/16/95 14:00	3	HCOF#1		1.06							0.0	2.6
9501714000300	1/17/95 14:00	3	HCOF#1		1.1							0.0	2.8
9501814000300	1/18/95 14:00	3	HCOF#1		1.12							0.0	2.9
9501914000300	1/19/95 14:00	3	HCOF#1		1.05							0.0	2.9
9502013000300	1/20/95 13:00	3	HCOF#1		1.1							0.0	2.9
9502314000300	1/23/95 14:00	3	HCOF#1		1.16							0.0	3.1
9502614000300	1/26/95 14:00	3	HCOF#1		1.34								3.0
9502614000300	1/26/95 14:00	3	HCOF#1		1.34								3.0
9503314000300	2/2/95 14:00	3	HCOF#1		1.15								3.1
9503814000300	2/7/95 14:00	3	HCOF#1		1.19								3.1
9503914000300	2/8/95 14:00	3	HCOF#1		1.23								3.1
9504014000300	2/9/95 14:00	3	HCOF#1		1.34								3.0
9504514000300	2/14/95 14:00	3	HCOF#1		1.17								3.1
9504714000300	2/16/95 14:00	3	HCOF#1		1.17								3.1
9505114000300	2/20/95 14:00	3	HCOF#1		1.2								2.9
9505214000300	2/21/95 14:00	3	HCOF#1		1.27								3.6
9505314000300	2/22/95 14:00	3	HCOF#1		1.86								3.3
9505914000300	2/28/95 14:00	3	HCOF#1		1.41								3.2
9506213000300	3/3/95 13:00	3	HCOF#1		1.39								3.0
9506713000300	3/8/95 13:00	3	HCOF#1		1.12								3.1
9415212000400	6/1/94 12:00	4	HCUF#1		16600								23.3
9415810300400	6/7/94 10:30	4	HCUF#1		14840								
9415912000400	6/8/94 12:00	4	HCUF#1		19362								25.8
9416612000400	6/15/94 12:00	4	HCUF#1										25.1
9416714000400	6/16/94 14:00	4	HCUF#1		2.29								26.6
9416813000400	6/17/94 13:00	4	HCUF#1		2.12								27.4
9417814000400	6/27/94 14:00	4	HCUF#1		1.72								24.9
9417914000400	6/28/94 14:00	4	HCUF#1		2.36								21.2
9417920000400	6/28/94 20:00	4	HCUF#1		2.29								
9417920000400	6/28/94 20:00	4	HCUF#1		2.29								27.0
9418018000400	6/29/94 18:00	4	HCUF#1		1.93								17.1
9418120000400	6/30/94 20:00	4	HCUF#1		2.28								29.4
9418614000400	7/5/94 14:00	4	HCUF#1		2.04								26.2
9418618000400	7/5/94 18:00	4	HCUF#1		2.87								21.1
9418622000400	7/5/94 22:00	4	HCUF#1	5521	3.2								26.7
9418713000400	7/6/94 13:00	4	HCUF#1		1.83								25.4
9418720000400	7/6/94 20:00	4	HCUF#1		2.18								25.5
9418814000400	7/7/94 14:00	4	HCUF#1		1.81								25.0
9418914000400	7/8/94 14:00	4	HCUF#1		1.84								25.4
9419217000400	7/11/94 17:00	4	HCUF#1		1.62								25.9
9419222000400	7/11/94 22:00	4	HCUF#1		2.38								23.1
9419313000400	7/12/94 13:00	4	HCUF#1		2.18								24.9
9419317300400	7/12/94 17:30	4	HCUF#1		1.8								25.7
9419414000400	7/13/94 14:00	4	HCUF#1		1.77								26.2

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9419418000400	7/13/94 18:00	4	HCUF#1		1.63								27.1
9419513000400	7/14/94 13:00	4	HCUF#1		1.32								25.3
9419518000400	7/14/94 18:00	4	HCUF#1		0.84								25.8
9419522000400	7/14/94 22:00	4	HCUF#1		1.36								22.2
9419914000400	7/18/94 14:00	4	HCUF#1		1.49								23.5
9419918000400	7/18/94 18:00	4	HCUF#1		1.73								20.8
9419922000400	7/18/94 22:00	4	HCUF#1		2.03								21.1
9420014000400	7/19/94 14:00	4	HCUF#1		1.84								21.0
9420018000400	7/19/94 18:00	4	HCUF#1		2.1								22.6
9420022000400	7/19/94 22:00	4	HCUF#1		2.25								24.0
9420114000400	7/20/94 14:00	4	HCUF#1		1.58								24.2
9420118000400	7/20/94 18:00	4	HCUF#1		1.76								23.6
9420122000400	7/20/94 22:00	4	HCUF#1		1.83								24.0
9420214000400	7/21/94 14:00	4	HCUF#1		1.73								21.7
9420221000400	7/21/94 21:00	4	HCUF#1		1.52								23.3
9420614000400	7/25/94 14:00	4	HCUF#1		1.9								
9420614000400	7/25/94 14:00	4	HCUF#1										
9420614000400	7/25/94 14:00	4	HCUF#1										24.4
9420618000400	7/25/94 18:00	4	HCUF#1		1.65								26.2
9420622000400	7/25/94 22:00	4	HCUF#1		1.6								24.7
9420714000400	7/26/94 14:00	4	HCUF#1		1.84								21.7
9420718000400	7/26/94 18:00	4	HCUF#1		1.72								26.0
9420722000400	7/26/94 22:00	4	HCUF#1		1.78								21.8
9420814000400	7/27/94 14:00	4	HCUF#1		1.63								21.2
9420819000400	7/27/94 19:00	4	HCUF#1		1.66								25.8
9420913000400	7/28/94 13:00	4	HCUF#1		1.54								27.3
9420921000400	7/28/94 21:00	4	HCUF#1		1.71								28.5
9421315000400	8/1/94 15:00	4	HCUF#1		1.39								25.7
9421322000400	8/1/94 22:00	4	HCUF#1		1.75								27.0
9421417000400	8/2/94 17:00	4	HCUF#1		1.65								27.3
9421514000400	8/3/94 14:00	4	HCUF#1		1.67								24.7
9421614000400	8/4/94 14:00	4	HCUF#1		1.49								25.0
9421618000400	8/4/94 18:00	4	HCUF#1		1.98								21.8
9422014000400	8/8/94 14:00	4	HCUF#1		1.47								22.6
9422022000400	8/8/94 22:00	4	HCUF#1		1.59								27.4
9422114000400	8/9/94 14:00	4	HCUF#1		1.67								28.1
9422118000400	8/9/94 18:00	4	HCUF#1		1.78								24.3
9422122000400	8/9/94 22:00	4	HCUF#1		1.65								
9422122000400	8/9/94 22:00	4	HCUF#1										26.3
9422214000400	8/10/94 14:00	4	HCUF#1		1.45								28.7
9422222000400	8/10/94 22:00	4	HCUF#1		1.73								23.2
9422314000400	8/11/94 14:00	4	HCUF#1		1.54								
9422314000400	8/11/94 14:00	4	HCUF#1										26.0
9422318000400	8/11/94 18:00	4	HCUF#1		1.47								22.7
9422322000400	8/11/94 22:00	4	HCUF#1		1.97								1.6
9423014000400	8/18/94 14:00	4	HCUF#1	1526	1.7							0.00	623.0
9423114000400	8/19/94 14:00	4	HCUF#1		1.35							0.00	22.3
9424113300400	8/29/94 13:30	4	HCUF#1		1.73							0.00	24.6
9424214000400	8/30/94 14:00	4	HCUF#1		1.64							0.00	22.4
9424314000400	8/31/94 14:00	4	HCUF#1		1.39							0.00	21.0
9424414000400	9/1/94 14:00	4	HCUF#1		1.27							0.00	23.5
9424914000400	9/6/94 14:00	4	HCUF#1		1.4							0.00	23.6
9424918000400	9/6/94 18:00	4	HCUF#1		1.3							0.00	23.5
9425714000400	9/14/94 14:00	4	HCUF#1		1.49							0.00	20.7
9426214000400	9/19/94 14:00	4	HCUF#1		1.53							0.00	25.0
9426218000400	9/19/94 18:00	4	HCUF#1		1.61							0.00	25.3
9426222000400	9/19/94 22:00	4	HCUF#1		2.12							0.00	22.8
9426314000400	9/20/94 14:00	4	HCUF#1		1.61							0.00	25.0
9426318000400	9/20/94 18:00	4	HCUF#1		1.47							0.00	22.8
9426414000400	9/21/94 14:00	4	HCUF#1	1953	1.55							1.00	25.2
9426515000400	9/22/94 15:00	4	HCUF#1		1.63							0.00	23.7
9426518000400	9/22/94 18:00	4	HCUF#1		0.96							0.00	24.0
9426522000400	9/22/94 22:00	4	HCUF#1		1.48							0.00	26.8
9427118000400	9/28/94 18:00	4	HCUF#1		1.77							0.00	28.1
9427122000400	9/28/94 22:00	4	HCUF#1		1.55							0.00	23.3
9427214000400	9/29/94 14:00	4	HCUF#1		1.31							0.00	24.7
9427614000400	10/3/94 14:00	4	HCUF#1		1.68							0.00	23.0

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9427618000400	10/3/94 18:00	4	HCUF#1		1.51							0.00	16.5
9427622450400	10/3/94 22:45	4	HCUF#1		1.42							0.00	16.2
9427714000400	10/4/94 14:00	4	HCUF#1		2.00							0.00	23.3
9427718000400	10/4/94 18:00	4	HCUF#1		1.88							0.00	24.7
9427721300400	10/4/94 21:30	4	HCUF#1		1.76							0.00	24.8
9427814000400	10/5/94 14:00	4	HCUF#1		1.61							0.00	23.1
9427914000400	10/6/94 14:00	4	HCUF#1		1.74							0.00	22.6
9428014000400	10/7/94 14:00	4	HCUF#1		1.16							0.00	20.5
9428314000400	10/10/94 14:00	4	HCUF#1		1.73							0.00	22.5
9428318000400	10/10/94 18:00	4	HCUF#1		1.62							0.00	21.4
9428322000400	10/10/94 22:00	4	HCUF#1		1.70							0.00	24.8
9428414000400	10/11/94 14:00	4	HCUF#1		1.73							12.38	22.8
9428418000400	10/11/94 18:00	4	HCUF#1		1.35							0.00	13.7
9428422000400	10/11/94 22:00	4	HCUF#1		1.72							0.00	15.3
9428514000400	10/12/94 14:00	4	HCUF#1		0.23							0.00	15.7
9428514000400	10/12/94 14:00	4	HCUF#1										15.7
9428518000400	10/12/94 18:00	4	HCUF#1		1.60							0.00	17.7
9428522000400	10/12/94 22:00	4	HCUF#1		1.38							0.00	19.2
9428614000400	10/13/94 14:00	4	HCUF#1		1.15							0.00	20.9
9428620000400	10/13/94 20:00	4	HCUF#1		1.95							0.00	23.4
9429014000400	10/17/94 14:00	4	HCUF#1		1.35							0.00	16.4
9429114000400	10/18/94 14:00	4	HCUF#1		1.78							0.00	17.8
9429214000400	10/19/94 14:00	4	HCUF#1		2.30							0.00	14.0
9429300000400	10/20/94 0:00	4	HCUF#1	2331								0.00	16.9
9429314000400	10/20/94 14:00	4	HCUF#1	3002								0.00	17.7
9429714000400	10/24/94 14:00	4	HCUF#1		1.53							0.00	15.6
9429718000400	10/24/94 18:00	4	HCUF#1		1.59							0.00	15.8
9429722000400	10/24/94 22:00	4	HCUF#1		1.56							0.00	15.7
9429802000400	10/25/94 2:00	4	HCUF#1		1.62							0.00	15.5
9429806000400	10/25/94 6:00	4	HCUF#1		1.71							0.00	16.4
9429814000400	10/25/94 14:00	4	HCUF#1		1.62							0.00	16.1
9429818000400	10/25/94 18:00	4	HCUF#1		1.63							0.00	15.8
9429823000400	10/25/94 23:00	4	HCUF#1		1.63							0.00	15.8
9429902000400	10/26/94 2:00	4	HCUF#1		1.45							0.00	16.0
9429906000400	10/26/94 6:00	4	HCUF#1		1.51							0.00	15.8
9429914000400	10/26/94 14:00	4	HCUF#1		1.60							0.00	16.1
9429918000400	10/26/94 18:00	4	HCUF#1		1.65							0.00	16.4
9429922000400	10/26/94 22:00	4	HCUF#1		1.61							0.00	16.2
9430002000400	10/27/94 2:00	4	HCUF#1										
9430002000400	10/27/94 2:00	4	HCUF#1		1.45							0.00	15.7
9430006000400	10/27/94 6:00	4	HCUF#1		1.72							0.00	16.0
9430014000400	10/27/94 14:00	4	HCUF#1		1.69							9.52	15.7
9430014000400	10/27/94 14:00	4	HCUF#1										
9430018000400	10/27/94 18:00	4	HCUF#1		1.49							0.00	15.3
9430022000400	10/27/94 22:00	4	HCUF#1		1.52							0.00	14.7
9430102000400	10/28/94 2:00	4	HCUF#1		1.49							0.00	14.7
9430106000400	10/28/94 6:00	4	HCUF#1		0.73							0.00	15.2
9430114000400	10/28/94 14:00	4	HCUF#1		1.53							0.00	14.9
9430118000400	10/28/94 18:00	4	HCUF#1		1.60							0.00	15.2
9430122000400	10/28/94 22:00	4	HCUF#1		1.47							0.00	14.8
9430402000400	10/31/94 2:00	4	HCUF#1		1.25							0.00	14.7
9430406000400	10/31/94 6:00	4	HCUF#1		1.39							0.00	15.0
9430414000400	10/31/94 14:00	4	HCUF#1		1.60							0.00	16.2
9430418000400	10/31/94 18:00	4	HCUF#1		1.60							0.00	15.9
9430422000400	10/31/94 22:00	4	HCUF#1		1.67							0.00	15.9
9430502000400	11/1/94 2:00	4	HCUF#1		1.38							0.00	15.3
9430502000400	11/1/94 2:00	4	HCUF#1										
9430506000400	11/1/94 6:00	4	HCUF#1		1.38							0.00	16.1
9430514000400	11/1/94 14:00	4	HCUF#1		1.62							0.00	15.7
9430518000400	11/1/94 18:00	4	HCUF#1		1.53							0.00	16.2
9430522000400	11/1/94 22:00	4	HCUF#1		0.86							0.00	15.6
9430602000400	11/2/94 2:00	4	HCUF#1		0.96							0.00	15.4
9430606000400	11/2/94 6:00	4	HCUF#1		0.99							0.00	15.9
9430614000400	11/2/94 14:00	4	HCUF#1		1.65							0.00	15.8
9430618000400	11/2/94 18:00	4	HCUF#1		1.69							0.00	17.0
9430622000400	11/2/94 22:00	4	HCUF#1		9.91							0.00	15.9
9430703000400	11/3/94 3:00	4	HCUF#1		1.36							0.00	15.4

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9430706000400	11/3/94 6:00	4	HCUF#1		1.57							0.00	15.0
9430714000400	11/3/94 14:00	4	HCUF#1		1.58							0.00	15.0
9430718000400	11/3/94 18:00	4	HCUF#1		1.57							0.00	15.7
9430722000400	11/3/94 22:00	4	HCUF#1		2.35							0.00	15.5
9430802000400	11/4/94 2:00	4	HCUF#1		1.58							0.00	15.4
9430806000400	11/4/94 6:00	4	HCUF#1		1.55							0.00	15.5
9430814000400	11/4/94 14:00	4	HCUF#1		1.54							0.00	15.7
9431104000400	11/7/94 4:00	4	HCUF#1		1.49							0.00	15.1
9431106000400	11/7/94 6:00	4	HCUF#1		0.30							0.00	15.1
9431106000400	11/7/94 6:00	4	HCUF#1		1.49							0.00	
9431114000400	11/7/94 14:00	4	HCUF#1		1.68							0.00	16.1
9431118000400	11/7/94 18:00	4	HCUF#1		1.49							0.00	15.7
9431122000400	11/7/94 22:00	4	HCUF#1		1.55							0.00	15.8
9431202000400	11/8/94 2:00	4	HCUF#1		1.64							0.00	15.5
9431206000400	11/8/94 6:00	4	HCUF#1		1.68							0.00	15.8
9431218000400	11/8/94 18:00	4	HCUF#1		1.69							0.00	17.1
9431222000400	11/8/94 22:00	4	HCUF#1		1.64							0.00	16.5
9431302000400	11/9/94 2:00	4	HCUF#1		1.73							0.00	16.1
9431306000400	11/9/94 6:00	4	HCUF#1		1.80							0.00	16.3
9431314000400	11/9/94 14:00	4	HCUF#1		1.48							0.00	16.3
9431318000400	11/9/94 18:00	4	HCUF#1		1.44							0.00	16.3
9431322000400	11/9/94 22:00	4	HCUF#1		1.97							0.00	16.6
9431402000400	11/10/94 2:00	4	HCUF#1		1.65							0.00	15.7
9431406000400	11/10/94 6:00	4	HCUF#1		1.71							0.00	16.8
9431414000400	11/10/94 14:00	4	HCUF#1		2.16							0.00	16.1
9431418000400	11/10/94 18:00	4	HCUF#1		2.07							0.00	15.2
9431422000400	11/10/94 22:00	4	HCUF#1		1.69							0.00	16.3
9431502000400	11/11/94 2:00	4	HCUF#1		1.58							0.00	15.2
9431506000400	11/11/94 6:00	4	HCUF#1		1.58							0.00	16.1
9431514000400	11/11/94 14:00	4	HCUF#1		1.61							0.00	15.8
9431519000400	11/11/94 19:00	4	HCUF#1		1.79							0.00	15.9
9432214000400	11/18/94 14:00	4	HCUF#1		1.27							0.00	
9432514000400	11/21/94 14:00	4	HCUF#1		1.47							0.00	26.9
9432613000400	11/22/94 13:00	4	HCUF#1		1.88							0.00	30.5
9432714000400	11/23/94 14:00	4	HCUF#1		1.47							0.00	27.4
9433214000400	11/28/94 14:00	4	HCUF#1		1.37							0.00	28.5
9433314000400	11/29/94 14:00	4	HCUF#1		1.74							0.00	34.9
9433414000400	11/30/94 14:00	4	HCUF#1		1.67							0.00	26.4
9433418000400	11/30/94 18:00	4	HCUF#1		1.81							0.00	26.8
9433514000400	12/1/94 14:00	4	HCUF#1		1.29							0.0	27.8
9433914000400	12/5/94 14:00	4	HCUF#1		1.33							0.0	25.3
9434014000400	12/6/94 14:00	4	HCUF#1		0.85							0.0	29.1
9434214000400	12/8/94 14:00	4	HCUF#1		1.39							0.0	10.7
9434314000400	12/9/94 14:00	4	HCUF#1		1.38							0.0	22.8
9434620000400	12/12/94 20:00	4	HCUF#1		1.76							0.0	20.3
9434714000400	12/13/94 14:00	4	HCUF#1		1.56							0.0	23.5
9434720000400	12/13/94 20:00	4	HCUF#1		1.52							0.0	22.7
9434813000400	12/14/94 13:00	4	HCUF#1		1.52							0.0	25.1
9434818000400	12/14/94 18:00	4	HCUF#1		1.55							0.0	25.1
9434822000400	12/14/94 22:00	4	HCUF#1		1.49							0.0	24.6
9434918000400	12/15/94 18:00	4	HCUF#1		1.67							0.0	24.7
9434922000400	12/15/94 22:00	4	HCUF#1		1.41							0.0	23.9
9435012000400	12/16/94 12:00	4	HCUF#1		1.5							0.0	23.3
9435314000400	12/19/94 14:00	4	HCUF#1		1.56							0.0	23.3
9435414000400	12/20/94 14:00	4	HCUF#1		1.61							0.0	24.0
9435514000400	12/21/94 14:00	4	HCUF#1		1.57							0.0	21.4
9435614000400	12/22/94 14:00	4	HCUF#1		1.61							0.0	24.0
9436114000400	12/27/94 14:00	4	HCUF#1		1.33							0.0	22.6
9436214000400	12/28/94 14:00	4	HCUF#1		1.52							0.0	22.6
9436314000400	12/29/94 14:00	4	HCUF#1		1.54							0.0	21.2
9500614000400	1/6/95 14:00	4	HCUF#1		1.19							0.0	22.2
9500914000400	1/9/95 14:00	4	HCUF#1		1.62							0.0	22.1
9501014000400	1/10/95 14:00	4	HCUF#1		1.85							0.0	20.9
9501114000400	1/11/95 14:00	4	HCUF#1		1.61							0.0	22.3
9501314000400	1/13/95 14:00	4	HCUF#1		1.51							0.0	22.8
9501614000400	1/16/95 14:00	4	HCUF#1		1.36							0.0	21.7
9501714000400	1/17/95 14:00	4	HCUF#1		1.54							0.0	22.5

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9501814000400	1/18/95 14:00	4	HCUF#1		1.46							0.0	22.4
9501914000400	1/19/95 14:00	4	HCUF#1		1.48							0.0	22.4
9502013000400	1/20/95 13:00	4	HCUF#1		1.39							0.0	20.9
9502314000400	1/23/95 14:00	4	HCUF#1		1.42							0.0	21.3
9502614000400	1/26/95 14:00	4	HCUF#1		1.69								21.9
9502614000400	1/26/95 14:00	4	HCUF#1		1.69								21.9
9503314000400	2/2/95 14:00	4	HCUF#1		1.6								21.0
9503814000400	2/7/95 14:00	4	HCUF#1		1.51								21.9
9503914000400	2/8/95 14:00	4	HCUF#1		1.62								21.7
9504014000400	2/9/95 14:00	4	HCUF#1		1.66								22.6
9504514000400	2/14/95 14:00	4	HCUF#1		1.74								21.7
9504714000400	2/16/95 14:00	4	HCUF#1		1.67								21.6
9505114000400	2/20/95 14:00	4	HCUF#1		1.72								21.7
9505214000400	2/21/95 14:00	4	HCUF#1		1.75								20.0
9505314000400	2/22/95 14:00	4	HCUF#1		1.97								19.1
9505914000400	2/28/95 14:00	4	HCUF#1		1.93								23.3
9506213000400	3/3/95 13:00	4	HCUF#1		1.87								22.2
9506713000400	3/8/95 13:00	4	HCUF#1		1.49								20.4
9416612000500	6/15/94 12:00	5	HCOF#2										1.8
9416714000500	6/16/94 14:00	5	HCOF#2		0.18								1.7
9416813000500	6/17/94 13:00	5	HCOF#2		0.22								1.8
9417814000500	6/27/94 14:00	5	HCOF#2										1.9
9417914000500	6/28/94 14:00	5	HCOF#2										2.0
9417920000500	6/28/94 20:00	5	HCOF#2		0.9								3.1
9418018000500	6/29/94 18:00	5	HCOF#2		0.35								1.4
9418614000500	7/5/94 14:00	5	HCOF#2		0.15								1.6
9418622000500	7/5/94 22:00	5	HCOF#2		0.12								1.8
9418713000500	7/6/94 13:00	5	HCOF#2		0.13								1.5
9418720000500	7/6/94 20:00	5	HCOF#2		0.23								1.9
9418814000500	7/7/94 14:00	5	HCOF#2		0.88								1.7
9418914000500	7/8/94 14:00	5	HCOF#2		0.15								1.8
9419217000500	7/11/94 17:00	5	HCOF#2		0.6								1.8
9419222000500	7/11/94 22:00	5	HCOF#2		1.09								1.6
9419313000500	7/12/94 13:00	5	HCOF#2		0.16							15.7	1.8
9419317300500	7/12/94 17:30	5	HCOF#2		0.42								1.9
9419414000500	7/13/94 14:00	5	HCOF#2		0.18								1.3
9419513000500	7/14/94 13:00	5	HCOF#2		0.14								1.4
9419518000500	7/14/94 18:00	5	HCOF#2		0.42								1.7
9419522000500	7/14/94 22:00	5	HCOF#2		0.16								1.7
9419918000500	7/18/94 18:00	5	HCOF#2		0.57								1.9
9419922000500	7/18/94 22:00	5	HCOF#2		0.75								1.9
9420014000500	7/19/94 14:00	5	HCOF#2		1.69								1.9
9420018000500	7/19/94 18:00	5	HCOF#2		0.62								2.1
9420022000500	7/19/94 22:00	5	HCOF#2		0.21								2.1
9420114000500	7/20/94 14:00	5	HCOF#2		0.18								1.8
9420118000500	7/20/94 18:00	5	HCOF#2		0.18								2.0
9420122000500	7/20/94 22:00	5	HCOF#2		0.18								2.0
9420214000500	7/21/94 14:00	5	HCOF#2		0.2							17.6	1.8
9420221000500	7/21/94 21:00	5	HCOF#2		0.28								2.0
9420614000500	7/25/94 14:00	5	HCOF#2		0.17								1.8
9420618000500	7/25/94 18:00	5	HCOF#2		0.15								2.0
9420622000500	7/25/94 22:00	5	HCOF#2		0.15								1.9
9420714000500	7/26/94 14:00	5	HCOF#2		0.19								1.8
9420718000500	7/26/94 18:00	5	HCOF#2		0.14								1.9
9420722000500	7/26/94 22:00	5	HCOF#2		0.15								2.0
9420814000500	7/27/94 14:00	5	HCOF#2		0.15								1.0
9420819000500	7/27/94 19:00	5	HCOF#2		0.17								2.3
9420913000500	7/28/94 13:00	5	HCOF#2		10.77								1.5
9420921000500	7/28/94 21:00	5	HCOF#2		0.11								1.9
9421315000500	8/1/94 15:00	5	HCOF#2		0.12								1.6
9421322000500	8/1/94 22:00	5	HCOF#2		0.16								1.9
9421417000500	8/2/94 17:00	5	HCOF#2		0.23								1.6
9421514000500	8/3/94 14:00	5	HCOF#2		0.4								1.7
9422014000500	8/8/94 14:00	5	HCOF#2		0.39							0.00	1.6
9422114000500	8/9/94 14:00	5	HCOF#2		0.16							0.00	1.5
9422118000500	8/9/94 18:00	5	HCOF#2		0.15							0.00	1.8
9422122000500	8/9/94 22:00	5	HCOF#2		0.15							0.00	1.8

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9422214000500	8/10/94 14:00	5	HCOF#2	5004	0.1							1.00	1.4
9422314000500	8/11/94 14:00	5	HCOF#2		0.15							0.00	1.7
9422318000500	8/11/94 18:00	5	HCOF#2		0.1							0.00	1.4
9422322000500	8/11/94 22:00	5	HCOF#2		0.16							0.00	1.7
9424113300500	8/29/94 13:30	5	HCOF#2		0.18							0.00	1.7
9424214000500	8/30/94 14:00	5	HCOF#2		0.2							0.00	1.7
9424314000500	8/31/94 14:00	5	HCOF#2		0.21							0.00	1.9
9424414000500	9/1/94 14:00	5	HCOF#2		0.23							0.00	1.8
9424914000500	9/6/94 14:00	5	HCOF#2		0.17							0.00	1.5
9424918000500	9/6/94 18:00	5	HCOF#2		0.14							0.00	1.6
9426214000500	9/19/94 14:00	5	HCOF#2		0.16							0.00	1.5
9426218000500	9/19/94 18:00	5	HCOF#2		0.17							0.00	1.7
9426222000500	9/19/94 22:00	5	HCOF#2		0.18							0.00	1.7
9426314000500	9/20/94 14:00	5	HCOF#2		0.17							0.00	1.5
9426318000500	9/20/94 18:00	5	HCOF#2		0.17							0.00	1.7
9426515000500	9/22/94 15:00	5	HCOF#2		0.16							0.00	1.4
9426518000500	9/22/94 18:00	5	HCOF#2		0.17							0.00	1.8
9427118000500	9/28/94 18:00	5	HCOF#2		0.16							0.00	1.8
9427214000500	9/29/94 14:00	5	HCOF#2		0.18							0.00	1.7
9427618000500	10/3/94 18:00	5	HCOF#2		0.30							0.00	2.0
9427622450500	10/3/94 22:45	5	HCOF#2		0.26							0.00	1.9
9427714000500	10/4/94 14:00	5	HCOF#2		0.20							0.00	1.8
9427718000500	10/4/94 18:00	5	HCOF#2		0.16							0.00	1.9
9427721300500	10/4/94 21:30	5	HCOF#2		0.15							0.00	1.7
9427814000500	10/5/94 14:00	5	HCOF#2		0.21							0.00	2.0
9427914000500	10/6/94 14:00	5	HCOF#2		0.20							0.00	1.9
9428014000500	10/7/94 14:00	5	HCOF#2		0.18							0.00	1.7
9428314000500	10/10/94 14:00	5	HCOF#2		0.20							0.00	1.6
9428318000500	10/10/94 18:00	5	HCOF#2		0.14							0.00	1.7
9428422000500	10/11/94 22:00	5	HCOF#2		1.20							0.00	3.0
9428514000500	10/12/94 14:00	5	HCOF#2		0.38							0.00	1.7
9428514000500	10/12/94 14:00	5	HCOF#2										
9428518000500	10/12/94 18:00	5	HCOF#2		1.68							0.00	1.8
9428522000500	10/12/94 22:00	5	HCOF#2		0.92							0.00	2.6
9428620000500	10/13/94 20:00	5	HCOF#2		0.20							0.00	1.7
9429114000500	10/18/94 14:00	5	HCOF#2		0.32							0.00	1.9
9429214000500	10/19/94 14:00	5	HCOF#2		0.35							0.00	1.9
9429300000500	10/20/94 0:00	5	HCOF#2	596								0.00	2.3
9429314000500	10/20/94 14:00	5	HCOF#2	1988								0.00	1.6
9429714000500	10/24/94 14:00	5	HCOF#2		0.37							0.00	1.8
9429722000500	10/24/94 22:00	5	HCOF#2		0.29							0.00	1.9
9429802000500	10/25/94 2:00	5	HCOF#2		0.31							0.00	1.8
9429806000500	10/25/94 6:00	5	HCOF#2		0.19							0.00	1.6
9429818000500	10/25/94 18:00	5	HCOF#2		0.29							0.00	1.9
9429823000500	10/25/94 23:00	5	HCOF#2		0.29							0.00	2.0
9429902000500	10/26/94 2:00	5	HCOF#2		0.30							0.00	1.7
9429906000500	10/26/94 6:00	5	HCOF#2		0.30							0.00	1.7
9429914000500	10/26/94 14:00	5	HCOF#2		0.31							0.00	1.8
9429918000500	10/26/94 18:00	5	HCOF#2		0.31							0.00	1.8
9429922000500	10/26/94 22:00	5	HCOF#2		0.66							0.00	21.8
9430002000500	10/27/94 2:00	5	HCOF#2		0.30							0.00	1.8
9430006000500	10/27/94 6:00	5	HCOF#2		0.32							0.00	1.7
9430014000500	10/27/94 14:00	5	HCOF#2		0.29							0.00	1.8
9430018000500	10/27/94 18:00	5	HCOF#2		0.30							0.00	1.9
9430106000500	10/28/94 6:00	5	HCOF#2		0.27							0.00	1.5
9430114000500	10/28/94 14:00	5	HCOF#2		0.30							0.00	1.8
9430118000500	10/28/94 18:00	5	HCOF#2		0.33							0.00	2.2
9430122000500	10/28/94 22:00	5	HCOF#2		0.30							0.00	2.2
9430406000500	10/31/94 6:00	5	HCOF#2		0.31							0.00	1.8
9430414000500	10/31/94 14:00	5	HCOF#2		0.31							0.00	1.9
9430418000500	10/31/94 18:00	5	HCOF#2		0.32							0.00	2.4
9430422000500	10/31/94 22:00	5	HCOF#2	5004	0.32							0.00	1.9
9430502000500	11/1/94 2:00	5	HCOF#2		0.29							0.00	1.8
9430506000500	11/1/94 6:00	5	HCOF#2		0.31							0.00	1.8
9430514000500	11/1/94 14:00	5	HCOF#2		0.28							0.00	1.7
9430518000500	11/1/94 18:00	5	HCOF#2		0.28							0.00	2.2
9430522000500	11/1/94 22:00	5	HCOF#2		0.32							0.00	2.0

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9430602000500	11/2/94 2:00	5	HCOF#2		0.28							0.00	1.8
9430606000500	11/2/94 6:00	5	HCOF#2		0.29							0.00	1.7
9430614000500	11/2/94 14:00	5	HCOF#2		0.33							0.00	1.8
9430618000500	11/2/94 18:00	5	HCOF#2		0.29							0.00	2.0
9430622000500	11/2/94 22:00	5	HCOF#2		0.28							0.00	2.1
9430703000500	11/3/94 3:00	5	HCOF#2		0.30							0.00	1.7
9430706000500	11/3/94 6:00	5	HCOF#2		0.27							0.00	1.7
9430714000500	11/3/94 14:00	5	HCOF#2		0.27							0.00	1.8
9430718000500	11/3/94 18:00	5	HCOF#2		0.28							0.00	2.1
9430722000500	11/3/94 22:00	5	HCOF#2		0.28							0.00	2.1
9430802000500	11/4/94 2:00	5	HCOF#2		0.30							0.00	1.7
9430806000500	11/4/94 6:00	5	HCOF#2		0.26							0.00	1.7
9430814000500	11/4/94 14:00	5	HCOF#2		0.28							0.00	1.8
9431104000500	11/7/94 4:00	5	HCOF#2		0.28							0.00	1.7
9431106000500	11/7/94 6:00	5	HCOF#2		0.30							0.00	1.7
9431114000500	11/7/94 14:00	5	HCOF#2		0.30							0.00	1.8
9431118000500	11/7/94 18:00	5	HCOF#2		0.29							0.00	2.0
9431122000500	11/7/94 22:00	5	HCOF#2		0.29							0.00	1.8
9431202000500	11/8/94 2:00	5	HCOF#2		0.29							0.00	1.7
9431206000500	11/8/94 6:00	5	HCOF#2		0.30							0.00	1.7
9431218000500	11/8/94 18:00	5	HCOF#2		0.31							0.00	1.6
9431222000500	11/8/94 22:00	5	HCOF#2		0.30							0.00	2.0
9431302000500	11/9/94 2:00	5	HCOF#2		0.30							0.00	1.8
9431306000500	11/9/94 6:00	5	HCOF#2		0.31							0.00	1.9
9431314000500	11/9/94 14:00	5	HCOF#2		0.31							0.00	1.8
9431318000500	11/9/94 18:00	5	HCOF#2		0.24							0.00	1.8
9431322000500	11/9/94 22:00	5	HCOF#2		0.31							0.00	1.9
9431402000500	11/10/94 2:00	5	HCOF#2		0.31							0.00	1.8
9431406000500	11/10/94 6:00	5	HCOF#2		0.30							0.00	1.8
9431414000500	11/10/94 14:00	5	HCOF#2		0.3							0.00	2.0
9431418000500	11/10/94 18:00	5	HCOF#2		0.29							0.00	1.9
9431422000500	11/10/94 22:00	5	HCOF#2		0.31							0.00	1.9
9431502000500	11/11/94 2:00	5	HCOF#2		0.29							0.00	1.8
9431506000500	11/11/94 6:00	5	HCOF#2		0.3							0.00	1.8
9431514000500	11/11/94 14:00	5	HCOF#2		0.34							0.00	1.7
9431519000500	11/11/94 19:00	5	HCOF#2		0.29							0.00	2.2
9432514000500	11/21/94 14:00	5	HCOF#2		0.28							0.00	1.6
9432613000500	11/22/94 13:00	5	HCOF#2		0.15							0.00	2.2
9432714000500	11/23/94 14:00	5	HCOF#2		0.13							0.00	1.9
9433214000500	11/28/94 14:00	5	HCOF#2		0.05							0.00	1.4
9433314000500	11/29/94 14:00	5	HCOF#2		0.1							0.00	1.6
9433414000500	11/30/94 14:00	5	HCOF#2		0.1							0.00	1.6
9433418000500	11/30/94 18:00	5	HCOF#2		0.12							0.00	1.9
9433514000500	12/1/94 14:00	5	HCOF#2		0.09							0.0	1.6
9433914000500	12/5/94 14:00	5	HCOF#2		0.13							0.0	1.7
9434014000500	12/6/94 14:00	5	HCOF#2		0.09							0.0	1.9
9434214000500	12/8/94 14:00	5	HCOF#2	5004	0.17							0.0	2.0
9434314000500	12/9/94 14:00	5	HCOF#2		0.15							0.0	1.8
9434620000500	12/12/94 20:00	5	HCOF#2		0.17							0.0	2.7
9434714000500	12/13/94 14:00	5	HCOF#2		0.18							0.0	1.6
9434720000500	12/13/94 20:00	5	HCOF#2		0.15							0.0	1.7
9434813000500	12/14/94 13:00	5	HCOF#2		0.17							0.0	1.6
9434818000500	12/14/94 18:00	5	HCOF#2		0.14							0.0	1.8
9434822000500	12/14/94 22:00	5	HCOF#2		0.14							0.0	1.7
9434918000500	12/15/94 18:00	5	HCOF#2		0.15							0.0	
9434922000500	12/15/94 22:00	5	HCOF#2		0.16							0.0	1.7
9435012000500	12/16/94 12:00	5	HCOF#2		0.18							0.0	2.0
9435314000500	12/19/94 14:00	5	HCOF#2		0.18							0.0	1.7
9435414000500	12/20/94 14:00	5	HCOF#2		0.17							0.0	1.7
9435514000500	12/21/94 14:00	5	HCOF#2		0.17							0.0	1.8
9435614000500	12/22/94 14:00	5	HCOF#2		0.17							0.0	1.7
9436114000500	12/27/94 14:00	5	HCOF#2		0.19							0.0	1.7
9436214000500	12/28/94 14:00	5	HCOF#2		0.17							0.0	1.8
9436314000500	12/29/94 14:00	5	HCOF#2		0.19							0.0	1.6
9500914000500	1/9/95 14:00	5	HCOF#2		0.26							0.0	1.7
9501014000500	1/10/95 14:00	5	HCOF#2		0.18							0.0	1.8
9501114000500	1/11/95 14:00	5	HCOF#2		0.17							0.0	1.8

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9501314000500	1/13/95 14:00	5	HCOF#2		0.13							0.0	1.8
9501614000500	1/16/95 14:00	5	HCOF#2		0.19							0.0	1.7
9501714000500	1/17/95 14:00	5	HCOF#2		0.13							0.0	1.7
9501814000500	1/18/95 14:00	5	HCOF#2		0.14							0.0	1.7
9502013000500	1/20/95 13:00	5	HCOF#2		0.2							0.0	1.7
9502314000500	1/23/95 14:00	5	HCOF#2		0.19							0.0	1.8
9502614000500	1/26/95 14:00	5	HCOF#2		0.2								1.6
9502614000500	1/26/95 14:00	5	HCOF#2		0.2								1.6
9503314000500	2/2/95 14:00	5	HCOF#2		0.19								1.8
9503814000500	2/7/95 14:00	5	HCOF#2		0.17								1.9
9504714000500	2/16/95 14:00	5	HCOF#2		0.16								1.8
9505314000500	2/22/95 14:00	5	HCOF#2		0.22								2.0
9505914000500	2/28/95 14:00	5	HCOF#2		0.21								1.3
9506713000500	3/8/95 13:00	5	HCOF#2		0.2								2.0
9416612000600	6/15/94 12:00	6	HCUF#2										23.6
9416714000600	6/16/94 14:00	6	HCUF#2		1.14								27.0
9416813000600	6/17/94 13:00	6	HCUF#2		1								28.3
9417814000600	6/27/94 14:00	6	HCUF#2										25.7
9417914000600	6/28/94 14:00	6	HCUF#2										24.7
9417920000600	6/28/94 20:00	6	HCUF#2		1.41								23.9
9418018000600	6/29/94 18:00	6	HCUF#2										162.0
9418018000600	6/29/94 18:00	6	HCUF#2		1.23								25.5
9418614000600	7/5/94 14:00	6	HCUF#2		0.9								25.8
9418622000600	7/5/94 22:00	6	HCUF#2		0.73								24.3
9418713000600	7/6/94 13:00	6	HCUF#2		0.85								24.1
9418720000600	7/6/94 20:00	6	HCUF#2		1.07								24.5
9418814000600	7/7/94 14:00	6	HCUF#2		0.23								25.8
9418914000600	7/8/94 14:00	6	HCUF#2										24.6
9419217000600	7/11/94 17:00	6	HCUF#2		0.95								25.1
9419222000600	7/11/94 22:00	6	HCUF#2		1.13								27.5
9419313000600	7/12/94 13:00	6	HCUF#2		0.93								25.8
9419317300600	7/12/94 17:30	6	HCUF#2		0.57								623.0
9419414000600	7/13/94 14:00	6	HCUF#2		0.8								29.0
9419513000600	7/14/94 13:00	6	HCUF#2		0.49								24.6
9419518000600	7/14/94 18:00	6	HCUF#2		0.54								23.0
9419522000600	7/14/94 22:00	6	HCUF#2		0.63								3.3
9419918000600	7/18/94 18:00	6	HCUF#2		0.76								18.9
9419922000600	7/18/94 22:00	6	HCUF#2		1.02								24.7
9420014000600	7/19/94 14:00	6	HCUF#2		0.75								23.4
9420018000600	7/19/94 18:00	6	HCUF#2		0.74								25.0
9420022000600	7/19/94 22:00	6	HCUF#2		0.73								21.6
9420114000600	7/20/94 14:00	6	HCUF#2	1574	0.72							16.0	24.6
9420118000600	7/20/94 18:00	6	HCUF#2		0.68								24.5
9420122000600	7/20/94 22:00	6	HCUF#2		0.66								24.2
9420214000600	7/21/94 14:00	6	HCUF#2		0.67								24.4
9420221000600	7/21/94 21:00	6	HCUF#2		0.69								25.9
9420614000600	7/25/94 14:00	6	HCUF#2		0.67								23.9
9420618000600	7/25/94 18:00	6	HCUF#2		0.73								25.0
9420622000600	7/25/94 22:00	6	HCUF#2		0.66								25.6
9420714000600	7/26/94 14:00	6	HCUF#2		0.76								24.4
9420718000600	7/26/94 18:00	6	HCUF#2		0.81								25.4
9420722000600	7/26/94 22:00	6	HCUF#2		0.41								
9420722000600	7/26/94 22:00	6	HCUF#2										25.0
9420814000600	7/27/94 14:00	6	HCUF#2		0.53								24.1
9420819000600	7/27/94 19:00	6	HCUF#2		0.65								24.7
9420913000600	7/28/94 13:00	6	HCUF#2		0.52								20.2
9420921000600	7/28/94 21:00	6	HCUF#2		0.55								26.2
9421315000600	8/1/94 15:00	6	HCUF#2		0.39								25.6
9421322000600	8/1/94 22:00	6	HCUF#2		0.17								1.8
9421417000600	8/2/94 17:00	6	HCUF#2		1.56								28.9
9421514000600	8/3/94 14:00	6	HCUF#2		1								26.4
9422014000600	8/8/94 14:00	6	HCUF#2		0.53								24.6
9422114000600	8/9/94 14:00	6	HCUF#2		0.12								28.5
9422118000600	8/9/94 18:00	6	HCUF#2		1.12								25.0
9422118000600	8/9/94 18:00	6	HCUF#2										25.0
9422122000600	8/9/94 22:00	6	HCUF#2		0.68								27.1
9422214000600	8/10/94 14:00	6	HCUF#2		0.58								25.4

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9422314000600	8/11/94 14:00	6	HCUF#2		0.57								26.2
9422318000600	8/11/94 18:00	6	HCUF#2		0.48								16.2
9422322000600	8/11/94 22:00	6	HCUF#2		0.59								25.4
9424113300600	8/29/94 13:30	6	HCUF#2		0.47							0.00	24.8
9424214000600	8/30/94 14:00	6	HCUF#2		0.57							0.00	23.2
9424314000600	8/31/94 14:00	6	HCUF#2		0.53							0.00	25.4
9424414000600	9/1/94 14:00	6	HCUF#2		0.52							0.00	25.9
9424914000600	9/6/94 14:00	6	HCUF#2		0.48							0.00	23.9
9424918000600	9/6/94 18:00	6	HCUF#2		0.49							0.00	22.6
9426214000600	9/19/94 14:00	6	HCUF#2		0.48							0.00	24.5
9426218000600	9/19/94 18:00	6	HCUF#2		0.52							0.00	26.5
9426222000600	9/19/94 22:00	6	HCUF#2		0.60							0.00	24.8
9426314000600	9/20/94 14:00	6	HCUF#2		0.57							0.00	26.9
9426318000600	9/20/94 18:00	6	HCUF#2		0.60							0.00	25.8
9426515000600	9/22/94 15:00	6	HCUF#2		0.51							0.00	24.9
9426518000600	9/22/94 18:00	6	HCUF#2		0.50							0.00	24.8
9427118000600	9/28/94 18:00	6	HCUF#2		0.65							0.00	27.1
9427214000600	9/29/94 14:00	6	HCUF#2		1.48							0.00	25.1
9427618000600	10/3/94 18:00	6	HCUF#2		0.74		0					0.00	25.4
9427622450600	10/3/94 22:45	6	HCUF#2		0.75							0.00	26.0
9427714000600	10/4/94 14:00	6	HCUF#2		0.69							0.00	24.4
9427718000600	10/4/94 18:00	6	HCUF#2		0.54							0.00	
9427718000600	10/4/94 18:00	6	HCUF#2		0.54							0.00	24.9
9427721300600	10/4/94 21:30	6	HCUF#2		0.49							0.00	25.2
9427814000600	10/5/94 14:00	6	HCUF#2		0.62							0.00	22.1
9427914000600	10/6/94 14:00	6	HCUF#2		0.62							0.00	25.1
9428014000600	10/7/94 14:00	6	HCUF#2		0.46							0.00	21.6
9428314000600	10/10/94 14:00	6	HCUF#2		0.51							0.00	23.7
9428314000600	10/10/94 14:00	6	HCUF#2										23.7
9428318000600	10/10/94 18:00	6	HCUF#2		0.53							0.00	18.4
9428422000600	10/11/94 22:00	6	HCUF#2		1.22							0.00	
9428422000600	10/11/94 22:00	6	HCUF#2		1.22							0.00	19.7
9428422000600	10/11/94 22:00	6	HCUF#2										19.7
9428514000600	10/12/94 14:00	6	HCUF#2		1.10							9.40	20.7
9428518000600	10/12/94 18:00	6	HCUF#2		0.57							0.00	22.2
9428522000600	10/12/94 22:00	6	HCUF#2		1.17							0.00	18.7
9428620000600	10/13/94 20:00	6	HCUF#2		1.03							0.00	26.4
9429114000600	10/18/94 14:00	6	HCUF#2		0.74							0.00	27.6
9429214000600	10/19/94 14:00	6	HCUF#2		0.83							0.00	24.7
9429300000600	10/20/94 0:00	6	HCUF#2	808								0.00	23.3
9429314000600	10/20/94 14:00	6	HCUF#2	524								0.00	27.4
9429714000600	10/24/94 14:00	6	HCUF#2		0.90							0.00	24.1
9429722000600	10/24/94 22:00	6	HCUF#2		0.92							0.00	21.1
9429802000600	10/25/94 2:00	6	HCUF#2		0.93				53			0.00	24.4
9429806000600	10/25/94 6:00	6	HCUF#2		0.69							0.00	19.1
9429818000600	10/25/94 18:00	6	HCUF#2		0.76							0.00	24.9
9429823000600	10/25/94 23:00	6	HCUF#2		1.07							0.00	23.8
9429902000600	10/26/94 2:00	6	HCUF#2		0.72							0.00	25.3
9429906000600	10/26/94 6:00	6	HCUF#2		0.58							0.00	25.6
9429906000600	10/26/94 6:00	6	HCUF#2										25.6
9429914000600	10/26/94 14:00	6	HCUF#2		0.98							0.00	24.5
9429918000600	10/26/94 18:00	6	HCUF#2		0.90							0.00	24.7
9429922000600	10/26/94 22:00	6	HCUF#2		0.52							0.00	1.7
9430002000600	10/27/94 2:00	6	HCUF#2		0.90							0.00	25.1
9430006000600	10/27/94 6:00	6	HCUF#2		0.96							0.00	25.6
9430014000600	10/27/94 14:00	6	HCUF#2		0.94							0.00	24.3
9430018000600	10/27/94 18:00	6	HCUF#2		0.90							0.00	24.7
9430106000600	10/28/94 6:00	6	HCUF#2		1.36							0.00	24.2
9430114000600	10/28/94 14:00	6	HCUF#2		0.74							0.00	24.4
9430118000600	10/28/94 18:00	6	HCUF#2		0.83							0.00	24.9
9430122000600	10/28/94 22:00	6	HCUF#2										4.7
9430122000600	10/28/94 22:00	6	HCUF#2		0.86							0.00	23.8
9430406000600	10/31/94 6:00	6	HCUF#2		0.38							0.00	24.7
9430414000600	10/31/94 14:00	6	HCUF#2		0.93							0.00	25.4
9430418000600	10/31/94 18:00	6	HCUF#2		0.84							0.00	24.6
9430422000600	10/31/94 22:00	6	HCUF#2		1.05							0.00	24.5
9430502000600	11/1/94 2:00	6	HCUF#2		1.00							0.00	25.6

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9430506000600	11/1/94 6:00	6	HCUF#2		0.62							0.00	26.3
9430514000600	11/1/94 14:00	6	HCUF#2		0.94							0.00	24.1
9430518000600	11/1/94 18:00	6	HCUF#2		0.82							0.00	23.6
9430522000600	11/1/94 22:00	6	HCUF#2		0.85							0.00	23.7
9430602000600	11/2/94 2:00	6	HCUF#2		0.65							0.00	24.1
9430606000600	11/2/94 6:00	6	HCUF#2		0.43							0.00	24.3
9430614000600	11/2/94 14:00	6	HCUF#2		0.67							0.00	24.5
9430618000600	11/2/94 18:00	6	HCUF#2		0.89							0.00	23.9
9430622000600	11/2/94 22:00	6	HCUF#2		1.00							0.00	24.0
9430703000600	11/3/94 3:00	6	HCUF#2		0.95							0.00	24.3
9430706000600	11/3/94 6:00	6	HCUF#2		0.88							0.00	23.9
9430714000600	11/3/94 14:00	6	HCUF#2		0.81							0.00	5.3
9430718000600	11/3/94 18:00	6	HCUF#2		1.16							0.00	23.6
9430722000600	11/3/94 22:00	6	HCUF#2										
9430802000600	11/4/94 2:00	6	HCUF#2		0.92							0.00	24.9
9430806000600	11/4/94 6:00	6	HCUF#2		0.86							0.00	24.2
9430814000600	11/4/94 14:00	6	HCUF#2		1.19							0.00	24.5
9431104000600	11/7/94 4:00	6	HCUF#2		0.74							0.00	24.6
9431106000600	11/7/94 6:00	6	HCUF#2		0.79							0.00	24.2
9431114000600	11/7/94 14:00	6	HCUF#2		0.92							0.00	24.8
9431118000600	11/7/94 18:00	6	HCUF#2		0.87							0.00	23.6
9431122000600	11/7/94 22:00	6	HCUF#2		0.91							0.00	20.1
9431202000600	11/8/94 2:00	6	HCUF#2		0.91							0.00	24.8
9431206000600	11/8/94 6:00	6	HCUF#2		1.08							0.00	24.9
9431218000600	11/8/94 18:00	6	HCUF#2		1.18							0.00	24.1
9431222000600	11/8/94 22:00	6	HCUF#2		1.05							0.00	25.1
9431302000600	11/9/94 2:00	6	HCUF#2		0.93							0.00	26.4
9431306000600	11/9/94 6:00	6	HCUF#2		0.95							0.00	26.0
9431314000600	11/9/94 14:00	6	HCUF#2		0.98							0.00	25.5
9431318000600	11/9/94 18:00	6	HCUF#2		0.83							0.00	22.6
9431322000600	11/9/94 22:00	6	HCUF#2		1.03							0.00	25.2
9431402000600	11/10/94 2:00	6	HCUF#2		0.95							0.00	25.2
9431406000600	11/10/94 6:00	6	HCUF#2		1.00							0.00	25.9
9431414000600	11/10/94 14:00	6	HCUF#2		0.9							0.00	25.7
9431418000600	11/10/94 18:00	6	HCUF#2		0.89							0.00	24.6
9431422000600	11/10/94 22:00	6	HCUF#2		0.91							0.00	25.4
9431502000600	11/11/94 2:00	6	HCUF#2		0.92							0.00	25.4
9431506000600	11/11/94 6:00	6	HCUF#2		0.88							0.00	25.0
9431514000600	11/11/94 14:00	6	HCUF#2		0.87							0.00	24.7
9431519000600	11/11/94 19:00	6	HCUF#2		1							0.00	24.7
9432514000600	11/21/94 14:00	6	HCUF#2		0.46							0.00	24.5
9432613000600	11/22/94 13:00	6	HCUF#2		0.74							0.00	26.7
9432714000600	11/23/94 14:00	6	HCUF#2		0.53							0.00	24.5
9433214000600	11/28/94 14:00	6	HCUF#2		0.19							0.00	12.4
9433314000600	11/29/94 14:00	6	HCUF#2		0.68							0.00	25.4
9433414000600	11/30/94 14:00	6	HCUF#2		0.96							0.00	24.9
9433418000600	11/30/94 18:00	6	HCUF#2		0.75							0.00	24.0
9433514000600	12/1/94 14:00	6	HCUF#2		0.56							0.0	23.0
9433914000600	12/5/94 14:00	6	HCUF#2		0.28							0.0	25.1
9434014000600	12/6/94 14:00	6	HCUF#2		0.55							0.0	24.5
9434214000600	12/8/94 14:00	6	HCUF#2		0.75							0.0	23.2
9434314000600	12/9/94 14:00	6	HCUF#2		0.48							0.0	24.5
9434620000600	12/12/94 20:00	6	HCUF#2		0.55							0.0	25.8
9434714000600	12/13/94 14:00	6	HCUF#2		0.61							0.0	25.6
9434720000600	12/13/94 20:00	6	HCUF#2		0.6							0.0	24.7
9434813000600	12/14/94 13:00	6	HCUF#2	4389	0.6							0.0	26.2
9434818000600	12/14/94 18:00	6	HCUF#2		0.67							0.0	26.6
9434822000600	12/14/94 22:00	6	HCUF#2		0.64							0.0	26.0
9434918000600	12/15/94 18:00	6	HCUF#2		0.67							0.0	25.1
9434922000600	12/15/94 22:00	6	HCUF#2		0.59							0.0	24.8
9435012000600	12/16/94 12:00	6	HCUF#2		0.71							0.0	25.4
9435314000600	12/19/94 14:00	6	HCUF#2		0.57							0.0	24.6
9435414000600	12/20/94 14:00	6	HCUF#2		0.47							0.0	25.9
9435514000600	12/21/94 14:00	6	HCUF#2		0.57							0.0	25.5
9435614000600	12/22/94 14:00	6	HCUF#2		0.58							0.0	25.1
9436114000600	12/27/94 14:00	6	HCUF#2		0.5							0.0	23.3
9436214000600	12/28/94 14:00	6	HCUF#2		0.62							0.0	24.3

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9436314000600	12/29/94 14:00	6	HCUF#2		0.64							0.0	22.0
9500914000600	1/9/95 14:00	6	HCUF#2		0.5							0.0	22.2
9501014000600	1/10/95 14:00	6	HCUF#2		0.76							0.0	22.3
9501114000600	1/11/95 14:00	6	HCUF#2		0.67							0.0	24.3
9501314000600	1/13/95 14:00	6	HCUF#2		0.58							0.0	23.4
9501614000600	1/16/95 14:00	6	HCUF#2		0.51							0.0	22.9
9501714000600	1/17/95 14:00	6	HCUF#2		0.53							0.0	23.2
9501814000600	1/18/95 14:00	6	HCUF#2		0.49							0.0	21.3
9502013000600	1/20/95 13:00	6	HCUF#2		0.58							0.0	23.9
9502314000600	1/23/95 14:00	6	HCUF#2		0.5							0.0	22.8
9502614000600	1/26/95 14:00	6	HCUF#2		0.58								22.3
9502614000600	1/26/95 14:00	6	HCUF#2		0.58								22.3
9503314000600	2/2/95 14:00	6	HCUF#2		0.62								20.8
9503814000600	2/7/95 14:00	6	HCUF#2		0.41								11.6
9504715000600	2/16/95 15:00	6	HCUF#2		0.51								21.0
9505314000600	2/22/95 14:00	6	HCUF#2		0.57								23.8
9505914000600	2/28/95 14:00	6	HCUF#2		0.59								24.7
9506713000600	3/8/95 13:00	6	HCUF#2		0.53								22.6
9418000000700	6/29/94 0:00	7	Mg TOF										
9418000000700	6/29/94 0:00	7	Mg TOF										
9415212000800	6/1/94 12:00	8	Mg TUF		112500								16.3
9415810300800	6/7/94 10:30	8	Mg TUF		106305								
9415912000800	6/8/94 12:00	8	Mg TUF		125006								
9416612000800	6/15/94 12:00	8	Mg TUF		13.11								19.4
9416714000800	6/16/94 14:00	8	Mg TUF		13.27								19.7
9416813000800	6/17/94 13:00	8	Mg TUF		13.44								20.0
9417300000800	6/22/94 0:00	8	Mg TUF		13.32								19.9
9417814000800	6/27/94 14:00	8	Mg TUF		16.18								24.1
9417914000800	6/28/94 14:00	8	Mg TUF		2								22.0
9417920000800	6/28/94 20:00	8	Mg TUF		13.64								20.2
9418018000800	6/29/94 18:00	8	Mg TUF		13.72								21.5
9418120000800	6/30/94 20:00	8	Mg TUF		10.11								16.8
9418614000800	7/5/94 14:00	8	Mg TUF		9.32								14.3
9418618000800	7/5/94 18:00	8	Mg TUF		9.91								15.7
9418622000800	7/5/94 22:00	8	Mg TUF		3.62								14.9
9418713000800	7/6/94 13:00	8	Mg TUF		10.02								15.4
9418720000800	7/6/94 20:00	8	Mg TUF		1.01								15.5
9418814000800	7/7/94 14:00	8	Mg TUF		10.38								15.9
9418914000800	7/8/94 14:00	8	Mg TUF		10.62								16.3
9419217000800	7/11/94 17:00	8	Mg TUF		11.1								14.9
9419222000800	7/11/94 22:00	8	Mg TUF		13.46								15.1
9419313000800	7/12/94 13:00	8	Mg TUF		10.11								15.1
9419317300800	7/12/94 17:30	8	Mg TUF		10.25								15.1
9419414000800	7/13/94 14:00	8	Mg TUF		9.25								13.6
9419418000800	7/13/94 18:00	8	Mg TUF		9.68								14.6
9419513000800	7/14/94 13:00	8	Mg TUF		6.17								9.4
9419518000800	7/14/94 18:00	8	Mg TUF		6.2								8.0
9419522000800	7/14/94 22:00	8	Mg TUF		5.07								8.0
9419914000800	7/18/94 14:00	8	Mg TUF		7.23								10.8
9419918000800	7/18/94 18:00	8	Mg TUF		6.47								9.0
9419922000800	7/18/94 22:00	8	Mg TUF		6.01								8.0
9420014000800	7/19/94 14:00	8	Mg TUF		5.1								8.2
9420018000800	7/19/94 18:00	8	Mg TUF		5.38								8.5
9420022000800	7/19/94 22:00	8	Mg TUF		5.87								7.2
9420114000800	7/20/94 14:00	8	Mg TUF		5.72								10.1
9420122000800	7/20/94 22:00	8	Mg TUF		5.02								8.6
9420214000800	7/21/94 14:00	8	Mg TUF		5.48								8.7
9420221000800	7/21/94 21:00	8	Mg TUF		5.93								9.9
9420614000800	7/25/94 14:00	8	Mg TUF		7.11								11.2
9420618000800	7/25/94 18:00	8	Mg TUF		6.87								11.7
9420622000800	7/25/94 22:00	8	Mg TUF		6.84								11.3
9420714000800	7/26/94 14:00	8	Mg TUF		7.41								11.5
9420718000800	7/26/94 18:00	8	Mg TUF		7.27								11.6
9420722000800	7/26/94 22:00	8	Mg TUF		7.22								12.2
9420814000800	7/27/94 14:00	8	Mg TUF		7.59								12.1
9420819000800	7/27/94 19:00	8	Mg TUF		7.49								12.1
9420913000800	7/28/94 13:00	8	Mg TUF		7.74								11.8

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9420921000800	7/28/94 21:00	8	Mg TUF		7.88								13.1
9421315000800	8/1/94 15:00	8	Mg TUF		8.8								14.4
9421322000800	8/1/94 22:00	8	Mg TUF		8.5								13.0
9421500210800	8/3/94 0:21	8	Mg TUF										10.0
9421514000800	8/3/94 14:00	8	Mg TUF		7.01								11.8
9421614000800	8/4/94 14:00	8	Mg TUF		6.75								11.0
9421618000800	8/4/94 18:00	8	Mg TUF		6.79								10.8
9422014000800	8/8/94 14:00	8	Mg TUF		7.57							0.00	12.0
9422022000800	8/8/94 22:00	8	Mg TUF		8.1							0.00	12.3
9422114000800	8/9/94 14:00	8	Mg TUF		7.98							0.00	12.2
9422118000800	8/9/94 18:00	8	Mg TUF		8.02							0.00	13.1
9422122000800	8/9/94 22:00	8	Mg TUF		8.25							0.00	13.6
9422214000800	8/10/94 14:00	8	Mg TUF		8.36							0.00	13.5
9422314000800	8/11/94 14:00	8	Mg TUF		8.57							0.00	13.1
9422318000800	8/11/94 18:00	8	Mg TUF		8.59							0.00	13.1
9422322000800	8/11/94 22:00	8	Mg TUF		8.63							0.00	13.6
9423014000800	8/18/94 14:00	8	Mg TUF		9.83							0.00	14.5
9423114000800	8/19/94 14:00	8	Mg TUF		10.28							0.00	15.4
9424113300800	8/29/94 13:30	8	Mg TUF		10.59							0.00	15.9
9424214000800	8/30/94 14:00	8	Mg TUF		10.65							0.00	15.9
9424314000800	8/31/94 14:00	8	Mg TUF		9.99							0.00	14.9
9424414000800	9/1/94 14:00	8	Mg TUF		10.23							0.00	14.7
9424914000800	9/6/94 14:00	8	Mg TUF		11.33							0.00	16.7
9424918000800	9/6/94 18:00	8	Mg TUF		11.37							0.00	16.5
9425714000800	9/14/94 14:00	8	Mg TUF		12.48							0.00	18.0
9426214000800	9/19/94 14:00	8	Mg TUF		10.76							0.00	15.9
9426218000800	9/19/94 18:00	8	Mg TUF		10.97							0.00	16.1
9426222000800	9/19/94 22:00	8	Mg TUF		10.92							0.00	16.7
9426314000800	9/20/94 14:00	8	Mg TUF		10.68							0.00	15.8
9426318000800	9/20/94 18:00	8	Mg TUF		10.62							0.00	15.9
9426414000800	9/21/94 14:00	8	Mg TUF		10.33							0.00	16.2
9426515000800	9/22/94 15:00	8	Mg TUF		10.36							0.00	16.1
9426518000800	9/22/94 18:00	8	Mg TUF		10.95							0.00	16.3
9426522000800	9/22/94 22:00	8	Mg TUF		10.94							0.00	16.4
9427118000800	9/28/94 18:00	8	Mg TUF		11.28							0.00	17.0
9427122000800	9/28/94 22:00	8	Mg TUF		11.30							0.00	16.8
9427214000800	9/29/94 14:00	8	Mg TUF		11.02							0.00	16.4
9427614000800	10/3/94 14:00	8	Mg TUF		11.36							0.00	16.6
9427618000800	10/3/94 18:00	8	Mg TUF		11.28							0.00	16.8
9427622450800	10/3/94 22:45	8	Mg TUF		11.38							0.00	17.0
9427714000800	10/4/94 14:00	8	Mg TUF		11.49							0.00	17.0
9427718000800	10/4/94 18:00	8	Mg TUF		11.40							0.00	17.2
9427721300800	10/4/94 21:30	8	Mg TUF		11.32							0.00	16.8
9427814000800	10/5/94 14:00	8	Mg TUF		11.05							0.00	16.6
9427914000800	10/6/94 14:00	8	Mg TUF		11.26							0.00	17.0
9428014000800	10/7/94 14:00	8	Mg TUF		11.37							0.00	16.7
9428314000800	10/10/94 14:00	8	Mg TUF		12.02							0.00	17.3
9428318000800	10/10/94 18:00	8	Mg TUF		11.91							0.00	17.8
9428322000800	10/10/94 22:00	8	Mg TUF		11.97							0.00	18.0
9428414000800	10/11/94 14:00	8	Mg TUF		11.91							0.00	17.4
9428418000800	10/11/94 18:00	8	Mg TUF		11.95							0.00	17.8
9428422000800	10/11/94 22:00	8	Mg TUF		2.90							1.00	
9428422000800	10/11/94 22:00	8	Mg TUF		2.90							1.00	
9428422000800	10/11/94 22:00	8	Mg TUF		11.86							0.00	17.5
9428514000800	10/12/94 14:00	8	Mg TUF		11.27							0.00	17.0
9428518000800	10/12/94 18:00	8	Mg TUF		11.70							0.00	17.6
9428522000800	10/12/94 22:00	8	Mg TUF		11.56							0.00	17.2
9428614000800	10/13/94 14:00	8	Mg TUF		11.77							0.00	17.1
9428620000800	10/13/94 20:00	8	Mg TUF		11.64							0.00	17.5
9429014000800	10/17/94 14:00	8	Mg TUF		11.96							0.00	17.5
9429114000800	10/18/94 14:00	8	Mg TUF	5004	11.97							0.00	18.3
9429214000800	10/19/94 14:00	8	Mg TUF		11.96							0.00	18.2
9429300000800	10/20/94 0:00	8	Mg TUF	19225								0.00	17.3
9429314000800	10/20/94 14:00	8	Mg TUF	19451								0.00	17.2
9429714000800	10/24/94 14:00	8	Mg TUF		12.06							0.00	17.9
9429718000800	10/24/94 18:00	8	Mg TUF		11.68							0.00	17.6
9429722000800	10/24/94 22:00	8	Mg TUF		11.26							0.00	17.4

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9429802000800	10/25/94 2:00	8	Mg TUF		11.18							0.00	17.3
9429806000800	10/25/94 6:00	8	Mg TUF		11.06							0.00	17.0
9429814000800	10/25/94 14:00	8	Mg TUF		11.24							0.00	16.9
9429818000800	10/25/94 18:00	8	Mg TUF		11.10							0.00	17.1
9429823000800	10/25/94 23:00	8	Mg TUF		13.37							0.00	17.2
9429902000800	10/26/94 2:00	8	Mg TUF		9.95							0.00	15.5
9429906000800	10/26/94 6:00	8	Mg TUF		9.20							0.00	14.6
9429910000800	10/26/94 10:00	8	Mg TUF										13.8
9429912000800	10/26/94 12:00	8	Mg TUF										13.6
9429914000800	10/26/94 14:00	8	Mg TUF		8.62							0.00	13.7
9429918000800	10/26/94 18:00	8	Mg TUF		8.83							0.00	14.0
9429922000800	10/26/94 22:00	8	Mg TUF		8.86							0.00	13.8
9430002000800	10/27/94 2:00	8	Mg TUF		8.75							0.00	13.6
9430006000800	10/27/94 6:00	8	Mg TUF		8.92							0.00	13.7
9430014000800	10/27/94 14:00	8	Mg TUF		9.21							0.00	13.8
9430018000800	10/27/94 18:00	8	Mg TUF		9.00							0.00	14.0
9430022000800	10/27/94 22:00	8	Mg TUF		9.07							0.00	14.1
9430102000800	10/28/94 2:00	8	Mg TUF		9.04							0.00	13.6
9430106000800	10/28/94 6:00	8	Mg TUF		8.87							0.00	14.0
9430114000800	10/28/94 14:00	8	Mg TUF		8.66							0.00	13.0
9430118000800	10/28/94 18:00	8	Mg TUF		8.86							0.00	13.6
9430122000800	10/28/94 22:00	8	Mg TUF		9.13							0.00	14.2
9430402000800	10/31/94 2:00	8	Mg TUF		9.75							0.00	14.7
9430406000800	10/31/94 6:00	8	Mg TUF		9.77							0.00	14.9
9430414000800	10/31/94 14:00	8	Mg TUF		10.56							0.00	14.7
9430418000800	10/31/94 18:00	8	Mg TUF		9.70							0.00	14.9
9430422000800	10/31/94 22:00	8	Mg TUF		9.61							0.00	14.9
9430502000800	11/1/94 2:00	8	Mg TUF		9.78							0.00	14.8
9430506000800	11/1/94 6:00	8	Mg TUF		9.84							0.00	15.2
9430513000800	11/1/94 13:00	8	Mg TUF										12.2
9430514000800	11/1/94 14:00	8	Mg TUF		7.89							0.00	12.3
9430518000800	11/1/94 18:00	8	Mg TUF		8.65							0.00	13.4
9430522000800	11/1/94 22:00	8	Mg TUF		7.83							0.00	13.7
9430602000800	11/2/94 2:00	8	Mg TUF		8.16							0.00	12.7
9430606000800	11/2/94 6:00	8	Mg TUF		7.63							0.00	12.1
9430613000800	11/2/94 13:00	8	Mg TUF										13.8
9430613000800	11/2/94 13:00	8	Mg TUF										13.8
9430614000800	11/2/94 14:00	8	Mg TUF		8.04							0.00	12.5
9430618000800	11/2/94 18:00	8	Mg TUF		8.36							0.00	13.3
9430622000800	11/2/94 22:00	8	Mg TUF		8.82							0.00	13.8
9430703000800	11/3/94 3:00	8	Mg TUF		8.86							0.00	13.9
9430706000800	11/3/94 6:00	8	Mg TUF		8.59							0.00	13.3
9430712000800	11/3/94 12:00	8	Mg TUF										14.5
9430714000800	11/3/94 14:00	8	Mg TUF		9.28							0.00	14.4
9430718000800	11/3/94 18:00	8	Mg TUF		9.28							0.00	14.5
9430722000800	11/3/94 22:00	8	Mg TUF		9.68							0.00	14.4
9430802000800	11/4/94 2:00	8	Mg TUF		9.27							0.00	14.3
9430806000800	11/4/94 6:00	8	Mg TUF		6.66							0.00	13.1
9430814000800	11/4/94 14:00	8	Mg TUF		9.56							0.00	14.6
9431104000800	11/7/94 4:00	8	Mg TUF		10.73							0.00	16.6
9431106000800	11/7/94 6:00	8	Mg TUF		10.23							0.00	16.0
9431114000800	11/7/94 14:00	8	Mg TUF		9.48							0.00	14.3
9431118000800	11/7/94 18:00	8	Mg TUF		10.23							0.00	15.5
9431122000800	11/7/94 22:00	8	Mg TUF		9.30							0.00	13.9
9431202000800	11/8/94 2:00	8	Mg TUF		9.63							0.00	14.6
9431206000800	11/8/94 6:00	8	Mg TUF		8.42							0.00	13.1
9431218000800	11/8/94 18:00	8	Mg TUF		8.92							0.00	13.9
9431222000800	11/8/94 22:00	8	Mg TUF		7.93							0.00	13.7
9431302000800	11/9/94 2:00	8	Mg TUF		8.87							0.00	14.0
9431306000800	11/9/94 6:00	8	Mg TUF		8.76							0.00	13.5
9431314000800	11/9/94 14:00	8	Mg TUF		9.81							0.00	14.5
9431318000800	11/9/94 18:00	8	Mg TUF		10.12							0.00	15.5
9431322000800	11/9/94 22:00	8	Mg TUF		9.54							0.00	14.7
9431402000800	11/10/94 2:00	8	Mg TUF		9.52							0.00	14.5
9431406000800	11/10/94 6:00	8	Mg TUF		9.26							0.00	14.4
9431414000800	11/10/94 14:00	8	Mg TUF	5004	9.58							1.00	14.1
9431418000800	11/10/94 18:00	8	Mg TUF		10.08							0.00	15.3

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9431422000800	11/10/94 22:00	8	Mg TUF		9.96							0.00	15.0
9431502000800	11/11/94 2:00	8	Mg TUF		8.61							0.00	13.1
9431506000800	11/11/94 6:00	8	Mg TUF		9.05							0.00	13.7
9431514000800	11/11/94 14:00	8	Mg TUF		9.03							0.00	13.4
9431519000800	11/11/94 19:00	8	Mg TUF		9.88							0.00	14.6
9432111000800	11/17/94 11:00	8	Mg TUF										16.3
9432214000800	11/18/94 14:00	8	Mg TUF		11.47							0.00	16.7
9432514000800	11/21/94 14:00	8	Mg TUF		11.62							0.00	17.1
9432613000800	11/22/94 13:00	8	Mg TUF		11.62							0.00	17.2
9432714000800	11/23/94 14:00	8	Mg TUF		11.8							0.00	17.4
9433214000800	11/28/94 14:00	8	Mg TUF		10.85							0.00	16.7
9433314000800	11/29/94 14:00	8	Mg TUF		6.93							0.00	12.2
9433414000800	11/30/94 14:00	8	Mg TUF		7.88							0.00	14.6
9433418000800	11/30/94 18:00	8	Mg TUF		8.65							0.00	14.5
9433514000800	12/1/94 14:00	8	Mg TUF		7.63							0.0	13.9
9433914000800	12/5/94 14:00	8	Mg TUF		7.2							0.0	2.1
9433914000800	12/5/94 14:00	8	Mg TUF		7.2							0.0	12.2
9434012000800	12/6/94 12:00	8	Mg TUF										10.9
9434014000800	12/6/94 14:00	8	Mg TUF		6.38							0.0	11.9
9434100000800	12/7/94 0:00	8	Mg TUF	5004								1.0	12.8
9434214000800	12/8/94 14:00	8	Mg TUF		7.54							0.0	12.5
9434314000800	12/9/94 14:00	8	Mg TUF		6.73							0.0	10.4
9434619000800	12/12/94 19:00	8	Mg TUF										11.9
9434620000800	12/12/94 20:00	8	Mg TUF		6.75							0.0	11.2
9434714000800	12/13/94 14:00	8	Mg TUF		7.08							0.0	12.0
9434720000800	12/13/94 20:00	8	Mg TUF		7.01							0.0	11.8
9434808300800	12/14/94 8:30	8	Mg TUF										13.6
9434813000800	12/14/94 13:00	8	Mg TUF		7.27							0.0	12.0
9434818000800	12/14/94 18:00	8	Mg TUF		7.01							0.0	12.2
9434822000800	12/14/94 22:00	8	Mg TUF		7.5							0.0	12.6
9434918000800	12/15/94 18:00	8	Mg TUF		5.67							0.0	9.3
9434922000800	12/15/94 22:00	8	Mg TUF		6.06							0.0	9.8
9435008000800	12/16/94 8:00	8	Mg TUF										10.8
9435012000800	12/16/94 12:00	8	Mg TUF		6.33							0.0	9.9
9435314000800	12/19/94 14:00	8	Mg TUF		7.41							0.0	11.6
9435414000800	12/20/94 14:00	8	Mg TUF		7.9							0.0	12.3
9435514000800	12/21/94 14:00	8	Mg TUF		7.9							0.0	12.4
9435614000800	12/22/94 14:00	8	Mg TUF		8.24							0.0	12.8
9436114000800	12/27/94 14:00	8	Mg TUF		9.58							0.0	14.0
9436214000800	12/28/94 14:00	8	Mg TUF		9.55							0.0	14.8
9436314000800	12/29/94 14:00	8	Mg TUF		9.12							0.0	14.3
9500614000800	1/6/95 14:00	8	Mg TUF		10.52							0.0	17.5
9500914000800	1/9/95 14:00	8	Mg TUF		9.2							0.0	15.1
9501014000800	1/10/95 14:00	8	Mg TUF		8.85							0.0	14.9
9501114000800	1/11/95 14:00	8	Mg TUF		8.89							0.0	15.0
9501314000800	1/13/95 14:00	8	Mg TUF		9.73							0.0	16.4
9501614000800	1/16/95 14:00	8	Mg TUF		10.46							0.0	16.1
9501710300800	1/17/95 10:30	8	Mg TUF										
9501714000800	1/17/95 14:00	8	Mg TUF		7.25							0.0	11.5
9501814000800	1/18/95 14:00	8	Mg TUF		8.14							0.0	12.7
9501914000800	1/19/95 14:00	8	Mg TUF		7.91							0.0	12.3
9502012000800	1/20/95 12:00	8	Mg TUF										12.4
9502013000800	1/20/95 13:00	8	Mg TUF		7.97							0.0	12.2
9502314000800	1/23/95 14:00	8	Mg TUF		8.11							0.0	12.8
9502614000800	1/26/95 14:00	8	Mg TUF		8.81								13.6
9502614000800	1/26/95 14:00	8	Mg TUF		8.81								13.6
9503314000800	2/2/95 14:00	8	Mg TUF		10.4								16.2
9503814000800	2/7/95 14:00	8	Mg TUF		10.85								16.9
9503914000800	2/8/95 14:00	8	Mg TUF		10.75								16.6
9504014000800	2/9/95 14:00	8	Mg TUF		11.01								16.7
9504514000800	2/14/95 14:00	8	Mg TUF		11.17								16.6
9504714000800	2/16/95 14:00	8	Mg TUF		10.56								15.8
9505114000800	2/20/95 14:00	8	Mg TUF		10.81								16.0
9505214000800	2/21/95 14:00	8	Mg TUF		10.78								16.3
9505314000800	2/22/95 14:00	8	Mg TUF		10.14								15.4
9505914000800	2/28/95 14:00	8	Mg TUF		11.32								17.1
9506213000800	3/3/95 13:00	8	Mg TUF		11.37								17.4

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9506611000800	3/7/95 11:00	8	Mg TUF										18.1
9506713000800	3/8/95 13:00	8	Mg TUF		10.34								16.9
9506810000800	3/9/95 10:00	8	Mg TUF		10.25								16.6
9506910000800	3/10/95 10:00	8	Mg TUF			11							17.0
9415212000900	6/1/94 12:00	9	Ox. Feed	2359		23829	5656	13156	2511	24	5769	6.4	
9415810300900	6/7/94 10:30	9	Ox. Feed	2165		24960	6224			47	6030	6.2	
9415911000900	6/8/94 11:00	9	Ox. Feed				6720					6.3	
9415912000900	6/8/94 12:00	9	Ox. Feed	2384		24450	6320		2872	47	5906	6.3	19.3
9415915000900	6/8/94 15:00	9	Ox. Feed				6480					6.4	
9416009150900	6/9/94 9:15	9	Ox. Feed				6480					6.4	
9416010000900	6/9/94 10:00	9	Ox. Feed				6656					6.4	
9416011000900	6/9/94 11:00	9	Ox. Feed	2277		24249	6400	14523	2893	53	5854	6.4	
9416015000900	6/9/94 15:00	9	Ox. Feed				6520					6.5	
9416609000900	6/15/94 9:00	9	Ox. Feed				5304					6.4	
9416610000900	6/15/94 10:00	9	Ox. Feed			22078	5192	5490	2659	37	5336	6.4	
9416611000900	6/15/94 11:00	9	Ox. Feed				5704					6.4	
9416612000900	6/15/94 12:00	9	Ox. Feed				5504					6.4	
9416613000900	6/15/94 13:00	9	Ox. Feed				5776					6.4	
9416614000900	6/15/94 14:00	9	Ox. Feed				5752					6.4	
9416615000900	6/15/94 15:00	9	Ox. Feed				5680					6.4	
9416710000900	6/16/94 10:00	9	Ox. Feed				5504					6.4	
9416710300900	6/16/94 10:30	9	Ox. Feed			23539	5688		2797	43	5688	6.4	
9416711000900	6/16/94 11:00	9	Ox. Feed				5520					6.4	
9416712000900	6/16/94 12:00	9	Ox. Feed				5472					6.4	
9416713000900	6/16/94 13:00	9	Ox. Feed				5712					6.4	
9416715000900	6/16/94 15:00	9	Ox. Feed				5928					6.4	
9416809000900	6/17/94 9:00	9	Ox. Feed				6224					6.3	
9416810000900	6/17/94 10:00	9	Ox. Feed			24069	6176	10235	2872	37	5820	6.3	
9416811000900	6/17/94 11:00	9	Ox. Feed				6240					6.3	
9416812000900	6/17/94 12:00	9	Ox. Feed				6432					6.3	
9416813000900	6/17/94 13:00	9	Ox. Feed				6136					6.3	
9417300000900	6/22/94 0:00	9	Ox. Feed	1735		24379	5264	12250	2297	58	5882	6.1	
9417809300900	6/27/94 9:30	9	Ox. Feed				4024					6.5	
9417810000900	6/27/94 10:00	9	Ox. Feed			26381	4136	14865	4159	57	6369	6.5	
9417811000900	6/27/94 11:00	9	Ox. Feed				4280					6.5	
9417812300900	6/27/94 12:30	9	Ox. Feed				4264					6.5	
9417813000900	6/27/94 13:00	9	Ox. Feed				4416					6.5	
9417814000900	6/27/94 14:00	9	Ox. Feed				4352					6.5	
9417815000900	6/27/94 15:00	9	Ox. Feed				4416					6.6	
9417910000900	6/28/94 10:00	9	Ox. Feed				5464					6.5	
9417911000900	6/28/94 11:00	9	Ox. Feed			25220	5456		3191	112	6053	6.5	
9417912000900	6/28/94 12:00	9	Ox. Feed				5384					6.5	
9417913000900	6/28/94 13:00	9	Ox. Feed				5312					6.5	
9417914000900	6/28/94 14:00	9	Ox. Feed				4624					6.4	
9417915000900	6/28/94 15:00	9	Ox. Feed				5352						
9417916000900	6/28/94 16:00	9	Ox. Feed				5296					6.4	
9417917000900	6/28/94 17:00	9	Ox. Feed				5496					6.4	
9417918000900	6/28/94 18:00	9	Ox. Feed				5640					6.3	
9417919000900	6/28/94 19:00	9	Ox. Feed				5784					6.4	
9417919000900	6/28/94 19:00	9	Ox. Feed				5784					6.4	
9417920000900	6/28/94 20:00	9	Ox. Feed	1902								6.3	
9417920000900	6/28/94 20:00	9	Ox. Feed									6.3	
9417920000900	6/28/94 20:00	9	Ox. Feed				5680						
9417920000900	6/28/94 20:00	9	Ox. Feed				5680					6.3	
9417921000900	6/28/94 21:00	9	Ox. Feed				5808					6.6	
9417922000900	6/28/94 22:00	9	Ox. Feed				5664					6.5	
9418000000900	6/29/94 0:00	9	Ox. Feed				6600					6.4	
9418015000900	6/29/94 15:00	9	Ox. Feed			25330	6504	5273	2659	62	6111	6.3	
9418016000900	6/29/94 16:00	9	Ox. Feed				6504					5.5	
9418018000900	6/29/94 18:00	9	Ox. Feed				6504					6.4	
9418018000900	6/29/94 18:00	9	Ox. Feed				6504					6.4	
9418019000900	6/29/94 19:00	9	Ox. Feed				6408					6.4	
9418020000900	6/29/94 20:00	9	Ox. Feed				6512					6.4	
9418111000900	6/30/94 11:00	9	Ox. Feed									5.6	
9418111000900	6/30/94 11:00	9	Ox. Feed				240					6.8	
9418112000900	6/30/94 12:00	9	Ox. Feed				128					6.8	
9418113000900	6/30/94 13:00	9	Ox. Feed				288					6.8	

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9418116000900	6/30/94 16:00	9	Ox. Feed				6624					6.7	
9418117000900	6/30/94 17:00	9	Ox. Feed				6624					6.8	
9418118000900	6/30/94 18:00	9	Ox. Feed				6752					6.7	
9418119000900	6/30/94 19:00	9	Ox. Feed				6536					6.8	
9418120000900	6/30/94 20:00	9	Ox. Feed				6808					6.8	
9418609000900	7/5/94 9:00	9	Ox. Feed				3112					6.6	
9418610000900	7/5/94 10:00	9	Ox. Feed			18765	3456	13952	2872	43	4529	6.5	
9418611000900	7/5/94 11:00	9	Ox. Feed				3408					6.5	
9418612000900	7/5/94 12:00	9	Ox. Feed				3320					6.5	
9418613000900	7/5/94 13:00	9	Ox. Feed				3504					6.6	
9418614000900	7/5/94 14:00	9	Ox. Feed				3464					6.5	
9418616000900	7/5/94 16:00	9	Ox. Feed				3240					6.5	
9418617000900	7/5/94 17:00	9	Ox. Feed				3416					6.6	
9418618000900	7/5/94 18:00	9	Ox. Feed				3272					6.7	
9418619000900	7/5/94 19:00	9	Ox. Feed				3152					6.7	
9418620000900	7/5/94 20:00	9	Ox. Feed				3088					6.6	
9418621000900	7/5/94 21:00	9	Ox. Feed				3224					6.7	
9418622000900	7/5/94 22:00	9	Ox. Feed				3144					6.7	
9418709000900	7/6/94 9:00	9	Ox. Feed				3360					6.6	
9418710000900	7/6/94 10:00	9	Ox. Feed			18435	3160	12606	3212	55	4441	6.6	
9418711000900	7/6/94 11:00	9	Ox. Feed				3360					6.6	
9418712000900	7/6/94 12:00	9	Ox. Feed				3192					6.6	
9418713000900	7/6/94 13:00	9	Ox. Feed				3184					6.7	
9418714000900	7/6/94 14:00	9	Ox. Feed				3064					6.9	
9418715000900	7/6/94 15:00	9	Ox. Feed				3264					6.9	
9418716000900	7/6/94 16:00	9	Ox. Feed				3208					6.8	
9418717000900	7/6/94 17:00	9	Ox. Feed				3192					6.8	
9418718000900	7/6/94 18:00	9	Ox. Feed				3160						
9418719000900	7/6/94 19:00	9	Ox. Feed				3144					6.8	
9418720000900	7/6/94 20:00	9	Ox. Feed				3136					6.8	
9418809000900	7/7/94 9:00	9	Ox. Feed				3216					6.6	
9418810000900	7/7/94 10:00	9	Ox. Feed			18785	3368	2223	3382	81	4510	6.6	
9418811000900	7/7/94 11:00	9	Ox. Feed				3424					6.6	
9418812000900	7/7/94 12:00	9	Ox. Feed				3352					6.6	
9418813000900	7/7/94 13:00	9	Ox. Feed				3360					6.6	
9418814000900	7/7/94 14:00	9	Ox. Feed				3296					6.6	
9418908000900	7/8/94 8:00	9	Ox. Feed				3336		6935				
9418909000900	7/8/94 9:00	9	Ox. Feed				4432					6.5	
9418910000900	7/8/94 10:00	9	Ox. Feed				4352					6.6	
9418910300900	7/8/94 10:30	9	Ox. Feed			20246	4568	13740	3563	39	4890	6.6	
9418911000900	7/8/94 11:00	9	Ox. Feed				3912					6.5	
9418912000900	7/8/94 12:00	9	Ox. Feed				4488					6.5	
9418913000900	7/8/94 13:00	9	Ox. Feed				4408					6.6	
9418914000900	7/8/94 14:00	9	Ox. Feed				4736					6.5	
9419212000900	7/11/94 12:00	9	Ox. Feed				4864					6.7	
9419213000900	7/11/94 13:00	9	Ox. Feed				4904					6.6	
9419214000900	7/11/94 14:00	9	Ox. Feed			19085	4848	12868	3201	53	4600	6.7	
9419215000900	7/11/94 15:00	9	Ox. Feed				4896					6.6	
9419216000900	7/11/94 16:00	9	Ox. Feed									6.6	
9419217000900	7/11/94 17:00	9	Ox. Feed				4736					6.6	
9419218000900	7/11/94 18:00	9	Ox. Feed				4608					6.7	
9419219000900	7/11/94 19:00	9	Ox. Feed				4704					6.4	
9419220000900	7/11/94 20:00	9	Ox. Feed				4816					6.4	
9419221000900	7/11/94 21:00	9	Ox. Feed				4736					6.4	
9419222000900	7/11/94 22:00	9	Ox. Feed				128					6.4	
9419309000900	7/12/94 9:00	9	Ox. Feed				4544					6.4	
9419310000900	7/12/94 10:00	9	Ox. Feed			21887	4392	12252	3286	37	5290	6.4	
9419311000900	7/12/94 11:00	9	Ox. Feed				4488					6.4	
9419311110900	7/12/94 11:11	9	Ox. Feed				4600					6.4	
9419313000900	7/12/94 13:00	9	Ox. Feed				4472					6.4	
9419314000900	7/12/94 14:00	9	Ox. Feed				4232					6.6	
9419315000900	7/12/94 15:00	9	Ox. Feed				4336					6.3	
9419316000900	7/12/94 16:00	9	Ox. Feed				4112					6.5	
9419317000900	7/12/94 17:00	9	Ox. Feed				4208					6.5	
9419317300900	7/12/94 17:30	9	Ox. Feed				4256					6.5	
9419318000900	7/12/94 18:00	9	Ox. Feed				4200					6.5	
9419319000900	7/12/94 19:00	9	Ox. Feed				4320					6.5	

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9419409000900	7/13/94 9:00	9	Ox. Feed				4840					6.8	
9419410000900	7/13/94 10:00	9	Ox. Feed			21757	4736	11839	3435	42	5256	6.7	
9419411000900	7/13/94 11:00	9	Ox. Feed				4680					6.7	
9419412000900	7/13/94 12:00	9	Ox. Feed				4912					6.6	
9419413000900	7/13/94 13:00	9	Ox. Feed				4888					6.6	
9419414000900	7/13/94 14:00	9	Ox. Feed				5016					6.6	
9419415000900	7/13/94 15:00	9	Ox. Feed				4984					6.7	
9419416000900	7/13/94 16:00	9	Ox. Feed				4864					6.6	
9419417000900	7/13/94 17:00	9	Ox. Feed				4856					6.6	
9419418000900	7/13/94 18:00	9	Ox. Feed				4856					6.5	
9419509000900	7/14/94 9:00	9	Ox. Feed				5320					6.7	
9419510000900	7/14/94 10:00	9	Ox. Feed			22318	5088	13176	3446	45	5390	6.8	
9419511000900	7/14/94 11:00	9	Ox. Feed				5272					6.8	
9419512000900	7/14/94 12:00	9	Ox. Feed				5272					6.7	
9419513000900	7/14/94 13:00	9	Ox. Feed				5168					6.8	
9419514000900	7/14/94 14:00	9	Ox. Feed				5200					6.9	
9419515000900	7/14/94 15:00	9	Ox. Feed				5144					6.8	
9419516000900	7/14/94 16:00	9	Ox. Feed				4840					6.8	
9419517000900	7/14/94 17:00	9	Ox. Feed				4912					6.8	
9419518000900	7/14/94 18:00	9	Ox. Feed				4616					7.1	
9419519000900	7/14/94 19:00	9	Ox. Feed				4512					7.1	
9419520000900	7/14/94 20:00	9	Ox. Feed				4696					7.0	
9419521000900	7/14/94 21:00	9	Ox. Feed				4576					7.1	
9419522000900	7/14/94 22:00	9	Ox. Feed				4712					5.4	
9419909000900	7/18/94 9:00	9	Ox. Feed				4480					6.3	
9419910000900	7/18/94 10:00	9	Ox. Feed			21307	4264	13568	3276	41	5147	6.3	
9419911000900	7/18/94 11:00	9	Ox. Feed				4624					6.3	
9419912000900	7/18/94 12:00	9	Ox. Feed				4768					6.3	
9419913000900	7/18/94 13:00	9	Ox. Feed				4704					6.3	
9419914000900	7/18/94 14:00	9	Ox. Feed				4632					6.3	
9419915000900	7/18/94 15:00	9	Ox. Feed				4592					6.4	
9419916000900	7/18/94 16:00	9	Ox. Feed				4528					6.4	
9419917000900	7/18/94 17:00	9	Ox. Feed				4568					6.5	
9419918000900	7/18/94 18:00	9	Ox. Feed				4504					6.5	
9419919000900	7/18/94 19:00	9	Ox. Feed				4600					6.6	
9419920000900	7/18/94 20:00	9	Ox. Feed				4504					6.5	
9419921000900	7/18/94 21:00	9	Ox. Feed				4488					6.6	
9419922000900	7/18/94 22:00	9	Ox. Feed				4480					6.6	
9420009000900	7/19/94 9:00	9	Ox. Feed				4648					6.4	
9420010000900	7/19/94 10:00	9	Ox. Feed			21747	4456	8906	3903	35	5257	6.5	
9420011000900	7/19/94 11:00	9	Ox. Feed				4712					6.4	
9420012000900	7/19/94 12:00	9	Ox. Feed				4840					6.4	
9420013000900	7/19/94 13:00	9	Ox. Feed				4880					6.4	
9420014000900	7/19/94 14:00	9	Ox. Feed				4960					6.4	
9420015000900	7/19/94 15:00	9	Ox. Feed				4920					6.6	
9420016000900	7/19/94 16:00	9	Ox. Feed				4520					6.5	
9420017000900	7/19/94 17:00	9	Ox. Feed				4896					6.6	
9420018000900	7/19/94 18:00	9	Ox. Feed				4848					6.6	
9420019000900	7/19/94 19:00	9	Ox. Feed				4816					6.8	
9420020000900	7/19/94 20:00	9	Ox. Feed				4976					6.7	
9420021000900	7/19/94 21:00	9	Ox. Feed				4000					6.7	
9420022000900	7/19/94 22:00	9	Ox. Feed				4968					6.6	
9420109000900	7/20/94 9:00	9	Ox. Feed				5368					6.4	
9420110000900	7/20/94 10:00	9	Ox. Feed			22658	5224	16162	4010	50	5469	6.4	
9420111000900	7/20/94 11:00	9	Ox. Feed				5512					6.4	
9420112000900	7/20/94 12:00	9	Ox. Feed				88					6.4	
9420113000900	7/20/94 13:00	9	Ox. Feed				5528					6.5	
9420114000900	7/20/94 14:00	9	Ox. Feed				5592					6.4	
9420115000900	7/20/94 15:00	9	Ox. Feed				5536					6.5	
9420116000900	7/20/94 16:00	9	Ox. Feed				5376					6.4	
9420117000900	7/20/94 17:00	9	Ox. Feed				5408					6.5	
9420118000900	7/20/94 18:00	9	Ox. Feed		5.09		5280					6.6	8.0
9420119000900	7/20/94 19:00	9	Ox. Feed				5344					6.6	
9420120000900	7/20/94 20:00	9	Ox. Feed				5280					6.6	
9420121000900	7/20/94 21:00	9	Ox. Feed				5264					6.6	
9420122000900	7/20/94 22:00	9	Ox. Feed				5208					6.6	
9420209000900	7/21/94 9:00	9	Ox. Feed				5904					6.4	

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9420210000900	7/21/94 10:00	9	Ox. Feed			24179	5896	13432	3914	53	5837	6.4	
9420211000900	7/21/94 11:00	9	Ox. Feed				6032					6.4	
9420212000900	7/21/94 12:00	9	Ox. Feed				5760					6.4	
9420213000900	7/21/94 13:00	9	Ox. Feed				6016					6.4	
9420214000900	7/21/94 14:00	9	Ox. Feed				5944					6.4	
9420215000900	7/21/94 15:00	9	Ox. Feed				6096					6.5	
9420216000900	7/21/94 16:00	9	Ox. Feed				5072					6.5	
9420217000900	7/21/94 17:00	9	Ox. Feed				5632					6.4	
9420218000900	7/21/94 18:00	9	Ox. Feed				5624					6.4	
9420219000900	7/21/94 19:00	9	Ox. Feed				5544					6.4	
9420220000900	7/21/94 20:00	9	Ox. Feed				5544					6.4	
9420221000900	7/21/94 21:00	9	Ox. Feed				5552					6.4	
9420609000900	7/25/94 9:00	9	Ox. Feed				6416					6.4	
9420610000900	7/25/94 10:00	9	Ox. Feed			23579	6232	13029	3850	56	5689	6.4	
9420611000900	7/25/94 11:00	9	Ox. Feed				6376					6.3	
9420612000900	7/25/94 12:00	9	Ox. Feed				6208					6.4	
9420613000900	7/25/94 13:00	9	Ox. Feed				6296					6.3	
9420614000900	7/25/94 14:00	9	Ox. Feed				6312					6.4	
9420615000900	7/25/94 15:00	9	Ox. Feed				6304					6.4	
9420616000900	7/25/94 16:00	9	Ox. Feed			20	6136					6.4	
9420617000900	7/25/94 17:00	9	Ox. Feed				6192					6.3	
9420618000900	7/25/94 18:00	9	Ox. Feed				6120					6.4	
9420619000900	7/25/94 19:00	9	Ox. Feed				6112					6.4	
9420620000900	7/25/94 20:00	9	Ox. Feed			1001	6016					6.3	
9420622000900	7/25/94 22:00	9	Ox. Feed				5920					6.3	
9420710000900	7/26/94 10:00	9	Ox. Feed				5320					6.6	
9420711000900	7/26/94 11:00	9	Ox. Feed			22518	5224	7468	3382	66	5426	6.6	
9420712000900	7/26/94 12:00	9	Ox. Feed				5352					6.6	
9420712000900	7/26/94 12:00	9	Ox. Feed				5352					6.6	
9420713000900	7/26/94 13:00	9	Ox. Feed				5600		1064				
9420714000900	7/26/94 14:00	9	Ox. Feed				5520					6.6	
9420715000900	7/26/94 15:00	9	Ox. Feed				5464					6.6	
9420716000900	7/26/94 16:00	9	Ox. Feed				5200					6.6	
9420717000900	7/26/94 17:00	9	Ox. Feed				5384					6.6	
9420718000900	7/26/94 18:00	9	Ox. Feed				5392					6.6	
9420719000900	7/26/94 19:00	9	Ox. Feed				5432					6.6	
9420720000900	7/26/94 20:00	9	Ox. Feed				5360					6.8	
9420721000900	7/26/94 21:00	9	Ox. Feed				5472					6.6	
9420722000900	7/26/94 22:00	9	Ox. Feed				5584					6.6	
9420809000900	7/27/94 9:00	9	Ox. Feed				6064					6.48	
9420810000900	7/27/94 10:00	9	Ox. Feed			23899	5840	-6873	3297	60.9	5764	6.53	
9420810000900	7/27/94 10:00	9	Ox. Feed				5840	12881					
9420811000900	7/27/94 11:00	9	Ox. Feed				6224					6.51	
9420812000900	7/27/94 12:00	9	Ox. Feed				6336		1212			6.51	
9420814000900	7/27/94 14:00	9	Ox. Feed				6232					6.68	
9420814000900	7/27/94 14:00	9	Ox. Feed				6344					6.50	
9420815000900	7/27/94 15:00	9	Ox. Feed				6296					6.53	
9420816000900	7/27/94 16:00	9	Ox. Feed				6192					6.52	
9420817000900	7/27/94 17:00	9	Ox. Feed				6112					6.51	
9420818000900	7/27/94 18:00	9	Ox. Feed				6192					6.49	
9420819000900	7/27/94 19:00	9	Ox. Feed				6200					6.45	
9420909000900	7/28/94 9:00	9	Ox. Feed									6.43	
9420909000900	7/28/94 9:00	9	Ox. Feed				6816						
9420910000900	7/28/94 10:00	9	Ox. Feed			24770	6776	10554	2957	72.1	5968	6.42	
9420911000900	7/28/94 11:00	9	Ox. Feed				6992					5.54	
9420911000900	7/28/94 11:00	9	Ox. Feed				6992						
9420912000900	7/28/94 12:00	9	Ox. Feed				7024					6.44	
9420913000900	7/28/94 13:00	9	Ox. Feed				6880					6.45	
9420917000900	7/28/94 17:00	9	Ox. Feed				6968						
9420918000900	7/28/94 18:00	9	Ox. Feed				6776					6.45	
9420919000900	7/28/94 19:00	9	Ox. Feed				6952					6.46	
9420920000900	7/28/94 20:00	9	Ox. Feed				6984					6.45	
9420921000900	7/28/94 21:00	9	Ox. Feed				6888					6.46	
9421310000900	8/1/94 10:00	9	Ox. Feed				6856					6.36	
9421311000900	8/1/94 11:00	9	Ox. Feed			24430	6992	14041	2882	56.1	5896	6.38	
9421312000900	8/1/94 12:00	9	Ox. Feed				7000					6.36	
9421313000900	8/1/94 13:00	9	Ox. Feed				7080					6.36	

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9421314000900	8/1/94 14:00	9	Ox. Feed				7232					6.37	
9421315000900	8/1/94 15:00	9	Ox. Feed				7056					6.39	
9421316000900	8/1/94 16:00	9	Ox. Feed				6648					6.45	
9421317000900	8/1/94 17:00	9	Ox. Feed				6672					6.48	
9421318000900	8/1/94 18:00	9	Ox. Feed									6.65	
9421319000900	8/1/94 19:00	9	Ox. Feed				6600					6.62	
9421320000900	8/1/94 20:00	9	Ox. Feed									6.64	
9421321000900	8/1/94 21:00	9	Ox. Feed				6552					6.66	
9421322000900	8/1/94 22:00	9	Ox. Feed				6592					6.63	
9421400000900	8/2/94 0:00	9	Ox. Feed				104					5.43	
9421413000900	8/2/94 13:00	9	Ox. Feed				6832					6.72	
9421414000900	8/2/94 14:00	9	Ox. Feed			25100	6504	15972	2840	57.7	6057	6.75	
9421415000900	8/2/94 15:00	9	Ox. Feed				6832					6.73	
9421416000900	8/2/94 16:00	9	Ox. Feed				6704					6.75	
9421419000900	8/2/94 19:00	9	Ox. Feed				6608					7.00	
9421420000900	8/2/94 20:00	9	Ox. Feed				6672					6.98	
9421509000900	8/3/94 9:00	9	Ox. Feed				6744					6.72	
9421510000900	8/3/94 10:00	9	Ox. Feed			24850	6656	15110	2925	52.9	5999	6.58	
9421511000900	8/3/94 11:00	9	Ox. Feed				6696					6.58	
9421512000900	8/3/94 12:00	9	Ox. Feed				6568					6.56	
9421513000900	8/3/94 13:00	9	Ox. Feed				6736					6.76	
9421514000900	8/3/94 14:00	9	Ox. Feed				6760					6.81	
9421515000900	8/3/94 15:00	9	Ox. Feed				6704					6.83	
9421516000900	8/3/94 16:00	9	Ox. Feed				6496					6.87	
9421517000900	8/3/94 17:00	9	Ox. Feed				6680					6.83	
9421518000900	8/3/94 18:00	9	Ox. Feed				6472					6.80	
9421519000900	8/3/94 19:00	9	Ox. Feed				6440					6.85	
9421520000900	8/3/94 20:00	9	Ox. Feed				6464					6.84	
9421609000900	8/4/94 9:00	9	Ox. Feed				6824					6.55	
9421610000900	8/4/94 10:00	9	Ox. Feed			26041	6752	15129	2840	60.9	6284	6.53	
9421611000900	8/4/94 11:00	9	Ox. Feed				7016					6.52	
9421612000900	8/4/94 12:00	9	Ox. Feed									6.53	
9421612000900	8/4/94 12:00	9	Ox. Feed				7056					6.53	
9421613000900	8/4/94 13:00	9	Ox. Feed				6984					6.50	
9421614000900	8/4/94 14:00	9	Ox. Feed				6952					6.54	
9421615000900	8/4/94 15:00	9	Ox. Feed				6976					6.49	
9421616000900	8/4/94 16:00	9	Ox. Feed				6944					6.47	
9421617000900	8/4/94 17:00	9	Ox. Feed				6952					6.51	
9421618000900	8/4/94 18:00	9	Ox. Feed				6800					6.52	
9421619000900	8/4/94 19:00	9	Ox. Feed				6912					6.55	
9421620000900	8/4/94 20:00	9	Ox. Feed				6656					6.54	
9421621000900	8/4/94 21:00	9	Ox. Feed				6304					6.54	
9422009000900	8/8/94 9:00	9	Ox. Feed				6256					6.39	
9422010000900	8/8/94 10:00	9	Ox. Feed			21637	6120	15753	2234	48.1	5223	6.43	
9422011000900	8/8/94 11:00	9	Ox. Feed				6176					6.42	
9422012000900	8/8/94 12:00	9	Ox. Feed				5904					6.41	
9422013000900	8/8/94 13:00	9	Ox. Feed				6112					6.40	
9422014000900	8/8/94 14:00	9	Ox. Feed				6056					6.40	
9422015000900	8/8/94 15:00	9	Ox. Feed				5968					6.39	
9422016000900	8/8/94 16:00	9	Ox. Feed				5936					6.43	
9422017000900	8/8/94 17:00	9	Ox. Feed									6.43	
9422020000900	8/8/94 20:00	9	Ox. Feed				56					6.52	
9422021000900	8/8/94 21:00	9	Ox. Feed				5880					6.41	
9422022000900	8/8/94 22:00	9	Ox. Feed				5992					6.42	
9422100000900	8/9/94 0:00	9	Ox. Feed				6240					6.46	
9422110000900	8/9/94 10:00	9	Ox. Feed				6176					6.40	
9422111000900	8/9/94 11:00	9	Ox. Feed			21347	6016		2265	68.1	5140	6.40	
9422112000900	8/9/94 12:00	9	Ox. Feed				6224					6.45	
9422113000900	8/9/94 13:00	9	Ox. Feed				6256					6.47	
9422113000900	8/9/94 13:00	9	Ox. Feed				6192					6.54	
9422114000900	8/9/94 14:00	9	Ox. Feed				6304					6.48	
9422115000900	8/9/94 15:00	9	Ox. Feed				6192					6.54	
9422116000900	8/9/94 16:00	9	Ox. Feed				6208					6.43	
9422116000900	8/9/94 16:00	9	Ox. Feed				6208					6.43	
9422117000900	8/9/94 17:00	9	Ox. Feed				6048					6.49	
9422118000900	8/9/94 18:00	9	Ox. Feed				6184						
9422118000900	8/9/94 18:00	9	Ox. Feed				6184					6.59	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9422119000900	8/9/94 19:00	9	Ox. Feed				6128					6.46	
9422121000900	8/9/94 21:00	9	Ox. Feed				5912					5.63	
9422121000900	8/9/94 21:00	9	Ox. Feed									6.48	
9422122000900	8/9/94 22:00	9	Ox. Feed				6152					6.49	
9422209000900	8/10/94 9:00	9	Ox. Feed				6272					6.44	
9422210000900	8/10/94 10:00	9	Ox. Feed			19345	6232		2127	44.1	4669	6.44	
9422211000900	8/10/94 11:00	9	Ox. Feed				6824					6.41	
9422212000900	8/10/94 12:00	9	Ox. Feed				6032					6.45	
9422213000900	8/10/94 13:00	9	Ox. Feed				6208					6.46	
9422214000900	8/10/94 14:00	9	Ox. Feed				6120					6.43	
9422215000900	8/10/94 15:00	9	Ox. Feed				6272					6.45	
9422217000900	8/10/94 17:00	9	Ox. Feed				6008					6.43	
9422219000900	8/10/94 19:00	9	Ox. Feed									6.55	71.9
9422219000900	8/10/94 19:00	9	Ox. Feed				6048						
9422220000900	8/10/94 20:00	9	Ox. Feed				6104					6.43	71.9
9422221000900	8/10/94 21:00	9	Ox. Feed				6304					6.45	
9422222000900	8/10/94 22:00	9	Ox. Feed				6232					6.50	4.9
9422309000900	8/11/94 9:00	9	Ox. Feed				6544						
9422309000900	8/11/94 9:00	9	Ox. Feed									6.49	
9422310000900	8/11/94 10:00	9	Ox. Feed			21517	6208		2106	54.5	5190	6.50	
9422311000900	8/11/94 11:00	9	Ox. Feed				6648					6.48	
9422312000900	8/11/94 12:00	9	Ox. Feed				6376					6.48	
9422313000900	8/11/94 13:00	9	Ox. Feed				6288					6.49	
9422314000900	8/11/94 14:00	9	Ox. Feed				6416					6.52	
9422315000900	8/11/94 15:00	9	Ox. Feed				6392					6.55	
9422316000900	8/11/94 16:00	9	Ox. Feed				6264					6.52	
9422317000900	8/11/94 17:00	9	Ox. Feed				6264					6.53	
9422318000900	8/11/94 18:00	9	Ox. Feed				6384					6.53	
9422319000900	8/11/94 19:00	9	Ox. Feed				6232					6.52	
9422320000900	8/11/94 20:00	9	Ox. Feed				6304					6.52	71.9
9422321000900	8/11/94 21:00	9	Ox. Feed				6240					6.54	
9422322000900	8/11/94 22:00	9	Ox. Feed				6336					6.59	
9422413000900	8/12/94 13:00	9	Ox. Feed				6816					6.41	
9422413000900	8/12/94 13:00	9	Ox. Feed				6816					6.41	
9423009000900	8/18/94 9:00	9	Ox. Feed				6232					6.36	
9423010000900	8/18/94 10:00	9	Ox. Feed				6544					6.36	
9423011000900	8/18/94 11:00	9	Ox. Feed				6304					6.35	
9423011300900	8/18/94 11:30	9	Ox. Feed			25460	6440	22029	2329	63.3	6141	6.34	
9423012000900	8/18/94 12:00	9	Ox. Feed				6512					6.32	
9423014000900	8/18/94 14:00	9	Ox. Feed			1001	6456						
9423015000900	8/18/94 15:00	9	Ox. Feed				6448					6.34	
9423109000900	8/19/94 9:00	9	Ox. Feed				6320					6.48	
9423110000900	8/19/94 10:00	9	Ox. Feed			23779	6168	18497	2574	56.1	5738	6.48	
9423111000900	8/19/94 11:00	9	Ox. Feed				6280					6.53	
9423112000900	8/19/94 12:00	9	Ox. Feed				6520					6.49	
9423113000900	8/19/94 13:00	9	Ox. Feed				6496					6.49	
9423114000900	8/19/94 14:00	9	Ox. Feed				6408					6.51	
9423409000900	8/22/94 9:00	9	Ox. Feed				7256					6.49	
9423410000900	8/22/94 10:00	9	Ox. Feed			26962	6896	16194	2872	112.9	6476	6.46	
9423412000900	8/22/94 12:00	9	Ox. Feed				6928					6.42	
9423413000900	8/22/94 13:00	9	Ox. Feed				7016					6.39	
9423414000900	8/22/94 14:00	9	Ox. Feed				7168					6.43	
9423415000900	8/22/94 15:00	9	Ox. Feed				7096					6.54	
9423615000900	8/24/94 15:00	9	Ox. Feed				6008					6.60	
9423709000900	8/25/94 9:00	9	Ox. Feed				6224					6.36	
9423710000900	8/25/94 10:00	9	Ox. Feed			24770	6296	16221	2585	70.5	5969	6.35	
9423711000900	8/25/94 11:00	9	Ox. Feed			500	6320		1563			6.36	
9423712000900	8/25/94 12:00	9	Ox. Feed				6832		3297			6.33	
9423713000900	8/25/94 13:00	9	Ox. Feed				6168					6.33	
9423714000900	8/25/94 14:00	9	Ox. Feed				6120					6.35	
9423809000900	8/26/94 9:00	9	Ox. Feed				7040					6.37	
9423809300900	8/26/94 9:30	9	Ox. Feed				6824					6.38	
9423810000900	8/26/94 10:00	9	Ox. Feed				6832					6.40	
9423810300900	8/26/94 10:30	9	Ox. Feed				6864					6.41	
9423811300900	8/26/94 11:30	9	Ox. Feed				6824						
9424109000900	8/29/94 9:00	9	Ox. Feed				7824					6.37	
9424110000900	8/29/94 10:00	9	Ox. Feed				7856					6.39	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9424111000900	8/29/94 11:00	9	Ox. Feed				7544					6.39	
9424112000900	8/29/94 12:00	9	Ox. Feed				7608					6.40	
9424113300900	8/29/94 13:30	9	Ox. Feed				7632					6.41	
9424115000900	8/29/94 15:00	9	Ox. Feed				7648					6.41	
9424209000900	8/30/94 9:00	9	Ox. Feed				7224					6.40	
9424210000900	8/30/94 10:00	9	Ox. Feed			21677	6968	10147	2382	51.3	5230	6.39	
9424211000900	8/30/94 11:00	9	Ox. Feed				7064					6.42	
9424212000900	8/30/94 12:00	9	Ox. Feed				7232					6.43	
9424213000900	8/30/94 13:00	9	Ox. Feed				7272					6.46	
9424214000900	8/30/94 14:00	9	Ox. Feed				7040					6.51	
9424215000900	8/30/94 15:00	9	Ox. Feed				6968					6.52	
9424216000900	8/30/94 16:00	9	Ox. Feed				6992					6.52	
9424308300900	8/31/94 8:30	9	Ox. Feed				6632					6.46	
9424309000900	8/31/94 9:00	9	Ox. Feed				6728					6.44	
9424310000900	8/31/94 10:00	9	Ox. Feed			24289	6560	13583	2202	36.8	5873	6.46	
9424311000900	8/31/94 11:00	9	Ox. Feed				6560					6.44	
9424312000900	8/31/94 12:00	9	Ox. Feed				6744					6.43	
9424313000900	8/31/94 13:00	9	Ox. Feed				6864					6.44	
9424314000900	8/31/94 14:00	9	Ox. Feed				6728					6.49	
9424315000900	8/31/94 15:00	9	Ox. Feed				6576					6.47	
9424409000900	9/1/94 9:00	9	Ox. Feed				6784					6.42	
9424410000900	9/1/94 10:00	9	Ox. Feed			24440	6504	14494	2234	57.7	5897	6.40	
9424411000900	9/1/94 11:00	9	Ox. Feed				6800					6.43	
9424412000900	9/1/94 12:00	9	Ox. Feed				6816					6.45	
9424413000900	9/1/94 13:00	9	Ox. Feed				6768					6.46	
9424414000900	9/1/94 14:00	9	Ox. Feed				6712					6.47	
9424415000900	9/1/94 15:00	9	Ox. Feed				6488		532			6.53	
9424909000900	9/6/94 9:00	9	Ox. Feed				6512					6.52	
9424910000900	9/6/94 10:00	9	Ox. Feed			21807	6400	12952	1819	60.1	5257	6.56	
9424911000900	9/6/94 11:00	9	Ox. Feed				6464					6.56	
9424912000900	9/6/94 12:00	9	Ox. Feed				6456					6.55	
9424913000900	9/6/94 13:00	9	Ox. Feed				6504					6.55	
9424914000900	9/6/94 14:00	9	Ox. Feed				6672					6.53	
9424915000900	9/6/94 15:00	9	Ox. Feed				6544					6.50	
9424916000900	9/6/94 16:00	9	Ox. Feed				6544					6.45	
9424917000900	9/6/94 17:00	9	Ox. Feed				6584					6.43	
9424918000900	9/6/94 18:00	9	Ox. Feed				6640					6.48	
9424919300900	9/6/94 19:30	9	Ox. Feed				6904					6.51	
9424920000900	9/6/94 20:00	9	Ox. Feed				6656					6.50	
9425709000900	9/14/94 9:00	9	Ox. Feed				8064					6.22	
9425709300900	9/14/94 9:30	9	Ox. Feed				168					5.55	
9425710000900	9/14/94 10:00	9	Ox. Feed			17624	7576	16229	1904	32.0	4258	6.20	
9425711000900	9/14/94 11:00	9	Ox. Feed				7552					5.59	
9425712000900	9/14/94 12:00	9	Ox. Feed				7800					6.20	
9425713000900	9/14/94 13:00	9	Ox. Feed				7632					6.22	
9425714000900	9/14/94 14:00	9	Ox. Feed				7648					6.20	
9425715000900	9/14/94 15:00	9	Ox. Feed				7568					6.23	
9425809000900	9/15/94 9:00	9	Ox. Feed				7992					6.24	
9425810000900	9/15/94 10:00	9	Ox. Feed			19436	7352	5172	2010	31.2	4699	6.21	
9426209000900	9/19/94 9:00	9	Ox. Feed				8664					6.36	
9426210000900	9/19/94 10:00	9	Ox. Feed			25070	8456	16118	2436	88.9	6031	6.37	
9426211000900	9/19/94 11:00	9	Ox. Feed				8288					6.35	
9426212000900	9/19/94 12:00	9	Ox. Feed				8480					6.34	
9426213000900	9/19/94 13:00	9	Ox. Feed				8624					6.36	
9426214000900	9/19/94 14:00	9	Ox. Feed				8320					6.36	
9426215000900	9/19/94 15:00	9	Ox. Feed			111	8608						
9426216000900	9/19/94 16:00	9	Ox. Feed				8456					6.31	
9426217000900	9/19/94 17:00	9	Ox. Feed				8256					6.33	
9426218000900	9/19/94 18:00	9	Ox. Feed				8424					6.36	
9426219000900	9/19/94 19:00	9	Ox. Feed				8184					6.43	
9426220000900	9/19/94 20:00	9	Ox. Feed				8392					6.34	
9426221000900	9/19/94 21:00	9	Ox. Feed				8264					6.33	
9426222000900	9/19/94 22:00	9	Ox. Feed				8184					6.31	
9426309000900	9/20/94 9:00	9	Ox. Feed				7928					6.14	
9426310000900	9/20/94 10:00	9	Ox. Feed			25691	8160	18214	2159	62.5	6198	6.43	
9426311000900	9/20/94 11:00	9	Ox. Feed				8336					6.39	
9426312000900	9/20/94 12:00	9	Ox. Feed				8232					6.38	

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9426313000900	9/20/94 13:00	9	Ox. Feed				8192					6.41	
9426314000900	9/20/94 14:00	9	Ox. Feed				8184					6.39	
9426315000900	9/20/94 15:00	9	Ox. Feed				8152					6.44	
9426316000900	9/20/94 16:00	9	Ox. Feed				8184					6.34	
9426317000900	9/20/94 17:00	9	Ox. Feed				8000					6.34	
9426318000900	9/20/94 18:00	9	Ox. Feed				8128					5.14	
9426319000900	9/20/94 19:00	9	Ox. Feed				7808					6.42	
9426320000900	9/20/94 20:00	9	Ox. Feed				8208					6.44	
9426321000900	9/20/94 21:00	9	Ox. Feed				8016					6.23	
9426411000900	9/21/94 11:00	9	Ox. Feed				8032					6.60	
9426412000900	9/21/94 12:00	9	Ox. Feed				8336					6.64	
9426413000900	9/21/94 13:00	9	Ox. Feed				7608					6.62	
9426414000900	9/21/94 14:00	9	Ox. Feed				7904					6.45	
9426510000900	9/22/94 10:00	9	Ox. Feed				8072					6.67	
9426510300900	9/22/94 10:30	9	Ox. Feed				7712					6.60	
9426511000900	9/22/94 11:00	9	Ox. Feed			18755	7384	-1633	1925	92.9	4496	6.66	
9426512000900	9/22/94 12:00	9	Ox. Feed				7808					6.64	
9426513000900	9/22/94 13:00	9	Ox. Feed				7600					6.54	
9426514000900	9/22/94 14:00	9	Ox. Feed				7320					6.54	
9426515000900	9/22/94 15:00	9	Ox. Feed				7792					6.60	
9426516000900	9/22/94 16:00	9	Ox. Feed				7736					6.56	
9426517000900	9/22/94 17:00	9	Ox. Feed				7784					6.56	
9426518000900	9/22/94 18:00	9	Ox. Feed				7784					6.70	
9426519000900	9/22/94 19:00	9	Ox. Feed				7968					6.61	
9426520000900	9/22/94 20:00	9	Ox. Feed				7808					6.71	
9426521000900	9/22/94 21:00	9	Ox. Feed				7832					6.74	
9426522000900	9/22/94 22:00	9	Ox. Feed				7744					6.79	
9427021000900	9/27/94 21:00	9	Ox. Feed				7608					6.44	
9427022000900	9/27/94 22:00	9	Ox. Feed				7488					6.42	
9427114000900	9/28/94 14:00	9	Ox. Feed				7568					6.46	
9427115000900	9/28/94 15:00	9	Ox. Feed				7752					6.51	
9427116000900	9/28/94 16:00	9	Ox. Feed				7672					6.51	
9427117000900	9/28/94 17:00	9	Ox. Feed				7512					6.48	
9427118000900	9/28/94 18:00	9	Ox. Feed				7424					6.55	
9427119000900	9/28/94 19:00	9	Ox. Feed				7288					6.39	
9427120000900	9/28/94 20:00	9	Ox. Feed				7400					6.63	
9427121000900	9/28/94 21:00	9	Ox. Feed				7112					6.41	
9427122000900	9/28/94 22:00	9	Ox. Feed				7376					6.51	
9427208000900	9/29/94 8:00	9	Ox. Feed				7408					6.21	
9427209300900	9/29/94 9:30	9	Ox. Feed				7456					6.24	
9427210000900	9/29/94 10:00	9	Ox. Feed			20256	7592	7845	2276	55.3	4883	6.23	
9427211000900	9/29/94 11:00	9	Ox. Feed				7480					6.21	
9427212000900	9/29/94 12:00	9	Ox. Feed				7352					6.30	
9427213000900	9/29/94 13:00	9	Ox. Feed				7512					6.35	
9427214000900	9/29/94 14:00	9	Ox. Feed				7512					6.30	
9427215000900	9/29/94 15:00	9	Ox. Feed				7368					6.14	
9427609000900	10/3/94 9:00	9	Ox. Feed				7496					6.32	
9427610000900	10/3/94 10:00	9	Ox. Feed			20777	7032	18198	2265	47.3	5014	6.45	
9427611000900	10/3/94 11:00	9	Ox. Feed				7184					6.12	
9427612000900	10/3/94 12:00	9	Ox. Feed				7400					6.14	
9427613000900	10/3/94 13:00	9	Ox. Feed				7176					5.97	
9427614000900	10/3/94 14:00	9	Ox. Feed				7312					6.01	
9427615000900	10/3/94 15:00	9	Ox. Feed				7032					5.95	
9427616000900	10/3/94 16:00	9	Ox. Feed				7208					6.08	
9427617000900	10/3/94 17:00	9	Ox. Feed				7176					6.16	
9427618000900	10/3/94 18:00	9	Ox. Feed				7032					6.26	
9427619000900	10/3/94 19:00	9	Ox. Feed				6416					5.99	
9427619000900	10/3/94 19:00	9	Ox. Feed				6904					6.09	
9427621000900	10/3/94 21:00	9	Ox. Feed				6864					6.11	
9427622000900	10/3/94 22:00	9	Ox. Feed				6744					6.20	
9427622450900	10/3/94 22:45	9	Ox. Feed				6600					6.09	
9427710000900	10/4/94 10:00	9	Ox. Feed			20757	6624	17950	2276	52.1	5007	6.02	
9427711000900	10/4/94 11:00	9	Ox. Feed				6816					5.86	
9427712000900	10/4/94 12:00	9	Ox. Feed				6648					5.87	
9427713000900	10/4/94 13:00	9	Ox. Feed				6656					5.90	
9427714000900	10/4/94 14:00	9	Ox. Feed				6720					5.83	
9427715000900	10/4/94 15:00	9	Ox. Feed				6808					5.86	

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9427716000900	10/4/94 16:00	9	Ox. Feed				6528					5.91	
9427716000900	10/4/94 16:00	9	Ox. Feed				6528					5.98	
9427716000900	10/4/94 16:00	9	Ox. Feed				6528					5.91	
9427717000900	10/4/94 17:00	9	Ox. Feed				6528					5.98	
9427718000900	10/4/94 18:00	9	Ox. Feed				6792					6.07	
9427719000900	10/4/94 19:00	9	Ox. Feed				6664					6.01	
9427720000900	10/4/94 20:00	9	Ox. Feed				6784					6.01	
9427721000900	10/4/94 21:00	9	Ox. Feed				6832					6.07	
9427721300900	10/4/94 21:30	9	Ox. Feed				6904					6.09	
9427809000900	10/5/94 9:00	9	Ox. Feed				6944					6.21	
9427809000900	10/5/94 9:00	9	Ox. Feed				6944					6.21	
9427809000900	10/5/94 9:00	9	Ox. Feed				6944					6.21	
9427810000900	10/5/94 10:00	9	Ox. Feed			22738	6656	34474	2372	145.0	5431	6.19	
9427811000900	10/5/94 11:00	9	Ox. Feed				5936					6.13	
9427812000900	10/5/94 12:00	9	Ox. Feed				6704					6.17	
9427813000900	10/5/94 13:00	9	Ox. Feed				6704					6.17	
9427813000900	10/5/94 13:00	9	Ox. Feed				6704					6.21	
9427814000900	10/5/94 14:00	9	Ox. Feed				6824					6.24	
9427815000900	10/5/94 15:00	9	Ox. Feed				6832					6.19	
9427909000900	10/6/94 9:00	9	Ox. Feed				7056					6.03	
9427910000900	10/6/94 10:00	9	Ox. Feed			20176	6944	6444	2425	52.9	4865	6.05	
9427911000900	10/6/94 11:00	9	Ox. Feed				7096					6.03	
9427912000900	10/6/94 12:00	9	Ox. Feed				7344					6.12	
9427913000900	10/6/94 13:00	9	Ox. Feed				7232					6.08	
9427914000900	10/6/94 14:00	9	Ox. Feed				7352					6.06	
9427915000900	10/6/94 15:00	9	Ox. Feed				7096					6.11	
9428009000900	10/7/94 9:00	9	Ox. Feed				7560					6.06	
9428010000900	10/7/94 10:00	9	Ox. Feed			20396	7264	11172	2446	52.9	4918	6.05	
9428011000900	10/7/94 11:00	9	Ox. Feed				7440					6.06	
9428012000900	10/7/94 12:00	9	Ox. Feed				7224					6.11	
9428013000900	10/7/94 13:00	9	Ox. Feed				7176					6.10	
9428014000900	10/7/94 14:00	9	Ox. Feed				7272					6.12	
9428310000900	10/10/94 10:00	9	Ox. Feed				6712					5.96	
9428311000900	10/10/94 11:00	9	Ox. Feed			20126	6424	17611	2287	116.9	4814	5.98	
9428312000900	10/10/94 12:00	9	Ox. Feed				6808					6.00	
9428313000900	10/10/94 13:00	9	Ox. Feed				6720					5.99	
9428314000900	10/10/94 14:00	9	Ox. Feed				6728					5.98	
9428315000900	10/10/94 15:00	9	Ox. Feed				6840					5.97	
9428316000900	10/10/94 16:00	9	Ox. Feed				6408					5.95	
9428316000900	10/10/94 16:00	9	Ox. Feed				6408					5.95	
9428317000900	10/10/94 17:00	9	Ox. Feed				6608					6.00	
9428318000900	10/10/94 18:00	9	Ox. Feed				6664					6.05	
9428319000900	10/10/94 19:00	9	Ox. Feed				6464					5.92	
9428320000900	10/10/94 20:00	9	Ox. Feed				6256					5.95	
9428321000900	10/10/94 21:00	9	Ox. Feed				6168					5.99	
9428322000900	10/10/94 22:00	9	Ox. Feed				6536					6.03	
9428323000900	10/10/94 23:00	9	Ox. Feed				6496					6.04	
9428409000900	10/11/94 9:00	9	Ox. Feed				6320					6.12	
9428410000900	10/11/94 10:00	9	Ox. Feed			20516	6304	19072	2085	88.1	4926	6.17	
9428413000900	10/11/94 13:00	9	Ox. Feed				6512					6.15	
9428414000900	10/11/94 14:00	9	Ox. Feed				6528					6.15	
9428415000900	10/11/94 15:00	9	Ox. Feed				6424					6.14	
9428416000900	10/11/94 16:00	9	Ox. Feed				6424					6.12	
9428417000900	10/11/94 17:00	9	Ox. Feed				6264					6.15	
9428417000900	10/11/94 17:00	9	Ox. Feed				6424					6.15	
9428417000900	10/11/94 17:00	9	Ox. Feed				6264					6.15	
9428418000900	10/11/94 18:00	9	Ox. Feed				6656					6.15	
9428419000900	10/11/94 19:00	9	Ox. Feed				6632					6.19	
9428420000900	10/11/94 20:00	9	Ox. Feed				120					6.17	
9428420000900	10/11/94 20:00	9	Ox. Feed				6624					6.17	
9428421000900	10/11/94 21:00	9	Ox. Feed				6664					6.18	
9428422000900	10/11/94 22:00	9	Ox. Feed				6728					6.19	
9428509000900	10/12/94 9:00	9	Ox. Feed				6656					6.21	
9428510000900	10/12/94 10:00	9	Ox. Feed			18775	6344	16856		117.7	4486	6.25	
9428511000900	10/12/94 11:00	9	Ox. Feed				6472					6.19	
9428512000900	10/12/94 12:00	9	Ox. Feed				6376					6.21	
9428513000900	10/12/94 13:00	9	Ox. Feed				6736					6.20	

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9428514000900	10/12/94 14:00	9	Ox. Feed				6912					6.21	
9428515000900	10/12/94 15:00	9	Ox. Feed				6664					6.24	
9428516000900	10/12/94 16:00	9	Ox. Feed				6792					6.21	
9428517000900	10/12/94 17:00	9	Ox. Feed				6816					6.22	
9428518000900	10/12/94 18:00	9	Ox. Feed				6848					6.22	
9428519000900	10/12/94 19:00	9	Ox. Feed				6800		0			6.20	
9428520000900	10/12/94 20:00	9	Ox. Feed				6728					6.20	
9428521000900	10/12/94 21:00	9	Ox. Feed				6816					6.23	
9428522000900	10/12/94 22:00	9	Ox. Feed				6760					6.25	
9428523000900	10/12/94 23:00	9	Ox. Feed				6832					6.31	
9428609000900	10/13/94 9:00	9	Ox. Feed				6648					6.29	
9428610000900	10/13/94 10:00	9	Ox. Feed			21067	6336	20558	2478	111.3	5046	6.29	
9428611000900	10/13/94 11:00	9	Ox. Feed				6728					6.27	
9428612000900	10/13/94 12:00	9	Ox. Feed				6544					6.27	
9428613000900	10/13/94 13:00	9	Ox. Feed				6864					6.27	
9428614000900	10/13/94 14:00	9	Ox. Feed		2.90	1001	6832					6.29	
9428615000900	10/13/94 15:00	9	Ox. Feed				6752					6.31	
9428616000900	10/13/94 16:00	9	Ox. Feed				6840					6.34	
9428617000900	10/13/94 17:00	9	Ox. Feed				6896					6.35	
9428618000900	10/13/94 18:00	9	Ox. Feed				6920					6.35	
9428619000900	10/13/94 19:00	9	Ox. Feed				6744					6.34	
9428620000900	10/13/94 20:00	9	Ox. Feed				6728					6.29	
9428621000900	10/13/94 21:00	9	Ox. Feed				6848					6.35	
9428622000900	10/13/94 22:00	9	Ox. Feed				6728					6.36	
9429009000900	10/17/94 9:00	9	Ox. Feed				7488					6.19	
9429010000900	10/17/94 10:00	9	Ox. Feed			11649	7304	15704	2606	390.1	2591	6.10	
9429010000900	10/17/94 10:00	9	Ox. Feed			11649	7304	15704	2606	390.1	2591	6.10	
9429011000900	10/17/94 11:00	9	Ox. Feed				7560					6.10	
9429012000900	10/17/94 12:00	9	Ox. Feed				7480					6.08	
9429013000900	10/17/94 13:00	9	Ox. Feed				7616					6.15	
9429014000900	10/17/94 14:00	9	Ox. Feed				7520					6.20	
9429015000900	10/17/94 15:00	9	Ox. Feed				7520					6.15	
9429109000900	10/18/94 9:00	9	Ox. Feed				8520					6.16	
9429110000900	10/18/94 10:00	9	Ox. Feed			21097	8208	18156	2787	104.1	5057	6.12	
9429111000900	10/18/94 11:00	9	Ox. Feed				8416					6.12	
9429112000900	10/18/94 12:00	9	Ox. Feed				8184					6.14	
9429113000900	10/18/94 13:00	9	Ox. Feed				8376					6.53	
9429114000900	10/18/94 14:00	9	Ox. Feed				8296					6.14	
9429209000900	10/19/94 9:00	9	Ox. Feed				8608					6.15	
9429210000900	10/19/94 10:00	9	Ox. Feed			22948	8408	18072	2489	55.3	5536	6.14	
9429211000900	10/19/94 11:00	9	Ox. Feed				8616					6.18	
9429212000900	10/19/94 12:00	9	Ox. Feed				8488					6.17	
9429213000900	10/19/94 13:00	9	Ox. Feed	2944			8736					6.16	
9429214000900	10/19/94 14:00	9	Ox. Feed				8608					6.16	
9429300000900	10/20/94 0:00	9	Ox. Feed				7720					6.13	
9429310000900	10/20/94 10:00	9	Ox. Feed				8280					6.18	
9429314000900	10/20/94 14:00	9	Ox. Feed				7952					6.17	
9429700000900	10/24/94 0:00	9	Ox. Feed				6824					6.27	
9429709000900	10/24/94 9:00	9	Ox. Feed				7496					6.15	
9429710000900	10/24/94 10:00	9	Ox. Feed			21617	7136	18827	2351	105.7	5183	6.18	
9429711000900	10/24/94 11:00	9	Ox. Feed				7264					6.15	
9429712000900	10/24/94 12:00	9	Ox. Feed				7224					6.18	
9429713000900	10/24/94 13:00	9	Ox. Feed				7312					6.21	
9429714000900	10/24/94 14:00	9	Ox. Feed				7344					6.21	
9429715000900	10/24/94 15:00	9	Ox. Feed				7224					6.25	
9429717000900	10/24/94 17:00	9	Ox. Feed				7064					6.30	
9429718000900	10/24/94 18:00	9	Ox. Feed				7112					6.26	
9429719000900	10/24/94 19:00	9	Ox. Feed				7056					6.30	
9429720000900	10/24/94 20:00	9	Ox. Feed				6832					6.28	
9429721000900	10/24/94 21:00	9	Ox. Feed				7088					6.33	
9429722000900	10/24/94 22:00	9	Ox. Feed				6936					6.33	
9429723000900	10/24/94 23:00	9	Ox. Feed				7048					6.32	
9429800000900	10/25/94 0:00	9	Ox. Feed				6496					6.32	
9429801000900	10/25/94 1:00	9	Ox. Feed				6640					6.33	
9429802000900	10/25/94 2:00	9	Ox. Feed				6296					6.35	
9429803000900	10/25/94 3:00	9	Ox. Feed				6776					6.31	
9429804000900	10/25/94 4:00	9	Ox. Feed				6664		5			5.53	

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9429805000900	10/25/94 5:00	9	Ox. Feed				6344					6.32	
9429806000900	10/25/94 6:00	9	Ox. Feed				6216					6.33	
9429807000900	10/25/94 7:00	9	Ox. Feed				6496					6.30	
9429809000900	10/25/94 9:00	9	Ox. Feed				6872					6.33	
9429810000900	10/25/94 10:00	9	Ox. Feed			21357	6640	18668	2425	125.0	5108	6.32	
9429811000900	10/25/94 11:00	9	Ox. Feed				7008					6.31	
9429812000900	10/25/94 12:00	9	Ox. Feed				7064					6.30	
9429813000900	10/25/94 13:00	9	Ox. Feed				7064					6.30	
9429814000900	10/25/94 14:00	9	Ox. Feed				6944					6.26	
9429815000900	10/25/94 15:00	9	Ox. Feed				6960					6.28	
9429816000900	10/25/94 16:00	9	Ox. Feed				7152					6.29	
9429817000900	10/25/94 17:00	9	Ox. Feed				6800					6.28	
9429818000900	10/25/94 18:00	9	Ox. Feed				7016					6.27	
9429819000900	10/25/94 19:00	9	Ox. Feed				6928					6.30	
9429820000900	10/25/94 20:00	9	Ox. Feed				6808					6.35	
9429821000900	10/25/94 21:00	9	Ox. Feed				6920					6.41	
9429823000900	10/25/94 23:00	9	Ox. Feed				6768					6.42	
9429823000900	10/25/94 23:00	9	Ox. Feed				6448					6.46	
9429901000900	10/26/94 1:00	9	Ox. Feed				6464					6.42	
9429902000900	10/26/94 2:00	9	Ox. Feed				6480					6.46	
9429903000900	10/26/94 3:00	9	Ox. Feed				6496					6.38	
9429904000900	10/26/94 4:00	9	Ox. Feed				6768					6.44	
9429905000900	10/26/94 5:00	9	Ox. Feed				6656					6.42	
9429906000900	10/26/94 6:00	9	Ox. Feed				6880					6.43	
9429907000900	10/26/94 7:00	9	Ox. Feed				6928					6.37	
9429909000900	10/26/94 9:00	9	Ox. Feed				7272					6.43	
9429910000900	10/26/94 10:00	9	Ox. Feed			21777	7000	19451	2446	67.3	5245	6.45	
9429911000900	10/26/94 11:00	9	Ox. Feed				7480					6.43	
9429912000900	10/26/94 12:00	9	Ox. Feed				7464					6.46	
9429913000900	10/26/94 13:00	9	Ox. Feed				7568					6.46	
9429914000900	10/26/94 14:00	9	Ox. Feed				7672					6.44	
9429915000900	10/26/94 15:00	9	Ox. Feed				7480					6.47	
9429916000900	10/26/94 16:00	9	Ox. Feed				7728					6.46	
9429917000900	10/26/94 17:00	9	Ox. Feed				7632					6.46	
9429918000900	10/26/94 18:00	9	Ox. Feed				7536					6.41	
9429919000900	10/26/94 19:00	9	Ox. Feed				7512					6.45	
9429920000900	10/26/94 20:00	9	Ox. Feed				7360					6.44	
9429921000900	10/26/94 21:00	9	Ox. Feed				7544					6.42	
9429922000900	10/26/94 22:00	9	Ox. Feed				7680					6.40	
9429923000900	10/26/94 23:00	9	Ox. Feed				7776					6.47	
9430001000900	10/27/94 1:00	9	Ox. Feed				7320					6.38	
9430002000900	10/27/94 2:00	9	Ox. Feed				6984		53			6.41	
9430002000900	10/27/94 2:00	9	Ox. Feed										
9430003000900	10/27/94 3:00	9	Ox. Feed				80					6.35	
9430003000900	10/27/94 3:00	9	Ox. Feed				7576						
9430004000900	10/27/94 4:00	9	Ox. Feed				7360					6.38	
9430005000900	10/27/94 5:00	9	Ox. Feed				7440					6.36	
9430006000900	10/27/94 6:00	9	Ox. Feed				7280					6.37	
9430007000900	10/27/94 7:00	9	Ox. Feed				7368					6.36	
9430008000900	10/27/94 8:00	9	Ox. Feed				7640					6.36	
9430009000900	10/27/94 9:00	9	Ox. Feed				7608					6.35	
9430010000900	10/27/94 10:00	9	Ox. Feed			22198	7408	15720	2361	96.9	5329	6.35	
9430011000900	10/27/94 11:00	9	Ox. Feed				7560					6.32	
9430012000900	10/27/94 12:00	9	Ox. Feed				7488					6.34	
9430013000900	10/27/94 13:00	9	Ox. Feed				7600					6.35	
9430015000900	10/27/94 15:00	9	Ox. Feed				7360					6.35	
9430016000900	10/27/94 16:00	9	Ox. Feed				7552					6.36	
9430017000900	10/27/94 17:00	9	Ox. Feed				7560					6.35	
9430018000900	10/27/94 18:00	9	Ox. Feed				7288					6.34	
9430019000900	10/27/94 19:00	9	Ox. Feed				7168					6.35	
9430020000900	10/27/94 20:00	9	Ox. Feed				6984					6.37	
9430021000900	10/27/94 21:00	9	Ox. Feed				6672					6.39	
9430022000900	10/27/94 22:00	9	Ox. Feed				6808					6.39	
9430023000900	10/27/94 23:00	9	Ox. Feed				6792					6.43	
9430100000900	10/28/94 0:00	9	Ox. Feed				6416					6.39	
9430101000900	10/28/94 1:00	9	Ox. Feed				6384					6.39	
9430102000900	10/28/94 2:00	9	Ox. Feed				6232					6.41	

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9430103000900	10/28/94 3:00	9	Ox. Feed				6536					6.38	
9430104000900	10/28/94 4:00	9	Ox. Feed				6568					6.39	
9430106000900	10/28/94 6:00	9	Ox. Feed				6064					6.40	
9430107000900	10/28/94 7:00	9	Ox. Feed									6.44	
9430107000900	10/28/94 7:00	9	Ox. Feed				6504					6.44	
9430108000900	10/28/94 8:00	9	Ox. Feed				6912					6.48	
9430109000900	10/28/94 9:00	9	Ox. Feed				6848					6.55	
9430110000900	10/28/94 10:00	9	Ox. Feed			21637	6728	22343	2351	75.3	5206	6.53	
9430111000900	10/28/94 11:00	9	Ox. Feed				6656					6.52	
9430112000900	10/28/94 12:00	9	Ox. Feed				6656					6.56	
9430113000900	10/28/94 13:00	9	Ox. Feed				6888					6.56	
9430114000900	10/28/94 14:00	9	Ox. Feed				6824					6.55	
9430115000900	10/28/94 15:00	9	Ox. Feed				6624					6.55	
9430116000900	10/28/94 16:00	9	Ox. Feed				6968					6.57	
9430117000900	10/28/94 17:00	9	Ox. Feed				6968					6.60	
9430118000900	10/28/94 18:00	9	Ox. Feed				6856					5.57	
9430119000900	10/28/94 19:00	9	Ox. Feed				6632					6.54	
9430120000900	10/28/94 20:00	9	Ox. Feed				6624					6.50	
9430121000900	10/28/94 21:00	9	Ox. Feed				6680					6.60	
9430122000900	10/28/94 22:00	9	Ox. Feed				6704					6.57	
9430401000900	10/31/94 1:00	9	Ox. Feed				5816					6.38	
9430402000900	10/31/94 2:00	9	Ox. Feed				5344					6.39	
9430403000900	10/31/94 3:00	9	Ox. Feed				5864					6.40	
9430404000900	10/31/94 4:00	9	Ox. Feed				5904					6.42	
9430405000900	10/31/94 5:00	9	Ox. Feed				5848					6.40	
9430406000900	10/31/94 6:00	9	Ox. Feed				5720					6.38	
9430407000900	10/31/94 7:00	9	Ox. Feed				5968					6.40	
9430408000900	10/31/94 8:00	9	Ox. Feed				6088					6.40	
9430409000900	10/31/94 9:00	9	Ox. Feed				6080					6.38	
9430410000900	10/31/94 10:00	9	Ox. Feed			21077	5872	18852	2489	96.9	5057	6.37	
9430411000900	10/31/94 11:00	9	Ox. Feed				6128					6.38	
9430412000900	10/31/94 12:00	9	Ox. Feed				5976					6.37	
9430413000900	10/31/94 13:00	9	Ox. Feed				6008					6.37	
9430414000900	10/31/94 14:00	9	Ox. Feed				6120					6.35	
9430416000900	10/31/94 16:00	9	Ox. Feed				5968					6.38	
9430417000900	10/31/94 17:00	9	Ox. Feed				6224					6.39	
9430418000900	10/31/94 18:00	9	Ox. Feed				6328					6.28	
9430419000900	10/31/94 19:00	9	Ox. Feed				6216					6.44	
9430420000900	10/31/94 20:00	9	Ox. Feed				6304					6.35	
9430421000900	10/31/94 21:00	9	Ox. Feed				6416					6.36	
9430422000900	10/31/94 22:00	9	Ox. Feed				6408					6.35	
9430423000900	10/31/94 23:00	9	Ox. Feed				6320					6.36	
9430500000900	11/1/94 0:00	9	Ox. Feed				6296					6.33	
9430501000900	11/1/94 1:00	9	Ox. Feed				6184					6.31	
9430502000900	11/1/94 2:00	9	Ox. Feed				5992					6.28	
9430503000900	11/1/94 3:00	9	Ox. Feed				6216					6.22	
9430504000900	11/1/94 4:00	9	Ox. Feed				6352					6.30	
9430505000900	11/1/94 5:00	9	Ox. Feed				6328					6.31	
9430506000900	11/1/94 6:00	9	Ox. Feed				6040					6.29	
9430507000900	11/1/94 7:00	9	Ox. Feed				6128		53180			6.28	
9430508000900	11/1/94 8:00	9	Ox. Feed				6544					6.29	
9430509000900	11/1/94 9:00	9	Ox. Feed				6320					6.28	
9430510000900	11/1/94 10:00	9	Ox. Feed			21677	6208	20790	2563	121.8	5188	6.28	
9430511000900	11/1/94 11:00	9	Ox. Feed				6552					6.29	
9430512000900	11/1/94 12:00	9	Ox. Feed				6552					6.31	
9430513000900	11/1/94 13:00	9	Ox. Feed				6536					6.30	
9430514000900	11/1/94 14:00	9	Ox. Feed				6312					6.28	
9430515000900	11/1/94 15:00	9	Ox. Feed				6208					6.28	
9430516000900	11/1/94 16:00	9	Ox. Feed				6456					6.30	
9430517000900	11/1/94 17:00	9	Ox. Feed				6528					6.33	
9430518000900	11/1/94 18:00	9	Ox. Feed				6432					6.29	
9430519000900	11/1/94 19:00	9	Ox. Feed				6408					6.25	
9430520000900	11/1/94 20:00	9	Ox. Feed				6696					6.27	
9430521000900	11/1/94 21:00	9	Ox. Feed				6576					6.30	
9430522000900	11/1/94 22:00	9	Ox. Feed				6680					6.28	
9430523000900	11/1/94 23:00	9	Ox. Feed				6576					6.32	
9430600000900	11/2/94 0:00	9	Ox. Feed				6480					6.29	

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9430601000900	11/2/94 1:00	9	Ox. Feed				6288					6.28	
9430602000900	11/2/94 2:00	9	Ox. Feed				5880					6.26	
9430603000900	11/2/94 3:00	9	Ox. Feed				6472					6.22	
9430604000900	11/2/94 4:00	9	Ox. Feed				6512					6.27	
9430605000900	11/2/94 5:00	9	Ox. Feed				6504					6.25	
9430605260900	11/2/94 5:26	9	Ox. Feed				6984					6.27	
9430606000900	11/2/94 6:00	9	Ox. Feed				6240					6.25	
9430607000900	11/2/94 7:00	9	Ox. Feed				6696					6.28	
9430609000900	11/2/94 9:00	9	Ox. Feed				6984					6.26	
9430610000900	11/2/94 10:00	9	Ox. Feed			21687	6872	18916	25313	129.0	5186	6.25	
9430611000900	11/2/94 11:00	9	Ox. Feed				7120					6.26	
9430612000900	11/2/94 12:00	9	Ox. Feed				7192					6.26	
9430613000900	11/2/94 13:00	9	Ox. Feed				7064					6.26	
9430614000900	11/2/94 14:00	9	Ox. Feed				6992					6.22	
9430615000900	11/2/94 15:00	9	Ox. Feed				6952					6.28	
9430616000900	11/2/94 16:00	9	Ox. Feed				7048					6.29	
9430617000900	11/2/94 17:00	9	Ox. Feed				7096					6.32	
9430618000900	11/2/94 18:00	9	Ox. Feed				6912					6.27	
9430619000900	11/2/94 19:00	9	Ox. Feed				6896					6.30	
9430620000900	11/2/94 20:00	9	Ox. Feed				6984					6.28	
9430621000900	11/2/94 21:00	9	Ox. Feed				6784					6.34	
9430622000900	11/2/94 22:00	9	Ox. Feed				6856					6.25	
9430623000900	11/2/94 23:00	9	Ox. Feed				6872					6.25	
9430700000900	11/3/94 0:00	9	Ox. Feed				6672					6.25	
9430701000900	11/3/94 1:00	9	Ox. Feed				6496					6.24	
9430703000900	11/3/94 3:00	9	Ox. Feed				6088					6.23	
9430704000900	11/3/94 4:00	9	Ox. Feed				6496					6.24	
9430705000900	11/3/94 5:00	9	Ox. Feed				6192					6.22	
9430706000900	11/3/94 6:00	9	Ox. Feed				6080					6.22	
9430707000900	11/3/94 7:00	9	Ox. Feed				6312					6.22	
9430708000900	11/3/94 8:00	9	Ox. Feed				6352					6.25	
9430709000900	11/3/94 9:00	9	Ox. Feed				6576					6.24	
9430709000900	11/3/94 9:00	9	Ox. Feed									6.24	
9430710000900	11/3/94 10:00	9	Ox. Feed			21978	6320	17593	2521	111.3	5267	6.22	
9430711000900	11/3/94 11:00	9	Ox. Feed				6560					6.24	
9430712000900	11/3/94 12:00	9	Ox. Feed				6664					6.23	
9430713000900	11/3/94 13:00	9	Ox. Feed				6416					6.22	
9430714000900	11/3/94 14:00	9	Ox. Feed				6280					6.22	
9430715000900	11/3/94 15:00	9	Ox. Feed				6392					6.20	
9430716000900	11/3/94 16:00	9	Ox. Feed				6480					6.20	
9430717000900	11/3/94 17:00	9	Ox. Feed				6376					6.22	
9430718000900	11/3/94 18:00	9	Ox. Feed				6544					6.17	
9430719000900	11/3/94 19:00	9	Ox. Feed				6496					6.22	
9430720000900	11/3/94 20:00	9	Ox. Feed				6392					6.21	
9430721000900	11/3/94 21:00	9	Ox. Feed				6216					6.22	
9430722000900	11/3/94 22:00	9	Ox. Feed				6256					6.20	
9430723000900	11/3/94 23:00	9	Ox. Feed				6288					6.17	
9430800000900	11/4/94 0:00	9	Ox. Feed				5992					6.20	
9430801000900	11/4/94 1:00	9	Ox. Feed				6120					6.21	
9430802000900	11/4/94 2:00	9	Ox. Feed				5776					6.21	
9430803000900	11/4/94 3:00	9	Ox. Feed				5976					6.14	
9430805000900	11/4/94 5:00	9	Ox. Feed				6208					6.21	
9430806000900	11/4/94 6:00	9	Ox. Feed				5976					6.21	
9430807000900	11/4/94 7:00	9	Ox. Feed				6248					6.19	
9430808000900	11/4/94 8:00	9	Ox. Feed				6464					6.19	
9430809000900	11/4/94 9:00	9	Ox. Feed				6352					6.16	
9430810000900	11/4/94 10:00	9	Ox. Feed			21497	6232	19158	2638	117.7	5146	6.18	
9430811000900	11/4/94 11:00	9	Ox. Feed				6336					6.17	
9430814000900	11/4/94 14:00	9	Ox. Feed				6376					6.20	
9431103000900	11/7/94 3:00	9	Ox. Feed				5928					6.24	
9431104000900	11/7/94 4:00	9	Ox. Feed				5680					6.24	
9431105000900	11/7/94 5:00	9	Ox. Feed				6200					6.22	
9431106000900	11/7/94 6:00	9	Ox. Feed				5512					6.23	
9431107000900	11/7/94 7:00	9	Ox. Feed				6192					6.24	
9431108000900	11/7/94 8:00	9	Ox. Feed				6392					6.26	
9431109000900	11/7/94 9:00	9	Ox. Feed				6216					6.24	
9431110000900	11/7/94 10:00	9	Ox. Feed			21477	6192	19206	2670	94.5	5156	6.25	

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9431111000900	11/7/94 11:00	9	Ox. Feed				6536					6.28	
9431112000900	11/7/94 12:00	9	Ox. Feed				6400					6.26	
9431113000900	11/7/94 13:00	9	Ox. Feed				6512					6.25	
9431114000900	11/7/94 14:00	9	Ox. Feed				6472					6.24	
9431115000900	11/7/94 15:00	9	Ox. Feed				6512					6.26	
9431116000900	11/7/94 16:00	9	Ox. Feed				6568					6.24	
9431117000900	11/7/94 17:00	9	Ox. Feed				6592					6.23	
9431118000900	11/7/94 18:00	9	Ox. Feed				6552					6.17	
9431119000900	11/7/94 19:00	9	Ox. Feed				6648					6.22	
9431120000900	11/7/94 20:00	9	Ox. Feed				6344					6.22	
9431121000900	11/7/94 21:00	9	Ox. Feed									6.25	
9431122000900	11/7/94 22:00	9	Ox. Feed				6608					6.23	
9431123000900	11/7/94 23:00	9	Ox. Feed				6544					6.61	
9431200000900	11/8/94 0:00	9	Ox. Feed				6384					6.17	
9431201000900	11/8/94 1:00	9	Ox. Feed				6216					6.15	
9431202000900	11/8/94 2:00	9	Ox. Feed				5952					6.18	
9431203000900	11/8/94 3:00	9	Ox. Feed				6392					6.15	
9431204000900	11/8/94 4:00	9	Ox. Feed				6304					6.14	
9431205000900	11/8/94 5:00	9	Ox. Feed				6488					6.14	
9431205000900	11/8/94 5:00	9	Ox. Feed				6488					6.14	
9431206000900	11/8/94 6:00	9	Ox. Feed				6128					6.12	
9431207000900	11/8/94 7:00	9	Ox. Feed				6536					6.18	
9431208000900	11/8/94 8:00	9	Ox. Feed				6848					6.15	
9431209000900	11/8/94 9:00	9	Ox. Feed				6944					6.14	
9431210000900	11/8/94 10:00	9	Ox. Feed			21607	6720	20332	2638	92.1	5189	6.16	
9431211000900	11/8/94 11:00	9	Ox. Feed				6952					6.15	
9431212000900	11/8/94 12:00	9	Ox. Feed				7024					6.15	
9431216000900	11/8/94 16:00	9	Ox. Feed				6800					6.10	
9431217000900	11/8/94 17:00	9	Ox. Feed				6968					6.22	
9431218000900	11/8/94 18:00	9	Ox. Feed				6944					6.18	
9431219000900	11/8/94 19:00	9	Ox. Feed				6856					6.17	
9431220000900	11/8/94 20:00	9	Ox. Feed				6976					6.23	
9431221000900	11/8/94 21:00	9	Ox. Feed				6760					6.18	
9431222000900	11/8/94 22:00	9	Ox. Feed				6728					6.13	
9431223000900	11/8/94 23:00	9	Ox. Feed				6864					6.18	
9431300000900	11/9/94 0:00	9	Ox. Feed				6672					6.18	
9431301000900	11/9/94 1:00	9	Ox. Feed				6816					6.18	
9431302000900	11/9/94 2:00	9	Ox. Feed				6848					6.17	
9431303000900	11/9/94 3:00	9	Ox. Feed				6632					6.14	
9431304000900	11/9/94 4:00	9	Ox. Feed				6664					6.12	
9431305000900	11/9/94 5:00	9	Ox. Feed				6752					6.16	
9431306000900	11/9/94 6:00	9	Ox. Feed				6376					6.16	
9431307000900	11/9/94 7:00	9	Ox. Feed				6576					6.15	
9431308000900	11/9/94 8:00	9	Ox. Feed				7280					6.17	
9431309000900	11/9/94 9:00	9	Ox. Feed				6896					6.16	
9431310000900	11/9/94 10:00	9	Ox. Feed			4380	6672	19384	2627	111.3	996	6.16	
9431311000900	11/9/94 11:00	9	Ox. Feed				6824					6.18	
9431312000900	11/9/94 12:00	9	Ox. Feed				6648					6.17	
9431313000900	11/9/94 13:00	9	Ox. Feed				6712					6.20	
9431314000900	11/9/94 14:00	9	Ox. Feed				6640		0			6.15	
9431315000900	11/9/94 15:00	9	Ox. Feed	0			6656					6.16	
9431316000900	11/9/94 16:00	9	Ox. Feed				6696					6.20	
9431317000900	11/9/94 17:00	9	Ox. Feed				6704					6.18	
9431318000900	11/9/94 18:00	9	Ox. Feed				6712					6.16	
9431319000900	11/9/94 19:00	9	Ox. Feed				6688					6.22	
9431320000900	11/9/94 20:00	9	Ox. Feed				6616					6.20	
9431322000900	11/9/94 22:00	9	Ox. Feed				6632					6.20	
9431323000900	11/9/94 23:00	9	Ox. Feed				6600					6.19	
9431400000900	11/10/94 0:00	9	Ox. Feed				6280					6.17	
9431401000900	11/10/94 1:00	9	Ox. Feed				6184					6.17	
9431402000900	11/10/94 2:00	9	Ox. Feed				5984					6.18	
9431403000900	11/10/94 3:00	9	Ox. Feed				6240					6.17	
9431404000900	11/10/94 4:00	9	Ox. Feed				6136					6.18	
9431405000900	11/10/94 5:00	9	Ox. Feed				6248					6.20	
9431406000900	11/10/94 6:00	9	Ox. Feed				5872					6.22	
9431407000900	11/10/94 7:00	9	Ox. Feed				6248					6.19	
9431408000900	11/10/94 8:00	9	Ox. Feed				6152					6.17	

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9431409000900	11/10/94 9:00	9	Ox. Feed				6064		2638	200.3		6.21	-9.5
9431409000900	11/10/94 9:00	9	Ox. Feed				6296					6.21	
9431410000900	11/10/94 10:00	9	Ox. Feed			22218	6064	19360	2638	200.3	5271	6.19	
9431412000900	11/10/94 12:00	9	Ox. Feed	5004	2.90		6656					6.07	
9431412000900	11/10/94 12:00	9	Ox. Feed				6400					6.29	
9431413000900	11/10/94 13:00	9	Ox. Feed				6392					6.24	
9431414000900	11/10/94 14:00	9	Ox. Feed				6808					6.25	
9431415000900	11/10/94 15:00	9	Ox. Feed				6584					6.26	606.0
9431416000900	11/10/94 16:00	9	Ox. Feed				6488					6.23	
9431417000900	11/10/94 17:00	9	Ox. Feed				6528					6.29	
9431418000900	11/10/94 18:00	9	Ox. Feed				6560					6.27	
9431419000900	11/10/94 19:00	9	Ox. Feed				6552					6.34	
9431420000900	11/10/94 20:00	9	Ox. Feed				6376					6.32	
9431421000900	11/10/94 21:00	9	Ox. Feed				6384					6.30	
9431422000900	11/10/94 22:00	9	Ox. Feed				6336					6.27	
9431423000900	11/10/94 23:00	9	Ox. Feed				6232					6.18	
9431500000900	11/11/94 0:00	9	Ox. Feed				5920					6.25	
9431501000900	11/11/94 1:00	9	Ox. Feed				6016					6.26	
9431502000900	11/11/94 2:00	9	Ox. Feed				5704					6.25	
9431503000900	11/11/94 3:00	9	Ox. Feed				5976					6.25	
9431504000900	11/11/94 4:00	9	Ox. Feed				5896					6.18	
9431505000900	11/11/94 5:00	9	Ox. Feed				5912					6.22	
9431506000900	11/11/94 6:00	9	Ox. Feed				5800					6.22	
9431507000900	11/11/94 7:00	9	Ox. Feed				6000					6.22	
9431508000900	11/11/94 8:00	9	Ox. Feed				6296					6.25	
9431509000900	11/11/94 9:00	9	Ox. Feed				6288					6.27	
9431510000900	11/11/94 10:00	9	Ox. Feed			22888				92.9	5499		
9431511000900	11/11/94 11:00	9	Ox. Feed				6304					6.30	
9431512000900	11/11/94 12:00	9	Ox. Feed				5976					6.22	
9431513000900	11/11/94 13:00	9	Ox. Feed				6104					6.24	
9431514000900	11/11/94 14:00	9	Ox. Feed				6128					6.23	
9431516000900	11/11/94 16:00	9	Ox. Feed				6144					6.24	
9431517000900	11/11/94 17:00	9	Ox. Feed				6264					6.26	
9431518000900	11/11/94 18:00	9	Ox. Feed				6136					6.23	
9431519000900	11/11/94 19:00	9	Ox. Feed				6080					6.23	
9432209000900	11/18/94 9:00	9	Ox. Feed				6696					6.30	
9432210000900	11/18/94 10:00	9	Ox. Feed			20546	6688	43912	2989	60.1	4950	6.34	
9432211000900	11/18/94 11:00	9	Ox. Feed				7032					6.34	
9432212000900	11/18/94 12:00	9	Ox. Feed				6640					6.29	
9432213000900	11/18/94 13:00	9	Ox. Feed				6768					6.33	
9432214000900	11/18/94 14:00	9	Ox. Feed				6800					6.36	
9432509000900	11/21/94 9:00	9	Ox. Feed				7200					6.27	
9432510000900	11/21/94 10:00	9	Ox. Feed			20526	7008	16060	2797	100.1	4921	6.25	
9432511000900	11/21/94 11:00	9	Ox. Feed				7248					6.24	
9432512000900	11/21/94 12:00	9	Ox. Feed				7208					6.24	
9432513000900	11/21/94 13:00	9	Ox. Feed				7096					6.22	
9432514000900	11/21/94 14:00	9	Ox. Feed				7328					6.19	
9432515000900	11/21/94 15:00	9	Ox. Feed				7176					6.22	
9432611000900	11/22/94 11:00	9	Ox. Feed				6512					6.27	
9432611300900	11/22/94 11:30	9	Ox. Feed			19816	6344	17067	2787	157.0	4714	6.27	
9432612000900	11/22/94 12:00	9	Ox. Feed				6528					6.30	
9432613000900	11/22/94 13:00	9	Ox. Feed				6424					6.27	
9432614000900	11/22/94 14:00	9	Ox. Feed				6448					6.30	
9432615000900	11/22/94 15:00	9	Ox. Feed				6400					6.26	
9432709000900	11/23/94 9:00	9	Ox. Feed				6088					6.23	
9432710000900	11/23/94 10:00	9	Ox. Feed			19035	5984	11801	2957	135.4	4538	6.22	
9432711000900	11/23/94 11:00	9	Ox. Feed				6072					6.21	
9432712000900	11/23/94 12:00	9	Ox. Feed				6144					6.23	
9432713000900	11/23/94 13:00	9	Ox. Feed				6160					6.20	
9432714000900	11/23/94 14:00	9	Ox. Feed				6008					6.16	
9432715000900	11/23/94 15:00	9	Ox. Feed				6120					6.22	
9433209000900	11/28/94 9:00	9	Ox. Feed				2816					6.42	
9433209160900	11/28/94 9:16	9	Ox. Feed				2928						
9433209300900	11/28/94 9:30	9	Ox. Feed				2704					6.48	
9433211000900	11/28/94 11:00	9	Ox. Feed				2616					6.40	
9433211300900	11/28/94 11:30	9	Ox. Feed				2576					6.38	
9433212000900	11/28/94 12:00	9	Ox. Feed			17844	2408	1382	2563	147.4	4242	6.37	

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9433213000900	11/28/94 13:00	9	Ox. Feed				2400					6.36	
9433214000900	11/28/94 14:00	9	Ox. Feed				2488					6.44	
9433215000900	11/28/94 15:00	9	Ox. Feed				2416					6.36	
9433308150900	11/29/94 8:15	9	Ox. Feed				3696					6.53	
9433309000900	11/29/94 9:00	9	Ox. Feed				3704					6.56	
9433310000900	11/29/94 10:00	9	Ox. Feed			20106	3584	13336	2659	96.9	4821	6.54	
9433311000900	11/29/94 11:00	9	Ox. Feed				3704					6.48	
9433312000900	11/29/94 12:00	9	Ox. Feed				3712					6.46	
9433313000900	11/29/94 13:00	9	Ox. Feed				3968					6.45	
9433314000900	11/29/94 14:00	9	Ox. Feed				4024					6.49	
9433315000900	11/29/94 15:00	9	Ox. Feed				3808					6.46	
9433409000900	11/30/94 9:00	9	Ox. Feed				4664					6.51	
9433410000900	11/30/94 10:00	9	Ox. Feed			18245	4496	12996	2755	179.4	4320	6.49	
9433411000900	11/30/94 11:00	9	Ox. Feed				4664					6.49	
9433412000900	11/30/94 12:00	9	Ox. Feed				4664					6.49	
9433413000900	11/30/94 13:00	9	Ox. Feed				4480					6.45	
9433414000900	11/30/94 14:00	9	Ox. Feed				4640					6.44	
9433415000900	11/30/94 15:00	9	Ox. Feed				4680					6.49	
9433416000900	11/30/94 16:00	9	Ox. Feed				4632					6.44	
9433417000900	11/30/94 17:00	9	Ox. Feed				4584					6.44	
9433418000900	11/30/94 18:00	9	Ox. Feed				4608					6.44	
9433419000900	11/30/94 19:00	9	Ox. Feed				4600					6.41	
9433419000900	11/30/94 19:00	9	Ox. Feed				4600					6.4	
9433510300900	12/1/94 10:30	9	Ox. Feed				4936					6.4	
9433511000900	12/1/94 11:00	9	Ox. Feed			18345	4720	9007	2702	111	4386	6.4	
9433512000900	12/1/94 12:00	9	Ox. Feed				4896					6.5	
9433513000900	12/1/94 13:00	9	Ox. Feed				4872					6.4	
9433514000900	12/1/94 14:00	9	Ox. Feed				4992					6.4	
9433515000900	12/1/94 15:00	9	Ox. Feed				4832					6.4	
9433609300900	12/2/94 9:30	9	Ox. Feed				5016					6.4	
9433610000900	12/2/94 10:00	9	Ox. Feed			20636	4952	9366	2712	155	4914	6.4	
9433909300900	12/5/94 9:30	9	Ox. Feed									6.4	
9433910000900	12/5/94 10:00	9	Ox. Feed				4736					6.4	
9433911000900	12/5/94 11:00	9	Ox. Feed			17714	4632		2957	71	4256	6.3	
9433911000900	12/5/94 11:00	9	Ox. Feed					15849					
9433912000900	12/5/94 12:00	9	Ox. Feed				4912					6.4	
9433913000900	12/5/94 13:00	9	Ox. Feed				4784					6.3	
9433914000900	12/5/94 14:00	9	Ox. Feed				4896					6.3	
9433915000900	12/5/94 15:00	9	Ox. Feed				4856					6.3	
9434010000900	12/6/94 10:00	9	Ox. Feed			19385	4584	11737	2978	190	4590	6.4	
9434011000900	12/6/94 11:00	9	Ox. Feed				4568					6.4	
9434012000900	12/6/94 12:00	9	Ox. Feed				4896					6.4	
9434013000900	12/6/94 13:00	9	Ox. Feed				4928					6.4	
9434014000900	12/6/94 14:00	9	Ox. Feed				4912					6.4	
9434015000900	12/6/94 15:00	9	Ox. Feed				4880					6.4	
9434200000900	12/8/94 0:00	9	Ox. Feed				5472					6.5	
9434210000900	12/8/94 10:00	9	Ox. Feed				5400					6.5	
9434211000900	12/8/94 11:00	9	Ox. Feed			18745	5232	8340	2999	111	4483	6.4	
9434212000900	12/8/94 12:00	9	Ox. Feed				5336					6.5	
9434214000900	12/8/94 14:00	9	Ox. Feed			6035	5384		2691	1987	259	6.5	4.6
9434215000900	12/8/94 15:00	9	Ox. Feed				5456					6.47	
9434215000900	12/8/94 15:00	9	Ox. Feed				5456					6.5	
9434309000900	12/9/94 9:00	9	Ox. Feed				5480					6.4	
9434310000900	12/9/94 10:00	9	Ox. Feed			19966	5080	8681	3031	112	4778	6.4	
9434311000900	12/9/94 11:00	9	Ox. Feed				4592					6.4	
9434312000900	12/9/94 12:00	9	Ox. Feed				5352					6.4	
9434313000900	12/9/94 13:00	9	Ox. Feed				5280					6.4	
9434314000900	12/9/94 14:00	9	Ox. Feed				5392					6.4	
9434617000900	12/12/94 17:00	9	Ox. Feed				7256					6.5	
9434618000900	12/12/94 18:00	9	Ox. Feed				7280					6.5	
9434620000900	12/12/94 20:00	9	Ox. Feed				7464					6.5	
9434621000900	12/12/94 21:00	9	Ox. Feed				7328					6.5	
9434622000900	12/12/94 22:00	9	Ox. Feed				7344					6.5	
9434713000900	12/13/94 13:00	9	Ox. Feed				6944					6.4	
9434714000900	12/13/94 14:00	9	Ox. Feed				7136					6.3	
9434715000900	12/13/94 15:00	9	Ox. Feed				6624					6.6	
9434716000900	12/13/94 16:00	9	Ox. Feed				6312					6.6	

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9434717000900	12/13/94 17:00	9	Ox. Feed				6376					6.7	
9434718000900	12/13/94 18:00	9	Ox. Feed				6288					6.7	
9434719000900	12/13/94 19:00	9	Ox. Feed				6160					6.7	
9434719550900	12/13/94 19:55	9	Ox. Feed				6336					6.7	
9434720000900	12/13/94 20:00	9	Ox. Feed				6248					6.7	
9434721000900	12/13/94 21:00	9	Ox. Feed				6128					6.7	
9434722000900	12/13/94 22:00	9	Ox. Feed				6072					6.7	
9434809000900	12/14/94 9:00	9	Ox. Feed				6488					6.6	
9434810000900	12/14/94 10:00	9	Ox. Feed			20636	6144	7829	3074	106	4945	6.6	
9434811000900	12/14/94 11:00	9	Ox. Feed				6544					6.6	
9434812000900	12/14/94 12:00	9	Ox. Feed				6616					6.6	
9434813000900	12/14/94 13:00	9	Ox. Feed				6504					6.5	
9434814000900	12/14/94 14:00	9	Ox. Feed				6616					6.5	
9434815000900	12/14/94 15:00	9	Ox. Feed	0			6640					6.5	
9434816000900	12/14/94 16:00	9	Ox. Feed				6720					6.6	
9434816300900	12/14/94 16:30	9	Ox. Feed				6664					6.5	
9434817000900	12/14/94 17:00	9	Ox. Feed				6560					6.5	
9434818000900	12/14/94 18:00	9	Ox. Feed				6584					6.5	
9434819000900	12/14/94 19:00	9	Ox. Feed				6496					6.5	
9434820000900	12/14/94 20:00	9	Ox. Feed				6568					6.5	
9434821000900	12/14/94 21:00	9	Ox. Feed				6544					6.5	
9434821300900	12/14/94 21:30	9	Ox. Feed				6560					6.5	
9434822000900	12/14/94 22:00	9	Ox. Feed				6928					6.6	
9434823000900	12/14/94 23:00	9	Ox. Feed				6816					6.6	
9434909000900	12/15/94 9:00	9	Ox. Feed				6864					6.5	
9434910000900	12/15/94 10:00	9	Ox. Feed			21687	6848	7091	3042	145	5176	6.4	
9434911000900	12/15/94 11:00	9	Ox. Feed				7144					6.5	
9434912000900	12/15/94 12:00	9	Ox. Feed				7048					6.4	
9434918000900	12/15/94 18:00	9	Ox. Feed				7184					6.4	
9434919000900	12/15/94 19:00	9	Ox. Feed				7272					6.4	
9434920000900	12/15/94 20:00	9	Ox. Feed				7256					6.4	
9434921000900	12/15/94 21:00	9	Ox. Feed				7216					6.4	
9434922000900	12/15/94 22:00	9	Ox. Feed				7304					6.4	
9435009000900	12/16/94 9:00	9	Ox. Feed				7280					6.3	
9435010000900	12/16/94 10:00	9	Ox. Feed			20626	7152	9575	2872	102	4945	6.3	
9435011000900	12/16/94 11:00	9	Ox. Feed				7232					6.4	
9435012000900	12/16/94 12:00	9	Ox. Feed				7312					6.3	
9435013000900	12/16/94 13:00	9	Ox. Feed				7184					6.4	
9435309000900	12/19/94 9:00	9	Ox. Feed				7144					6.5	
9435310000900	12/19/94 10:00	9	Ox. Feed			23068	7040	10237	2999	98	5540	6.5	
9435311000900	12/19/94 11:00	9	Ox. Feed				7288					6.5	
9435312000900	12/19/94 12:00	9	Ox. Feed				7184					6.5	
9435313000900	12/19/94 13:00	9	Ox. Feed				7224					6.5	
9435314000900	12/19/94 14:00	9	Ox. Feed				7232					6.5	
9435315000900	12/19/94 15:00	9	Ox. Feed				7088					6.5	
9435409300900	12/20/94 9:30	9	Ox. Feed				7472					6.4	
9435410000900	12/20/94 10:00	9	Ox. Feed			21687	7296	10406	2808	95	5206	6.4	
9435411000900	12/20/94 11:00	9	Ox. Feed				7400					6.4	
9435412000900	12/20/94 12:00	9	Ox. Feed				7440					6.4	
9435413000900	12/20/94 13:00	9	Ox. Feed				7352					6.4	
9435414000900	12/20/94 14:00	9	Ox. Feed				7496					6.4	
9435415000900	12/20/94 15:00	9	Ox. Feed				7112					6.3	
9435509300900	12/21/94 9:30	9	Ox. Feed				7272					6.3	
9435510000900	12/21/94 10:00	9	Ox. Feed			21948	7024	10553	2861	83	5277	6.4	
9435511000900	12/21/94 11:00	9	Ox. Feed				7232					6.4	
9435512000900	12/21/94 12:00	9	Ox. Feed				7232					6.3	
9435513000900	12/21/94 13:00	9	Ox. Feed				7248					6.3	
9435514000900	12/21/94 14:00	9	Ox. Feed				7080					6.3	
9435515000900	12/21/94 15:00	9	Ox. Feed				7152					6.3	
9435609000900	12/22/94 9:00	9	Ox. Feed				7016					6.4	
9435610000900	12/22/94 10:00	9	Ox. Feed			22268	6944	7625	2808	99	5345	6.5	
9435611000900	12/22/94 11:00	9	Ox. Feed				7192					6.4	
9435612000900	12/22/94 12:00	9	Ox. Feed				7136					6.4	
9435613000900	12/22/94 13:00	9	Ox. Feed				7128					6.3	
9435614000900	12/22/94 14:00	9	Ox. Feed				7144					6.3	
9436109000900	12/27/94 9:00	9	Ox. Feed				6504					6.4	
9436110000900	12/27/94 10:00	9	Ox. Feed				6608					6.4	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9436111000900	12/27/94 11:00	9	Ox. Feed			22138	6368	9767	2925	72	5330	6.4	
9436112000900	12/27/94 12:00	9	Ox. Feed				6384					6.4	
9436113000900	12/27/94 13:00	9	Ox. Feed				6272					6.4	
9436114000900	12/27/94 14:00	9	Ox. Feed				6368					6.4	
9436115000900	12/27/94 15:00	9	Ox. Feed				6464					6.4	
9436209300900	12/28/94 9:30	9	Ox. Feed				6528					6.5	
9436210000900	12/28/94 10:00	9	Ox. Feed			21427	6296	8953	2904	103	5139	6.4	
9436211000900	12/28/94 11:00	9	Ox. Feed				6504					6.4	
9436212000900	12/28/94 12:00	9	Ox. Feed				6408					6.4	
9436213000900	12/28/94 13:00	9	Ox. Feed				6280					6.3	
9436214000900	12/28/94 14:00	9	Ox. Feed				6344					6.4	
9436310000900	12/29/94 10:00	9	Ox. Feed				6872					6.4	
9436313000900	12/29/94 13:00	9	Ox. Feed				6760					6.4	
9436314000900	12/29/94 14:00	9	Ox. Feed				6848					6.4	
9436315000900	12/29/94 15:00	9	Ox. Feed				6864					6.3	
9436409000900	12/30/94 9:00	9	Ox. Feed				7408					6.4	
9436410000900	12/30/94 10:00	9	Ox. Feed			21938	7248	8258	3031	112	5257	6.3	
9436411000900	12/30/94 11:00	9	Ox. Feed				7288					6.3	
9500610000900	1/6/95 10:00	9	Ox. Feed			20096	6112	11056	2627	150	4787	6.5	
9500611000900	1/6/95 11:00	9	Ox. Feed				6216					6.4	
9500612000900	1/6/95 12:00	9	Ox. Feed				6224					6.4	
9500613000900	1/6/95 13:00	9	Ox. Feed				6144					6.5	
9500614000900	1/6/95 14:00	9	Ox. Feed				6216					6.5	
9500615000900	1/6/95 15:00	9	Ox. Feed				6656					6.5	
9500910000900	1/9/95 10:00	9	Ox. Feed				5960					6.4	
9500911000900	1/9/95 11:00	9	Ox. Feed			20937	5760	8023	3021	95	5024	6.3	
9500912000900	1/9/95 12:00	9	Ox. Feed				6032					6.4	
9500913000900	1/9/95 13:00	9	Ox. Feed				6120					6.3	
9500914000900	1/9/95 14:00	9	Ox. Feed				6160					6.4	
9500915000900	1/9/95 15:00	9	Ox. Feed				6104					6.3	
9501009000900	1/10/95 9:00	9	Ox. Feed				5736					6.5	
9501010000900	1/10/95 10:00	9	Ox. Feed			20436	5544	6880	3191	158	4864	6.5	
9501011000900	1/10/95 11:00	9	Ox. Feed				5624					6.5	
9501012000900	1/10/95 12:00	9	Ox. Feed				5592					6.5	
9501013000900	1/10/95 13:00	9	Ox. Feed				5536					6.5	
9501014000900	1/10/95 14:00	9	Ox. Feed				6160					6.5	
9501015000900	1/10/95 15:00	9	Ox. Feed				5488					6.5	
9501109000900	1/11/95 9:00	9	Ox. Feed				5536					6.6	
9501110000900	1/11/95 10:00	9	Ox. Feed			20446	5320	7869	3127	157	4867	6.5	
9501111000900	1/11/95 11:00	9	Ox. Feed				5544					6.5	
9501112000900	1/11/95 12:00	9	Ox. Feed				5568					6.5	
9501113000900	1/11/95 13:00	9	Ox. Feed				5440					6.5	
9501114000900	1/11/95 14:00	9	Ox. Feed				5472					6.5	
9501115000900	1/11/95 15:00	9	Ox. Feed				5448					6.5	
9501209000900	1/12/95 9:00	9	Ox. Feed				5904					6.5	
9501210000900	1/12/95 10:00	9	Ox. Feed			20466	5592	7027	3318	147	4878	6.5	
9501211000900	1/12/95 11:00	9	Ox. Feed				5816					6.5	
9501212000900	1/12/95 12:00	9	Ox. Feed				5784					6.6	
9501309000900	1/13/95 9:00	9	Ox. Feed				6176					6.4	
9501310000900	1/13/95 10:00	9	Ox. Feed			79974	5992	8279	3244	151	19319	6.4	
9501311000900	1/13/95 11:00	9	Ox. Feed				6224					6.5	
9501312000900	1/13/95 12:00	9	Ox. Feed				6440					6.5	
9501313000900	1/13/95 13:00	9	Ox. Feed				6208					6.5	
9501314000900	1/13/95 14:00	9	Ox. Feed				6344					6.5	
9501609000900	1/16/95 9:00	9	Ox. Feed				6344					6.5	
9501610000900	1/16/95 10:00	9	Ox. Feed			19005	6032	5341	2702	79	4565	6.4	
9501611000900	1/16/95 11:00	9	Ox. Feed				6424					6.5	
9501612000900	1/16/95 12:00	9	Ox. Feed				6488					6.4	
9501613000900	1/16/95 13:00	9	Ox. Feed				6400					6.5	
9501614000900	1/16/95 14:00	9	Ox. Feed				6528					6.4	
9501615000900	1/16/95 15:00	9	Ox. Feed				6648					6.5	
9501709000900	1/17/95 9:00	9	Ox. Feed				6752					6.5	
9501710000900	1/17/95 10:00	9	Ox. Feed			18134	6552	5875	2808	106	4337	6.5	
9501711000900	1/17/95 11:00	9	Ox. Feed				6832					6.5	
9501712000900	1/17/95 12:00	9	Ox. Feed				6912					6.5	
9501713000900	1/17/95 13:00	9	Ox. Feed				6936					6.5	
9501714000900	1/17/95 14:00	9	Ox. Feed				6672					6.5	

ZIMLAB

SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9501715000900	1/17/95 15:00	9	Ox. Feed				7104					6.5	
9501809000900	1/18/95 9:00	9	Ox. Feed				7248					6.5	
9501810000900	1/18/95 10:00	9	Ox. Feed			19125	6920	3687	2755	82	4592	6.4	
9501811000900	1/18/95 11:00	9	Ox. Feed				7248					6.5	
9501812000900	1/18/95 12:00	9	Ox. Feed				7096					6.5	
9501813000900	1/18/95 13:00	9	Ox. Feed				7168					6.5	
9501814000900	1/18/95 14:00	9	Ox. Feed				7280					6.4	
9501815000900	1/18/95 15:00	9	Ox. Feed				7232					6.5	
9501909000900	1/19/95 9:00	9	Ox. Feed				7632					6.4	
9501910000900	1/19/95 10:00	9	Ox. Feed			20486	7416	9964	2776	119	4900	6.5	
9501911000900	1/19/95 11:00	9	Ox. Feed				7552					6.4	
9501912000900	1/19/95 12:00	9	Ox. Feed				7496					6.4	
9501913000900	1/19/95 13:00	9	Ox. Feed				7344					6.4	
9501914000900	1/19/95 14:00	9	Ox. Feed				7544					6.4	
9501915000900	1/19/95 15:00	9	Ox. Feed				7344					6.3	
9502007000900	1/20/95 7:00	9	Ox. Feed				7000					6.4	
9502008000900	1/20/95 8:00	9	Ox. Feed				6936					6.4	
9502009000900	1/20/95 9:00	9	Ox. Feed			17344	6720	3927	2702	107	4145	6.4	
9502010000900	1/20/95 10:00	9	Ox. Feed				6648					6.4	
9502011000900	1/20/95 11:00	9	Ox. Feed				6592					6.4	
9502012000900	1/20/95 12:00	9	Ox. Feed				6552					6.4	
9502013000900	1/20/95 13:00	9	Ox. Feed				6752					6.4	
9502014000900	1/20/95 14:00	9	Ox. Feed				6600					6.3	
9502015000900	1/20/95 15:00	9	Ox. Feed				6680					6.5	
9502016000900	1/20/95 16:00	9	Ox. Feed				6696					6.4	
9502017000900	1/20/95 17:00	9	Ox. Feed				6640					6.4	
9502310000900	1/23/95 10:00	9	Ox. Feed				7064					6.4	
9502311000900	1/23/95 11:00	9	Ox. Feed			19856	7080	7353	2967	92	4764	6.4	
9502312000900	1/23/95 12:00	9	Ox. Feed				7008					6.4	
9502313000900	1/23/95 13:00	9	Ox. Feed				7232					6.4	
9502314000900	1/23/95 14:00	9	Ox. Feed				7296					6.4	
9502315000900	1/23/95 15:00	9	Ox. Feed				7328					6.4	
9502409000900	1/24/95 9:00	9	Ox. Feed				6800					6.4	
9502409000900	1/24/95 9:00	9	Ox. Feed				6800					6.4	
9502609000900	1/26/95 9:00	9	Ox. Feed				8312					6.5	
9502609000900	1/26/95 9:00	9	Ox. Feed				8312					6.5	
9502610000900	1/26/95 10:00	9	Ox. Feed			20456	8008	8664	2755	106	4901	6.4	
9502610000900	1/26/95 10:00	9	Ox. Feed			20456	8008	8664	2755	106	4901	6.4	
9502611000900	1/26/95 11:00	9	Ox. Feed				8312					6.5	
9502611000900	1/26/95 11:00	9	Ox. Feed				8312					6.5	
9502612000900	1/26/95 12:00	9	Ox. Feed				8280					6.4	
9502612000900	1/26/95 12:00	9	Ox. Feed				8280					6.4	
9502613000900	1/26/95 13:00	9	Ox. Feed				8440					6.4	
9502613000900	1/26/95 13:00	9	Ox. Feed				8440					6.4	
9502614000900	1/26/95 14:00	9	Ox. Feed				8296					6.4	
9502614000900	1/26/95 14:00	9	Ox. Feed				8296					6.4	
9502615000900	1/26/95 15:00	9	Ox. Feed				8152					6.4	
9502615000900	1/26/95 15:00	9	Ox. Feed				8152					6.4	
9503309000900	2/2/95 9:00	9	Ox. Feed				6320					6.5	
9503310000900	2/2/95 10:00	9	Ox. Feed			20006	6288	4396	2967	81	4807	6.5	
9503311000900	2/2/95 11:00	9	Ox. Feed				6320					6.5	
9503312000900	2/2/95 12:00	9	Ox. Feed				6392					6.4	
9503313000900	2/2/95 13:00	9	Ox. Feed				6368					6.5	
9503314000900	2/2/95 14:00	9	Ox. Feed				6248					6.4	
9503315000900	2/2/95 15:00	9	Ox. Feed				6216					6.7	
9503811000900	2/7/95 11:00	9	Ox. Feed			20516	6456	9775	2744	109	4914	6.3	
9503812000900	2/7/95 12:00	9	Ox. Feed				6472					6.4	
9503813000900	2/7/95 13:00	9	Ox. Feed				6584					6.4	
9503814000900	2/7/95 14:00	9	Ox. Feed				6424					6.4	
9503815000900	2/7/95 15:00	9	Ox. Feed				6472					6.4	
9503910300900	2/8/95 10:30	9	Ox. Feed				6912					6.3	
9503911000900	2/8/95 11:00	9	Ox. Feed			21467	6672	7409	3403	97	5152	6.3	
9503912000900	2/8/95 12:00	9	Ox. Feed				6880					6.4	
9503913000900	2/8/95 13:00	9	Ox. Feed				7024					6.4	
9503914000900	2/8/95 14:00	9	Ox. Feed				6880					6.4	
9503915000900	2/8/95 15:00	9	Ox. Feed				6960					6.4	
9504010000900	2/9/95 10:00	9	Ox. Feed			22568	7736	11917	3329	70	5435	6.4	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9504011000900	2/9/95 11:00	9	Ox. Feed				8048					6.4	
9504012000900	2/9/95 12:00	9	Ox. Feed				8016					6.4	
9504013000900	2/9/95 13:00	9	Ox. Feed				8024					6.4	
9504014000900	2/9/95 14:00	9	Ox. Feed				8016					6.3	
9504015000900	2/9/95 15:00	9	Ox. Feed				8016					6.4	
9504412000900	2/13/95 12:00	9	Ox. Feed				5584					6.4	
9504413000900	2/13/95 13:00	9	Ox. Feed				5848					6.4	
9504414000900	2/13/95 14:00	9	Ox. Feed				5848					6.4	
9504415000900	2/13/95 15:00	9	Ox. Feed				5776					6.4	
9504509000900	2/14/95 9:00	9	Ox. Feed				5408					6.5	
9504510000900	2/14/95 10:00	9	Ox. Feed			21277	5144	7157	3946	74	5119	6.4	
9504511000900	2/14/95 11:00	9	Ox. Feed				5264					6.5	
9504512000900	2/14/95 12:00	9	Ox. Feed				5320					6.5	
9504513000900	2/14/95 13:00	9	Ox. Feed				5264					6.4	
9504514000900	2/14/95 14:00	9	Ox. Feed				5320					6.6	
9504515000900	2/14/95 15:00	9	Ox. Feed				5272					6.4	
9504709300900	2/16/95 9:30	9	Ox. Feed				4856					6.4	
9504710000900	2/16/95 10:00	9	Ox. Feed			19516	4792	6582	3967	53	4705	6.4	
9504711000900	2/16/95 11:00	9	Ox. Feed				5072					6.5	
9504712000900	2/16/95 12:00	9	Ox. Feed				5704					6.5	
9504713000900	2/16/95 13:00	9	Ox. Feed				5104					6.5	
9504714000900	2/16/95 14:00	9	Ox. Feed				5256					6.5	
9504715000900	2/16/95 15:00	9	Ox. Feed				5192					6.4	
9505110000900	2/20/95 10:00	9	Ox. Feed				6648					6.4	
9505111000900	2/20/95 11:00	9	Ox. Feed			21437	6640	7289	3159	90	2149	6.3	
9505112000900	2/20/95 12:00	9	Ox. Feed				6632					6.4	
9505113000900	2/20/95 13:00	9	Ox. Feed				6600					6.3	
9505210000900	2/21/95 10:00	9	Ox. Feed				6624					6.3	
9505211000900	2/21/95 11:00	9	Ox. Feed			21817	6336	9185	4052	79	5248	6.3	
9505213000900	2/21/95 13:00	9	Ox. Feed				6560					6.4	
9505214000900	2/21/95 14:00	9	Ox. Feed				6576					6.4	
9505309000900	2/22/95 9:00	9	Ox. Feed				7248					6.4	
9505310000900	2/22/95 10:00	9	Ox. Feed			23008	6832	8589	3813	66	5545	6.4	
9505311000900	2/22/95 11:00	9	Ox. Feed				7072					6.4	
9505312000900	2/22/95 12:00	9	Ox. Feed				7176					6.4	
9505313000900	2/22/95 13:00	9	Ox. Feed				7256					6.4	
9505314000900	2/22/95 14:00	9	Ox. Feed				6640					6.4	
9505315000900	2/22/95 15:00	9	Ox. Feed				7248					6.4	
9505509300900	2/24/95 9:30	9	Ox. Feed				8104					6.4	
9505510150900	2/24/95 10:15	9	Ox. Feed				7952					6.4	
9505813000900	2/27/95 13:00	9	Ox. Feed				8232					6.3	
9505909000900	2/28/95 9:00	9	Ox. Feed				7416					6.4	
9505910000900	2/28/95 10:00	9	Ox. Feed			20076	7448	8018	3255	76	4827	6.3	
9505911000900	2/28/95 11:00	9	Ox. Feed				7920					6.3	
9505912000900	2/28/95 12:00	9	Ox. Feed				7768					6.4	
9505913000900	2/28/95 13:00	9	Ox. Feed				7680					6.3	
9505914000900	2/28/95 14:00	9	Ox. Feed				7696					6.3	
9506109000900	3/2/95 9:00	9	Ox. Feed				7456					6.5	
9506110000900	3/2/95 10:00	9	Ox. Feed				7392					6.5	
9506209000900	3/3/95 9:00	9	Ox. Feed				7384					6.4	
9506210000900	3/3/95 10:00	9	Ox. Feed			21998	7000		2797	99	5279	6.4	
9506211000900	3/3/95 11:00	9	Ox. Feed				7456					6.4	
9506212000900	3/3/95 12:00	9	Ox. Feed				7416					6.4	
9506213000900	3/3/95 13:00	9	Ox. Feed				7488					6.4	
9506610450900	3/7/95 10:45	9	Ox. Feed				6379					6.6	
9506611000900	3/7/95 11:00	9	Ox. Feed			20967	6336	9240	2680	71	5046	6.6	
9506709350900	3/8/95 9:35	9	Ox. Feed				6680					6.6	
9506710000900	3/8/95 10:00	9	Ox. Feed				6400	8442	2925	67	4786	6.4	
9506713000900	3/8/95 13:00	9	Ox. Feed				6776					6.3	
9506810000900	3/9/95 10:00	9	Ox. Feed				6872					6.5	
9421612001000	8/4/94 12:00	10	FGD TOF1										
9417409301200	6/23/94 9:30	12	FGD TOF2	1053		22948	7112	9448	3457	115	5500	6.5	
9425108001200	9/8/94 8:00	12	FGD TOF2			19856	7888	15926	1723	33.6	4799	6.16	
9417409251300	6/23/94 9:25	13	FGD TUF2										23.1
9420914001300	7/28/94 14:00	13	FGD TUF2										30.5
9422314001300	8/11/94 14:00	13	FGD TUF2										29.0
9423008001300	8/18/94 8:00	13	FGD TUF2										29.1

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9425108001300	9/8/94 8:00	13	FGD TUF2										29.1
9426408001300	9/21/94 8:00	13	FGD TUF2										29.6
9429819301300	10/25/94 19:30	13	FGD TUF2										30.1
9430420301300	10/31/94 20:30	13	FGD TUF2										30.3
9430720301300	11/3/94 20:30	13	FGD TUF2										30.1
9431119301300	11/7/94 19:30	13	FGD TUF2										30.5
9431419181300	11/10/94 19:18	13	FGD TUF2										28.6
9434000001300	12/6/94 0:00	13	FGD TUF2										31.1
9425700001500	9/14/94 0:00	15	FGD TUF3										
9425710001500	9/14/94 10:00	15	FGD TUF3									8.68	
9425711301500	9/14/94 11:30	15	FGD TUF3									8.56	
9425713001500	9/14/94 13:00	15	FGD TUF3									8.56	
9425810001500	9/15/94 10:00	15	FGD TUF3									8.49	
9426210001500	9/19/94 10:00	15	FGD TUF3									8.80	
9426212001500	9/19/94 12:00	15	FGD TUF3									8.65	
9426213001500	9/19/94 13:00	15	FGD TUF3									8.53	
9426215001500	9/19/94 15:00	15	FGD TUF3									8.65	
9426309001500	9/20/94 9:00	15	FGD TUF3									8.54	
9426310001500	9/20/94 10:00	15	FGD TUF3									8.53	
9426311001500	9/20/94 11:00	15	FGD TUF3									8.53	
9426312001500	9/20/94 12:00	15	FGD TUF3									8.54	
9426314001500	9/20/94 14:00	15	FGD TUF3									8.38	
9426315301500	9/20/94 15:30	15	FGD TUF3									8.32	
9426317001500	9/20/94 17:00	15	FGD TUF3									8.35	
9426320001500	9/20/94 20:00	15	FGD TUF3									8.20	
9426411001500	9/21/94 11:00	15	FGD TUF3									8.95	
9426412001500	9/21/94 12:00	15	FGD TUF3									8.77	
9426413001500	9/21/94 13:00	15	FGD TUF3									8.68	
9426414001500	9/21/94 14:00	15	FGD TUF3									8.57	
9426510001500	9/22/94 10:00	15	FGD TUF3									8.87	
9426515001500	9/22/94 15:00	15	FGD TUF3									8.44	
9426517001500	9/22/94 17:00	15	FGD TUF3									8.26	
9426518001500	9/22/94 18:00	15	FGD TUF3									7.88	
9426520001500	9/22/94 20:00	15	FGD TUF3									8.12	
9426522001500	9/22/94 22:00	15	FGD TUF3									8.29	
9427115001500	9/28/94 15:00	15	FGD TUF3									8.89	
9427116001500	9/28/94 16:00	15	FGD TUF3									8.91	
9427117001500	9/28/94 17:00	15	FGD TUF3									8.84	
9427118001500	9/28/94 18:00	15	FGD TUF3									8.39	
9427119001500	9/28/94 19:00	15	FGD TUF3									8.42	
9427120001500	9/28/94 20:00	15	FGD TUF3									8.38	
9427121001500	9/28/94 21:00	15	FGD TUF3									8.00	
9427122001500	9/28/94 22:00	15	FGD TUF3									7.95	
9427209301500	9/29/94 9:30	15	FGD TUF3									8.61	
9427211001500	9/29/94 11:00	15	FGD TUF3									8.69	
9427212001500	9/29/94 12:00	15	FGD TUF3									8.62	
9427213001500	9/29/94 13:00	15	FGD TUF3									8.66	
9427214001500	9/29/94 14:00	15	FGD TUF3									8.49	
9427215001500	9/29/94 15:00	15	FGD TUF3									8.45	
9427609001500	10/3/94 9:00	15	FGD TUF3									8.98	
9427611001500	10/3/94 11:00	15	FGD TUF3									8.46	
9427612001500	10/3/94 12:00	15	FGD TUF3									8.34	
9427614001500	10/3/94 14:00	15	FGD TUF3									8.23	
9427615001500	10/3/94 15:00	15	FGD TUF3									8.13	
9427616001500	10/3/94 16:00	15	FGD TUF3									8.33	
9427617001500	10/3/94 17:00	15	FGD TUF3									8.29	
9427618001500	10/3/94 18:00	15	FGD TUF3									8.29	
9427619001500	10/3/94 19:00	15	FGD TUF3									8.03	
9427619001500	10/3/94 19:00	15	FGD TUF3									8.05	
9427621001500	10/3/94 21:00	15	FGD TUF3									8.06	
9427622001500	10/3/94 22:00	15	FGD TUF3									7.99	
9427622451500	10/3/94 22:45	15	FGD TUF3									8.14	
9427711001500	10/4/94 11:00	15	FGD TUF3									8.18	
9427712001500	10/4/94 12:00	15	FGD TUF3									8.14	
9427713001500	10/4/94 13:00	15	FGD TUF3									8.20	
9427714001500	10/4/94 14:00	15	FGD TUF3									8.35	
9427715001500	10/4/94 15:00	15	FGD TUF3									8.29	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9427716001500	10/4/94 16:00	15	FGD TUF3									8.02	
9427716001500	10/4/94 16:00	15	FGD TUF3									8.21	
9427716001500	10/4/94 16:00	15	FGD TUF3									8.02	
9427717001500	10/4/94 17:00	15	FGD TUF3									8.21	
9427718001500	10/4/94 18:00	15	FGD TUF3									8.36	
9427719001500	10/4/94 19:00	15	FGD TUF3									8.60	
9427720001500	10/4/94 20:00	15	FGD TUF3									8.56	
9427721001500	10/4/94 21:00	15	FGD TUF3									8.67	
9427721301500	10/4/94 21:30	15	FGD TUF3									8.67	
9427809001500	10/5/94 9:00	15	FGD TUF3									8.58	
9427809001500	10/5/94 9:00	15	FGD TUF3										
9427809001500	10/5/94 9:00	15	FGD TUF3									8.58	
9427811001500	10/5/94 11:00	15	FGD TUF3									8.39	
9427812001500	10/5/94 12:00	15	FGD TUF3									8.41	
9427813001500	10/5/94 13:00	15	FGD TUF3									8.39	
9427814001500	10/5/94 14:00	15	FGD TUF3									8.30	
9427815001500	10/5/94 15:00	15	FGD TUF3									8.39	
9427909001500	10/6/94 9:00	15	FGD TUF3									8.50	
9427910001500	10/6/94 10:00	15	FGD TUF3									8.56	
9427911001500	10/6/94 11:00	15	FGD TUF3									8.35	
9427912001500	10/6/94 12:00	15	FGD TUF3									8.28	
9427913001500	10/6/94 13:00	15	FGD TUF3									8.41	
9427914001500	10/6/94 14:00	15	FGD TUF3									8.22	
9427915001500	10/6/94 15:00	15	FGD TUF3									8.27	
9428009001500	10/7/94 9:00	15	FGD TUF3									8.75	
9428010001500	10/7/94 10:00	15	FGD TUF3									8.85	
9428011001500	10/7/94 11:00	15	FGD TUF3									8.66	
9428012001500	10/7/94 12:00	15	FGD TUF3									8.55	
9428013001500	10/7/94 13:00	15	FGD TUF3									8.40	
9428014001500	10/7/94 14:00	15	FGD TUF3									8.36	
9428310001500	10/10/94 10:00	15	FGD TUF3									8.85	
9428311001500	10/10/94 11:00	15	FGD TUF3									8.83	
9428312001500	10/10/94 12:00	15	FGD TUF3									8.52	
9428314001500	10/10/94 14:00	15	FGD TUF3									8.38	
9428315001500	10/10/94 15:00	15	FGD TUF3									8.41	
9428316001500	10/10/94 16:00	15	FGD TUF3									8.39	
9428317001500	10/10/94 17:00	15	FGD TUF3									8.40	
9428318001500	10/10/94 18:00	15	FGD TUF3									8.39	
9428319001500	10/10/94 19:00	15	FGD TUF3									8.36	
9428320001500	10/10/94 20:00	15	FGD TUF3									8.30	
9428321001500	10/10/94 21:00	15	FGD TUF3									8.28	
9428322001500	10/10/94 22:00	15	FGD TUF3									8.34	
9428323001500	10/10/94 23:00	15	FGD TUF3									8.22	
9428409001500	10/11/94 9:00	15	FGD TUF3									8.77	
9428410001500	10/11/94 10:00	15	FGD TUF3									8.76	
9428413001500	10/11/94 13:00	15	FGD TUF3									8.71	
9428415001500	10/11/94 15:00	15	FGD TUF3									8.45	
9428417001500	10/11/94 17:00	15	FGD TUF3									8.45	
9428417001500	10/11/94 17:00	15	FGD TUF3									8.45	
9428418001500	10/11/94 18:00	15	FGD TUF3									8.45	
9428420001500	10/11/94 20:00	15	FGD TUF3									8.65	
9428422001500	10/11/94 22:00	15	FGD TUF3									8.60	
9428422001500	10/11/94 22:00	15	FGD TUF3										
9428509001500	10/12/94 9:00	15	FGD TUF3									8.83	
9428510001500	10/12/94 10:00	15	FGD TUF3									8.79	
9428513001500	10/12/94 13:00	15	FGD TUF3									8.65	
9428514001500	10/12/94 14:00	15	FGD TUF3									8.51	
9428515001500	10/12/94 15:00	15	FGD TUF3									8.49	
9428517001500	10/12/94 17:00	15	FGD TUF3									8.34	
9428518001500	10/12/94 18:00	15	FGD TUF3									8.52	
9428520001500	10/12/94 20:00	15	FGD TUF3									8.38	
9428522001500	10/12/94 22:00	15	FGD TUF3									8.36	
9428609001500	10/13/94 9:00	15	FGD TUF3									8.69	
9428611001500	10/13/94 11:00	15	FGD TUF3									8.66	
9428612001500	10/13/94 12:00	15	FGD TUF3									8.60	
9428613001500	10/13/94 13:00	15	FGD TUF3									8.68	
9428614001500	10/13/94 14:00	15	FGD TUF3									8.78	

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9428617001500	10/13/94 17:00	15	FGD TUF3									8.65	
9428619001500	10/13/94 19:00	15	FGD TUF3									8.57	
9428620001500	10/13/94 20:00	15	FGD TUF3									8.63	
9428622001500	10/13/94 22:00	15	FGD TUF3									8.36	
9429011001500	10/17/94 11:00	15	FGD TUF3									5.83	
9429012001500	10/17/94 12:00	15	FGD TUF3									8.49	
9429014001500	10/17/94 14:00	15	FGD TUF3									8.25	
9429015001500	10/17/94 15:00	15	FGD TUF3									8.26	
9416610001600	6/15/94 10:00	16	SUMP			5454		1087	2414	2346		11.4	
9416710301600	6/16/94 10:30	16	SUMP			5504			2489	1950	152	10.4	3.5
9416810001600	6/17/94 10:00	16	SUMP			5274		2228	2436	1870	145	10.3	4.1
9417300001600	6/22/94 0:00	16	SUMP										
9417810001600	6/27/94 10:00	16	SUMP			4414		457	1074	1682	51	11.1	4.0
9417911001600	6/28/94 11:00	16	SUMP			4894		1759	2521	2264		11.0	3.4
9418015001600	6/29/94 15:00	16	SUMP			4564		19645	3308	2278		11.0	12.5
9418610001600	7/5/94 10:00	16	SUMP			4584		1012	1914	1562	165	11.0	3.0
9418710001600	7/6/94 10:00	16	SUMP			6065		1239	2223	2259	101	11.0	3.1
9418810001600	7/7/94 10:00	16	SUMP			6135		767	3180	2155	182	10.6	3.1
9418910301600	7/8/94 10:30	16	SUMP			6946		693	3308	2764	9	10.8	25.6
9419214001600	7/11/94 14:00	16	SUMP			5635		1410	2202	2011	148	10.8	3.0
9419310001600	7/12/94 10:00	16	SUMP			7126		1352	3191	2764	53	11.2	3.3
9419410001600	7/13/94 10:00	16	SUMP			5635		1398	2170	1882	226	11.2	2.3
9419510001600	7/14/94 10:00	16	SUMP			5144		1648	1712	1614	269	11.3	2.9
9419910001600	7/18/94 10:00	16	SUMP			6475		1527	2850	2347	147	11.0	3.6
9420010001600	7/19/94 10:00	16	SUMP			7616		1307	3329	2727	194	10.8	3.8
9420110001600	7/20/94 10:00	16	SUMP			8036		1486	3489	2852	220	10.5	3.1
9420210001600	7/21/94 10:00	16	SUMP			9137		1902	3637	344	2009	10.6	6.0
9420610001600	7/25/94 10:00	16	SUMP			7456		1468	3808	2844	84	10.4	3.4
9420711001600	7/26/94 11:00	16	SUMP			7336		970	3191	2703	140	10.7	3.5
9420810001600	7/27/94 10:00	16	SUMP			7166		1773	3010	2667.3	121	10.25	3.2
9420910001600	7/28/94 10:00	16	SUMP			7316		1410	2574	2551.2	228	10.61	2.8
9421311001600	8/1/94 11:00	16	SUMP			7376		1381	3201	2407.0	330	9.91	3.8
9421414001600	8/2/94 14:00	16	SUMP			5945		1352	2031	394.9	1203	10.60	5.3
9421510001600	8/3/94 10:00	16	SUMP			6565		1773	2553	2154.7	286	10.08	
9421610001600	8/4/94 10:00	16	SUMP			7046		1416	2425	2395.0	257	11.45	4.7
9422010001600	8/8/94 10:00	16	SUMP			6585		1915	2861	2314.9	194	10.98	3.8
9422111001600	8/9/94 11:00	16	SUMP			6045			2457	2086.6	201	10.84	5.0
9422210001600	8/10/94 10:00	16	SUMP			5955			2468	405.3	1199	10.87	3.4
9422310001600	8/11/94 10:00	16	SUMP			6135			2489	2006.5	272	10.72	4.8
9423110001600	8/19/94 10:00	16	SUMP			5624		1468	2255	2054.6	118	10.85	4.2
9423410001600	8/22/94 10:00	16	SUMP			6365		1587	2276	2130.7	252	10.47	4.0
9423710001600	8/25/94 10:00	16	SUMP			5414		1468	1978	1882.4	172	10.34	4.0
9424210001600	8/30/94 10:00	16	SUMP			4964		1515	2361	1738.2	150	10.89	6.4
9424310001600	8/31/94 10:00	16	SUMP			5685		1184	2234	1986.5	174	10.43	4.0
9424410001600	9/1/94 10:00	16	SUMP			5895		1515	2202	2062.6	179	10.15	3.7
9424910001600	9/6/94 10:00	16	SUMP			6025		1451	2127	1966.5	269	10.45	3.7
9425710001600	9/14/94 10:00	16	SUMP			5334		1533	1936	1902.4	140	10.53	3.7
9425711301600	9/14/94 11:30	16	SUMP										
9425810001600	9/15/94 10:00	16	SUMP			3683		1773	1649	1197.5	167	10.14	27.9
9426210001600	9/19/94 10:00	16	SUMP			6996		5095	1893	1822.3	592	10.35	3.0
9426310001600	9/20/94 10:00	16	SUMP			5624		1780	2287	2066.6	111	10.68	3.1
9426511001600	9/22/94 11:00	16	SUMP			5044		919	2021	1698.1	194	10.87	3.5
9427210001600	9/29/94 10:00	16	SUMP			4434		1076	2031	1594.0	109	10.95	3.4
9427610001600	10/3/94 10:00	16	SUMP			4794		1504	2117	1798.2	72	10.75	9.4
9427710001600	10/4/94 10:00	16	SUMP			6145		1392	2127	1890.4	344	10.65	4.2
9427810001600	10/5/94 10:00	16	SUMP					2089				10.69	
9427810001600	10/5/94 10:00	16	SUMP			7476			2255	2519.1	286		
9427910001600	10/6/94 10:00	16	SUMP			4794		767	2138	1694.1	136	10.25	3.2
9428010001600	10/7/94 10:00	16	SUMP			4834		718	2117	1718.1	131	10.38	6.0
9428311001600	10/10/94 11:00	16	SUMP			5895		2021	2212	1766.2	359	10.87	3.4
9428410001600	10/11/94 10:00	16	SUMP			5354		1587	2000	1509.9	383	10.09	3.7
9428510001600	10/12/94 10:00	16	SUMP										5.5
9428510001600	10/12/94 10:00	16	SUMP			5534		1648	2351	1517.9	422		
9428610001600	10/13/94 10:00	16	SUMP			4884		1267	2276	1686.1	162	10.07	3.9
9429010001600	10/17/94 10:00	16	SUMP			3203		211				10.49	
9429010001600	10/17/94 10:00	16	SUMP			3203		211	2329	941.2	206	10.49	5.0
9429110001600	10/18/94 10:00	16	SUMP			6025		1468	2372	1962.5	272	10.82	4.4

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9429210001600	10/19/94 10:00	16	SUMP			5825		1527	2531	1770.2	340	10.70	3.4
9429710001600	10/24/94 10:00	16	SUMP			4764		1295	2170	1674.1	140	10.32	6.4
9429810001600	10/25/94 10:00	16	SUMP			4834		1439	2297	1698.1	143	11.05	3.4
9429910001600	10/26/94 10:00	16	SUMP			4634		1439	2234	1798.2	34	10.69	5.6
9430010001600	10/27/94 10:00	16	SUMP			5014		1935	2265	1986.5	12	10.78	3.7
9430110001600	10/28/94 10:00	16	SUMP			4634		1404	2170	1710.1	87	10.69	7.2
9430410001600	10/31/94 10:00	16	SUMP			5274		1948	2159	1590.0	315	9.90	3.2
9430510001600	11/1/94 10:00	16	SUMP			5154		1773	2372	1794.2	162	10.68	5.5
9430610001600	11/2/94 10:00	16	SUMP			5464		1468	2297	1842.3	208	10.80	
9430710001600	11/3/94 10:00	16	SUMP			5364		1190	2319	1886.4	157	10.48	3.9
9430810001600	11/4/94 10:00	16	SUMP			5194		1587	2276	1754.2	196	10.38	4.2
9431110001600	11/7/94 10:00	16	SUMP			5284		2069	2351	1806.3	186	10.53	4.1
9431210001600	11/8/94 10:00	16	SUMP			5014		1742	2595	1882.4	75	10.77	4.0
9431310001600	11/9/94 10:00	16	SUMP	1668		5404		1468				10.92	
9431310001600	11/9/94 10:00	16	SUMP						2382	1906.4			4.0
9431409001600	11/10/94 9:00	16	SUMP			5364		1352	2499	1978.5	101	10.77	
9431410001600	11/10/94 10:00	16	SUMP			5364		1352	2499	1978.5	101	11.76	4.1
9431510001600	11/11/94 10:00	16	SUMP			5314		1679	2489	1846.3	169	10.66	3.8
9432210001600	11/18/94 10:00	16	SUMP			5514		2089	2521	1818.3	235	10.84	3.7
9432510001600	11/21/94 10:00	16	SUMP			5384		1195	2744	789.0	828	10.49	3.1
9432611301600	11/22/94 11:30	16	SUMP			6415		1843	2659	1922.4	391	10.68	4.3
9432710001600	11/23/94 10:00	16	SUMP			6565		2221	2574	1906.4	437	10.87	3.2
9433212001600	11/28/94 12:00	16	SUMP			5945		1869	26590	1866.3	310	10.55	4.5
9433310001600	11/29/94 10:00	16	SUMP			6055		1661	2553	1862.3	340	10.56	2.8
9433410001600	11/30/94 10:00	16	SUMP			5685		1710	2510	1990.5	172	10.54	2.9
9433511001600	12/1/94 11:00	16	SUMP			6055		2498	2478	1979	269	10.5	3.0
9433610001600	12/2/94 10:00	16	SUMP			6415		2461	2499	1798	466	10.3	3.5
9433911001600	12/5/94 11:00	16	SUMP			5955		2461	2616	1862	315	10.4	3.3
9434010001600	12/6/94 10:00	16	SUMP			5805		1661	2638	1830	298	10.2	3.7
9434211001600	12/8/94 11:00	16	SUMP			5104		1352	2840	1750	177	10.0	12.5
9434310001600	12/9/94 10:00	16	SUMP			6445		1935	2936	2287	177	10.2	4.1
9434810001600	12/14/94 10:00	16	SUMP			6605		2314	2819	2027	373	10.5	3.4
9434910001600	12/15/94 10:00	16	SUMP			6976		2637	2861	1778	614	10.3	3.7
9435010001600	12/16/94 10:00	16	SUMP			5975		1587	2787	1838	335	10.2	5.2
9435310001600	12/19/94 10:00	16	SUMP			6055		1527	2808	1950	286	10.3	3.5
9435410001600	12/20/94 10:00	16	SUMP			5655		1335	2776	1938	196	10.4	3.5
9435510001600	12/21/94 10:00	16	SUMP			5955		1545	2691	2131	153	10.6	3.9
9435610001600	12/22/94 10:00	16	SUMP			5915		1398	2670	2151	131	10.6	3.8
9436111001600	12/27/94 11:00	16	SUMP			5624		1679	2648	1882	223	10.5	4.0
9436210001600	12/28/94 10:00	16	SUMP			6245		1698	2755	2011	296	10.6	3.6
9436410001600	12/30/94 10:00	16	SUMP			5294		1076	2606	1858	157	10.3	5.6
9500610001600	1/6/95 10:00	16	SUMP			5685		1648	2787	1963	189	10.5	3.4
9500911001600	1/9/95 11:00	16	SUMP			5965		2103	2648	1975	250	11.2	3.9
9501010001600	1/10/95 10:00	16	SUMP			5745		1710	2659	2079	133	11.5	3.4
9501110001600	1/11/95 10:00	16	SUMP			6155		1648	2702	2251	128	11.7	1.8
9501210001600	1/12/95 10:00	16	SUMP			5775		1468	2712	1842	284	11.1	3.9
9501310001600	1/13/95 10:00	16	SUMP			6065		1710	2925	2183	148	10.6	3.3
9501610001600	1/16/95 10:00	16	SUMP			5665		1587	2978	2079	114	10.7	3.2
9501710001600	1/17/95 10:00	16	SUMP			5544		1773	2829	1910	186	11.0	4.4
9501810001600	1/18/95 10:00	16	SUMP	0		5845		1527	2446	2059	170	10.7	3.2
9501910001600	1/19/95 10:00	16	SUMP			5424		1735	2638	2015	94	11.0	3.6
9502009001600	1/20/95 9:00	16	SUMP			5845		2116	2765	2035	184	10.7	3.4
9502311001600	1/23/95 11:00	16	SUMP			5404		1698	2616	2095	41	11.1	3.5
9502610001600	1/26/95 10:00	16	SUMP			5865		1792	2638	2123	136	10.7	4.0
9502610001600	1/26/95 10:00	16	SUMP			5865		1792	2638	2123	136	10.7	4.0
9503310001600	2/2/95 10:00	16	SUMP			5484		1648	2787	1954	145	10.5	3.0
9503811001600	2/7/95 11:00	16	SUMP			6165		2172	2563	2171	179	10.9	3.5
9503911001600	2/8/95 11:00	16	SUMP			6485		2151	3021	2091	305	10.6	
9504010001600	2/9/95 10:00	16	SUMP			6135		1968	3074	2219	143	10.8	3.7
9504510001600	2/14/95 10:00	16	SUMP			6235		1837	3148	2207	174	10.7	3.4
9504710001600	2/16/95 10:00	16	SUMP			6525		1974	3372	2363	150	11.0	4.9
9505111001600	2/20/95 11:00	16	SUMP			6125		2089	2893	2251	121	10.7	3.7
9505211001600	2/21/95 11:00	16	SUMP			6735		1773	3552	2323	225	10.6	6.7
9505310001600	2/22/95 10:00	16	SUMP			7256		1935	3637	2435	284	10.6	4.0
9505910001600	2/28/95 10:00	16	SUMP			5815		1935	3170	2267	36	10.7	2.1
9506210001600	3/3/95 10:00	16	SUMP			6505			254	2063	327	10.7	3.8
9506710001600	3/8/95 10:00	16	SUMP					1710	2808	1999	223	10.8	3.6

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SAMP_NUM	Date/Time	Location ID	Location	ALK	ALKS	TH	SO_3	SO_4	CL	CA	MG	PH	TSOL
9416413001700	6/13/94 13:00	17	SUMP										17.4
9416510451700	6/14/94 10:45	17	SUMP						483				

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	Al_2O_3	CaO	CO_2	Fe_2O_3	$Mg(OH)_2$	MgO	$S0_2$	SiO_2	SO_3	Total Sulfur	Total Susp. Solids (wt %)	Microtrac MV (microns)	$Mg(OH)_2$ (calc.)	$CaSO_4*2H_2O$ (calc.)	$CaSO_3*^1/_2H_2O$ (calc.)
941859	Crystallizer	2	5/27/94	8:30												23.2	0.00	0.00	0.00
941899	Crystallizer	2	6/7/94	14:30											5.1	23.1	0.00	0.00	0.00
942103	Crystallizer	2	6/15/94	12:00	0.22	22.54	1.06	0.09	27.10	18.88	0.72	1.07	30.90	12.72	8.7	30.3	26.28	63.10	1.63
942109	Crystallizer	2	6/16/94	14:00	0.24	22.17	1.31	0.10	27.60	20.31	0.74	1.19	30.00	12.37	4.7	34.5	28.24	60.94	1.68
942115	Crystallizer	2	6/17/94	13:00	0.24	22.31	1.22	0.09	24.30	20.02	0.85	1.14	30.01	12.43	5.1	42.5	27.86	61.42	1.93
942205	Crystallizer	2	6/27/94	14:00	0.21	22.28	1.06	0.09		19.44	0.51	0.95	30.84	12.59	7.9	38.8	27.21	62.87	1.16
942199	Crystallizer	2	6/28/94	14:00	0.22	22.32	1.08	0.09		19.42	0.55	1.02	30.91	12.64	5.6	41.5	27.11	62.81	1.25
942193	Crystallizer	2	6/28/94	20:00	0.22	22.38	1.81	0.09		19.67	0.46	1.05	31.23	12.72	13.6	39.6	27.44	60.38	1.04
942187	Crystallizer	2	6/29/94	18:00	0.23	22.18	1.12	0.09		19.89	0.78	1.10	30.25	12.49	5.0	43.2	27.71	61.60	1.77
942177	Crystallizer	2	6/30/94	13:30	0.22	22.76	1.11	0.09		19.13	0.66	1.10	30.73	12.62	9.1	35.5	26.61	63.74	1.50
942183	Crystallizer	2	6/30/94	20:00	0.19	24.11	1.20	0.08		16.70	0.89	0.87	32.71	13.53	12.9	41.5	23.32	66.92	2.02
942309	Crystallizer	2	7/5/94	14:00	0.22	22.20	1.00	0.10	29.10	19.66	0.40	0.94	30.20	12.28	7.12	40.1	27.54	63.16	0.91
942315	Crystallizer	2	7/5/94	18:00	0.23	21.61	1.22	0.11	30.80	20.89	0.45	0.98	29.04	11.84	3.46	38.0	29.28	60.35	1.02
942319	Crystallizer	2	7/5/94	22:00	0.21	23.02	1.02	0.10	26.70	18.11	0.28	0.86	31.60	12.78	11.63	33.5	25.37	65.92	0.63
942325	Crystallizer	2	7/6/94	13:00	0.23	21.01	0.94	0.10	31.10	21.32	0.36	1.06	28.65	11.64	3.39	40.5	29.82	59.85	0.82
942331	Crystallizer	2	7/6/94	20:00	0.23	20.98	1.13	0.10	31.30	21.34	0.49	1.07	28.84	11.78	4.75	42.1	29.84	58.66	1.11
942337	Crystallizer	2	7/7/94	14:00	0.21	21.67	0.90	0.10	29.50	20.04	0.52	1.02	30.20	12.34	5.08	45.7	28.01	61.60	1.18
942343	Crystallizer	2	7/8/94	14:00	0.23	21.66	1.05	0.10	30.10	20.55	0.38	1.10	29.85	12.13	6.47	27.2	28.67	61.36	0.86
942349	Crystallizer	2	7/11/94	17:00	0.22	21.59	1.20	0.10	30.10	20.71	0.32	1.07	29.50	11.96	3.56	25.4	28.93	60.72	0.73
942355	Crystallizer	2	7/11/94	22:00	0.23	21.04	1.19	0.10	32.10	21.97	0.54	1.16	28.40	11.63	5.47	33.7	30.67	58.48	1.22
942361	Crystallizer	2	7/12/94	13:00	0.24	21.65	1.23	0.10	30.60	21.09	0.52	1.18	28.80	11.78	3.44	26.7	29.37	60.24	1.18
942367	Crystallizer	2	7/12/94	17:30	0.22	22.66	1.10	0.09	28.70	19.03	0.53	1.09	29.96	12.25	9.02	39.7	26.48	63.83	1.20
942373	Crystallizer	2	7/13/94	14:00	0.23	22.05	1.33	0.10	29.80	21.37	0.66	1.09	28.53	11.74	3.47	53.6	29.87	60.70	1.50
942379	Crystallizer	2	7/13/94	18:00	0.25	21.00	1.48	0.11	33.90	23.36	0.50	1.22	26.48	10.84	7.79	29.9	32.62	57.33	1.13
942437	Crystallizer	2	7/14/94	13:00	0.20	19.37	1.09	0.10	29.90	18.84	0.87	0.92	24.26	10.14	4.43	31.8	26.37	52.85	1.97
942443	Crystallizer	2	7/14/94	18:00	0.23	20.94	1.02	0.10	30.80	23.51	0.48	1.11	28.78	11.75	9.33	36.7	32.94	58.99	1.09
942449	Crystallizer	2	7/14/94	22:00	0.22	20.84	0.92	0.24	30.80	22.61	0.44	1.10	29.08	11.85	7.02	38.9	31.65	59.19	1.00
942455	Crystallizer	2	7/18/94	14:00	0.22	20.73	1.12	0.10	31.40	21.78	0.49	1.09	28.36	11.59	3.38	34.8	30.46	57.93	1.11
942459	Crystallizer	2	7/18/94	18:00	0.21	21.03	0.94	0.10	30.60	22.14	0.36	1.06	29.60	12.02	8.69	39.8	31.01	59.91	0.82
942465	Crystallizer	2	7/18/94	22:00	0.21	20.88	0.93	0.10	31.80	21.42	0.38	1.04	28.80	11.71	5.32	38.0	29.99	59.43	0.86
942471	Crystallizer	2	7/19/94	14:00	0.26	20.89	1.01	0.10	32.10	21.48	0.30	1.29	28.64	11.62	3.45	39.4	29.83	59.36	0.68
942477	Crystallizer	2	7/19/94	18:00	0.23	20.99	1.02	0.10	30.60	21.51	0.54	1.28	28.86	11.83	6.28	33.1	29.88	58.99	1.22
942483	Crystallizer	2	7/19/94	22:00	0.23	20.99	0.88	0.10	30.20	21.26	0.38	1.27	29.44	11.98	6.21	39.5	29.53	59.96	0.86
942489	Crystallizer	2	7/20/94	14:00	0.22	20.62	0.91	0.10	31.10	21.56	0.27	1.13	29.01	11.74	3.66	42.4	30.10	59.01	0.61
942493	Crystallizer	2	7/20/94	18:00	0.23	21.59	1.02	0.10	30.00	22.82	0.32	1.17	30.48	12.35	7.82	41.1	31.89	61.42	0.73
942496	Crystallizer	2	7/20/94	22:00	0.21	20.81	1.03	0.09	28.40	19.38	0.41	1.04	28.54	11.62	7.51	43.6	27.03	58.74	0.93
942543	Crystallizer	2	7/21/94	14:00	0.25	19.92	1.69	0.10	33.19	28.82	0.34	1.34	27.90	11.33	3.18	61.0	40.40	53.62	0.77
942549	Crystallizer	2	7/21/94	21:00	0.22	20.88	1.51	0.10	30.77	21.50	0.35	1.14	28.69	11.65	5.53	54.1	30.01	57.24	0.79
942555	Crystallizer	2	7/25/94	14:00	0.23	20.92	1.73	0.10	30.89	22.16	0.49	1.25	28.54	11.66	4.10	53.9	30.85	56.13	1.11
942561	Crystallizer	2	7/25/94	18:00	0.22	21.78	1.58	0.10	29.25	20.93	0.42	1.15	29.90	12.17	10.49	44.4	29.17	59.54	0.95
942567	Crystallizer	2	7/25/94	22:00	0.21	22.08	1.54	0.10	27.93	20.02	0.26	1.10	30.48	12.32	8.72	37.8	27.90	61.05	0.59
942573	Crystallizer	2	7/26/94	14:00	0.25	20.46	1.88	0.11	33.04	22.77	0.55	1.45	27.43	11.26	4.30	43.0	31.54	53.97	1.25
942579	Crystallizer	2	7/26/94	18:00	0.22	21.23	1.66	0.09	29.95	21.41	0.22	1.32	29.44	11.90	8.37	39.7	29.70	58.08	0.50
942585	Crystallizer	2	7/26/94	22:00	0.22	21.46	1.81	0.10	29.01	20.60	0.33	1.30	29.85	12.12	7.42	37.5	28.55	57.90	0.75
942750	Crystallizer	2	7/27/94	13:00	0.22	20.97	0.98	0.10	29.83	21.33	0.47	1.34	29.05	11.87	4.73	39.5	29.57	59.27	1.07
942756	Crystallizer	2	7/27/94	19:00	0.22	21.80	1.06	0.09	27.93	20.22	0.21	1.26	30.35	12.26	7.57	37.9	28.04	62.20	0.48
942762	Crystallizer	2	7/28/94	13:00	0.22	21.60	0.88	0.09	27.37	20.31	0.33	1.30	30.37	12.33	4.32	45.7	28.13	61.97	0.75
942768	Crystallizer	2	7/28/94	21:00	0.18	23.72	0.95	0.08	22.01	16.00	0.31	0.95	33.47	13.56	9.70	48.7	22.23	68.26	0.70
942774	Crystallizer	2	8/1/94	15:00	0.20	22.23	1.19	0.09	26.99	19.17	0.33	1.08	30.87	12.53	9.01	51.8	26.69	62.69	0.75
942780	Crystallizer	2	8/1/94	22:00	0.20	23.03	0.98	0.08	25.07	18.61	0.36	1.05	31.76	12.90	11.07	35.8	25.91	65.89	0.82
942786	Crystallizer	2	8/2/94	19:00	0.21	21.83	1.04	0.09	26.41	20.34	0.50	1.15	30.44	12.44	10.93	43.1	28.32	61.59	1.13

Appendix IV

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	Al_2O_3	CaO	CO_2	Fe_2O_3	$Mg(OH)_2$	MgO	$S0_2$	SiO_2	SO_3	Total Sulfur	Total Susp. Solids (wt %)	Microtrac MV (microns)	$Mg(OH)_2$ (calc.)	$CaSO_4*2H_2O$ (calc.)	$CaSO_3*^1/_2H_2O$ (calc.)
942792	Crystallizer	2	8/3/94	14:00	0.23	21.35	1.10	0.09	30.25	21.15	0.66	1.30	29.31	12.07	3.92	48.1	29.34	59.46	1.50
943051	Crystallizer	2	8/11/94	14:00	0.22	21.53	1.47	0.09	29.15	19.33	0.23	1.24	29.80	12.05	3.81	28.4	26.77	59.72	0.52
943057	Crystallizer	2	8/11/94	18:00	0.20	22.75	1.35	0.08	24.41	17.64	0.44	1.07	30.94	12.61	6.38	29.4	24.49	63.37	1.00
943063	Crystallizer	2	8/11/94	22:00	0.20	23.50	1.31	0.08	23.21	15.90	0.31	1.06	32.62	13.22	8.14	32.2	21.98	66.18	0.70
943027	Crystallizer	2	8/29/94	13:30	0.24	20.98	1.75	0.10	30.65	21.16	0.33	1.24	28.35	11.52	4.10	48.9	29.42	56.66	0.75
943033	Crystallizer	2	8/30/94	14:00	0.18	23.54	1.39	0.08	22.96	15.54	0.23	0.91	32.80	13.25	9.94	50.3	21.60	66.20	0.52
943039	Crystallizer	2	8/31/94	14:00	0.22	21.13	1.67	0.09	29.61	19.95	0.31	1.19	29.53	11.98	4.37	29.8	27.71	57.49	0.70
943045	Crystallizer	2	9/1/94	14:00	0.20	22.48	1.49	0.08	26.10	17.23	0.28	1.06	31.16	12.62	7.26	45.6	23.90	62.42	0.63
943181	Crystallizer	2	9/6/94	14:00	0.23	21.07	1.34	0.09	30.18	20.98	0.48	1.34	29.26	11.96	3.72	33.4	29.06	58.14	1.09
943187	Crystallizer	2	9/6/94	18:00	0.23	21.20	1.46	0.09	30.33	20.85	0.40	1.38	29.79	12.13	3.55	18.0	28.83	58.29	0.91
943193	Crystallizer	2	9/14/94	14:00	0.24	21.60	1.68	0.10	28.94	20.13	0.42	1.32	29.56	12.05	3.99	31.9	27.85	58.60	0.95
943302	Crystallizer	2	9/19/94	14:00	0.22	22.31	1.06	0.09	26.67	19.24	0.49	1.23	31.47	12.85	8.16	44.2	26.65	63.02	1.11
943308	Crystallizer	2	9/19/94	18:00	0.22	22.40	1.19	0.09	27.03	18.96	0.53	1.25	31.05	12.70	11.25	32.4	26.22	62.68	1.20
943314	Crystallizer	2	9/19/94	22:00	0.23	21.87	0.78	0.09	29.01	20.26	0.39	1.31	30.35	12.35	8.09	27.4	28.05	63.03	0.88
943320	Crystallizer	2	9/20/94	14:00	0.23	21.56	1.74	0.09	28.53	20.43	0.42	1.27	30.26	12.33	4.47	32.6	28.33	58.24	0.95
943326	Crystallizer	2	9/20/94	18:00	0.22	22.54	1.19	0.09	26.28	18.74	0.38	1.19	31.56	12.83	6.55	36.5	25.96	63.51	0.86
943332	Crystallizer	2	9/22/94	15:00	0.24	21.45	1.42	0.10	29.31	20.85	0.51	1.34	29.60	12.11	4.08	37.8	28.87	58.91	1.16
943338	Crystallizer	2	9/22/94	18:00	0.20	23.92	3.96	0.08	21.67	16.25	0.50	1.08	33.26	13.57	10.17	30.2	22.47	56.59	1.13
943344	Crystallizer	2	9/22/94	22:00			1.25		26.10		0.72		calc		10.88	21.6	0.00	-6.83	1.63
943464	Crystallizer	2	9/28/94	18:00	0.24	21.76	1.36	0.09		20.68	0.29	1.34	calc	12.41	13.13	19.5	28.63	60.69	0.66
943470	Crystallizer	2	9/28/94	22:00	0.24	21.92	1.53	0.09		20.07	0.27	1.33	calc	12.36	9.80	23.3	27.75	60.57	0.61
943474	Crystallizer	2	9/29/94	14:00	0.24	21.82	1.45	0.09		20.43	0.32	1.23	calc	12.45	9.35	26.7	28.37	60.44	0.73
943480	Crystallizer	2	10/3/94	14:00	0.25	22.25	1.54	0.10		19.90	0.40	1.19	calc	12.47	4.90	24.5	27.64	61.20	0.91
943484	Crystallizer	2	10/3/94	18:00	0.23	22.52	1.47	0.09		19.08	0.29	1.11	calc	12.84	13.17	23.9	26.53	62.60	0.66
943490	Crystallizer	2	10/3/94	22:45	0.24	22.26	1.49	0.09		19.69	0.33	1.16	calc	12.61	10.88	46.9	27.37	61.61	0.75
943496	Crystallizer	2	10/4/94	14:00	0.27	20.26	1.42	0.10		22.67	0.35	1.41	calc	11.53	4.67	30.0	31.44	55.69	0.79
943502	Crystallizer	2	10/4/94	18:00	0.24	21.59	1.38	0.09		20.38	0.29	1.24	calc	12.41	9.35	28.8	28.29	60.09	0.66
943508	Crystallizer	2	10/4/94	21:30	0.25	21.37	1.37	0.10		21.03	0.31	1.30	calc	12.36	10.65	25.2	29.17	59.40	0.70
943514	Crystallizer	2	10/5/94	14:00	0.26	20.35	1.66	0.10		22.91	0.35	1.41	calc	11.64	4.29	34.3	31.78	55.03	0.79
943770	Crystallizer	2	10/6/94	14:00	0.26	20.55	1.34	0.10		22.36	0.22	1.38	29.48	11.90	4.50	21.1	31.02	57.26	0.50
943776	Crystallizer	2	10/7/94	14:00	0.25	21.21	1.34	0.10		21.33	0.37	1.31	29.86	12.13	4.39	28.5	29.59	58.88	0.84
943782	Crystallizer	2	10/10/94	14:00	0.26	21.16	1.34	0.10		21.17	0.33	1.32	30.16	12.23	4.24	20.0	29.35	58.83	0.75
943788	Crystallizer	2	10/10/94	18:00	0.25	21.58	1.34	0.10		19.80	0.27	1.37	31.24	12.63	9.92	23.2	27.32	60.28	0.61
943794	Crystallizer	2	10/10/94	22:00	0.28	20.26	1.34	0.10		22.59	0.24	1.50	28.85	11.66	7.61	27.6	31.23	56.31	0.54
943798	Crystallizer	2	10/11/94	14:00	0.27	20.20	1.34	0.10		22.01	0.70	1.43	27.78	11.46	6.00	37.8	30.46	54.89	1.59
943802	Crystallizer	2	10/11/94	22:00	0.26	20.87	1.34	0.10		22.34	0.29	1.43	29.56	11.97	12.29	22.3	30.94	58.05	0.66
943808	Crystallizer	2	10/12/94	14:00	0.27	20.45	1.34	0.10		22.10	0.25	1.46	29.01	11.73	4.48	28.8	30.56	56.87	0.57
943814	Crystallizer	2	10/12/94	18:00	0.25	21.41	1.34	0.09		20.85	0.25	1.34	30.54	12.34	9.17	27.4	28.87	59.82	0.57
943820	Crystallizer	2	10/12/94	22:00	0.24	21.83	1.34	0.09		19.07	0.32	1.27	31.33	12.69	6.99	31.6	26.36	60.92	0.73
943826	Crystallizer	2	10/13/94	20:00	0.25	22.80	1.34	0.09		18.61	0.38	1.27	32.10	13.03	9.98	32.3	25.70	63.73	0.86
943832	Crystallizer	2	10/19/94	14:00	0.24	21.89	1.34	0.09		19.65		1.28		12.44	4.97		27.19	61.96	0.00
943832	Crystallizer	2	10/19/94	14:00	0.24	21.89	1.34	0.09		19.65		1.28		12.44	4.97	37.1	27.19	61.96	0.00
943994	Crystallizer	2	10/24/94	14:00	0.25	21.95	1.34	0.09		19.80		1.26		12.51	4.44	41.7	27.43	62.15	0.00
944000	Crystallizer	2	10/25/94	14:00	0.25	21.66	1.34	0.10		20.54		1.27		12.42	4.29	38.7	28.49	61.26	0.00
944005	Crystallizer	2	10/26/94	14:00	0.25	21.67	1.34	0.10		20.21		1.23		12.32	4.57	35.7	28.05	61.29	0.00
944010	Crystallizer	2	10/27/94	14:00	0.25	21.57	1.34	0.09		19.91		1.25		12.23	4.27	34.7	27.60	60.98	0.00
944239	Crystallizer	2	10/28/94	14:00	0.40	22.65	1.34	0.13		19.42		1.28		12.51	4.22	33.0	26.86	64.30	0.00
944245	Crystallizer	2	10/31/94	14:00	0.24	21.49	1.34	0.10		20.76		1.25		12.30	4.57	35.4	28.83	60.73	0.00
944251	Crystallizer	2	11/1/94	14:00	0.24	21.23	1.34	0.10		20.82		1.26		12.06	4.72	31.4	28.91	59.94	0.00
944257	Crystallizer	2	11/2/94	14:00	0.25	21.38	1.34	0.10		20.83		1.25		11.98	4.69	31.1	28.93	60.40	0.00
944263	Crystallizer	2	11/3/94	14:00	0.27	18.98	1.34	0.11		24.92		1.40		10.77	4.23	36.2	34.70	53.03	0.00

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	Al_2O_3	CaO	CO_2	Fe_2O_3	$Mg(OH)_2$	MgO	$S0_2$	SiO_2	SO_3	Total Sulfur	Total Susp. Solids (wt %)	Microtrac MV (microns)	$Mg(OH)_2$ (calc.)	$CaSO_4*2H_2O$ (calc.)	$CaSO_3*^1/_2H_2O$ (calc.)
944272	Crystallizer	2	11/4/94	14:00	0.26	20.90	1.34	0.10		21.93		1.36		11.94	4.70	33.7	30.41	58.92	0.00
944278	Crystallizer	2	11/7/94	14:00	0.25	21.49	1.34	0.10		20.78		1.35		12.18	4.29	28.8	28.76	60.73	0.00
944284	Crystallizer	2	11/8/94	14:00	0.25	21.20	1.34	0.10		20.27		1.28		11.91	4.31	29.7	28.09	59.84	0.00
944290	Crystallizer	2	11/9/94	14:00	0.25	21.40	1.34	0.10		21.34		1.23		12.18	4.42	32.5	29.69	60.46	0.00
944296	Crystallizer	2	11/10/94	14:00	0.26	21.14	1.34	0.10		21.50		1.18		11.98	4.25	38.8	29.97	59.66	0.00
944302	Crystallizer	2	11/11/94	14:00	0.25	20.96	1.34	0.10		22.12		1.24		11.79	4.33	34.1	30.81	59.11	0.00
944477	Crystallizer	2	11/18/94	14:00	0.24	20.88	1.34	0.10		21.70		1.31		12.00	4.16	45.7	30.13	58.86	0.00
944481	Crystallizer	2	11/21/94	14:00	0.25	21.11	1.34	0.11		22.18		1.32		11.99	4.23	34.9	30.81	59.57	0.00
944607	Crystallizer	2	11/22/94	13:00	0.25	21.45	1.34	0.10		20.75		1.28		12.08	4.08	39.3	28.78	60.61	0.00
944613	Crystallizer	2	11/23/94	14:00	0.26	20.98	1.34	0.11		21.80		1.33		11.68	4.16	37.6	30.26	59.17	0.00
944619	Crystallizer	2	11/28/94	14:00	0.24	21.03	1.34	0.11		21.90		1.17		12.03	3.56	40.6	30.56	59.32	0.00
944625	Crystallizer	2	11/29/94	14:00	0.23	22.15	1.34	0.10		20.11		1.11		12.52	3.95	41.6	28.02	62.76	0.00
944631	Crystallizer	2	11/30/94	14:00	0.24	21.07	1.34	0.10		22.02		1.28		11.87	3.49	42.0	30.62	59.45	0.00
944637	Crystallizer	2	11/30/94	18:00	0.24	21.09	1.34	0.10		21.91		1.26		11.94	3.43	51.4	30.48	59.51	0.00
944643	Crystallizer	2	12/1/94	14:00	0.25	20.39	1.34	0.10		23.00		1.32		11.67	3.22	41.3	32.00	57.36	0.00
944649	Crystallizer	2	12/5/94	14:00	0.24	20.79	1.34	0.10		22.36		1.35		11.96	3.57	28.2	31.05	58.59	0.00
944655	Crystallizer (w/polymer)	2	12/6/94	12:00	0.24	20.77	1.34	0.10		22.37		1.33		11.88	3.53	26.2	31.08	58.52	0.00
944660	Crystallizer (w/polymer)	2	12/6/94	13:00	0.24	20.72	1.34	0.10		22.11		1.30		11.92	3.52	31.6	30.73	58.37	0.00
944665	Crystallizer (w/polymer)	2	12/6/94	14:00	0.23	20.81	1.34	0.10		21.91		1.29		11.86	3.55	32.0	30.45	58.65	0.00
944670	Crystallizer	2	12/6/94	14:00	0.24	21.00	1.34	0.10		20.93		1.29		11.91	3.56	36.2	29.04	59.23	0.00
944689	Crystallizer (w/polymer)	2	12/6/94	15:00	0.23	20.95	1.34	0.10		21.33		1.29		11.97	3.52	31.6	29.61	59.08	0.00
944694	Crystallizer (w/polymer)	2	12/6/94	16:00	0.24	20.83	1.34	0.10		22.36		1.31		11.93	3.57	35.4	31.09	58.71	0.00
944699	Crystallizer (w/polymer)	2	12/8/94	12:00	0.23	20.84	1.34	0.10		21.91		1.26		11.97	3.47	30.4	30.48	58.74	0.00
944704	Crystallizer (w/polymer)	2	12/8/94	13:00	0.23	20.64	1.34	0.10		21.98		1.26		11.79	3.43		30.58	58.13	0.00
944709	Crystallizer (w/polymer)	2	12/8/94	14:00	0.23	20.96	1.34	0.10		21.90		1.26		12.10	3.53		30.47	59.11	0.00
944714	Crystallizer	2	12/8/94	14:00	0.23	20.90	1.34	0.10		21.88		1.26		11.97	3.44	34.6	30.44	58.92	0.00
944720	Crystallizer (w/polymer)	2	12/8/94	15:00	0.23	20.99	1.34	0.10		22.13		1.27		12.10	3.42	33.6	30.79	59.20	0.00
944725	Crystallizer (w/polymer)	2	12/8/94	16:00	0.23	21.30	1.34	0.10		20.36		1.24		12.12	3.42	35.6	28.26	60.15	0.00
944730	Crystallizer	2	12/9/94	14:00	0.23	20.94	1.34	0.10		22.00		1.27		12.03	3.49	28.1	30.60	59.05	0.00
941736	HCOF#1	3	5/19/94	12:15	0.37	10.63		0.23	61.80	41.73	0.33	2.43	13.51	5.57		11.9	58.03	31.74	0.75
941737	HCOF#1	3	5/19/94	12:15	0.46	9.56		0.23	63.60	44.75	0.37	2.78	12.11	5.03			62.06	28.35	0.84
941860	HCOF#1	3	5/27/94	8:30									0.00			7.3	0.00	0.00	0.00
941895	HCOF#1	3	6/7/94	14:50	0.47	8.15	2.08	0.20	66.30	48.44	0.70	2.66	8.00	3.55		11.6	67.51	15.00	1.59
942104	HCOF#1	3	6/15/94	12:00	0.40	7.28	1.97	0.22	49.30	48.04	0.57	2.46	8.21	3.57	2.1	7.1	67.13	13.11	1.29
942110	HCOF#1	3	6/16/94	14:00	0.45	6.68	2.36	0.24	63.70	50.76	0.54	2.72	5.45	2.45	1.7	4.7	70.81	9.82	1.22
942116	HCOF#1	3	6/17/94	13:00	0.42	7.59	2.26	0.24	59.70	49.77	0.72	2.51	7.03	3.17	3.8	29.8	69.58	12.52	1.63
942206	HCOF#1	3	6/27/94	14:00	0.37	11.90	1.86	0.17		38.88	0.47	2.00	14.86	6.18	3.2	19.4	54.32	27.99	1.07
942200	HCOF#1	3	6/28/94	14:00	0.39	7.40	1.94	0.21		48.29	0.60	2.27	7.60	3.34	2.7	18.0	67.68	13.51	1.36
942194	HCOF#1	3	6/28/94	20:00	0.42	6.85	1.08	0.21		49.22	1.00	2.34	6.53	3.11	4.0	7.7	68.95	14.11	2.27
942188	HCOF#1	3	6/29/94	18:00	0.41	6.04	1.88	0.23		50.87	0.88	2.48	5.53	2.65	3.4	5.3	71.21	8.82	2.00
942178	HCOF#1	3	6/30/94	13:30	0.42	7.23	2.42	0.22		49.60	0.50	2.54	6.28	2.76	2.5	4.5	69.31	11.38	1.13
942184	HCOF#1	3	6/30/94	20:00	0.39	7.99	2.03	0.21		48.22	0.54	2.20	7.28	3.18	3.2	5.0	67.64	15.13	1.22
942310	HCOF#1	3	7/5/94	14:00	0.38	8.04	1.88	0.23	56.40	47.06	0.22	2.05	8.08	3.34	2.64	8.0	66.11	16.73	0.50
942316	HCOF#1	3	7/5/94	18:00	0.38	8.29	2.00	0.24	62.50	47.20	0.38	2.00	8.13	3.44	2.54	7.0	66.36	16.60	0.86
942320	HCOF#1	3	7/5/94	22:00	0.39	6.84	1.91	0.25	59.10	49.33	0.08	2.13	6.93	2.81	2.23	7.5	69.32	13.31	0.18
942326	HCOF#1	3	7/6/94	13:00			1.78		60.90		0.33				1.34	12.3	0.00	-7.85	0.75
942332	HCOF#1	3	7/6/94	20:00	0.38	6.75	1.69	0.22	60.30	48.02	0.38	2.25	7.48	3.18	2.46	14.5	67.30	13.09	0.86
942338	HCOF#1	3	7/7/94	14:00	0.35	7.00	1.52	0.21	65.60	46.38	0.41	2.18	8.21	3.49	2.02	21.1	65.00	14.44	0.93
942344	HCOF#1	3	7/8/94	14:00	0.37	7.24	1.83	0.22	60.10	48.90	0.34	2.37	7.53	3.18	2.06	13.8	68.46	14.15	0.77
942350	HCOF#1	3	7/11/94	17:00	0.36	7.72	1.97	0.22	67.70	47.01	0.34	2.23	7.98	3.36	1.43	12.5	65.86	15.08	0.77
942356	HCOF#1	3	7/11/94	22:00	0.38	7.39	1.85	0.22	68.70	48.27	0.30	2.30	7.18	3.02	2.07	16.8	67.62	14.64	0.68

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	Al_2O_3	CaO	CO_2	Fe_2O_3	$Mg(OH)_2$	MgO	$S0_2$	SiO_2	SO_3	Total Sulfur	Total Susp. Solids (wt %)	Microtrac MV (microns)	$Mg(OH)_2$ (calc.)	$CaSO_4*2H_2O$ (calc.)	$CaSO_3*^1/_2H_2O$ (calc.)
942362	HCOF#1	3	7/12/94	13:00	0.41	6.88	2.00	0.24	62.60	49.93	0.36	2.55	4.73	2.07	2.89	12.7	69.78	12.33	0.82
942368	HCOF#1	3	7/12/94	17:30	0.37	7.30	1.98	0.24	67.40	49.89	0.38	2.29	3.73	1.68	2.76	46.2	69.97	13.64	0.86
942374	HCOF#1	3	7/13/94	14:00	0.38	7.59	2.31	0.22	61.80	48.64	0.42	2.39	5.65	2.47	3.03	54.3	68.07	13.13	0.95
942380	HCOF#1	3	7/13/94	18:00	0.37	8.04	2.15	0.23	61.60	48.86	0.47	2.28	5.29	2.35	3.07	50.6	68.49	15.00	1.07
942438	HCOF#1	3	7/14/94	13:00	0.38	6.42	1.85	0.24	73.00	51.45	0.33	2.40	5.51	2.37	6.04	6.4	72.12	11.58	0.75
942444	HCOF#1	3	7/14/94	18:00	0.38	6.20	1.48	0.23	72.00	52.27	0.37	2.37	6.01	2.59	2.39	6.8	73.34	12.25	0.84
942450	HCOF#1	3	7/14/94	22:00	0.36	6.40	1.56	0.22	71.90	49.97	0.65	2.39	6.96	3.11	1.44	7.8	69.99	11.79	1.47
942456	HCOF#1	3	7/18/94	14:00	0.36	6.96	1.61	0.23	71.10	48.45	0.26	2.28	7.55	3.15	1.41	9.7	67.90	14.37	0.59
942460	HCOF#1	3	7/18/94	18:00	0.36	6.20	1.47	0.23	72.00	51.60	0.25	2.36	7.61	3.17	2.29	8.8	72.38	12.61	0.57
942466	HCOF#1	3	7/18/94	22:00	0.37	5.73	1.56	0.24	74.40	53.39	0.22	2.40	5.98	2.50	1.81	7.6	74.93	10.89	0.50
942472	HCOF#1	3	7/19/94	14:00	0.40	6.52	1.85	0.22	73.50	52.24	0.34	2.70	6.13	2.62	3.22	7.2	72.97	11.86	0.77
942478	HCOF#1	3	7/19/94	18:00	0.40	6.24	1.76	0.21	72.80	51.45	0.34	2.67	6.13	2.62	2.74	8.3	71.86	11.35	0.77
942484	HCOF#1	3	7/19/94	22:00	0.37	5.04	0.00	0.21	72.90	47.98	0.53	2.54	5.14	2.32	2.20	19.3	66.96	14.04	1.20
942536	HCOF#1	3	7/20/94	14:00	0.38	5.10	1.63	0.24	76.60	53.65	0.28	2.66	5.18	2.21	2.94	6.4	75.05	8.52	0.63
942538	HCOF#1	3	7/20/94	18:00	0.38	5.86	1.51	0.23	73.70	52.41	0.17	2.58	6.19	2.56	2.65	6.7	73.34	11.62	0.39
942541	HCOF#1	3	7/20/94	22:00	0.40	5.58	1.74	0.24	73.20	53.30	0.34	2.68	5.20	2.25	2.02	7.0	74.53	9.41	0.77
942544	HCOF#1	3	7/21/94	14:00	0.39	6.19	1.36	0.22	72.56	51.06	0.14	2.70	7.53	3.08	2.58	7.5	71.27	13.30	0.32
942550	HCOF#1	3	7/21/94	21:00	0.36	6.30	1.38	0.22	71.97	50.89	0.24	2.50	7.55	3.14	2.28	8.9	71.21	13.29	0.54
942556	HCOF#1	3	7/25/94	14:00	0.38	6.97	1.66	0.22	71.51	49.95	0.32	2.61	7.55	3.18	2.69	8.2	69.75	14.04	0.73
942562	HCOF#1	3	7/25/94	18:00	0.41	6.31	1.94	0.24	73.31	49.43	0.46	2.56	5.53	2.44	2.32	8.5	69.04	10.54	1.04
942568	HCOF#1	3	7/25/94	22:00	0.40	5.63	1.78	0.26	75.45	52.71	0.37	2.66	5.18	2.26	1.93	7.3	73.69	9.32	0.84
942574	HCOF#1	3	7/26/94	14:00	0.41	5.88	2.12	0.23	75.16	51.43	0.16	2.83	5.32	2.21	2.30	7.2	71.68	9.32	0.36
942580	HCOF#1	3	7/26/94	18:00	0.40	5.58	1.84	0.22	74.05	52.32	0.33	3.00	5.85	2.51	1.38	8.0	72.80	9.04	0.75
942586	HCOF#1	3	7/26/94	22:00	0.40	5.56	1.52	0.21	74.12	52.44	0.35	2.96	5.68	2.45	1.86	7.5	73.01	10.18	0.79
942751	HCOF#1	3	7/27/94	13:00	0.39	5.29	1.46	0.21	74.97	52.57	0.30	2.97	6.42	2.72	2.50	8.4	73.19	9.72	0.68
942757	HCOF#1	3	7/27/94	19:00	0.41	5.32	1.64	0.22	74.52	53.53	0.46	2.96	5.27	2.34	2.25	7.8	74.59	8.68	1.04
942763	HCOF#1	3	7/28/94	13:00	0.41	5.21	1.40	0.22	73.75	53.32	0.30	3.03	6.29	2.67	2.37	8.0	74.22	9.71	0.68
942769	HCOF#1	3	7/28/94	21:00	0.38	7.18	1.50	0.20	68.74	49.31	0.29	2.64	9.40	3.91	2.45	8.7	68.79	15.39	0.66
942775	HCOF#1	3	8/1/94	15:00	0.39	6.45	1.72	0.22	72.26	50.36	0.25	2.65	7.48	3.12	1.54	9.2	70.30	12.40	0.57
942781	HCOF#1	3	8/1/94	22:00	0.41	6.49	1.73	0.22	74.54	52.00	0.25	2.73	6.78	2.84	2.63	6.3	72.60	12.48	0.57
942787	HCOF#1	3	8/2/94	19:00	0.40	6.10	1.61	0.20	70.99	51.68	0.37	2.75	7.38	3.14	2.74	6.4	72.12	11.43	0.84
942793	HCOF#1	3	8/3/94	14:00	0.41	5.26	1.66	0.21	75.52	53.39	0.41	2.85	5.38	2.36	2.93	5.6	74.49	8.55	0.93
943052	HCOF#1	3	8/11/94	14:00	0.40	6.65	2.76	0.21	70.48	50.56	0.20	2.85	7.84	3.24	1.48	5.5	70.40	9.08	0.45
943058	HCOF#1	3	8/11/94	18:00	0.43	5.68	2.62	0.23	72.69	53.63	0.34	3.03	6.29	2.69	1.81	7.2	74.67	6.27	0.77
943064	HCOF#1	3	8/11/94	22:00	0.41	6.07	2.75	0.21	71.62	51.52	0.41	2.88	6.98	3.00	2.00	7.1	71.76	6.77	0.93
943028	HCOF#1	3	8/29/94	13:30	0.39	6.61	3.25	0.21	67.14	48.04	0.36	2.52	7.54	3.20	1.77	7.0	67.07	6.61	0.82
943034	HCOF#1	3	8/30/94	14:00	0.42	5.28	2.93	0.23	66.48	52.07	0.26	2.75	5.92	2.50	2.51	6.1	72.68	4.04	0.59
943040	HCOF#1	3	8/31/94	14:00	0.41	5.20	3.12	0.22	67.20	51.13	0.31	2.80	6.13	2.61	2.82	6.2	71.27	2.92	0.70
943046	HCOF#1	3	9/1/94	14:00	0.40	5.90	2.84	0.21	69.43	51.01	0.23	2.75	7.30	3.04	2.65	5.9	71.15	6.38	0.52
943182	HCOF#1	3	9/6/94	14:00	0.42	4.35	2.70	0.24	75.35	55.62	0.57	3.20	4.66	2.15	2.62	6.4	77.38	1.26	1.29
943188	HCOF#1	3	9/6/94	18:00	0.39	6.31	2.96	0.20	70.72	48.53	0.43	2.94	7.53	3.23	1.45	7.5	67.37	6.63	0.98
943194	HCOF#1	3	9/14/94	14:00	0.43	6.55	3.31	0.23	69.76	49.26	0.35	3.02	7.05	3.00	1.53	6.6	68.35	6.21	0.79
943303	HCOF#1	3	9/19/94	14:00	0.41	5.64	1.94	0.22	72.43	51.87	0.50	2.95	6.89	3.01	2.62	4.6	72.20	8.38	1.13
943309	HCOF#1	3	9/19/94	18:00	0.42	5.12	2.21	0.25	72.49	53.69	0.56	3.02	5.79	2.60	2.67	4.5	74.76	5.56	1.27
943315	HCOF#1	3	9/19/94	22:00	0.43	4.87	2.31	0.24	75.56	53.69	0.42	2.97	4.59	2.05	2.46	5.8	74.81	4.78	0.95
943321	HCOF#1	3	9/20/94	14:00	0.42	5.19	2.17	0.22	73.41	52.40	0.43	2.94	6.33	2.75	2.50	5.6	72.97	6.28	0.98
943327	HCOF#1	3	9/20/94	18:00	0.44	4.87	1.96	0.23	75.35	53.77	0.27	3.03	5.18	2.21	2.53	5.5	74.87	6.55	0.61
943333	HCOF#1	3	9/22/94	15:00	0.44	4.74	2.71	0.24	74.70	53.81	0.46	3.13	5.17	2.30	1.49	5.8	74.83	2.71	1.04
943339	HCOF#1	3	9/22/94	18:00	0.43	5.04	2.26	0.23	70.61	53.32	0.50	3.07	5.29	2.37	3.79	4.6	74.18	5.28	1.13
943345	HCOF#1	3	9/22/94	22:00	0.44	3.97	2.16	0.24	76.57	55.24	0.35	3.17	4.01	1.78	3.07	5.3	76.86	2.79	0.79
943465	HCOF#1	3	9/28/94	18:00	0.42	6.89	2.37	0.21		49.03	0.26	2.87	calc	3.54	2.95	5.0	68.16	11.18	0.59

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	Al_2O_3	CaO	CO_2	Fe_2O_3	$Mg(OH)_2$	MgO	$S0_2$	SiO_2	SO_3	Total Sulfur	Total Susp. Solids (wt %)	Microtrac MV (microns)	$Mg(OH)_2$ (calc.)	$CaSO_4*2H_2O$ (calc.)	$CaSO_3*^1/_2H_2O$ (calc.)
943471	HCOF#1	3	9/28/94	22:00	0.45	5.28	2.71	0.23		53.48	0.31	3.11	calc	2.36	2.95	5.3	74.37	4.77	0.70
943475	HCOF#1	3	9/29/94	14:00	0.43	6.35	2.03	0.22		51.25	0.35	2.82	calc	3.05	4.22	5.0	71.43	10.61	0.79
943481	HCOF#1	3	10/3/94	14:00	0.42	7.61	3.56	0.23		49.22	0.36	2.70	calc	3.45	2.81	3.7	68.60	8.46	0.82
943485	HCOF#1	3	10/3/94	18:00	0.45	5.38	2.13	0.25		53.51	0.29	2.88	calc	2.46	3.86	5.5	74.64	7.40	0.66
943491	HCOF#1	3	10/3/94	22:45	0.45	4.83	2.22	0.26		54.10	0.32	2.94	calc	2.15	3.30	6.5	75.43	5.28	0.73
943497	HCOF#1	3	10/4/94	14:00	0.45	5.28	3.27	0.25		53.23	0.34	3.00	calc	2.53	3.02	6.3	74.12	2.50	0.77
943503	HCOF#1	3	10/4/94	18:00	0.44	5.05	2.54	0.24		52.42	0.33	3.00	calc	2.65	3.27	5.1	72.94	4.68	0.75
943509	HCOF#1	3	10/4/94	21:30	0.45	4.60	2.91	0.25		53.72	0.35	3.10	calc	2.42	2.83	4.8	74.73	1.79	0.79
943515	HCOF#1	3	10/5/94	14:00	0.45	4.97	2.79	0.27		51.43	0.39	3.04	calc	2.49	1.76	5.0	71.47	3.29	0.88
943771	HCOF#1	3	10/6/94	14:00	0.43	5.83	2.09	0.23		51.22	0.34	2.99	7.53	3.18	3.20	4.2	71.22	8.79	0.77
943777	HCOF#1	3	10/7/94	14:00	0.44	6.50	2.09	0.23		50.96	0.54	2.88	7.48	3.26	1.74	5.4	70.95	10.31	1.22
943783	HCOF#1	3	10/10/94	14:00	0.47	5.37	2.09	0.25		52.46	0.29	3.20	6.71	2.83	2.81	5.2	72.81	7.51	0.66
943789	HCOF#1	3	10/10/94	18:00	0.45	6.13	2.09	0.23		50.23	0.29	3.14	8.81	3.67	3.05	6.9	69.64	9.84	0.66
943795	HCOF#1	3	10/10/94	22:00	0.44	8.00	2.09	0.20		47.08	0.24	2.88	10.58	4.35	2.68	7.7	65.33	15.72	0.54
943799	HCOF#1	3	10/11/94	14:00	0.46	5.63	2.09	0.24		52.03	0.24	3.13	6.90	2.88	2.77	5.5	72.25	8.44	0.54
943803	HCOF#1	3	10/11/94	22:00	0.45	6.37	2.09	0.22		51.34	0.31	3.00	7.76	3.26	4.13	5.9	71.38	10.53	0.70
943809	HCOF#1	3	10/12/94	14:00	0.42	8.85	2.09	0.19		45.75	0.29	2.71	11.86	4.89	1.80	5.9	63.57	18.19	0.66
943815	HCOF#1	3	10/12/94	18:00	0.44	6.21	2.09	0.22		50.43	0.25	2.98	7.69	3.20	2.86	5.9	70.08	10.20	0.57
943821	HCOF#1	3	10/12/94	22:00	0.44	6.80	2.09	0.21		49.85	0.38	2.93	8.65	3.65	4.78	6.3	69.29	11.66	0.86
943827	HCOF#1	3	10/13/94	20:00	0.45	6.92	2.09	0.22		48.51		2.86		3.29	1.64	7.6	67.42	13.05	0.00
943833	HCOF#1	3	10/19/94	14:00	0.46	6.26	2.09	0.23		50.19		2.97		3.04	1.81	7.5	69.75	11.02	0.00
943995	HCOF#1	3	10/24/94	14:00	0.43	6.03	2.09	0.23		49.40		2.81		3.07	1.63	7.4	68.76	10.32	0.00
944001	HCOF#1	3	10/25/94	14:00	0.41	5.83	2.09	0.22		48.71		2.69		2.93	1.59	6.2	67.88	9.70	0.00
944006	HCOF#1	3	10/26/94	14:00	0.41	5.76	2.09	0.23		50.55		2.65		3.01	1.63	6.4	70.58	9.49	0.00
944011	HCOF#1	3	10/27/94	14:00	0.43	5.90	2.09	0.23		50.12		2.83		2.87	1.56	6.6	69.78	9.92	0.00
944240	HCOF#1	3	10/28/94	14:00	0.42	5.59	2.09	0.22		51.55		2.85		2.67	2.34	6.0	71.83	8.97	0.00
944246	HCOF#1	3	10/31/94	14:00	0.40	6.36	2.09	0.22		48.92		2.65		3.27	1.60	5.8	68.22	11.33	0.00
944252	HCOF#1	3	11/1/94	14:00	0.39	8.62	2.09	0.19		46.00		2.48		4.65	1.04	7.3	64.16	18.27	0.00
944258	HCOF#1	3	11/2/94	14:00	0.41	6.72	2.09	0.22		49.42		2.58		3.39	1.62	6.3	69.01	12.44	0.00
944264	HCOF#1	3	11/3/94	14:00	0.41	6.66	2.09	0.22		49.10		2.61		3.48	1.50	6.0	68.52	12.25	0.00
944273	HCOF#1	3	11/4/94	14:00	0.43	6.38	2.09	0.22		49.35		2.77		3.25	1.63	6.1	68.72	11.39	0.00
944279	HCOF#1	3	11/7/94	14:00	0.41	5.96	2.09	0.22		49.20		2.69		2.93	1.62	6.5	68.58	10.10	0.00
944285	HCOF#1	3	11/8/94	14:00	0.45	6.12	2.09	0.23		50.28		2.83		2.77	1.60	6.3	70.01	10.59	0.00
944291	HCOF#1	3	11/9/94	14:00	0.44	6.02	2.09	0.24		52.24		2.84		2.78	1.61		72.84	10.29	0.00
944297	HCOF#1	3	11/10/94	14:00	0.44	5.36	2.09	0.25		52.31		2.73		2.56	1.54	6.1	73.05	8.26	0.00
944303	HCOF#1	3	11/11/94	14:00	0.43	6.09	2.09	0.24		52.01		2.69		2.75	1.54	6.3	72.65	10.50	0.00
944478	HCOF#1	3	11/18/94	14:00	0.38	7.76	2.09	0.21		45.60		2.60		4.05	1.79	7.8	63.46	15.63	0.00
944482	HCOF#1	3	11/21/94	14:00	0.40	7.40	2.09	0.23		46.71		2.62		3.63	1.73	5.6	65.05	14.52	0.00
944608	HCOF#1	3	11/22/94	13:00	0.41	7.25	2.09	0.23		48.20		2.72		3.75	1.63	7.0	67.11	14.06	0.00
944614	HCOF#1	3	11/23/94	14:00	0.41	7.52	2.09	0.23		48.81		2.73		3.90	1.63	6.9	67.98	14.89	0.00
944620	HCOF#1	3	11/28/94	14:00	0.37	8.42	2.09	0.21		44.91		2.36		4.58	1.48	6.4	62.70	17.65	0.00
944626	HCOF#1	3	11/29/94	14:00	0.33	12.11	2.09	0.16		38.46		2.03		6.67	1.75	11.4	53.68	28.98	0.00
944632	HCOF#1	3	11/30/94	14:00	0.42	7.08	2.09	0.23		48.72		2.76		3.63	1.39	6.8	67.82	13.54	0.00
944638	HCOF#1	3	11/30/94	18:00	0.39	7.79	2.09	0.21		47.96		2.63		4.17	1.46	6.9	66.85	15.72	0.00
944644	HCOF#1	3	12/1/94	14:00	0.39	8.24	2.09	0.20		46.51		2.62		4.61	1.72	6.2	64.76	17.10	0.00
944650	HCOF#1	3	12/5/94	14:00	0.37	7.90	2.09	0.20		45.90		2.70		4.37	1.56	5.9	63.80	16.06	0.00
944656	HCOF#1 (w/polymer)	3	12/6/94	12:00	0.38	7.58	2.09	0.20		45.83		2.67		4.11	1.55	7.1	63.73	15.07	0.00
944661	HCOF#1 (w/polymer)	3	12/6/94	13:00	0.38	7.88	2.09	0.20		47.49		2.71		4.36	1.55		66.09	16.00	0.00
944666	HCOF#1 (w/polymer)	3	12/6/94	14:00	0.37	8.53	2.09	0.19		46.14		2.61		4.78	1.59	7.3	64.23	17.99	0.00
944671	HCOF#1	3	12/6/94	14:00	0.37	8.60	2.09	0.19		45.95		2.60		4.86	5.28	7.9	63.97	18.21	0.00
944690	HCOF#1 (w/polymer)	3	12/6/94	15:00	0.36	9.00	2.09	0.18		45.56		2.58		5.03	1.63		63.42	19.43	0.00

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	Al_2O_3	CaO	CO_2	Fe_2O_3	$Mg(OH)_2$	MgO	SO_2	SiO_2	SO_3	Total Sulfur	Total Susp. Solids (wt %)	Microtrac MV (microns)	$Mg(OH)_2$ (calc.)	$CaSO_4*2H_2O$ (calc.)	$CaSO_3*^1/_2H_2O$ (calc.)
944695	HCOF#1 (w/polymer)	3	12/6/94	16:00	0.35	9.61	2.09	0.18		43.48		2.45		5.39	1.67	8.1	60.54	21.31	0.00
944700	HCOF#1 (w/polymer)	3	12/8/94	12:00	0.39	6.12	2.09	0.22		50.34		2.81		3.48	1.40	5.8	70.12	10.59	0.00
944705	HCOF#1 (w/polymer)	3	12/8/94	13:00	0.39	5.92	2.09	0.23		48.97		2.78		3.29	1.38		68.16	9.98	0.00
944710	HCOF#1 (w/polymer)	3	12/8/94	14:00	0.39	6.38	2.09	0.22		49.77		2.79		3.58	1.41		69.31	11.39	0.00
944715	HCOF#1	3	12/8/94	14:00	0.39	6.68	2.09	0.22		49.80		2.79		3.71	1.42	6.1	69.36	12.31	0.00
944721	HCOF#1 (w/polymer)	3	12/8/94	15:00	0.39	7.01	2.09	0.21		48.58		2.72		3.88	1.45	6.3	67.66	13.33	0.00
944726	HCOF#1 (w/polymer)	3	12/8/94	16:00	0.38	7.43	2.09	0.21		47.93		2.69		4.11	1.47	6.6	66.75	14.61	0.00
944731	HCOF#1	3	12/9/94	14:00	0.40	6.98	2.09	0.21		49.15		2.78		3.90	1.47	6.5	68.43	13.23	0.00
941738	HCUF#1	4	5/19/94	12:15	0.10	30.31		0.08	6.16	4.08	0.33	0.41	43.26	17.47		29.8	5.51	92.15	0.75
941858	HCUF#1	4	5/27/94	8:30									0.00			49.6	0.00	0.00	0.00
941857	HCUF#1	4	5/27/94	9:30	0.09	29.88	0.55	0.07	7.16	5.00	0.27	0.38	43.11	17.38		47.8	6.87	88.84	0.61
941897	HCUF#1	4	6/7/94	14:50	0.13	28.33	0.66	0.07	10.80	7.64	0.27	0.61	40.29	16.25	14.4	36.6	10.46	83.65	0.61
942105	HCUF#1	4	6/15/94	12:00	0.10	29.50	0.60	0.06	6.13	5.07	0.49	0.41	42.06	17.07	29.9	66.9	6.94	86.89	1.11
942111	HCUF#1	4	6/16/94	14:00	0.10	29.50	0.67	0.06	6.96	5.31	0.65	0.47	41.64	16.98	27.5	62.3	7.23	86.18	1.47
942117	HCUF#1	4	6/17/94	13:00	0.11	29.58	0.65	0.06	7.01	5.10	0.46	0.47	41.98	17.02	28.0	76.9	6.92	87.02	1.04
942207	HCUF#1	4	6/27/94	14:00	0.10	29.35	0.65	0.06		5.38	0.38	0.38	41.45	16.77	24.1	61.6	7.42	86.53	0.86
942201	HCUF#1	4	6/28/94	14:00	0.10	28.97	0.62	0.06		5.69	0.55	0.42	40.84	16.61	26.3	57.9	7.83	85.02	1.25
942195	HCUF#1	4	6/28/94	20:00	0.10	28.87	0.69	0.06		6.08	0.54	0.49	40.58	16.50	33.8	66.2	8.32	84.47	1.22
942189	HCUF#1	4	6/29/94	18:00	0.12	27.94	0.72	0.06		7.89	0.54	0.55	39.25	15.97	17.2	65.7	10.88	81.49	1.22
942179	HCUF#1	4	6/30/94	13:30	0.12	28.29	0.76	0.06		7.88	0.54	0.56	39.95	16.25	22.5	63.1	10.86	82.41	1.22
942185	HCUF#1	4	6/30/94	20:00	0.10	29.25	0.68	0.06		5.59	0.90	0.44	40.63	16.70	36.4	66.7	7.66	84.70	2.04
942311	HCUF#1	4	7/5/94	14:00	0.12	29.17	0.53	0.06	7.61	4.94	1.13	0.35	39.94	16.54	27.39	67.5	6.81	84.43	2.56
942317	HCUF#1	4	7/5/94	18:00	0.12	29.20	0.64	0.06	8.27	5.70	0.43	0.40	40.94	16.59	33.83	70.9	7.86	85.97	0.98
942321	HCUF#1	4	7/5/94	22:00	0.11	28.98	0.61	0.06	6.88	5.74	0.35	0.35	40.91	16.54	34.96	64.7	7.97	85.63	0.79
942327	HCUF#1	4	7/6/94	13:00	0.10	29.33	0.56	0.06	7.51	5.49	0.55	0.37	41.44	16.85	25.04	68.5	7.59	86.36	1.25
942333	HCUF#1	4	7/6/94	20:00	0.10	29.15	0.61	0.06	7.64	5.54	0.52	0.37	41.30	16.78	34.16	65.9	7.66	85.69	1.18
942339	HCUF#1	4	7/7/94	14:00	0.11	29.44	0.64	0.06	7.35	5.25	0.48	0.38	41.63	16.89	31.85	72.1	7.23	86.57	1.09
942345	HCUF#1	4	7/8/94	14:00	0.11	29.33	0.59	0.06	7.29	5.33	0.58	0.42	41.30	16.81	31.80	70.6	7.31	86.16	1.32
942351	HCUF#1	4	7/11/94	17:00	0.10	29.41	0.66	0.06	7.38	5.31	0.48	0.39	41.48	16.83	25.26	71.9	7.31	86.40	1.09
942357	HCUF#1	4	7/11/94	22:00	0.11	29.31	0.65	0.06	7.65	5.48	0.52	0.44	41.18	16.73	33.84	63.9	7.50	86.03	1.18
942363	HCUF#1	4	7/12/94	13:00	0.10	29.36	0.69	0.06	7.12	5.13	0.30	0.41	41.33	16.68	36.45	62.2	7.03	86.62	0.68
942369	HCUF#1	4	7/12/94	17:30	0.11	29.88	0.55	0.06	6.66	4.66	0.41	0.43	41.86	16.95	37.33	67.4	6.33	88.46	0.93
942375	HCUF#1	4	7/13/94	14:00	0.11	30.05	0.67	0.06	5.75	4.10	0.38	0.39	41.98	16.98	27.76	61.8	5.55	88.60	0.86
942381	HCUF#1	4	7/13/94	18:00	0.10	30.32	0.58	0.06	5.22	3.76	0.41	0.37	42.31	17.13	43.83	69.2	5.08	89.70	0.93
942439	HCUF#1	4	7/14/94	13:00	0.12	29.91	2.37	0.06	6.22	4.66	0.58	0.35	41.48	16.88	27.89	70.7	6.40	80.98	1.32
942445	HCUF#1	4	7/14/94	18:00	0.11	29.68	0.47	0.06	6.86	5.21	0.66	0.36	41.30	16.85	41.21	59.8	7.19	87.49	1.50
942451	HCUF#1	4	7/14/94	22:00	0.10	29.39	0.45	0.06	7.12	5.32	0.54	0.36	41.30	16.79	32.50	59.6	7.35	87.00	1.22
942457	HCUF#1	4	7/18/94	14:00	0.10	28.67	0.61	0.06	7.20	5.03	0.42	0.35	39.88	16.16	58.84	64.0	6.94	84.49	0.95
942461	HCUF#1	4	7/18/94	18:00	0.10	29.09	0.53	0.06	7.60	5.45	0.28	0.33	41.13	16.59	33.10	67.9	7.57	86.47	0.63
942467	HCUF#1	4	7/18/94	22:00	0.10	29.50	0.54	0.06	7.35	5.41	0.40	0.34	41.60	16.84	34.52	62.4	7.50	87.36	0.91
942473	HCUF#1	4	7/19/94	14:00	0.11	29.40	0.60	0.06	7.78	5.49	0.54	0.52	41.00	16.67	23.93	74.2	7.44	86.44	1.22
942479	HCUF#1	4	7/19/94	18:00	0.11	29.37	0.51	0.06	7.40	5.46	0.33	0.52	41.39	16.72	35.56	66.2	7.40	87.27	0.75
942485	HCUF#1	4	7/19/94	22:00	0.11	29.34	0.51	0.06	7.20	5.34	0.48	0.48	41.35	16.78	33.94	63.1	7.26	86.77	1.09
942490	HCUF#1	4	7/20/94	14:00	0.10	29.33	0.55	0.06	7.36	5.41	0.51	0.38	41.39	16.81	23.64	71.6	7.46	86.51	1.16
942494	HCUF#1	4	7/20/94	18:00	0.10	29.35	0.52	0.06	7.33	5.35	0.56	0.38	41.23	16.77	36.42	65.2	7.37	86.55	1.27
942497	HCUF#1	4	7/20/94	22:00	0.10	29.59	0.56	0.06	7.08	5.31	0.47	0.42	41.76	16.94	42.61	63.2	7.28	87.37	1.07
942545	HCUF#1	4	7/21/94	14:00	0.10	29.39	0.53	0.06	6.86	4.83	0.41	0.42	41.69	16.88	23.21	67.7	6.58	87.04	0.93
942551	HCUF#1	4	7/21/94	21:00	0.10	29.29	0.49	0.06	6.91	4.68	0.22	0.36	41.33	16.64	35.34	60.7	6.42	87.40	0.50
942557	HCUF#1	4	7/25/94	14:00	0.10	29.56	0.58	0.06	6.81	4.91	0.43	0.46	41.69	16.89	23.36	60.8	6.66	87.31	0.98
942563	HCUF#1	4	7/25/94	18:00	0.10	29.49	0.51	0.06	7.60	5.28	0.38	0.45	41.40	16.75	34.88	61.7	7.20	87.50	0.86
942569	HCUF#1	4	7/25/94	22:00	0.10	29.61	0.54	0.06	6.85	5.18	0.34	0.44	41.85	16.91	34.54	60.9	7.07	87.86	0.77

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	Al_2O_3	CaO	CO_2	Fe_2O_3	$Mg(OH)_2$	MgO	$S0_2$	SiO_2	SO_3	Total Sulfur	Total Susp. Solids (wt %)	Microtrac MV (microns)	$Mg(OH)_2$ (calc.)	$CaSO_4*2H_2O$ (calc.)	$CaSO_3*^1/_2H_2O$ (calc.)
942575	HCUF#1	4	7/26/94	14:00	0.10	29.54	0.57	0.06	7.05	4.95	0.43	0.54	41.26	16.74	24.19	71.2	6.64	87.29	0.98
942581	HCUF#1	4	7/26/94	18:00	0.10	29.63	0.56	0.06	7.01	4.94	0.40	0.52	41.82	16.95	38.20	69.2	6.64	87.68	0.91
942587	HCUF#1	4	7/26/94	22:00	0.10	29.61	0.50	0.06	6.69	4.79	0.36	0.52	41.72	16.89	36.08	68.4	6.43	87.96	0.82
942752	HCUF#1	4	7/27/94	13:00	0.10	29.28	0.59	0.06	6.58	4.63	0.27	0.47	41.76	16.86	25.14	68.3	6.24	86.84	0.61
942758	HCUF#1	4	7/27/94	19:00	0.10	29.16	0.49	0.06	7.24	5.65	0.08	0.52	41.75	16.76	34.52	56.3	7.67	87.38	0.18
942764	HCUF#1	4	7/28/94	13:00	0.08	29.30	0.44	0.07	6.62	4.78	0.33	0.43	41.93	16.96	27.04	56.8	6.50	87.33	0.75
942770	HCUF#1	4	7/28/94	21:00	0.08	29.75	0.49	0.06	5.99	4.22	0.39	0.38	42.48	17.21	42.16	51.8	5.74	88.35	0.88
942776	HCUF#1	4	8/1/94	15:00	0.09	29.46	0.65	0.06	6.51	4.86	0.45	0.40	41.73	16.94	26.31	53.6	6.64	86.68	1.02
942782	HCUF#1	4	8/1/94	22:00	0.09	29.26	0.54	0.06	6.64	5.09	0.39	0.45	41.41	16.78	40.23	57.5	6.93	86.65	0.88
942788	HCUF#1	4	8/2/94	19:00	0.09	29.40	0.50	0.06	6.76	5.12	0.48	0.46	41.77	16.97	35.16	70.0	6.96	87.00	1.09
942794	HCUF#1	4	8/3/94	14:00	0.09	29.45	0.63	0.06	6.66	4.87	0.26	0.45	42.05	16.97	24.18	71.4	6.61	87.23	0.59
943053	HCUF#1	4	8/11/94	14:00	0.09	29.84	0.57	0.06	5.93	4.21	0.25	0.39	42.71	17.23	25.59	73.7	5.71	88.69	0.57
943059	HCUF#1	4	8/11/94	18:00	0.10	29.68	0.49	0.06	6.61	4.66	0.39	0.43	41.91	16.98	38.53	63.1	6.33	88.14	0.88
943065	HCUF#1	4	8/11/94	22:00	0.09	29.79	0.59	0.06	6.02	4.19	0.48	0.43	42.17	17.13	37.27	72.2	5.65	87.84	1.09
943029	HCUF#1	4	8/29/94	13:30	0.10	29.51	0.65	0.06	6.56	4.70	0.27	0.40	42.06	16.98	19.71	78.0	6.41	87.31	0.61
943035	HCUF#1	4	8/30/94	14:00	0.09	29.50	0.64	0.06	5.69	4.74	0.33	0.38	41.81	16.91	35.31	60.2	6.49	87.16	0.75
943041	HCUF#1	4	8/31/94	14:00	0.09	29.68	0.59	0.06	6.63	4.57	0.30	0.40	42.37	17.12	35.33	60.2	6.23	87.99	0.68
943047	HCUF#1	4	9/1/94	14:00	0.10	29.48	0.60	0.06	6.98	4.84	0.23	0.44	41.91	16.90	29.46	60.5	6.58	87.52	0.52
943183	HCUF#1	4	9/6/94	14:00	0.09	29.82	0.75	0.06	6.00	4.14	0.54	0.41	42.05	17.11	23.71	64.4	5.59	87.15	1.22
943189	HCUF#1	4	9/6/94	18:00	0.09	29.60	0.64	0.06	6.52	4.62	0.40	0.46	98.83	17.08	23.19	81.0	6.24	87.28	0.91
943195	HCUF#1	4	9/14/94	14:00	0.09	29.65	0.82	0.06	6.25	4.52	0.54	0.42	41.62	16.94	23.88	65.4	6.13	86.35	1.22
943304	HCUF#1	4	9/19/94	14:00	0.09	29.67	0.59	0.06	6.56	4.46	0.54	0.43	42.15	17.15	30.03	58.0	6.04	87.31	1.22
943310	HCUF#1	4	9/19/94	18:00	0.09	29.53	0.53	0.06	7.08	4.94	0.53	0.46	42.16	17.15	33.53	52.8	6.70	87.14	1.20
943316	HCUF#1	4	9/19/94	22:00	0.10	29.26	0.62	0.06	7.02	5.32	0.43	0.51	41.54	16.85	32.98	59.6	7.20	86.23	0.98
943322	HCUF#1	4	9/20/94	14:00	0.09	29.45	0.58	0.06	6.75	4.72	0.41	0.41	42.28	17.14	29.91	57.0	6.43	87.03	0.93
943328	HCUF#1	4	9/20/94	18:00	0.09	29.63	0.61	0.06	6.36	4.58	0.43	0.42	42.16	17.10	31.46	58.3	6.22	87.41	0.98
943334	HCUF#1	4	9/22/94	15:00	0.09	29.84	0.59	0.06	6.38	4.65	0.40	0.43	42.97	17.41	23.58	58.8	6.31	88.21	0.91
943340	HCUF#1	4	9/22/94	18:00	0.10	29.56	0.69	0.06	6.24	4.64	0.42	0.43	42.12	17.08	32.34	61.5	6.30	86.91	0.95
943346	HCUF#1	4	9/22/94	22:00	0.08	30.08	0.65	0.05	5.38	3.84	0.88	0.37	42.42	17.43	36.82	73.5	5.20	87.42	2.00
943466	HCUF#1	4	9/28/94	18:00	0.10	29.86	0.66	0.06		4.51	0.31	0.48	calc	17.28	38.15	56.3	6.06	88.24	0.70
943472	HCUF#1	4	9/28/94	22:00	0.09	29.35	0.69	0.06		5.00	0.34	0.48	calc	16.97	33.79	50.0	6.77	86.48	0.77
943476	HCUF#1	4	9/29/94	14:00	0.09	29.18	1.35	0.06		5.18	0.35	0.40	calc	16.74	34.70	57.9	7.11	83.35	0.79
943482	HCUF#1	4	10/3/94	14:00			0.70				0.34		calc		22.89	45.6	0.00	-3.65	0.77
943486	HCUF#1	4	10/3/94	18:00	0.11	28.61	0.76	0.06		6.61	0.24	0.45	calc	16.52	15.33	56.1	9.13	84.20	0.54
943492	HCUF#1	4	10/3/94	22:45	0.11	28.82	0.70	0.06		6.41	0.29	0.43	calc	16.58	27.98	59.0	8.86	84.95	0.66
943498	HCUF#1	4	10/4/94	14:00	0.11	29.17	0.73	0.06		5.63	0.41	0.46	calc	16.86	23.39	60.7	7.70	85.58	0.93
943504	HCUF#1	4	10/4/94	18:00	0.10	28.94	0.65	0.06		5.69	0.30	0.42	calc	16.73	33.97	54.3	7.83	85.48	0.68
943510	HCUF#1	4	10/4/94	21:30	0.10	28.85	0.77	0.06		5.96	0.36	0.46	calc	16.75	31.37	51.0	8.18	84.58	0.82
943516	HCUF#1	4	10/5/94	14:00	0.11	29.13	0.69	0.06		5.78	0.30	0.47	calc	16.81	22.56	61.4	7.91	85.91	0.68
943772	HCUF#1	4	10/6/94	14:00	0.12	29.26	*0.64*	0.06		5.09	0.26	0.45	42.10	16.97	22.52	50.6	6.93	86.62	0.59
943778	HCUF#1	4	10/7/94	14:00	0.11	29.17	*0.64*	0.06		5.68	0.38	0.46	41.50	16.79	22.72	56.4	7.77	86.02	0.86
943784	HCUF#1	4	10/10/94	14:00	0.15	29.17	*0.64*	0.06		5.56	0.21	0.50	42.06	16.93	26.51	55.5	7.56	86.48	0.48
943790	HCUF#1	4	10/10/94	18:00	0.12	29.45	*0.64*	0.06		4.81	0.25	0.48	42.39	17.08	33.50	54.5	6.49	87.23	0.57
943796	HCUF#1	4	10/10/94	22:00	0.11	29.40	*0.64*	0.06		4.84	0.21	0.49	42.39	17.06	31.33	49.8	6.53	87.19	0.48
943800	HCUF#1	4	10/11/94	14:00	0.13	29.58	*0.64*	0.06		5.43	0.31	0.50	42.44	17.13	19.10	56.6	7.37	87.47	0.70
943804	HCUF#1	4	10/11/94	22:00	0.15	27.80	*0.64*	0.06		7.94	0.27	0.62	39.84	16.07	26.66	50.5	10.89	82.11	0.61
943810	HCUF#1	4	10/12/94	14:00	0.15	27.64	*0.64*	0.07		8.42	0.29	0.66	39.69	16.02	14.48	54.8	11.54	81.57	0.66
943816	HCUF#1	4	10/12/94	18:00	0.12	29.21	*0.64*	0.06		5.70	0.25	0.53	42.04	16.94	34.66	48.0	7.73	86.50	0.57
943822	HCUF#1	4	10/12/94	22:00	0.11	29.52	*0.64*	0.06		4.73	0.29	0.48	42.34	17.08	32.87	55.3	6.38	87.34	0.66
943828	HCUF#1	4	10/13/94	20:00	0.11	29.10	*0.64*	0.06		5.44		0.54		16.83	33.59	58.8	7.35	86.83	0.00
943834	HCUF#1	4	10/19/94	14:00	0.13	28.47	0.64	0.06		7.38		0.61		16.42	16.46	59.9	10.09	84.90	0.00

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	Al_2O_3	CaO	CO_2	Fe_2O_3	$Mg(OH)_2$	MgO	$S0_2$	SiO_2	SO_3	Total Sulfur	Total Susp. Solids (wt %)	Microtrac MV (microns)	$Mg(OH)_2$ (calc.)	$CaSO_4*2H_2O$ (calc.)	$CaSO_3*^1/_2H_2O$ (calc.)
943996	HCUF#1	4	10/24/94	14:00	0.15	28.39	0.64	0.06		7.07		0.57		16.44	14.76	55.4	9.68	84.65	0.00
944002	HCUF#1	4	10/25/94	14:00	0.13	28.09	0.64	0.06		7.66		0.57		16.15	15.15	61.5	10.53	83.73	0.00
944007	HCUF#1	4	10/26/94	14:00	0.13	28.05	0.64	0.06		7.66		0.51		16.23	14.95	59.7	10.59	83.61	0.00
944012	HCUF#1	4	10/27/94	14:00	0.13	28.31	0.64	0.06		7.65		0.57		16.27	14.77	70.0	10.52	84.41	0.00
944241	HCUF#1	4	10/28/94	14:00	0.14	27.59	0.64	0.07		8.46		0.62		15.81	14.69	93.6	11.64	82.20	0.00
944247	HCUF#1	4	10/31/94	14:00	0.13	28.42	0.64	0.06		7.07		0.54		16.33	15.65	54.7	9.71	84.75	0.00
944253	HCUF#1	4	11/1/94	14:00	0.13	28.54	0.64	0.06		6.98		0.54		16.47	15.47	59.3	9.58	85.11	0.00
944259	HCUF#1	4	11/2/94	14:00	0.13	27.90	0.64	0.07		7.75		0.57		15.94	15.26	64.5	10.66	83.15	0.00
944265	HCUF#1	4	11/3/94	14:00	0.13	28.48	0.64	0.06		6.85		0.50		16.31	16.18	61.6	9.43	84.93	0.00
944274	HCUF#1	4	11/4/94	14:00	0.13	28.00	0.64	0.06		7.46		0.56		16.07	14.89	65.3	10.25	83.46	0.00
944280	HCUF#1	4	11/7/94	14:00	0.13	28.10	0.64	0.06		7.36		0.57		16.12	15.48	54.4	10.10	83.76	0.00
944286	HCUF#1	4	11/8/94	14:00	0.13	27.86	0.64	0.07		7.75		0.60		15.89	15.71	63.7	10.63	83.03	0.00
944292	HCUF#1	4	11/9/94	14:00	0.13	27.84	0.64	0.06		7.52		0.55		15.87	15.73	59.6	10.35	82.96	0.00
944298	HCUF#1	4	11/10/94	14:00	0.13	27.89	0.64	0.07		7.49		0.49		15.95	15.10	64.1	10.36	83.12	0.00
944304	HCUF#1	4	11/11/94	14:00	0.14	27.89	0.64	0.07		8.00		0.58		15.85	14.83	58.2	11.01	83.12	0.00
944479	HCUF#1	4	11/18/94	14:00	0.10	30.08	0.64	0.06		3.48		0.41		17.27	28.84	59.6	4.64	89.84	0.00
944483	HCUF#1	4	11/21/94	14:00	0.10	29.83	0.64	0.06		3.70		0.37		17.14	27.01	55.4	5.00	89.07	0.00
944609	HCUF#1	4	11/22/94	13:00	0.10	30.20	0.64	0.06		3.58		0.36		17.31	31.58	47.4	4.83	90.21	0.00
944615	HCUF#1	4	11/23/94	14:00	0.10	30.21	0.64	0.06		3.82		0.36		17.35	26.56	53.0	5.18	90.24	0.00
944621	HCUF#1	4	11/28/94	14:00	0.10	30.52	0.64	0.06		2.90		0.26		17.43	27.54	63.7	3.94	91.19	0.00
944627	HCUF#1	4	11/29/94	14:00	0.10	30.33	0.64	0.06		3.46		0.32		17.38	34.31	71.3	4.70	90.61	0.00
944633	HCUF#1	4	11/30/94	14:00	0.09	29.66	0.64	0.06		4.64		0.37		16.90	27.18	54.3	6.36	88.55	0.00
944639	HCUF#1	4	11/30/94	18:00	0.09	30.16	0.64	0.06		3.80		0.34		17.30	26.43	71.1	5.17	90.09	0.00
944645	HCUF#1	4	12/1/94	14:00	0.09	30.29	0.64	0.06		3.33		0.29		17.29	27.37	49.4	4.54	90.49	0.00
944651	HCUF#1	4	12/5/94	14:00	0.10	30.32	0.64	0.06		3.31		0.32		17.39	24.76	52.6	4.48	90.58	0.00
944657	HCUF#1 (w/polymer)	4	12/6/94	12:00	0.09	30.14	0.64	0.06		3.25		0.28		17.17	27.79	46.6	4.43	90.02	0.00
944662	HCUF#1 (w/polymer)	4	12/6/94	13:00	0.10	30.40	0.64	0.06		3.36		0.30		17.39	28.28	49.8	4.57	90.82	0.00
944667	HCUF#1 (w/polymer)	4	12/6/94	14:00	0.10	30.31	0.64	0.06		3.46		0.31		17.40	28.22	48.2	4.71	90.55	0.00
944672	HCUF#1	4	12/6/94	14:00	0.10	30.31	0.64	0.06		3.42		0.31		17.44	28.13	48.2	4.65	90.55	0.00
944691	HCUF#1 (w/polymer)	4	12/6/94	15:00	0.10	30.13	0.64	0.06		3.53		0.32		17.13	28.22	51.9	4.80	89.99	0.00
944696	HCUF#1 (w/polymer)	4	12/6/94	16:00	0.10	30.29	0.64	0.06		3.59		0.33		17.39	28.07	53.9	4.87	90.49	0.00
944701	HCUF#1 (w/polymer)	4	12/8/94	12:00	0.12	28.20	0.64	0.07		7.08		0.49		16.13	3.73	51.1	9.77	84.07	0.00
944706	HCUF#1 (w/polymer)	4	12/8/94	13:00	0.13	28.74	0.64	0.06		6.84		0.50		16.55	11.36		9.41	85.73	0.00
944711	HCUF#1 (w/polymer)	4	12/8/94	14:00	0.13	28.60	0.64	0.07		6.97		0.50		16.32	12.05		9.60	85.30	0.00
944716	HCUF#1	4	12/8/94	14:00	0.12	28.54	0.64	0.06		6.89		0.47		16.46	11.94	51.5	9.51	85.11	0.00
944722	HCUF#1 (w/polymer)	4	12/8/94	15:00	0.10	29.92	0.64	0.06		3.94		0.31		17.13	21.86	57.4	5.40	89.35	0.00
944727	HCUF#1 (w/polymer)	4	12/8/94	16:00	0.10	29.90	0.64	0.06		4.06		0.32		17.03	21.69	55.5	5.56	89.29	0.00
944732	HCUF#1	4	12/9/94	14:00	0.10	29.95	0.64	0.06		4.00		0.33		17.16	21.70	56.7	5.47	89.44	0.00
941896	HCOF#2	5	6/7/94	15:05	0.49	8.24	2.02	0.18	68.30	48.29	0.32	2.66	8.55	3.58		11.8	67.30	16.53	0.73
942106	HCOF#2	5	6/15/94	12:00	0.28	16.91	1.48	0.13	41.20	29.23	0.48	1.58	22.30	9.16	1.5	15.9	40.76	44.82	1.09
942112	HCOF#2	5	6/16/94	14:00	0.34	16.12	0.56	0.14	45.70	30.67	0.42	2.22	20.68	8.48	0.5	11.4	42.23	46.16	0.95
942118	HCOF#2	5	6/17/94	14:00	0.32	16.18	0.56	0.14	45.20	30.23	0.36	2.19	20.75	8.48	0.4	18.2	41.62	46.51	0.82
942208	HCOF#2	5	6/27/94		0.32	16.05	1.27	0.14		31.24	0.38	1.49	21.30	8.71	1.7		43.76	43.28	0.86
942196	HCOF#2	5	6/28/94		0.36	10.64	1.48	0.17		41.47	0.63	1.98	12.76	5.42	2.7		58.09	25.18	1.43
942202	HCOF#2	5	6/28/94		0.27	17.61	1.48	0.12		28.36	0.59	1.39	23.16	9.56	0.5		39.69	46.68	1.34
942190	HCOF#2	5	6/29/94		0.37	8.75	1.59	0.21		45.89	0.39	2.07	9.94	4.17	1.6		64.40	19.59	0.88
942180	HCOF#2	5	6/30/94		0.35	12.67	1.59	0.17		37.73	0.50	1.99	15.68	6.52	0.6		52.67	31.33	1.13
942312	HCOF#2	5	7/5/94	14:00			1.44				0.29				0.91	13.9	0.00	-6.41	0.66
942322	HCOF#2	5	7/5/94	22:00			1.59				0.22				0.47	15.2	0.00	-6.81	0.50
942328	HCOF#2	5	7/6/94	13:00			NES				0.38				0.26	13.9	0.00	#VALUE!	0.86
942334	HCOF#2	5	7/6/94	20:00			NES				0.42				0.31	17.3	0.00	#VALUE!	0.95

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	Al_2O_3	CaO	CO_2	Fe_2O_3	$Mg(OH)_2$	MgO	SO_2	SiO_2	SO_3	Total Sulfur	Total Susp. Solids (wt %)	Microtrac MV (microns)	$Mg(OH)_2$ (calc.)	$CaSO_4*2H_2O$ (calc.)	$CaSO_3*^1/_2H_2O$ (calc.)
942340	HCOF#2	5	7/7/94	14:00			1.52				0.44				0.60	19.2	0.00	-7.13	1.00
942346	HCOF#2	5	7/8/94	14:00			1.38				0.41				0.40	14.2	0.00	-6.50	0.93
942346	HCOF#2	5	7/8/94	14:00			1.38		42.20		0.41				0.40	14.2			
942352	HCOF#2	5	7/11/94	17:00	0.00	0.00	1.36	0.00	38.90	0.00	0.30	0.00	0.00	0.00	0.29	14.9	0.00	-6.13	0.68
942358	HCOF#2	5	7/11/94	22:00	0.27	17.42	0.00	0.13	42.60	29.22	0.48	1.50	22.22	9.14	0.64	16.8	40.83	52.18	1.09
942364	HCOF#2	5	7/12/94	13:00	0.00	0.00	1.91	0.00	44.20	0.00	0.40	0.00	0.00	0.00	0.30	15.3	0.00	-8.55	0.91
942370	HCOF#2	5	7/12/94	17:30	0.32	16.07	1.81	0.16	47.90	32.50	0.34	1.81	19.23	7.87	0.46	42.7	45.27	41.33	0.77
942376	HCOF#2	5	7/13/94	14:00	0.33	15.82	1.89	0.18	48.70	33.89	0.28	1.78	18.10	7.39	0.79	20.0	47.31	40.41	0.63
942440	HCOF#2	5	7/14/94	13:00	0.00	0.00	2.31	0.00	55.30	0.00	1.04	0.00	0.00	0.00	0.57	14.0	0.00	-11.83	2.36
942446	HCOF#2	5	7/14/94	18:00	0.26	16.99	1.36	0.14	43.60	29.84	0.43	1.53	21.93	9.00	0.40	16.8	41.70	45.67	0.98
942452	HCOF#2	5	7/14/94	22:00	0.32	10.45	1.32	0.18	60.60	42.67	0.31	2.11	13.27	5.47	0.82	12.3	59.70	26.08	0.70
942462	HCOF#2	5	7/18/94	18:00	0.21	19.41	1.06	0.11	36.90	24.59	0.50	1.22	26.27	10.77	0.43	23.6	34.40	54.09	1.13
942468	HCOF#2	5	7/18/94	22:00	0.25	17.21	1.18	0.14	43.60	28.86	0.50	1.43	22.52	9.27	0.39	17.1	40.37	46.87	1.13
942474	HCOF#2	5	7/19/94	14:00	0.00	0.00	1.43	0.00	48.10	0.00	0.36	0.00	0.00	0.00	0.67	13.7	0.00	-6.56	0.82
942480	HCOF#2	5	7/19/94	18:00	0.27	16.63	1.30	0.12	42.30	30.22	0.38	1.78	21.97	8.99	0.57	15.5	42.00	44.94	0.86
942486	HCOF#2	5	7/19/94	22:00	0.27	16.42	0.00	0.13	42.60	29.72	0.42	1.77	21.95	9.00	0.36		41.29	49.27	0.95
942537	HCOF#2	5	7/20/94	14:00	0.30	15.03	1.68	0.15	47.60	33.06	0.29	2.12	19.39	7.91	24.86	18.1	45.78	38.78	0.66
942539	HCOF#2	5	7/20/94	18:00	0.27	16.66	1.46	0.13	43.90	30.34	0.22	1.67	22.30	9.04	24.80	16.0	42.28	44.83	0.50
942542	HCOF#2	5	7/20/94	22:00	0.28	16.67	1.22	0.13	43.20	30.07	0.33	1.88	22.21	9.06	0.38	17.7	41.69	45.51	0.75
942546	HCOF#2	5	7/21/94	14:00	0.26	18.34	0.94	0.12	36.82	25.54	0.31	1.80	25.26	10.27	0.31	13.8	35.21	51.78	0.70
942552	HCOF#2	5	7/21/94	21:00	0.25	17.43	0.56	0.12	40.45	27.34	0.38	1.64	23.83	9.72	0.48	13.1	37.97	50.29	0.86
942558	HCOF#2	5	7/25/94	14:00	0.29	15.65	1.20	0.14	45.61	31.69	0.54	1.96	20.40	8.44	0.58	20.6	43.96	41.89	1.22
942564	HCOF#2	5	7/25/94	18:00	0.25	18.45	1.03	0.11	38.50	26.07	0.35	1.74	24.81	10.11	0.36	16.7	36.04	51.66	0.79
942570	HCOF#2	5	7/25/94	22:00	0.00	0.00	1.41	0.00	42.81	0.00	0.29	0.00	0.00	0.00	0.05	5.3	0.00	-6.30	0.66
942576	HCOF#2	5	7/26/94	14:00	0.28	16.62	1.20	0.13	43.34	29.89	0.50	1.93	21.65	8.92	0.86	12.6	41.38	44.98	1.13
942582	HCOF#2	5	7/26/94	18:00	0.27	17.46	1.30	0.11	41.66	28.52	0.40	1.88	23.30	9.53	0.25	15.5	39.45	47.43	0.91
942588	HCOF#2	5	7/26/94	22:00	0.28	15.86	1.22	0.12	44.92	30.91	0.35	2.01	21.11	8.63	0.37	18.3	42.78	42.97	0.79
942753	HCOF#2	5	7/27/94	13:00	0.30	15.33	1.32	0.13	46.94	31.93	0.33	2.11	20.66	8.44	0.50	14.1	44.16	41.00	0.75
942759	HCOF#2	5	7/27/94	19:00	0.28	16.67	1.25	0.12	42.87	29.62	0.47	1.99	22.18	9.12	0.38	15.7	40.93	45.01	1.07
942765	HCOF#2	5	7/28/94	13:00			1.49		38.35		0.30		calc		0.13	14.3	0.00	-6.64	0.68
942771	HCOF#2	5	7/28/94	21:00	0.25	18.64	1.37	0.11	37.10	25.22	0.48	1.92	25.79	10.57	0.31	17.9	34.63	50.57	1.09
942777	HCOF#2	5	8/1/94	15:00	0.32	14.00	1.42	0.16	49.75	34.78	0.24	2.07	18.85	7.67	0.33	11.6	48.32	36.77	0.54
942783	HCOF#2	5	8/1/94	22:00	0.31	15.82	1.56	0.14	45.57	31.71	0.34	2.01	20.92	8.55	0.30	12.5	43.94	41.54	0.77
942789	HCOF#2	5	8/2/94	19:00	0.31	15.26	1.62	0.14	46.96	32.46	0.54	2.04	19.72	8.17	0.41	9.6	44.99	39.05	1.22
942795	HCOF#2	5	8/3/94	14:00	0.34	13.72	1.50	0.15	50.01	35.15	0.18	2.23	18.38	7.45	0.45	7.8	48.70	35.76	0.41
943054	HCOF#2	5	8/11/94	14:00	0.31	15.68	2.21	0.16	45.71	31.07	0.36	1.94	20.67	8.46	0.26	9.1	43.08	38.52	0.82
943060	HCOF#2	5	8/11/94	18:00	0.25	19.24	1.94	0.12	36.66	25.76	0.30	1.64	26.09	10.60	0.21	19.2	35.68	50.66	0.68
943066	HCOF#2	5	8/11/94	22:00	0.26	18.25	1.89	0.12	38.34	26.29	0.31	1.68	24.51	9.97	0.24	18.7	36.41	47.79	0.70
943030	HCOF#2	5	8/29/94	13:30	0.28	17.31	NES	0.12	39.75	27.76	0.17	1.56	23.48	9.49	0.41	19.6	38.66	#VALUE!	0.39
943036	HCOF#2	5	8/30/94	14:00	0.34	13.77	2.50	0.16	49.57	34.35	0.35	1.93	18.39	7.54	0.62	7.7	47.83	31.55	0.79
943042	HCOF#2	5	8/31/94	14:00	0.33	13.70	2.50	0.15	50.02	34.76	0.23	2.00	18.54	7.54	0.52	7.9	48.36	31.65	0.52
943048	HCOF#2	5	9/1/94	14:00	0.31	15.07	2.14	0.13	45.91	31.85	0.22	1.83	21.07	8.55	0.62	20.0	44.31	37.29	0.50
943184	HCOF#2	5	9/6/94	14:00	0.34	13.65	2.42	0.16	50.31	34.84	0.28	2.32	18.35	7.49	0.52	12.0	48.16	31.68	0.63
943190	HCOF#2	5	9/6/94	18:00	0.27	17.60	2.45	0.12	39.60	27.18	0.35	1.78	23.78	9.70	0.31	15.5	37.60	43.50	0.79
943305	HCOF#2	5	9/19/94	14:00	0.31	16.03	1.78	0.15	44.14	30.51	0.40	1.92	22.12	9.06	0.62	13.0	42.29	41.17	0.91
943311	HCOF#2	5	9/19/94	18:00	0.28	17.13	1.57	0.12	42.09	28.50	0.48	1.77	23.25	9.55	0.58	15.7	39.52	45.15	1.09
943317	HCOF#2	5	9/19/94	22:00	0.32	15.26	1.97	0.14	45.70	32.49	0.43	2.04	20.26	8.33	0.36	13.2	45.04	37.98	0.98
943323	HCOF#2	5	9/20/94	14:00	0.31	15.24	1.73	0.14	46.08	31.85	0.34	1.92	21.05	8.60	0.48	14.8	44.23	39.10	0.77
943329	HCOF#2	5	9/20/94	18:00	0.34	13.77	1.95	0.16	50.71	35.30	0.39	2.16	18.39	7.56	0.46	10.1	48.99	33.59	0.88
943335	HCOF#2	5	9/22/94	15:00	0.34	14.18	2.17	0.16	49.70	34.26	0.57	2.14	18.54	7.71	0.28	13.2	47.50	33.50	1.29
943341	HCOF#2	5	9/22/94	18:00	0.35	13.48	1.95	0.16	51.82	35.71	0.40	2.23	17.85	7.35	0.46	10.0	49.51	32.67	0.91

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	Al_2O_3	CaO	CO_2	Fe_2O_3	$Mg(OH)_2$	MgO	$S0_2$	SiO_2	SO_3	Total Sulfur	Total Susp. Solids (wt %)	Microtrac MV (microns)	$Mg(OH)_2$ (calc.)	$CaSO_4*2H_2O$ (calc.)	$CaSO_3*^1/_2H_2O$ (calc.)
943467	HCOF#2	5	9/28/94	18:00	0.26	20.28	1.74	0.11		22.56	0.33	1.43	calc	11.45	0.95	17.7	31.26	54.56	0.75
943477	HCOF#2	5	9/29/94	14:00	0.31	15.63	2.24	0.14		31.46	0.30	1.84	calc	8.58	0.47	10.2	43.74	38.41	0.68
943487	HCOF#2	5	10/3/94	18:00	0.34	13.67	2.34	0.16		35.95	0.27	2.03	calc	7.46	0.70	9.5	50.05	32.08	0.61
943493	HCOF#2	5	10/3/94	22:45	0.37	11.39	2.39	0.19		41.18	0.29	2.31	calc	6.12	0.76	11.7	57.35	24.83	0.66
943499	HCOF#2	5	10/4/94	14:00	0.33	14.19	2.36	0.16		34.40	0.30	2.02	calc	7.92	0.46	11.5	47.82	33.52	0.68
943505	HCOF#2	5	10/4/94	18:00	0.32	15.37	2.91	0.14		32.02	0.27	1.89	calc	8.70	0.56	12.1	44.50	35.07	0.61
943511	HCOF#2	5	10/4/94	21:30			2.33				0.30		calc		0.34	8.2	0.00	-9.92	0.68
943517	HCOF#2	5	10/5/94	14:00	0.33	15.03	1.77	0.14		32.48	0.35	1.97	calc	8.53	0.36	8.1	45.09	38.27	0.79
943773	HCOF#2	5	10/6/94	14:00	0.32	15.41	*1.69*	0.14		30.61	0.38	1.86	20.98	8.58	0.51	11.9	42.49	39.67	0.86
943779	HCOF#2	5	10/7/94	14:00	0.32	15.41	*1.69*	0.14		31.47	0.47	1.87	20.56	8.46	0.35	13.3	43.72	39.43	1.07
943785	HCOF#2	5	10/10/94	14:00	0.41	8.37	*1.69*	0.19		45.80	0.25	2.74	11.54	4.74	2.27	11.2	63.62	18.41	0.57
943791	HCOF#2	5	10/10/94	18:00	0.29	17.84	*1.69*	0.12		25.07	0.27	1.65	24.91	10.10	0.52	14.1	34.68	47.43	0.61
943805	HCOF#2	5	10/11/94	22:00	0.36	13.87	*1.69*	0.16		34.66	0.27	2.15	18.89	7.69	0.56	6.2	48.07	35.24	0.61
943811	HCOF#2	5	10/12/94	14:00	0.37	12.34	*1.69*	0.16		37.43	0.19	2.33	16.69	6.77	0.57	12.0	51.90	30.76	0.43
943817	HCOF#2	5	10/12/94	18:00	0.33	15.23	*1.69*	0.13		31.98	0.33	1.98	21.04	8.58	0.68	16.7	44.36	39.25	0.75
943823	HCOF#2	5	10/12/94	22:00	0.43	7.71	*1.69*	0.20		48.01	0.32	2.84	10.55	4.38	2.38	8.3	66.72	16.20	0.73
943829	HCOF#2	5	10/13/94	20:00	0.33	14.79	*1.69*	0.15		32.91		2.02		8.09	0.70	10.7	45.66	38.79	0.00
943835	HCOF#2	5	10/19/94	14:00	0.37	12.19	1.69	0.17		38.11		2.33		6.71	0.55	10.4	52.89	30.81	0.00
943997	HCOF#2	5	10/24/94	14:00	0.37	11.15	1.69	0.17		38.24		2.25		5.99	0.60	10.6	53.15	27.62	0.00
944003	HCOF#2	5	10/25/94	14:00	0.34	12.71	1.69	0.16		36.98		2.03		7.12	0.54	12.6	51.54	32.41	0.00
944013	HCOF#2	5	10/27/94	14:00	0.36	12.12	1.69	0.16		38.17		2.24		6.58	0.48	10.9	53.06	30.60	0.00
944242	HCOF#2	5	10/28/94	14:00	0.36	11.50	1.69	0.16		40.76		2.30		6.41	0.67	9.2	56.75	28.69	0.00
944248	HCOF#2	5	10/31/94	14:00	0.31	14.65	1.69	0.14		34.04		1.88		8.38	0.55	12.6	47.43	38.36	0.00
944254	HCOF#2	5	11/1/94	14:00	0.32	14.65	1.69	0.14		34.40		1.90		8.30	0.56	13.6	47.94	38.36	0.00
944260	HCOF#2	5	11/2/94	14:00	0.32	14.01	1.69	0.15		34.85		1.91		7.69	0.56	11.5	48.58	36.40	0.00
944266	HCOF#2	5	11/3/94	14:00	0.31	14.27	1.69	0.15		34.23		1.87		8.05	0.53	13.9	47.72	37.20	0.00
944275	HCOF#2	5	11/4/94	14:00	0.34	13.01	1.69	0.15		37.49		2.15		7.29	0.52	12.4	52.16	33.33	0.00
944281	HCOF#2	5	11/7/94	14:00	0.32	13.91	1.69	0.14		36.01		2.02		7.86	0.52	12.5	50.15	36.09	0.00
944287	HCOF#2	5	11/8/94	14:00	0.36	12.26	1.69	0.17		38.27		2.23		6.51	0.49	11.5	53.22	31.03	0.00
944293	HCOF#2	5	11/9/94	14:00	0.36	12.56	1.69	0.17		39.12		2.19		6.87	0.51	16.1	54.48	31.95	0.00
944299	HCOF#2	5	11/10/94	14:00	0.36	11.97	1.69	0.18		39.96		2.12		6.33	0.48	11.5	55.77	30.14	0.00
944305	HCOF#2	5	11/11/94	14:00	0.36	11.95	1.69	0.18		39.26		2.15		6.39	0.50	11.2	54.73	30.08	0.00
944484	HCOF#2	5	11/21/94	14:00	0.27	17.76	1.69	0.13		27.34		1.62		9.94	0.31	15.4	37.99	47.91	0.00
944610	HCOF#2	5	11/22/94	13:00	0.17	26.02	1.69	0.08		12.45		0.80		14.89	0.72	33.8	17.24	73.26	0.00
944616	HCOF#2	5	11/23/94	14:00	0.23	21.67	1.69	0.10		20.35		1.20		12.14	0.39	25.3	28.28	59.91	0.00
944622	HCOF#2	5	11/28/94	14:00	0.11	27.99	1.69	0.06		8.75		0.51		15.88	0.15	20.4	12.17	79.31	0.00
944628	HCOF#2	5	11/29/94	14:00	0.15	24.98	1.69	0.07		14.71		0.78		14.28	0.35	18.6	20.53	70.07	0.00
944634	HCOF#2	5	11/30/94	14:00	0.20	23.32	1.69	0.09		17.40		1.07		13.37	0.29	15.3	24.14	64.98	0.00
944640	HCOF#2	5	11/30/94	18:00	0.22	21.57	1.69	0.09		20.56		1.19		12.21	0.27	14.0	28.60	59.60	0.00
944646	HCOF#2	5	12/1/94	14:00	0.20	22.56	1.69	0.09		18.16		1.08		12.76	0.27	14.6	25.23	62.64	0.00
944652	HCOF#2	5	12/5/94	14:00	0.20	22.44	1.69	0.09		18.13		1.08		12.92	0.28	18.8	25.19	62.27	0.00
944658	HCOF#2 (w/polymer)	5	12/6/94	12:00											0.25	16.8	0.00	0.00	0.00
944663	HCOF#2 (w/polymer)	5	12/6/94	13:00											0.25		0.00	0.00	0.00
944668	HCOF#2 (w/polymer)	5	12/6/94	14:00											0.25	16.0	0.00	0.00	0.00
944673	HCOF#2	5	12/6/94	14:00	0.20	22.21	1.69	0.09		18.90		1.13		12.87	0.26	14.3	26.25	61.57	0.00
944692	HCOF#2 (w/polymer)	5	12/6/94	15:00											0.22		0.00	0.00	0.00
944697	HCOF#2 (w/polymer)	5	12/6/94	16:00											0.24	18.8	0.00	0.00	0.00
944702	HCOF#2 (w/polymer)	5	12/8/94	12:00											0.37	9.8	0.00	0.00	0.00
944707	HCOF#2 (w/polymer)	5	12/8/94	13:00											0.38		0.00	0.00	0.00
944712	HCOF#2 (w/polymer)	5	12/8/94	14:00	0.31	13.99	1.69	0.15		34.47		2.00		8.00	0.41		47.94	36.34	0.00
944717	HCOF#2	5	12/8/94	14:00	0.32	13.40	1.69	0.16		36.40		2.06		7.69	0.40	8.1	50.67	34.53	0.00

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	Al_2O_3	CaO	CO_2	Fe_2O_3	$Mg(OH)_2$	MgO	SO_2	SiO_2	SO_3	Total Sulfur	Total Susp. Solids (wt %)	Microtrac MV (microns)	$Mg(OH)_2$ (calc.)	$CaSO_4*2H_2O$ (calc.)	$CaSO_3*^1/_2H_2O$ (calc.)
944723	HCOF#2 (w/polymer)	5	12/8/94	15:00	0.25	19.42	1.69	0.11		23.82		1.42		11.20	0.28	11.4	33.09	53.00	0.00
944728	HCOF#2 (w/polymer)	5	12/8/94	16:00	0.25	19.33	1.69	0.11		23.86		1.41		11.06	0.29	15.8	33.16	52.73	0.00
944733	HCOF#2	5	12/9/94	14:00	0.26	19.23	1.69	0.12		24.95		1.49		11.07	0.32	12.5	34.66	52.42	0.00
950398	HCOF#2 Roping	5	2/16/95	12:15	0.28	19.34	1.69	0.14		25.58		1.52		10.35	0.30	18.8	35.54	52.76	0.00
941898	HCUF#2	6	6/7/94	15:05	0.08	30.73	0.42	0.05	3.92	2.59	0.21	0.36	43.89	17.66	27.2	45.5	3.40	92.12	0.48
942107	HCUF#2	6	6/15/94	12:00	0.07	30.89	0.47	0.05	3.26	2.29	0.56	0.27	44.00	17.88	25.0	72.5	3.05	91.47	1.27
942113	HCUF#2	6	6/16/94	14:00	0.07	30.57	0.56	0.05	3.85	2.84	0.53	0.34	43.34	17.60	27.2	69.2	3.78	90.22	1.20
942119	HCUF#2	6	6/17/94	13:00	0.08	30.83	0.52	0.05	3.44	2.67	0.40	0.34	43.93	17.77	28.0	78.7	3.53	91.52	0.91
942209	HCUF#2	6	6/27/94	14:00	0.07	31.20	0.39	0.05		2.26	0.43	0.24	44.64	18.07	25.2	71.0	3.04	93.09	0.98
942203	HCUF#2	6	6/28/94	14:00	0.09	30.04	0.50	0.06		4.36	0.56	0.42	42.63	17.33	27.5	59.0	5.90	88.75	1.27
942197	HCUF#2	6	6/28/94	20:00	0.08	30.77	0.50	0.05		2.94	0.51	0.31	43.81	17.78	35.5	64.1	3.95	91.12	1.16
942191	HCUF#2	6	6/29/94	18:00	0.08	30.52	0.48	0.05		3.27	0.43	0.34	43.56	17.64	32.6	64.2	4.40	90.65	0.98
942181	HCUF#2	6	6/30/94	13:30	0.08	30.31	0.51	0.05		3.52	0.51	0.35	42.99	17.45	37.0	60.6	4.75	89.67	1.16
942313	HCUF#2	6	7/5/94	14:00	0.09	30.67	0.50	0.06	4.12	2.88	0.41	0.25	43.44	17.58	25.33	72.6	3.93	91.08	0.93
942323	HCUF#2	6	7/5/94	22:00	0.09	30.47	2.16	0.05	4.52	3.09	0.46	0.26	43.15	17.49	37.28	69.9	4.22	83.84	1.04
942329	HCUF#2	6	7/6/94	13:00	0.08	30.51	0.46	0.05	3.99	2.80	0.56	0.26	43.33	17.61	23.92	74.0	3.80	90.35	1.27
942335	HCUF#2	6	7/6/94	20:00	0.08	30.39	0.48	0.05	4.10	2.84	0.57	0.26	43.11	17.53	39.00	70.6	3.86	89.87	1.29
942341	HCUF#2	6	7/7/94	14:00	0.08	30.69	0.45	0.05	3.61	2.56	0.62	0.25	43.65	17.77	34.65	75.8	3.46	90.78	1.41
942347	HCUF#2	6	7/8/94	14:00	0.08	30.94	0.45	0.05	3.62	2.60	0.42	0.29	44.20	17.89	24.40	78.6	3.48	92.08	0.95
942353	HCUF#2	6	7/11/94	17:00	0.09	31.89	0.53	0.05	3.87	2.90	0.60	0.29	45.68	18.57	25.41	74.9	3.92	94.20	1.36
942359	HCUF#2	6	7/11/94	22:00	0.09	30.64	0.51	0.06	4.24	2.99	0.43	0.32	43.54	17.63	36.64	68.9	4.02	90.90	0.98
942365	HCUF#2	6	7/12/94	13:00	0.08	30.98	0.53	0.05	3.81	2.59	0.30	0.28	44.28	17.86	25.92	72.0	3.48	92.21	0.68
942371	HCUF#2	6	7/12/94	17:30	0.09	30.99	0.49	0.06	3.13	2.13	0.77	0.32	43.36	17.73	39.38	68.0	2.77	91.14	1.75
942377	HCUF#2	6	7/13/94	14:00	0.09	31.24	0.49	0.05	2.72	1.79	0.60	0.27	43.88	17.85	28.60	71.3	2.33	92.36	1.36
942441	HCUF#2	6	7/14/94	13:00	0.08	31.35	0.37	0.05	2.32	1.65	1.07	0.19	43.34	17.87	23.92	73.1	2.20	91.90	2.43
942447	HCUF#2	6	7/14/94	18:00	0.08	31.01	0.40	0.05	3.09	2.19	0.49	0.22	43.46	17.63	40.71	62.8	2.96	92.30	1.11
942453	HCUF#2	6	7/14/94	22:00	0.08	30.07	0.47	0.05	3.42	2.26	0.45	0.23	42.06	17.05	36.61	61.7	3.05	89.25	1.02
942463	HCUF#2	6	7/18/94	18:00	0.08	30.69	0.61	0.06	3.80	2.61	0.32	0.22	43.43	17.53	35.32	69.2	3.56	90.96	0.73
942469	HCUF#2	6	7/18/94	22:00	0.07	31.08	0.47	0.05	3.38	2.38	0.41	0.20	44.09	17.84	36.89	69.3	3.25	92.46	0.93
942475	HCUF#2	6	7/19/94	14:00	0.08	30.80	0.42	0.06	3.64	2.44	0.36	0.33	43.53	17.59	23.24	75.4	3.21	91.93	0.82
942481	HCUF#2	6	7/19/94	18:00	0.08	30.80	0.55	0.06	3.76	2.67	0.28	0.38	43.78	17.65	37.35	67.3	3.50	91.64	0.63
942487	HCUF#2	6	7/19/94	22:00	0.08	30.86	0.52	0.06	3.43	2.42	0.43	0.34	43.69	17.69	39.86	65.1	3.17	91.54	0.98
942491	HCUF#2	6	7/20/94	14:00	0.08	31.04	0.49	0.05	3.18	2.26	0.31	0.23	44.29	17.87	23.38	69.5	3.05	92.53	0.70
942495	HCUF#2	6	7/20/94	18:00	0.07	30.96	0.48	0.05	3.43	2.32	0.41	0.23	43.84	17.74	42.14	57.0	3.13	92.05	0.93
942498	HCUF#2	6	7/20/94	22:00	0.07	30.78	0.50	0.05	3.50	2.56	0.40	0.29	43.63	17.65	40.18	62.3	3.42	91.45	0.91
942547	HCUF#2	6	7/21/94	14:00	0.07	30.87	0.35	0.05	2.90	2.07	0.38	0.27	43.75	17.69	23.73	78.0	2.73	92.37	0.86
942553	HCUF#2	6	7/21/94	21:00	0.08	31.02	0.39	0.06	3.12	2.13	0.27	0.25	44.09	17.77	36.90	66.4	2.84	92.97	0.61
942559	HCUF#2	6	7/25/94	14:00	0.09	30.23	0.37	0.05	2.94	1.76	0.53	0.29	41.31	16.79	22.99	66.6	2.27	89.92	1.20
942565	HCUF#2	6	7/25/94	18:00	0.08	30.93	0.40	0.06	3.76	2.61	0.46	0.34	43.65	17.69	41.42	65.2	3.45	92.14	1.04
942571	HCUF#2	6	7/25/94	22:00	0.08	30.91	0.40	0.05	3.57	2.51	0.52	0.31	43.43	17.63	35.45	64.7	3.33	91.92	1.18
942577	HCUF#2	6	7/26/94	14:00	0.08	31.08	0.31	0.06	3.34	2.32	0.41	0.39	43.98	17.82	24.15	74.5	2.98	93.09	0.93
942583	HCUF#2	6	7/26/94	18:00	0.08	30.97	0.10	0.06	3.38	2.28	0.39	0.38	43.71	17.70	30.16	75.3	2.93	93.62	0.88
942589	HCUF#2	6	7/26/94	22:00	0.07	31.11	0.36	0.06	3.14	2.19	0.42	0.37	44.09	17.87	34.83	70.6	2.81	92.96	0.95
942754	HCUF#2	6	7/27/94	13:00	0.07	30.72	0.41	0.05	2.78	1.96	0.42	0.32	43.55	17.65	23.55	91.1	2.53	91.56	0.95
942760	HCUF#2	6	7/27/94	19:00	0.07	30.66	0.40	0.05	3.38	2.36	0.39	0.37	43.36	17.56	40.00	61.6	3.06	91.50	0.88
942766	HCUF#2	6	7/28/94	13:00	0.07	30.70	0.32	0.06	3.50	2.40	0.32	0.35	43.72	17.67	22.87	67.1	3.13	92.12	0.73
942772	HCUF#2	6	7/28/94	21:00	0.06	30.68	1.66	0.05	2.96	2.05	0.26	0.26	43.87	17.70	39.37	57.6	2.71	86.98	0.59
942778	HCUF#2	6	8/1/94	15:00	0.07	30.81	0.35	0.05	3.19	2.12	0.31	0.27	43.86	17.72	25.71	56.9	2.81	92.37	0.70
942784	HCUF#2	6	8/1/94	22:00	0.07	30.62	0.38	0.05	3.90	2.65	0.35	0.32	43.46	17.58	31.09	59.3	3.52	91.56	0.79
942790	HCUF#2	6	8/2/94	19:00	0.07	30.79	0.30	0.05	3.22	2.22	0.51	0.32	43.53	17.69	40.00	58.9	2.90	91.97	1.16
942796	HCUF#2	6	8/3/94	14:00	0.07	30.77	0.34	0.05	2.80	1.98	0.30	0.30	43.79	17.69	26.35	58.1	2.57	92.31	0.68

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	Al_2O_3	CaO	CO_2	Fe_2O_3	$Mg(OH)_2$	MgO	$S0_2$	SiO_2	SO_3	Total Sulfur	Total Susp. Solids (wt %)	Microtrac MV (microns)	$Mg(OH)_2$ (calc.)	$CaSO_4*2H_2O$ (calc.)	$CaSO_3*^1/_2H_2O$ (calc.)
943055	HCUF#2	6	8/11/94	14:00	0.07	31.21	0.37	0.05	2.76	1.82	0.24	0.26	44.79	18.06	25.43	70.6	2.38	93.71	0.54
943061	HCUF#2	6	8/11/94	18:00	0.07	31.29	0.47	0.05	2.90	1.94	0.37	0.29	45.01	18.21	38.33	66.5	2.53	93.21	0.84
943067	HCUF#2	6	8/11/94	22:00	0.08	31.08	0.46	0.05	2.98	2.00	0.42	0.34	44.24	17.93	45.92	67.5	2.56	92.47	0.95
943031	HCUF#2	6	8/29/94	13:30	0.07	31.15	0.36	0.05	2.58	1.80	0.25	0.25	44.88	18.10	21.62	65.9	2.36	93.54	0.57
943037	HCUF#2	6	8/30/94	14:00	0.06	30.99	0.39	0.05	2.72	1.84	0.20	0.22	44.67	17.99	34.82	58.1	2.45	93.06	0.45
943043	HCUF#2	6	8/31/94	14:00	0.07	31.22	0.39	0.05	2.80	1.78	0.34	0.29	44.67	18.06	33.14	59.0	2.29	93.39	0.77
943049	HCUF#2	6	9/1/94	14:00	0.07	31.22	0.40	0.05	2.57	1.82	0.33	0.32	44.91	18.15	35.14	58.7	2.32	93.38	0.75
943185	HCUF#2	6	9/6/94	14:00	0.06	31.37	0.35	0.05	2.30	1.53	0.41	0.27	45.03	18.24	23.85	64.9	1.95	93.82	0.93
943191	HCUF#2	6	9/6/94	18:00	0.07	31.35	0.41	0.05	2.49	1.61	0.40	0.31	44.89	18.18	22.41	85.7	2.03	93.55	0.91
943306	HCUF#2	6	9/19/94	14:00	0.07	31.33	0.38	0.05	2.50	1.59	0.50	0.27	44.94	18.25	32.04	58.4	2.04	93.34	1.13
943312	HCUF#2	6	9/19/94	18:00	0.07	31.16	0.44	0.05	3.02	2.03	0.46	0.32	44.49	18.05	39.19	58.8	2.63	92.69	1.04
943318	HCUF#2	6	9/19/94	22:00	0.07	31.15	0.40	0.05	3.36	2.27	0.36	0.36	44.77	18.11	36.43	54.9	2.94	93.08	0.82
943324	HCUF#2	6	9/20/94	14:00	0.07	31.30	0.39	0.05	2.62	1.79	0.43	0.28	44.81	18.16	34.89	56.9	2.32	93.39	0.98
943330	HCUF#2	6	9/20/94	18:00	0.06	31.44	0.39	0.05	2.77	1.84	0.39	0.30	45.28	18.33	39.18	53.9	2.37	93.93	0.88
943336	HCUF#2	6	9/22/94	15:00	0.07	31.33	0.40	0.05	2.49	1.75	0.39	0.28	44.78	18.13	23.94	67.2	2.26	93.55	0.88
943348	HCUF#2	6	9/22/94	22:00	0.07	31.47	0.39	0.05	2.70	1.79	0.38	0.29	45.37	18.36	37.25	61.5	2.31	94.05	0.86
943468	HCUF#2	6	9/28/94	18:00	0.07	31.25	0.43	0.05		1.79	0.32	0.32	calc	18.05	37.71	55.5	2.28	93.38	0.73
943478	HCUF#2	6	9/29/94	14:00	0.07	31.14	0.50	0.05		2.24	0.32	0.28	calc	18.11	36.30	62.7	2.97	92.77	0.73
943488	HCUF#2	6	10/3/94	18:00	0.07	30.64	0.56	0.05		2.65	0.20	0.25	calc	17.68	34.60	54.0	3.59	91.32	0.45
943494	HCUF#2	6	10/3/94	22:45	0.08	30.86	0.49	0.05		2.47	0.31	0.26	calc	17.92	39.32	62.8	3.32	91.98	0.70
943500	HCUF#2	6	10/4/94	14:00	0.08	31.02	0.51	0.05		2.23	0.35	0.27	calc	17.93	24.30	68.3	2.97	92.28	0.79
943506	HCUF#2	6	10/4/94	18:00	0.06	30.67	0.49	0.05		2.35	0.30	0.23	calc	17.89	38.24	61.1	3.18	91.42	0.68
943512	HCUF#2	6	10/4/94	21:30	0.08	30.92	0.48	0.05		2.42	0.35	0.29	calc	17.89	34.32	55.2	3.22	92.09	0.79
943518	HCUF#2	6	10/5/94	14:00	0.07	31.14	0.41	0.05		2.24	0.37	0.28	calc	18.17	23.82	56.8	2.97	92.99	0.84
943774	HCUF#2	6	10/6/94	14:00	0.07	30.52	*0.45*	0.05		2.09	0.25	0.25	43.64	17.58	24.28	57.9	2.78	91.27	0.57
943780	HCUF#2	6	10/7/94	14:00	0.12	30.85	*0.45*	0.07		2.48	0.37	0.45	44.04	17.80	29.13	52.9	3.15	91.96	0.84
943786	HCUF#2	6	10/10/94	14:00	0.08	30.68	*0.45*	0.05		2.26	0.23	0.28	44.11	17.76	28.32	57.0	3.00	91.81	0.52
943792	HCUF#2	6	10/10/94	18:00	0.08	30.82	*0.45*	0.05		1.92	0.22	0.30	44.65	17.97	35.66	54.2	2.49	92.27	0.50
943806	HCUF#2	6	10/11/94	22:00	0.11	29.67	*0.45*	0.06		4.55	0.30	0.46	42.68	17.22	32.84	50.6	6.14	88.53	0.68
943812	HCUF#2	6	10/12/94	14:00	0.08	30.19	*0.45*	0.06		2.97	0.26	0.34	43.38	17.48	25.23	54.3	3.97	90.23	0.59
943818	HCUF#2	6	10/12/94	18:00	0.08	30.51	*0.45*	0.05		2.46	0.32	0.32	43.68	17.63	36.45	52.0	3.25	91.05	0.73
943824	HCUF#2	6	10/12/94	22:00	0.09	29.94	*0.45*	0.06		3.33	0.25	0.39	43.24	17.42	26.99	56.2	4.44	89.49	0.57
943830	HCUF#2	6	10/13/94	20:00	0.08	30.26	*0.45*	0.06		3.06		0.41		17.43	37.45	57.4	4.03	91.14	0.00
943836	HCUF#2	6	10/19/94	14:00	0.08	30.56	0.45	0.05		2.63		0.35		17.79	25.81	63.4	3.47	92.06	0.00
943993	#18 HCUF (Roping)	6	10/20/94		0.06	30.67	0.45	0.05		2.17		0.29		17.75	33.31	50.0	2.86	92.38	0.00
943998	HCUF#2	6	10/24/94	14:00	0.08	30.57	0.45	0.05		2.64		0.29		17.77	23.48	55.7	3.54	92.09	0.00
944008	HCUF#2	6	10/26/94	14:00	0.08	30.45	0.45	0.05		2.55		0.26		17.56	24.08	60.8	3.44	91.73	0.00
944014	HCUF#2	6	10/27/94	14:00	0.09	30.56	0.45	0.05		2.77		0.34		17.68	23.23	61.5	3.68	92.06	0.00
944243	HCUF#2	6	10/28/94	14:00	0.08	30.43	0.45	0.05		2.44		0.30		17.53	23.87	72.7	3.24	91.66	0.00
944249	HCUF#2	6	10/31/94	14:00	0.09	30.50	0.45	0.05		2.64		0.29		17.73	24.65	55.5	3.54	91.88	0.00
944255	HCUF#2	6	11/1/94	14:00	0.08	30.57	0.45	0.05		2.64		0.30		17.64	23.77	62.2	3.53	92.09	0.00
944261	HCUF#2	6	11/2/94	14:00	0.10	30.52	0.45	0.06		2.81		0.33		17.67	23.52	63.1	3.75	91.94	0.00
944267	HCUF#2	6	11/3/94	14:00	0.09	30.66	0.45	0.05		2.46		0.27		17.79	22.43	60.2	3.30	92.37	0.00
944276	HCUF#2	6	11/4/94	14:00	0.09	30.49	0.45	0.05		2.55		0.32		17.65	23.13	65.1	3.38	91.85	0.00
944282	HCUF#2	6	11/7/94	14:00	0.10	30.85	0.45	0.06		2.48		0.39		17.89	20.74	54.8	3.21	92.95	0.00
944288	HCUF#2	6	11/8/94	14:00	0.08	30.46	0.45	0.06		2.82		0.35		17.56	22.73	63.6	3.74	91.76	0.00
944294	HCUF#2	6	11/9/94	14:00	0.08	30.62	0.45	0.05		2.61		0.31		17.66	24.61	61.1	3.48	92.25	0.00
944300	HCUF#2	6	11/10/94	14:00	0.09	30.63	0.45	0.06		2.72		0.32		17.62	24.21	64.5	3.63	92.28	0.00
944306	HCUF#2	6	11/11/94	14:00	0.08	30.68	0.45	0.06		2.51		0.25		17.77	24.48	65.7	3.39	92.43	0.00
944485	HCUF#2	6	11/21/94	14:00	0.08	31.04	0.45	0.05		1.43		0.24		17.86	25.13	58.3	1.84	93.54	0.00
944611	HCUF#2	6	11/22/94	13:00	0.08	30.93	0.45	0.05		1.74		0.26		17.62	25.51	54.9	2.27	93.20	0.00

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	Al_2O_3	CaO	CO_2	Fe_2O_3	$Mg(OH)_2$	MgO	$S0_2$	SIO_2	SO_3	Total Sulfur	Total Susp. Solids (wt %)	Microtrac MV (microns)	$Mg(OH)_2$ (calc.)	$CaSO_4*2H_2O$ (calc.)	$CaSO_3*^1/_2H_2O$ (calc.)
944617	HCUF#2	6	11/23/94	14:00	0.08	31.26	0.45	0.05		1.72		0.25		17.98	23.55	61.3	2.25	94.21	0.00
944623	HCUF#2	6	11/28/94	14:00	0.09	31.39	0.45	0.05		1.28		0.17		18.00	7.96	75.7	1.69	94.61	0.00
944629	HCUF#2	6	11/29/94	14:00	0.10	31.06	0.45	0.06		1.95		0.26		17.82	24.15	80.3	2.57	93.60	0.00
944635	HCUF#2	6	11/30/94	14:00	0.07	30.71	0.45	0.05		2.74		0.27		17.59	24.73	64.9	3.70	92.52	0.00
944641	HCUF#2	6	11/30/94	18:00	0.08	31.17	0.45	0.05		1.90		0.24		17.96	21.93	68.8	2.52	93.94	0.00
944647	HCUF#2	6	12/1/94	14:00	0.07	31.34	0.45	0.05		1.46		0.18		17.99	22.65	59.2	1.94	94.46	0.00
944653	HCUF#2	6	12/5/94	14:00	0.07	31.60	0.45	0.05		1.06		0.19		18.26	24.13	49.4	1.35	95.26	0.00
944659	HCUF#2 (w/polymer)	6	12/6/94	12:00	0.08	31.30	0.45	0.05		1.41		0.19		17.99	25.15	50.5	1.86	94.33	0.00
944664	HCUF#2 (w/polymer)	6	12/6/94	13:00	0.08	31.45	0.45	0.05		1.45		0.19		18.17	24.82	51.5	1.91	94.80	0.00
944669	HCUF#2 (w/polymer)	6	12/6/94	14:00	0.08	31.32	0.45	0.05		1.53		0.20		18.02	24.91	50.1	2.02	94.40	0.00
944674	HCUF#2	6	12/6/94	14:00	0.08	31.23	0.45	0.05		1.54		0.20		17.86	23.92	50.4	2.03	94.12	0.00
944693	HCUF#2 (w/polymer)	6	12/6/94	15:00	0.08	31.25	0.45	0.05		1.58		0.21		18.00	24.60	48.6	2.08	94.18	0.00
944698	HCUF#2 (w/polymer)	6	12/6/94	16:00	0.09	31.04	0.45	0.06		1.69		0.23		17.73	23.75	54.3	2.22	93.54	0.00
944703	HCUF#2 (w/polymer)	6	12/8/94	12:00	0.08	31.00	0.45	0.05		2.03		0.23		17.88	21.35	47.8	2.71	93.41	0.00
944708	HCUF#2 (w/polymer)	6	12/8/94	13:00	0.08	31.05	0.45	0.05		1.94		0.21		17.83	22.85		2.60	93.57	0.00
944713	HCUF#2 (w/polymer)	6	12/8/94	14:00	0.08	31.15	0.45	0.05		1.88		0.20		18.01	21.84		2.53	93.87	0.00
944718	HCUF#2	6	12/8/94	14:00	0.08	31.19	0.45	0.05		1.84		0.21		17.89		48.8	2.46	94.00	0.00
944724	HCUF#2 (w/polymer)	6	12/8/94	15:00	0.07	31.34	0.45	0.05		1.44		0.16		18.13	21.60	55.5	1.93	94.46	0.00
944729	HCUF#2 (w/polymer)	6	12/8/94	16:00	0.07	31.23	0.45	0.05		1.45		0.17		17.93	22.29	55.3	1.93	94.12	0.00
944734	HCUF#2	6	12/9/94	14:00	0.07	31.30	0.45	0.05		1.34		0.18		18.04	22.63	56.7	1.76	94.33	0.00
950399	HCUF#2 Roping	6	2/16/95	12:15	0.12	31.60	0.45	0.06		1.50		0.26		17.85	31.65	57.9	1.92	95.26	0.00
941855	Product	8	5/27/94		0.48	6.30	1.50	0.24	71.50	50.15	0.51	3.00	7.76	3.36		4.1	69.66	12.10	1.16
941856	Product	8	6/2/94	13:45	0.44	7.36	1.43	0.24	67.80	48.90	0.49	2.81	8.71	3.73		3.9	68.03	15.68	1.11
941894	Product	8	6/7/94	15:00	0.47	7.44	1.35	0.22	69.20	49.56	0.45	2.72	8.76	3.73		6.0	69.08	16.35	1.02
942108	Product	8	6/15/94	12:00	0.42	7.35	1.89	0.25	63.40	49.42	0.55	2.69	8.26	3.58	18.4	4.0	68.90	13.69	1.25
942114	Product	8	6/16/94	14:00	0.42	7.26	1.81	0.25	49.40	50.36	0.43	2.70	8.19	3.49	18.5	4.8	70.25	14.05	0.98
942120	Product	8	6/17/94	13:00	0.42	7.32	1.71	0.25	51.60	50.27	0.44	2.70	8.18	3.49	18.5	3.2	70.12	14.60	1.00
942210	Product	8	6/27/94	14:00	0.41	7.32	1.65	0.25	64.40	49.83	0.46	2.62	7.98	3.42	22.6	14.0	69.56	14.78	1.04
942204	Product	8	6/28/94	14:00	0.42	7.46	1.66	0.24	55.90	49.73	0.94	2.63	7.50	3.47	20.7	11.6	69.41	13.88	2.13
942198	Product	8	6/28/94	20:00	0.42	7.49	1.70	0.25	64.40	49.90	0.55	2.65	8.06	3.50	20.0	5.4	69.64	14.86	1.25
942192	Product	8	6/29/94	18:00	0.42	7.51	1.70	0.24	63.30	49.89	0.41	2.63	8.16	3.47	20.6	4.6	69.64	15.30	0.93
942182	Product	8	6/30/94	13:30	0.41	8.14	1.93	0.23	63.50	48.91	0.87	2.49	8.01	3.64	16.4	4.0	68.36	15.10	1.97
942186	Product	8	6/30/94	20:00	0.41	8.24	1.83	0.22	57.90	48.07	0.73	2.43	8.41	3.73	15.6	4.2	67.20	16.17	1.66
942314	Product	8	7/5/94	14:00	0.39	8.37	1.92	0.21	66.30	48.48	0.13	2.34	9.46	3.85	13.57	5.3	67.88	17.83	0.29
942318	Product	8	7/5/94	18:00	0.40	8.30	1.89	0.21	53.00	48.43	0.29	2.34	9.14	3.80	13.58	5.7	67.81	17.30	0.66
942324	Product	8	7/5/94	22:00	0.39	8.24	1.96	0.21	53.70	48.30	0.13	2.33	9.24	3.76	13.68	7.6	67.63	17.28	0.29
942330	Product	8	7/6/94	13:00	0.40	8.20	1.82	0.21	56.60	48.59	0.33	2.35	8.89	3.72	13.98	7.3	68.03	17.16	0.75
942336	Product	8	7/6/94	20:00	0.40	8.25	1.93	0.21	55.10	48.63	0.39	2.35	8.86	3.74	14.27	12.2	68.09	16.72	0.88
942342	Product	8	7/7/94	14:00	0.39	8.27	1.94	0.21	69.70	48.42	0.38	2.34	8.90	3.75	14.53	13.0	67.80	16.77	0.86
942348	Product	8	7/8/94	14:00	0.39	8.23	1.98	0.21	66.70	48.20	0.31	2.32	8.91	3.72	14.65	14.4	67.50	16.68	0.70
942354	Product	8	7/11/94	17:00	0.39	7.72	1.89	0.23	68.70	49.62	0.43	2.28	8.11	3.46	13.63	15.5	69.59	15.15	0.98
942360	Product	8	7/11/94	22:00	0.39	7.60	1.64	0.23	70.60	50.10	0.38	2.27	8.08	3.42	13.64	15.0	70.29	15.89	0.86
942366	Product	8	7/12/94	13:00	0.39	7.57	1.84	0.23	71.30	50.30	0.32	2.28	8.20	3.44	13.74	12.6	70.57	15.18	0.73
942372	Product	8	7/12/94	17:30	0.39	7.61	1.87	0.23	69.80	49.85	0.29	2.27	8.26	3.45	13.92	45.0	69.93	15.26	0.66
942378	Product	8	7/13/94	14:00	0.38	7.57	1.84	0.22	70.00	50.05	0.25	2.29	8.46	3.51	12.74	25.7	70.20	15.37	0.57
942382	Product	8	7/13/94	18:00	0.38	7.61	1.75	0.22	68.70	50.13	0.50	2.29	8.20	3.53	12.61	21.0	70.32	15.17	1.13
942442	Product	8	7/14/94	13:00	0.40	8.41	2.61	0.23	71.80	50.98	1.43	2.49	4.39	2.47	8.09	5.8	71.35	11.76	3.24
942448	Product	8	7/14/94	18:00	0.38	8.34	2.66	0.23	71.50	49.33	0.38	2.32	5.50	2.39	6.89	5.9	69.13	14.17	0.86
942454	Product	8	7/14/94	22:00	0.38	7.14	2.34	0.25	72.20	51.49	0.26	2.40	5.25	2.23	6.45	6.4	72.18	12.06	0.59
942458	Product	8	7/18/94	14:00	0.37	7.03	1.97	0.23	72.50	52.04	0.26	2.40	6.23	2.62	9.43	6.0	72.98	13.17	0.59
942464	Product	8	7/18/94	18:00	0.38	5.93	2.00	0.25	77.00	53.62	0.28	2.48	5.20	2.22	7.49	5.9	75.18	9.62	0.63
942470	Product	8	7/18/94	22:00	0.36	6.88	1.61	0.23	72.00	51.29	0.25	2.37	7.71	3.21	6.54	6.2	71.92	14.15	0.57
942476	Product	8	7/19/94	14:00	0.38	6.31	1.67	0.25	72.60	51.97	0.33	2.50	6.55	2.79	6.75	6.2	72.78	11.95	0.75
942482	Product	8	7/19/94	18:00	0.39	6.69	1.57	0.39	71.40	51.70	0.32	2.59	6.99	2.96	6.68	6.0	72.30	13.53	0.73
942488	Product	8	7/19/94	22:00	0.38	6.81	1.58	0.21	70.30	50.49	0.24	2.62	7.57	3.15	5.72	6.5	70.52	14.08	0.54
942492	Product	8	7/20/94	14:00	0.38	6.82	1.41	0.20	68.80	50.45	0.38	2.65	7.70	3.27	8.76	6.1	70.43	14.40	0.86
942540	Product	8	7/20/94	18:00	0.38	5.90	1.86	0.23	71.90	52.36	0.30	2.63	6.25	2.65	7.80	5.8	73.22	10.03	0.68

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	Al_2O_3	CaO	CO_2	Fe_2O_3	$Mg(OH)_2$	MgO	$S0_2$	SiO_2	SO_3	Total Sulfur	Total Susp. Solids (wt %)	Microtrac MV (microns)	$Mg(OH)_2$ (calc.)	$CaSO_4*2H_2O$ (calc.)	$CaSO_3*^1/_2H_2O$ (calc.)
942499	Product	8	7/20/94	22:00	0.36	7.97	1.46	0.20	66.10	49.26	0.43	2.43	9.19	3.89	7.02	6.3	68.92	17.60	0.98
942548	Product	8	7/21/94	14:00	0.38	6.16	1.68	0.22	71.69	51.00	0.28	2.55	6.85	2.88	7.37	6.1	71.33	11.58	0.63
942554	Product	8	7/21/94	14:00	0.39	6.25	1.67	0.22	72.32	51.71	0.35	2.61	7.06	3.00	7.88	6.1	72.29	11.71	0.79
942560	Product	8	7/25/94	14:00	0.38	6.95	1.56	0.21	66.15	50.13	0.34	2.54	8.43	3.54	10.00	5.9	70.08	14.32	0.77
942566	Product	8	7/25/94	18:00	0.37	7.05	1.62	0.21	69.31	48.90	0.28	2.55	8.48	3.53	9.86	6.1	68.29	14.55	0.63
942572	Product	8	7/25/94	22:00	0.37	7.02	1.68	0.21	67.08	48.96	0.36	2.55	8.35	3.52	10.05	6.1	68.37	14.01	0.82
942578	Product	8	7/26/94	14:00	0.38	6.98	1.51	0.21	70.17	50.02	0.28	2.59	8.31	3.47	10.22	5.8	69.87	14.76	0.63
942584	Product	8	7/26/94	18:00	0.37	6.99	1.63	0.21	70.12	49.96	0.27	2.58	8.35	3.48	9.86	6.1	69.79	14.35	0.61
942590	Product	8	7/26/94	22:00	0.38	6.99	1.57	0.22	68.98	50.14	0.45	2.59	7.88	3.38	10.03	6.2	70.04	14.10	1.02
942755	Product	8	7/27/94	13:00	0.33	6.89	1.61	0.22	70.92	42.66	0.28	2.20	7.34	3.08	10.46	6.1	59.60	14.10	0.63
942761	Product	8	7/27/94	19:00	0.32	6.81	1.55	0.22	70.87	42.12	0.21	2.19	7.13	2.96	10.65	5.7	58.82	14.27	0.48
942767	Product	8	7/28/94	13:00	0.33	6.78	1.65	0.22	69.26	43.12	0.21	2.25	7.10	2.95	10.31	5.7	60.21	13.79	0.48
942773	Product	8	7/28/94	21:00	0.35	6.83	1.65	0.22	71.28	45.10	0.24	2.35	7.29	3.04	8.64	6.1	62.98	13.86	0.54
942779	Product	8	8/1/94	15:00	0.33	6.67	1.66	0.22	71.35	42.02	0.30	2.24	6.74	2.85	12.25	5.9	58.63	13.17	0.68
942785	Product	8	8/1/94	22:00	0.34	6.30	1.54	0.21	72.43	42.78	0.46	2.38	6.27	2.74	11.75	5.6	59.60	12.08	1.04
942791	Product	8	8/2/94	19:00	0.33	7.28	1.54	0.20	67.78	42.38	0.45	2.30	8.23	3.52	10.85	6.1	59.09	15.11	1.02
942797	Product	8	8/3/94	14:00	0.33	7.27	1.74	0.20	66.52	41.47	0.22	2.23	7.99	3.31	6.59	5.9	57.85	14.92	0.50
943056	Product	8	8/11/94	14:00	0.41	7.08	2.34	0.21	68.86	49.48	0.30	2.80	7.94	3.33	12.06	5.5	68.88	11.77	0.68
943062	Product	8	8/11/94	18:00	0.41	7.00	2.31	0.21	68.94	50.01	0.42	2.84	7.84	3.35	8.45	5.8	69.61	11.32	0.95
943068	Product	8	8/11/94	22:00	0.41	7.05	2.32	0.21	67.27	50.41	0.52	2.83	7.71	3.35	11.55	5.2	70.20	11.17	1.18
943032	Product	8	8/29/94	13:30	0.41	6.86	2.38	0.21	69.70	48.81	0.35	2.75	7.63	3.23	17.19	5.7	67.96	10.80	0.79
943038	Product	8	8/30/94	14:00	0.41	6.85	2.29	0.22	75.44	49.91	0.43	2.79	7.60	3.26	14.60	5.5	69.52	10.91	0.98
943044	Product	8	8/31/94	14:00	0.42	6.32	2.30	0.23	71.20	51.02	0.22	2.86	7.12	2.96	13.57	4.8	71.05	9.81	0.50
943050	Product	8	9/1/94	14:00	0.42	6.33	2.56	0.22	71.99	50.83	0.31	2.84	7.10	3.00	13.43	5.2	70.80	8.58	0.70
943186	Product	8	9/6/94	14:00	0.42	6.39	2.44	0.22	73.32	50.99	0.25	2.85	7.30	3.05	15.17	5.1	71.02	9.40	0.57
943192	Product	8	9/6/94	14:00	0.41	6.78	2.39	0.22	70.36	50.08	0.32	2.80	7.76	3.27	15.70	5.2	69.75	10.60	0.73
943196	Product	8	9/14/94	14:00	0.41	6.37	2.93	0.22	70.97	50.71	0.33	2.83	7.28	3.08	16.78	5.6	70.63	7.20	0.75
943307	Product	8	9/19/94	14:00	0.41	6.29	2.24	0.22	73.33	50.74	0.51	2.81	7.20	3.14	15.06	4.4	70.70	9.17	1.16
943313	Product	8	9/19/94	18:00	0.41	6.31	2.43	0.22	70.99	50.68	0.52	2.80	7.27	3.17	14.75	3.9	70.62	8.46	1.18
943319	Product	8	9/19/94	22:00	0.41	6.29	2.41	0.22	63.11	50.69	0.42	2.81	7.34	3.15	15.10	4.2	70.62	8.75	0.95
943325	Product	8	9/20/94	14:00	0.42	6.23	2.49	0.22	71.26	50.63	0.43	2.85	7.35	3.16	14.74	5.3	70.50	8.23	0.98
943331	Product	8	9/20/94	18:00	0.41	6.26	3.34	0.23	69.15	50.64	0.44	2.86	7.32	3.15	14.69	5.4	70.50	4.96	1.00
943337	Product	8	9/22/94	15:00	0.41	6.35	2.66	0.22	65.41	50.80	0.51	2.89	7.43	3.23	15.11	4.6	70.71	7.71	1.16
943343	Product	8	9/22/94	18:00	0.41	6.31	2.83	0.22	69.51	49.80	0.39	2.83	7.45	3.18	14.99	4.9	69.32	7.25	0.88
943349	Product	8	9/22/94	22:00	0.40	6.86	2.18	0.21	66.05	48.72	0.39	2.78	8.30	3.52	15.05	5.6	67.80	11.48	0.88
943469	Product	8	9/28/94	18:00	0.42	6.53	2.05	0.22		50.82	0.32	2.91	calc	3.33	15.52	5.0	70.72	11.16	0.73
943473	Product	8	9/28/94	22:00	0.42	6.53	1.82	0.22		51.02	0.32	2.92	calc	3.35	15.62	4.9	71.00	12.06	0.73
943479	Product	8	9/29/94	14:00	0.43	6.47	2.07	0.22		51.22	0.37	2.94	calc	3.29	15.23	4.8	71.27	10.77	0.84
943483	Product	8	10/3/94	14:00	0.43	6.43	1.76	0.22		51.05	0.36	2.95	calc	3.29	15.35	5.2	71.01	11.88	0.82
943489	Product	8	10/3/94	18:00	0.42	6.56	2.27	0.22		51.17	0.42	2.95	calc	3.35	15.68	5.3	71.18	10.13	0.95
943495	Product	8	10/3/94	22:45	0.43	6.45	3.34	0.22		51.19	0.40	2.96	calc	3.30	15.57	5.7	71.20	5.66	0.91
943501	Product	8	10/4/94	14:00	0.43	6.49	2.71	0.22		51.10	0.31	2.95	calc	3.29	15.78	5.3	71.08	8.49	0.70
943507	Product	8	10/4/94	18:00	0.43	6.55	2.92	0.22		51.05	0.30	2.94	calc	3.35	15.69	5.0	71.02	7.87	0.68
943513	Product	8	10/4/94	21:30	0.43	6.52	1.96	0.22		51.15	0.34	2.95	calc	3.29	15.48	4.9	71.15	11.43	0.77
943519	Product	8	10/5/94	14:00	0.43	6.53	2.75	0.22		51.15	0.36	2.94	calc	3.31	15.26	4.8	71.16	8.32	0.82
943775	Product	8	10/6/94	14:00	0.43	6.50	2.06	0.22		50.61	0.44	2.87	7.58	3.25	15.48	4.7	70.45	10.70	1.00
943781	Product	8	10/7/94	14:00	0.43	6.46	2.06	0.22		50.77	0.46	2.88	7.55	3.25	15.72	4.5	70.67	10.52	1.04
943787	Product	8	10/10/94	14:00	0.44	6.32	2.06	0.23		51.08	0.27	2.91	7.64	3.19	16.31	4.5	71.09	10.61	0.61
943793	Product	8	10/10/94	18:00	0.44	6.35	2.06	0.23		51.22	0.29	2.90	7.66	3.21	16.38	4.2	71.30	10.64	0.66
943797	Product	8	10/10/94	22:00	0.44	6.37	2.06	0.23		51.22	0.34	2.91	7.70	3.25	16.53	5.1	71.29	10.57	0.77
943801	Product	8	10/11/94	14:00	0.46	6.40	2.06	0.23		50.81	0.34	2.90	7.70	3.25	16.71	5.2	70.71	10.66	0.77
943807	Product	8	10/11/94	22:00	0.44	6.37	2.06	0.23		51.09	0.32	2.91	7.75	3.26	16.40	5.6	71.11	10.63	0.73
943813	Product	8	10/12/94	14:00	0.44	6.32	2.06	0.23		51.00	0.29	2.93	7.69	3.22	16.15	5.4	70.96	10.55	0.66
943819	Product	8	10/12/94	18:00	0.45	6.49	2.06	0.23		50.61	0.27	2.90	8.01	3.34	16.34	4.8	70.42	11.13	0.61
943825	Product	8	10/12/94	22:00	0.45	6.38	2.06	0.24		50.89	0.30	2.91	7.75	3.25	15.54	4.8	70.82	10.71	0.68
943831	Product	8	10/13/94	20:00	0.43	6.43	2.06	0.23		49.91		2.86		3.30	15.50	5.5	69.45	11.67	0.00
943837	Product	8	10/19/94	14:00	0.44	6.81	2.06	0.22		49.57		2.92		3.60	16.94	6.4	68.90	12.84	0.00

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	Al_2O_3	CaO	CO_2	Fe_2O_3	$Mg(OH)_2$	MgO	$S0_2$	SiO_2	SO_3	Total Sulfur	Total Susp. Solids (wt %)	Microtrac MV (microns)	$Mg(OH)_2$ (calc.)	$CaSO_4*2H_2O$ (calc.)	$CaSO_3*^1/_2H_2O$ (calc.)
943999	Product	8	10/24/94	14:00	0.45	6.75	2.06	0.22		49.71		2.94		3.57	16.94	5.7	69.08	12.65	0.00
944004	Product	8	10/25/94	14:00	0.44	6.87	2.06	0.23		49.89		2.95		3.62	15.85	5.8	69.33	13.02	0.00
944009	Product	8	10/26/94	14:00	0.43	7.42	2.06	0.22		49.12		2.77		3.82	12.68	5.4	68.39	14.71	0.00
944015	Product	8	10/27/94	14:00	0.42	7.12	2.06	0.22		49.98		2.74		3.52	15.85	5.5	69.67	13.79	0.00
944244	Product	8	10/28/94	14:00	0.41	6.93	2.06	0.22		50.30		2.69		3.45	12.15	6.0	70.18	13.21	0.00
944250	Product	8	10/31/94	14:00	0.41	6.52	2.06	0.21		50.99		2.81		3.47	13.80	6.4	71.06	11.95	0.00
944256	Product	8	11/1/94	14:00	0.41	6.66	2.06	0.22		51.12		2.70		3.48	11.48	7.8	71.35	12.38	0.00
944262	Product	8	11/2/94	14:00	0.41	7.38	2.06	0.21		48.84		2.59		3.81	11.46	6.0	68.16	14.59	0.00
944268	Product	8	11/3/94	14:00	0.41	7.13	2.06	0.22		49.59		2.60		3.66	12.64	5.6	69.24	13.82	0.00
944277	Product	8	11/4/94	14:00	0.41	7.30	2.06	0.22		49.00		2.58		3.77	13.28	5.3	68.40	14.34	0.00
944283	Product	8	11/7/94	14:00	0.42	6.81	2.06	0.23		50.13		2.76		3.49	13.34	4.7	69.86	12.84	0.00
944289	Product	8	11/8/94	14:00	0.41	7.19	2.06	0.21		49.99		2.74		3.71	12.01	5.7	69.68	14.00	0.00
944295	Product	8	11/9/94	14:00	0.43	7.13	2.06	0.22		50.63		2.77		3.50	13.81	6.0	70.58	13.82	0.00
944301	Product	8	11/10/94	14:00	0.43	6.96	2.06	0.22		50.36		2.73		3.34	12.95	5.2	70.22	13.30	0.00
944307	Product	8	11/11/94	14:00	0.43	6.53	2.06	0.23		50.80		2.72		3.07	12.39	5.5	70.87	11.98	0.00
944480	Product	8	11/18/94	14:00	0.43	6.33	2.06	0.23		51.63		2.76		3.11	15.54	5.6	72.03	11.36	0.00
944486	Product	8	11/21/94	14:00	0.43	6.35	2.06	0.23		51.57		2.75		3.15	15.82	5.6	71.96	11.42	0.00
944612	Product	8	11/22/94	13:00	0.43	6.38	2.06	0.23		51.40		2.78		3.16	15.55	5.1	71.68	11.52	0.00
944618	Product	8	11/23/94	14:00	0.43	6.39	2.06	0.23		51.83		2.80		3.17	16.08	6.4	72.28	11.55	0.00
944624	Product	8	11/28/94	14:00	0.41	7.13	2.06	0.24		50.43		2.78		3.65	15.24	5.7	70.28	13.82	0.00
944630	Product	8	11/29/94	14:00	0.39	8.96	2.06	0.21		46.71		2.50		4.87	10.11	5.1	65.17	19.44	0.00
944636	Product	8	11/30/94	14:00	0.36	11.15	2.06	0.17		41.96		2.21		6.23	13.25	8.1	58.57	26.16	0.00
944642	Product	8	11/30/94	18:00	0.36	11.16	2.06	0.17		42.14		2.22		6.24	12.95	8.5	58.82	26.19	0.00
944648.	Product	8	12/1/94	14:00	0.37	10.06	2.06	0.19		44.33		2.38		5.61	12.62	7.4	61.84	22.81	0.00
944654	Product	8	12/5/94	14:00	0.39	8.44	2.06	0.20		47.40		2.64		4.68	10.82	4.9	66.03	17.84	0.00
944675	Product	8	12/6/94	14:00	0.39	7.78	2.06	0.21		48.35		2.75		4.36	10.36	6.1	67.30	15.81	0.00
944719	Product	8	12/8/94	14:00	0.38	8.23	2.06	0.20		46.28		2.67		4.59	11.14	5.8	64.38	17.20	0.00
944735	Product	8	12/9/94	14:00	0.39	6.76	2.06	0.22		48.70		2.79		3.78	9.26	7.5	67.76	12.68	0.00
943987	Mg(OH)2 as received	#N/A			0.41	6.66	1.59	0.22		50.23		2.87	calc	3.46					
943988	Mg(OH)2 Eimco Product	#N/A			0.46	2.47	2.88	0.32		57.48		3.48	calc	0.32					
943989	Mg(OH)2 Bird Product	#N/A			0.46	2.45	2.98	0.32		58.09		3.52	calc	0.29					
943990	Mg(OH)2 Sharples Product	#N/A			0.46	2.52	3.03	0.31		58.02		3.51	calc	0.28					
942218	Washed Mg(OH)2 Test #15	#N/A	10 minutes				1.94		69.90										
942219	Washed Mg(OH)2 Test #16	#N/A	10 minutes				1.82		60.50										
942220	Washed Mg(OH)2 Test #17	#N/A	10 minutes				1.56		66.80										
942221	Washed Mg(OH)2 Test #18	#N/A	20 minutes				1.87		77.30										
942222	Washed Mg(OH)2 Test #19	#N/A	20 minutes				1.75		76.00										
942223	Washed Mg(OH)2 Test #20	#N/A	20 minutes				0.02		68.70										
943165	MAG Slurry Wash	#N/A	O for 10 mi			1.60				60.94									
943166	MAG Slurry Wash	#N/A	O for 20 mi			1.30				61.06									
943164	MAG Slurry Solids	#N/A	H dissoluti			6.90				50.91									
930148	Mg(OH)2 Slurry	#N/A	Zimmer Station			0.85			0.00	65.27		0.40		0.05	55.42				
943163	Solids from MAG Slurry	#N/A	3			17.50				34.06									
943162	Solids from MAG Slurry	#N/A	0			14.10				40.04									
930148	DOW Prod.	#N/A				0.85			0.00	65.27	0.00	0.40	0.13	0.05			94.06	2.61	0.00
941976	Washed Mg(OH)2 Test #1	#N/A							75.30										
941977	Washed Mg(OH)2 Test #2	#N/A							72.70										
941978	Washed Mg(OH)2 Test #3	#N/A							71.10										
941979	Washed Mg(OH)2 Test #4	#N/A							75.40										
942225	Test 1A Solids	#N/A							15.60										
944238	FGD TUF2	13	10/31/94												30.34	12.7			

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	$MgSiO_2$ (calc.)	$CaCO_3$ (calc.)	Al_2O_3	Fe_2O_3	Total	Spec. Gravity	Gal/min	Lbs/min	$Mg(OH)_2$ (Lbs./min)	$CaSO_4*2H_2O$ (Lbs./min)	$Mg(OH)_2$ wt% Purity	Gypsum wt% Purity
941859	Crystallizer	2	5/27/94	8:30	0.00	0.00	0.00	0.00	0.00							
941899	Crystallizer	2	6/7/94	14:30	0.00	0.00	0.00	0.00	0.00	1.021	100.0	850.99				
942103	Crystallizer	2	6/15/94	12:00	1.50	2.41	0.22	0.09	95.24	1.042	100.0	868.32	19.85	47.67		
942109	Crystallizer	2	6/16/94	14:00	1.67	2.98	0.24	0.10	95.84	1.019	100.0	848.86	11.22	24.21		
942115	Crystallizer	2	6/17/94	13:00	1.60	2.77	0.24	0.09	95.92	1.021	100.0	851.12	12.21	26.91		
942205	Crystallizer	2	6/27/94	14:00	1.33	2.41	0.21	0.09	95.28	1.037	100.0	864.45	18.58	42.94		
942199	Crystallizer	2	6/28/94	14:00	1.43	2.46	0.22	0.09	95.36	1.024	100.0	853.46	13.03	30.18		
942193	Crystallizer	2	6/28/94	20:00	1.47	4.12	0.22	0.09	94.76	1.070	100.0	891.94	33.24	73.13		
942187	Crystallizer	2	6/29/94	18:00	1.54	2.55	0.23	0.09	95.50	1.021	100.0	850.60	11.88	26.41		
942177	Crystallizer	2	6/30/94	13:30	1.54	2.52	0.22	0.09	96.23	1.044	100.0	870.16	21.03	50.37		
942183	Crystallizer	2	6/30/94	20:00	1.22	2.73	0.19	0.08	96.48	1.066	100.0	888.50	26.67	76.52		
942309	Crystallizer	2	7/5/94	14:00	1.32	2.27	0.22	0.10	95.51	1.033	100.0	860.67	16.87	38.70		
942315	Crystallizer	2	7/5/94	18:00	1.37	2.77	0.23	0.11	95.14	1.012	100.0	842.96	8.54	17.60		
942319	Crystallizer	2	7/5/94	22:00	1.21	2.32	0.21	0.10	95.76	1.059	100.0	882.50	26.04	67.65		
942325	Crystallizer	2	7/6/94	13:00	1.49	2.14	0.23	0.10	94.44	1.011	80.0	674.09	6.81	13.68		
942331	Crystallizer	2	7/6/94	20:00	1.50	2.57	0.23	0.10	94.01	1.019	100.0	849.20	12.04	23.66		
942337	Crystallizer	2	7/7/94	14:00	1.43	2.05	0.21	0.10	94.57	1.021	120.0	1020.96	14.53	31.95		
942343	Crystallizer	2	7/8/94	14:00	1.54	2.39	0.23	0.10	95.15	1.029	80.0	686.02	12.73	27.23	29%	61%
942349	Crystallizer	2	7/11/94	17:00	1.50	2.73	0.22	0.10	94.92	1.012	100.0	843.44	8.69	18.23	29%	61%
942355	Crystallizer	2	7/11/94	22:00	1.63	2.71	0.23	0.10	95.03	1.023	100.0	852.69	14.30	27.27	31%	58%
942361	Crystallizer	2	7/12/94	13:00	1.66	2.80	0.24	0.10	95.59	1.011	100.0	842.86	8.52	17.47	29%	60%
942367	Crystallizer	2	7/12/94	17:30	1.53	2.50	0.22	0.09	95.85	1.044	100.0	869.87	20.78	50.08	26%	64%
942373	Crystallizer	2	7/13/94	14:00	1.53	3.02	0.23	0.10	96.95	1.012	100.0	843.01	8.74	17.76	30%	61%
942379	Crystallizer	2	7/13/94	18:00	1.71	3.37	0.25	0.11	96.52	1.037	100.0	863.91	21.95	38.58	33%	57%
942437	Crystallizer	2	7/14/94	13:00	1.29	2.48	0.20	0.10	85.26	1.017	100.0	847.65	9.90	19.85	26%	53%
942443	Crystallizer	2	7/14/94	18:00	1.56	2.32	0.23	0.10	97.23	1.046	100.0	871.37	26.78	47.96	33%	59%
942449	Crystallizer	2	7/14/94	22:00	1.54	2.09	0.22	0.24	95.93	1.032	100.0	860.19	19.11	35.74	32%	59%
942455	Crystallizer	2	7/18/94	14:00	1.53	2.55	0.22	0.10	93.90	1.011	100.0	842.57	8.67	16.50	30%	58%
942459	Crystallizer	2	7/18/94	18:00	1.49	2.14	0.21	0.10	95.67	1.042	100.0	868.27	23.40	45.20	31%	60%
942465	Crystallizer	2	7/18/94	22:00	1.46	2.11	0.21	0.10	94.16	1.022	100.0	851.96	13.59	26.94	30%	59%
942471	Crystallizer	2	7/19/94	14:00	1.81	2.30	0.26	0.10	94.34	1.011	100.0	842.91	8.67	17.26	30%	59%
942477	Crystallizer	2	7/19/94	18:00	1.80	2.32	0.23	0.10	94.54	1.028	100.0	856.61	16.08	31.73	30%	59%
942483	Crystallizer	2	7/19/94	22:00	1.78	2.00	0.23	0.10	94.47	1.028	100.0	856.27	15.70	31.89	30%	60%
942489	Crystallizer	2	7/20/94	14:00	1.59	2.07	0.22	0.10	93.70	1.013	100.0	843.93	9.30	18.23	30%	59%
942493	Crystallizer	2	7/20/94	18:00	1.64	2.32	0.23	0.10	98.32	1.037	100.0	864.06	21.55	41.50	32%	61%
942496	Crystallizer	2	7/20/94	22:00	1.46	2.34	0.21	0.09	90.81	1.035	100.0	862.56	17.51	38.05	27%	59%
942543	Crystallizer	2	7/21/94	14:00	1.88	3.84	0.25	0.10	100.87	1.010	100.0	841.60	10.81	14.35	40%	54%
942549	Crystallizer	2	7/21/94	21:00	1.60	3.43	0.22	0.10	93.40	1.024	100.0	852.98	14.15	27.00	30%	57%
942555	Crystallizer	2	7/25/94	14:00	1.75	3.93	0.23	0.10	94.11	1.015	100.0	846.05	10.70	19.47	31%	56%
942561	Crystallizer	2	7/25/94	18:00	1.61	3.59	0.22	0.10	95.19	1.052	100.0	876.98	26.84	54.78	29%	60%
942567	Crystallizer	2	7/25/94	22:00	1.54	3.50	0.21	0.10	94.90	1.042	100.0	868.42	21.13	46.23	28%	61%
942573	Crystallizer	2	7/26/94	14:00	2.03	4.28	0.25	0.11	93.43	1.016	100.0	847.02	11.49	19.66	32%	54%
942579	Crystallizer	2	7/26/94	18:00	1.85	3.77	0.22	0.09	94.22	1.040	100.0	866.72	21.55	42.13	30%	58%
942585	Crystallizer	2	7/26/94	22:00	1.82	4.12	0.22	0.10	93.46	1.035	100.0	862.12	18.26	37.04	29%	58%
942750	Crystallizer	2	7/27/94	13:00	1.88	2.23	0.22	0.10	94.33	1.019	100.0	849.10	11.87	23.80	30%	59%
942756	Crystallizer	2	7/27/94	19:00	1.77	2.41	0.22	0.09	95.21	1.035	100.0	862.85	18.31	40.63	28%	62%
942762	Crystallizer	2	7/28/94	13:00	1.82	2.00	0.22	0.09	94.98	1.017	100.0	847.12	10.29	22.68	28%	62%
942768	Crystallizer	2	7/28/94	21:00	1.33	2.16	0.18	0.08	94.95	1.048	100.0	873.16	18.83	57.81	22%	68%
942774	Crystallizer	2	8/1/94	15:00	1.52	2.71	0.20	0.09	94.64	1.044	100.0	869.82	20.92	49.13	27%	63%
942780	Crystallizer	2	8/1/94	22:00	1.47	2.23	0.20	0.08	96.60	1.056	100.0	879.79	25.24	64.17	26%	66%
942786	Crystallizer	2	8/2/94	19:00	1.61	2.36	0.21	0.09	95.32	1.055	100.0	879.11	27.21	59.18	28%	62%

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	$MgSiO_2$ (calc.)	$CaCO_3$ (calc.)	Al_2O_3	Fe_2O_3	Total	Spec. Gravity	Gal/min	Lbs/min	$Mg(OH)_2$ (Lbs./min)	$CaSO_4*2H_2O$ (Lbs./min)	$Mg(OH)_2$ wt% Purity	Gypsum wt% Purity
942792	Crystallizer	2	8/3/94	14:00	1.82	2.50	0.23	0.09	94.94	1.014	100.0	845.18	9.72	19.70	29%	59%
943051	Crystallizer	2	8/11/94	14:00	1.74	3.34	0.22	0.09	92.40	1.014	100.0	844.65	8.61	19.22	27%	60%
943057	Crystallizer	2	8/11/94	18:00	1.50	3.07	0.20	0.08	93.70	1.029	100.0	857.09	13.39	34.65	24%	63%
943063	Crystallizer	2	8/11/94	22:00	1.49	2.98	0.20	0.08	93.60	1.039	100.0	865.61	15.49	46.63	22%	66%
943027	Crystallizer	2	8/29/94	13:30	1.74	3.98	0.24	0.10	92.89	1.015	100.0	846.05	10.20	19.66	29%	57%
943033	Crystallizer	2	8/30/94	14:00	1.28	3.16	0.18	0.08	93.02	1.049	100.0	874.32	18.78	57.53	22%	66%
943039	Crystallizer	2	8/31/94	14:00	1.67	3.80	0.22	0.09	91.69	1.017	100.0	847.36	10.26	21.29	28%	57%
943045	Crystallizer	2	9/1/94	14:00	1.49	3.39	0.20	0.08	92.12	1.034	100.0	861.35	14.95	39.03	24%	62%
943181	Crystallizer	2	9/6/94	14:00	1.88	3.05	0.23	0.09	93.54	1.013	100.0	844.22	9.13	18.26	29%	58%
943187	Crystallizer	2	9/6/94	18:00	1.94	3.32	0.23	0.09	93.60	1.012	100.0	843.39	8.63	17.45	29%	58%
943193	Crystallizer	2	9/14/94	14:00	1.85	3.82	0.24	0.10	93.41	1.015	100.0	845.52	9.40	19.77	28%	59%
943302	Crystallizer	2	9/19/94	14:00	1.73	2.41	0.22	0.09	95.22	1.039	80.0	692.56	15.06	35.61	27%	63%
943308	Crystallizer	2	9/19/94	18:00	1.75	2.71	0.22	0.09	94.87	1.057	80.0	704.53	20.78	49.68	26%	63%
943314	Crystallizer	2	9/19/94	22:00	1.84	1.77	0.23	0.09	95.89	1.038	80.0	692.29	15.71	35.30	28%	63%
943320	Crystallizer	2	9/20/94	14:00	1.78	3.96	0.23	0.09	93.58	1.017	100.0	847.85	10.74	22.07	28%	58%
943326	Crystallizer	2	9/20/94	18:00	1.67	2.71	0.22	0.09	95.02	1.029	100.0	857.91	14.59	35.69	26%	64%
943332	Crystallizer	2	9/22/94	15:00	1.88	3.23	0.24	0.10	94.39	1.015	100.0	845.96	9.96	20.33	29%	59%
943338	Crystallizer	2	9/22/94	18:00	1.52	9.01	0.20	0.08	90.99	1.051	100.0	875.43	20.00	50.38	22%	57%
943344	Crystallizer	2	9/22/94	22:00	0.00	2.84	0.00	0.00	-2.35	1.055	100.0	878.87	0.00	-6.53	0%	-7%
943464	Crystallizer	2	9/28/94	18:00	1.88	3.09	0.24	0.09	95.28	1.068	100.0	889.76	33.44	70.90	29%	61%
943470	Crystallizer	2	9/28/94	22:00	1.87	3.48	0.24	0.09	94.61	1.048	100.0	873.64	23.76	51.86	28%	61%
943474	Crystallizer	2	9/29/94	14:00	1.73	3.30	0.24	0.09	94.89	1.046	100.0	871.46	23.12	49.25	28%	60%
943480	Crystallizer	2	10/3/94	14:00	1.67	3.50	0.25	0.10	95.27	1.020	100.0	849.93	11.51	25.49	28%	61%
943484	Crystallizer	2	10/3/94	18:00	1.56	3.34	0.23	0.09	95.01	1.068	100.0	889.95	31.10	73.37	27%	63%
943490	Crystallizer	2	10/3/94	22:45	1.63	3.39	0.24	0.09	95.07	1.055	100.0	878.87	26.17	58.91	27%	62%
943496	Crystallizer	2	10/4/94	14:00	1.98	3.23	0.27	0.10	93.50	1.019	80.0	679.05	9.97	17.66	31%	56%
943502	Crystallizer	2	10/4/94	18:00	1.74	3.14	0.24	0.09	94.25	1.046	80.0	697.17	18.44	39.17	28%	60%
943508	Crystallizer	2	10/4/94	21:30	1.82	3.12	0.25	0.10	94.56	1.053	80.0	702.21	21.81	44.42	29%	59%
943514	Crystallizer	2	10/5/94	14:00	1.98	3.77	0.26	0.10	93.72	1.016	100.0	846.97	11.55	20.00	32%	55%
943770	Crystallizer	2	10/6/94	14:00	1.94	3.04	0.26	0.10	94.11	1.018	100.0	847.99	11.84	21.85	31%	57%
943776	Crystallizer	2	10/7/94	14:00	1.84	3.04	0.25	0.10	94.54	1.017	100.0	847.46	11.01	21.91	30%	59%
943782	Crystallizer	2	10/10/94	14:00	1.85	3.04	0.26	0.10	94.19	1.016	100.0	846.73	10.54	21.12	29%	59%
943788	Crystallizer	2	10/10/94	18:00	1.92	3.04	0.25	0.10	93.53	1.049	100.0	874.22	23.69	52.28	27%	60%
943794	Crystallizer	2	10/10/94	22:00	2.10	3.04	0.28	0.10	93.62	1.036	100.0	863.04	20.51	36.98	31%	56%
943798	Crystallizer	2	10/11/94	14:00	2.01	3.04	0.27	0.10	92.36	1.026	100.0	855.25	15.63	28.17	30%	55%
943802	Crystallizer	2	10/11/94	22:00	2.01	3.04	0.26	0.10	95.05	1.063	100.0	885.69	33.68	63.19	31%	58%
943808	Crystallizer	2	10/12/94	14:00	2.05	3.04	0.27	0.10	93.46	1.017	100.0	847.89	11.61	21.60	31%	57%
943814	Crystallizer	2	10/12/94	18:00	1.88	3.04	0.25	0.09	94.51	1.045	120.0	1044.71	27.66	57.30	29%	60%
943820	Crystallizer	2	10/12/94	22:00	1.78	3.04	0.24	0.09	93.16	1.032	120.0	1032.05	19.02	43.95	26%	61%
943826	Crystallizer	2	10/13/94	20:00	1.78	3.04	0.25	0.09	95.45	1.049	120.0	1049.42	26.91	66.75	26%	64%
943832	Crystallizer	2	10/19/94	14:00	1.80	3.04	0.24	0.09	94.32	1.020	100.0	850.27	11.49	26.18	27%	62%
943832	Crystallizer	2	10/19/94	14:00	1.80	3.04	0.24	0.09	94.32	1.020	100.0	850.27	11.49	26.18	27%	62%
943994	Crystallizer	2	10/24/94	14:00	1.77	3.04	0.25	0.09	94.72	1.017	100.0	847.70	10.32	23.39	27%	62%
944000	Crystallizer	2	10/25/94	14:00	1.78	3.04	0.25	0.10	94.92	1.016	100.0	846.97	10.35	22.26	28%	61%
944005	Crystallizer	2	10/26/94	14:00	1.73	3.04	0.25	0.10	94.45	1.018	100.0	848.33	10.88	23.76	28%	61%
944010	Crystallizer	2	10/27/94	14:00	1.75	3.04	0.25	0.09	93.71	1.016	100.0	846.88	9.98	22.05	28%	61%
944239	Crystallizer	2	10/28/94	14:00	1.80	3.04	0.40	0.13	96.52	1.016	100.0	846.64	9.60	22.97	27%	64%
944245	Crystallizer	2	10/31/94	14:00	1.75	3.04	0.24	0.10	94.70	1.018	100.0	848.33	11.18	23.55	29%	61%
944251	Crystallizer	2	11/1/94	14:00	1.77	3.04	0.24	0.10	93.99	1.019	100.0	849.06	11.58	24.02	29%	60%
944257	Crystallizer	2	11/2/94	14:00	1.75	3.04	0.25	0.10	94.47	1.019	100.0	848.91	11.52	24.05	29%	60%
944263	Crystallizer	2	11/3/94	14:00	1.96	3.04	0.27	0.11	93.12	1.016	100.0	846.68	12.43	18.99	35%	53%

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	$MgSiO_2$ (calc.)	$CaCO_3$ (calc.)	Al_2O_3	Fe_2O_3	Total	Spec. Gravity	Gal/min	Lbs/min	$Mg(OH)_2$ (Lbs./min)	$CaSO_4*2H_2O$ (Lbs./min)	$Mg(OH)_2$ wt% Purity	Gypsum wt% Purity
944272	Crystallizer	2	11/4/94	14:00	1.91	3.04	0.26	0.10	94.65	1.019	100.0	848.96	12.14	23.51	30%	59%
944278	Crystallizer	2	11/7/94	14:00	1.89	3.04	0.25	0.10	94.78	1.016	100.0	846.97	10.45	22.07	29%	61%
944284	Crystallizer	2	11/8/94	14:00	1.80	3.04	0.25	0.10	93.12	1.016	100.0	847.07	10.26	21.85	28%	60%
944290	Crystallizer	2	11/9/94	14:00	1.73	3.04	0.25	0.10	95.26	1.017	100.0	847.60	11.12	22.65	30%	60%
944296	Crystallizer	2	11/10/94	14:00	1.66	3.04	0.26	0.10	94.68	1.016	100.0	846.78	10.78	21.47	30%	60%
944302	Crystallizer	2	11/11/94	14:00	1.74	3.04	0.25	0.10	95.04	1.017	100.0	847.17	11.30	21.68	31%	59%
944477	Crystallizer	2	11/18/94	14:00	1.84	3.04	0.24	0.10	94.21	1.016	100.0	846.35	10.61	20.72	30%	59%
944481	Crystallizer	2	11/21/94	14:00	1.85	3.04	0.26	0.11	95.63	1.016	100.0	846.68	11.04	21.33	31%	60%
944607	Crystallizer	2	11/22/94	13:00	1.80	3.04	0.25	0.10	94.58	1.015	120.0	1015.15	11.92	25.10	29%	61%
944613	Crystallizer	2	11/23/94	14:00	1.87	3.04	0.26	0.11	94.70	1.016	100.0	846.35	10.65	20.83	30%	59%
944619	Crystallizer	2	11/28/94	14:00	1.64	3.04	0.24	0.11	94.91	1.012	100.0	843.44	9.17	17.81	31%	59%
944625	Crystallizer	2	11/29/94	14:00	1.56	3.04	0.23	0.10	95.71	1.014	100.0	845.33	9.36	20.96	28%	63%
944631	Crystallizer	2	11/30/94	14:00	1.80	3.04	0.24	0.10	95.24	1.012	100.0	843.10	9.01	17.49	31%	59%
944637	Crystallizer	2	11/30/94	18:00	1.77	3.04	0.24	0.10	95.14	1.011	100.0	842.81	8.81	17.20	30%	60%
944643	Crystallizer	2	12/1/94	14:00	1.85	3.04	0.25	0.10	94.60	1.010	100.0	841.80	8.67	15.55	32%	57%
944649	Crystallizer	2	12/5/94	14:00	1.89	3.04	0.24	0.10	94.91	1.012	100.0	843.49	9.35	17.64	31%	59%
944655	Crystallizer (w/polymer)	2	12/6/94	12:00	1.87	3.04	0.24	0.10	94.85	1.012	100.0	843.30	9.25	17.42	31%	59%
944660	Crystallizer (w/polymer)	2	12/6/94	13:00	1.82	3.04	0.24	0.10	94.31	1.012	100.0	843.25	9.12	17.33	31%	58%
944665	Crystallizer (w/polymer)	2	12/6/94	14:00	1.81	3.04	0.23	0.10	94.28	1.012	100.0	843.39	9.12	17.56	30%	59%
944670	Crystallizer	2	12/6/94	14:00	1.81	3.04	0.24	0.10	93.46	1.012	100.0	843.44	8.72	17.78	29%	59%
944689	Crystallizer (w/polymer)	2	12/6/94	15:00	1.81	3.04	0.23	0.10	93.87	1.012	100.0	843.25	8.79	17.54	30%	59%
944694	Crystallizer (w/polymer)	2	12/6/94	16:00	1.84	3.04	0.24	0.10	95.01	1.012	100.0	843.49	9.36	17.68	31%	59%
944699	Crystallizer (w/polymer)	2	12/8/94	12:00	1.77	3.04	0.23	0.10	94.36	1.012	100.0	843.01	8.92	17.18	30%	59%
944704	Crystallizer (w/polymer)	2	12/8/94	13:00	1.77	3.04	0.23	0.10	93.85	1.011	100.0	842.81	8.84	16.80	31%	58%
944709	Crystallizer (w/polymer)	2	12/8/94	14:00	1.77	3.04	0.23	0.10	94.71	1.012	100.0	843.30	9.07	17.60	30%	59%
944714	Crystallizer	2	12/8/94	14:00	1.77	3.04	0.23	0.10	94.50	1.011	100.0	842.86	8.83	17.08	30%	59%
944720	Crystallizer (w/polymer)	2	12/8/94	15:00	1.78	3.04	0.23	0.10	95.14	1.011	100.0	842.76	8.87	17.06	31%	59%
944725	Crystallizer (w/polymer)	2	12/8/94	16:00	1.74	3.04	0.23	0.10	93.52	1.011	100.0	842.76	8.14	17.34	28%	60%
944730	Crystallizer	2	12/9/94	14:00	1.78	3.04	0.23	0.10	94.80	1.012	100.0	843.10	9.00	17.37	31%	59%
941736	HCOF#1	3	5/19/94	12:15	3.41	0.00	0.37	0.23	94.53							
941737	HCOF#1	3	5/19/94	12:15	3.90	0.00	0.46	0.23	95.84							
941860	HCOF#1	3	5/27/94	8:30	0.00	0.00	0.00	0.00	0.00							
941895	HCOF#1	3	6/7/94	14:50	3.73	4.73	0.47	0.20	93.23							
942104	HCOF#1	3	6/15/94	12:00	3.45	4.48	0.40	0.22	90.08	1.004	89.7	749.98	10.77	2.10		
942110	HCOF#1	3	6/16/94	14:00	3.82	5.37	0.45	0.24	91.73	1.001	89.7	747.99	8.90	1.23		
942116	HCOF#1	3	6/17/94	13:00	3.52	5.14	0.42	0.24	93.06	1.014	89.7	757.19	20.02	3.60		
942206	HCOF#1	3	6/27/94	14:00	2.81	4.23	0.37	0.17	90.95	1.010	89.7	754.58	13.12	6.76		
942200	HCOF#1	3	6/28/94	14:00	3.18	4.41	0.39	0.21	90.74	1.007	89.7	752.50	13.85	2.77		
942194	HCOF#1	3	6/28/94	20:00	3.28	2.46	0.42	0.21	91.70	1.014	89.7	757.84	20.64	4.22		
942188	HCOF#1	3	6/29/94	18:00	3.48	4.28	0.41	0.23	90.41	1.011	89.7	755.41	18.23	2.26		
942178	HCOF#1	3	6/30/94	13:30	3.56	5.50	0.42	0.22	91.53	1.006	89.7	751.50	12.97	2.13		
942184	HCOF#1	3	6/30/94	20:00	3.09	4.62	0.39	0.21	92.30	1.010	89.7	754.41	16.13	3.61		
942310	HCOF#1	3	7/5/94	14:00	2.88	4.28	0.38	0.23	91.10	1.007	89.7	752.15	13.13	3.32		
942316	HCOF#1	3	7/5/94	18:00	2.81	4.55	0.38	0.24	91.80	1.006	89.7	751.72	12.67	3.17		
942320	HCOF#1	3	7/5/94	22:00	2.99	4.34	0.39	0.25	90.78	1.004	89.7	750.37	11.60	2.23		
942326	HCOF#1	3	7/6/94	13:00	0.00	4.05	0.00	0.00	-3.06	0.999	71.7	597.21	0.00	-0.63		
942332	HCOF#1	3	7/6/94	20:00	3.16	3.84	0.38	0.22	88.85	1.006	89.7	751.37	12.44	2.42		
942338	HCOF#1	3	7/7/94	14:00	3.06	3.46	0.35	0.21	87.44	1.003	107.6	899.36	11.81	2.62		
942344	HCOF#1	3	7/8/94	14:00	3.32	4.16	0.37	0.22	91.46	1.003	71.7	599.71	8.46	1.75	68%	14%
942350	HCOF#1	3	7/11/94	17:00	3.13	4.48	0.36	0.22	89.90	1.000	89.7	746.90	7.03	1.61	66%	15%
942356	HCOF#1	3	7/11/94	22:00	3.23	4.21	0.38	0.22	90.97	1.003	89.7	749.68	10.49	2.27	68%	15%

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	$MgSiO_2$ (calc.)	$CaCO_3$ (calc.)	Al_2O_3	Fe_2O_3	Total	Spec. Gravity	Gal/min	Lbs/min	$Mg(OH)_2$ (Lbs./min)	$CaSO_4*2H_2O$ (Lbs./min)	$Mg(OH)_2$ wt% Purity	Gypsum wt% Purity
942362	HCOF#1	3	7/12/94	13:00	3.58	4.55	0.41	0.24	91.69	1.008	89.7	753.24	15.19	2.68	70%	12%
942368	HCOF#1	3	7/12/94	17:30	3.21	4.50	0.37	0.24	92.80	1.007	89.7	752.67	14.54	2.83	70%	14%
942374	HCOF#1	3	7/13/94	14:00	3.35	5.25	0.38	0.22	91.35	1.009	89.7	753.85	15.55	3.00	68%	13%
942380	HCOF#1	3	7/13/94	18:00	3.20	4.89	0.37	0.23	93.25	1.009	89.7	754.02	15.85	3.47	68%	15%
942438	HCOF#1	3	7/14/94	13:00	3.37	4.21	0.38	0.24	92.65	1.027	89.7	766.91	33.41	5.36	72%	12%
942444	HCOF#1	3	7/14/94	18:00	3.32	3.37	0.38	0.23	93.72	1.005	89.7	751.07	13.16	2.20	73%	12%
942450	HCOF#1	3	7/14/94	22:00	3.35	3.55	0.36	0.22	90.74	1.000	89.7	746.95	7.53	1.27	70%	12%
942456	HCOF#1	3	7/18/94	14:00	3.20	3.66	0.36	0.23	90.30	1.000	89.7	746.82	7.15	1.51	68%	14%
942460	HCOF#1	3	7/18/94	18:00	3.31	3.34	0.36	0.23	92.80	1.005	89.7	750.63	12.44	2.17	72%	13%
942466	HCOF#1	3	7/18/94	22:00	3.37	3.55	0.37	0.24	93.85	1.002	89.7	748.55	10.15	1.48	75%	11%
942472	HCOF#1	3	7/19/94	14:00	3.79	4.21	0.40	0.22	94.22	1.010	89.7	754.67	17.73	2.88	73%	12%
942478	HCOF#1	3	7/19/94	18:00	3.75	4.00	0.40	0.21	92.34	1.007	89.7	752.59	14.82	2.34	72%	11%
942484	HCOF#1	3	7/19/94	22:00	3.56	0.00	0.37	0.21	86.36	1.004	89.7	750.24	11.05	2.32	67%	14%
942536	HCOF#1	3	7/20/94	14:00	3.73	3.71	0.38	0.24	92.27	1.009	89.7	753.45	16.63	1.89	75%	9%
942538	HCOF#1	3	7/20/94	18:00	3.62	3.43	0.38	0.23	93.01	1.007	89.7	752.20	14.62	2.32	73%	12%
942541	HCOF#1	3	7/20/94	22:00	3.76	3.96	0.40	0.24	93.06	1.003	89.7	749.46	11.28	1.42	75%	9%
942544	HCOF#1	3	7/21/94	14:00	3.79	3.09	0.39	0.22	92.38	1.006	89.7	751.89	13.82	2.58	71%	13%
942550	HCOF#1	3	7/21/94	21:00	3.51	3.14	0.36	0.22	92.28	1.005	89.7	750.59	12.19	2.28	71%	13%
942556	HCOF#1	3	7/25/94	14:00	3.66	3.77	0.38	0.22	92.55	1.007	89.7	752.37	14.12	2.84	70%	14%
942562	HCOF#1	3	7/25/94	18:00	3.59	4.41	0.41	0.24	89.28	1.005	89.7	750.76	12.03	1.84	69%	11%
942568	HCOF#1	3	7/25/94	22:00	3.73	4.05	0.40	0.26	92.29	1.003	89.7	749.07	10.65	1.35	74%	9%
942574	HCOF#1	3	7/26/94	14:00	3.97	4.82	0.41	0.23	90.79	1.005	89.7	750.68	12.38	1.61	72%	9%
942580	HCOF#1	3	7/26/94	18:00	4.21	4.18	0.40	0.22	91.60	0.999	89.7	746.69	7.50	0.93	73%	9%
942586	HCOF#1	3	7/26/94	22:00	4.15	3.46	0.40	0.21	92.20	1.002	89.7	748.77	10.17	1.42	73%	10%
942751	HCOF#1	3	7/27/94	13:00	4.17	3.32	0.39	0.21	91.68	1.006	89.7	751.55	13.75	1.83	73%	10%
942757	HCOF#1	3	7/27/94	19:00	4.15	3.73	0.41	0.22	92.82	1.005	89.7	750.46	12.59	1.47	75%	9%
942763	HCOF#1	3	7/28/94	13:00	4.25	3.18	0.41	0.22	92.67	1.005	89.7	750.98	13.21	1.73	74%	10%
942769	HCOF#1	3	7/28/94	21:00	3.70	3.41	0.38	0.20	92.54	1.006	89.7	751.33	12.66	2.83	69%	15%
942775	HCOF#1	3	8/1/94	15:00	3.72	3.91	0.39	0.22	91.51	1.000	89.7	747.38	8.09	1.43	70%	12%
942781	HCOF#1	3	8/1/94	22:00	3.83	3.93	0.41	0.22	94.04	1.007	89.7	752.11	14.36	2.47	73%	12%
942787	HCOF#1	3	8/2/94	19:00	3.86	3.66	0.40	0.20	92.50	1.007	89.7	752.59	14.87	2.36	72%	11%
942793	HCOF#1	3	8/3/94	14:00	4.00	3.77	0.41	0.21	92.36	1.008	89.7	753.41	16.44	1.89	74%	9%
943052	HCOF#1	3	8/11/94	14:00	4.00	6.28	0.40	0.21	90.81	1.000	89.7	747.12	7.78	1.00	70%	9%
943058	HCOF#1	3	8/11/94	18:00	4.25	5.96	0.43	0.23	92.58	1.002	89.7	748.55	10.12	0.85	75%	6%
943064	HCOF#1	3	8/11/94	22:00	4.04	6.25	0.41	0.21	90.37	1.003	89.7	749.38	10.75	1.01	72%	7%
943028	HCOF#1	3	8/29/94	13:30	3.54	7.39	0.39	0.21	86.02	1.002	89.7	748.38	8.88	0.88	67%	7%
943034	HCOF#1	3	8/30/94	14:00	3.86	6.66	0.42	0.23	88.49	1.006	89.7	751.59	13.71	0.76	73%	4%
943040	HCOF#1	3	8/31/94	14:00	3.93	7.09	0.41	0.22	86.55	1.008	89.7	752.93	15.13	0.62	71%	3%
943046	HCOF#1	3	9/1/94	14:00	3.86	6.46	0.40	0.21	88.97	1.007	89.7	752.20	14.18	1.27	71%	6%
943182	HCOF#1	3	9/6/94	14:00	4.49	6.14	0.42	0.24	91.22	1.007	89.7	752.07	15.25	0.25	77%	1%
943188	HCOF#1	3	9/6/94	18:00	4.12	6.73	0.39	0.20	86.43	1.000	89.7	746.99	7.30	0.72	67%	7%
943194	HCOF#1	3	9/14/94	14:00	4.24	7.53	0.43	0.23	87.78	1.000	89.7	747.34	7.82	0.71	68%	6%
943303	HCOF#1	3	9/19/94	14:00	4.14	4.41	0.41	0.22	90.89	1.007	71.7	601.65	11.38	1.32	72%	8%
943309	HCOF#1	3	9/19/94	18:00	4.24	5.03	0.42	0.25	91.53	1.007	71.7	601.83	12.01	0.89	75%	6%
943315	HCOF#1	3	9/19/94	22:00	4.17	5.25	0.43	0.24	90.63	1.006	71.7	601.10	11.06	0.71	75%	5%
943321	HCOF#1	3	9/20/94	14:00	4.12	4.93	0.42	0.22	89.93	1.006	89.7	751.55	13.71	1.18	73%	6%
943327	HCOF#1	3	9/20/94	18:00	4.25	4.46	0.44	0.23	91.41	1.006	89.7	751.68	14.24	1.25	75%	7%
943333	HCOF#1	3	9/22/94	15:00	4.39	6.16	0.44	0.24	89.82	1.000	89.7	747.16	8.33	0.30	75%	3%
943339	HCOF#1	3	9/22/94	18:00	4.31	5.14	0.43	0.23	90.70	1.013	89.7	757.14	21.29	1.52	74%	5%
943345	HCOF#1	3	9/22/94	22:00	4.45	4.91	0.44	0.24	90.49	1.009	89.7	754.02	17.79	0.65	77%	3%
943465	HCOF#1	3	9/28/94	18:00	4.03	5.39	0.42	0.21	89.98	1.009	89.7	753.50	15.15	2.48	68%	11%

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	$MgSiO_2$ (calc.)	$CaCO_3$ (calc.)	Al_2O_3	Fe_2O_3	Total	Spec. Gravity	Gal/min	Lbs/min	$Mg(OH)_2$ (Lbs./min)	$CaSO_4*2H_2O$ (Lbs./min)	$Mg(OH)_2$ wt% Purity	Gypsum wt% Purity
943471	HCOF#1	3	9/28/94	22:00	4.36	6.16	0.45	0.23	91.05	1.009	89.7	753.50	16.53	1.06	74%	5%
943475	HCOF#1	3	9/29/94	14:00	3.96	4.62	0.43	0.22	92.05	1.016	89.7	759.01	22.88	3.40	71%	11%
943481	HCOF#1	3	10/3/94	14:00	3.79	8.10	0.42	0.23	90.42	1.008	89.7	752.89	14.51	1.79	69%	8%
943485	HCOF#1	3	10/3/94	18:00	4.04	4.84	0.45	0.25	92.28	1.014	89.7	757.45	21.82	2.16	75%	7%
943491	HCOF#1	3	10/3/94	22:45	4.12	5.05	0.45	0.26	91.32	1.011	89.7	755.02	18.79	1.32	75%	5%
943497	HCOF#1	3	10/4/94	14:00	4.21	7.44	0.45	0.25	89.73	1.009	71.7	603.04	13.50	0.46	74%	2%
943503	HCOF#1	3	10/4/94	18:00	4.21	5.78	0.44	0.24	89.03	1.010	71.7	603.91	14.40	0.92	73%	5%
943509	HCOF#1	3	10/4/94	21:30	4.35	6.62	0.45	0.25	88.98	1.008	71.7	602.38	12.74	0.31	75%	2%
943515	HCOF#1	3	10/5/94	14:00	4.26	6.34	0.45	0.27	86.98	1.002	89.7	748.33	9.41	0.43	71%	3%
943771	HCOF#1	3	10/6/94	14:00	4.19	4.76	0.43	0.23	90.39	1.010	89.7	754.58	17.20	2.12	71%	9%
943777	HCOF#1	3	10/7/94	14:00	4.04	4.76	0.44	0.23	91.95	1.002	89.7	748.25	9.24	1.34	71%	10%
943783	HCOF#1	3	10/10/94	14:00	4.49	4.76	0.47	0.25	90.95	1.008	89.7	752.89	15.40	1.59	73%	8%
943789	HCOF#1	3	10/10/94	18:00	4.41	4.76	0.45	0.23	89.99	1.009	89.7	753.93	16.01	2.26	70%	10%
943795	HCOF#1	3	10/10/94	22:00	4.04	4.76	0.44	0.20	91.04	1.007	89.7	752.33	13.17	3.17	65%	16%
943799	HCOF#1	3	10/11/94	14:00	4.39	4.76	0.46	0.24	91.09	1.008	89.7	752.72	15.07	1.76	72%	8%
943803	HCOF#1	3	10/11/94	22:00	4.21	4.76	0.45	0.22	92.25	1.015	89.7	758.62	22.36	3.30	71%	11%
943809	HCOF#1	3	10/12/94	14:00	3.80	4.76	0.42	0.19	91.60	1.002	89.7	748.51	8.57	2.45	64%	18%
943815	HCOF#1	3	10/12/94	18:00	4.18	4.76	0.44	0.22	90.45	1.008	107.6	903.73	18.11	2.64	70%	10%
943821	HCOF#1	3	10/12/94	22:00	4.11	4.76	0.44	0.21	91.34	1.019	107.6	913.73	30.26	5.09	69%	12%
943827	HCOF#1	3	10/13/94	20:00	4.01	4.76	0.45	0.22	89.91	1.001	107.6	897.38	9.92	1.92	67%	13%
943833	HCOF#1	3	10/19/94	14:00	4.17	4.76	0.46	0.23	90.39	1.002	89.7	748.55	9.45	1.49	70%	11%
943995	HCOF#1	3	10/24/94	14:00	3.94	4.76	0.43	0.23	88.44	1.001	89.7	747.77	8.38	1.26	69%	10%
944001	HCOF#1	3	10/25/94	14:00	3.77	4.76	0.41	0.22	86.74	1.001	89.7	747.60	8.07	1.15	68%	10%
944006	HCOF#1	3	10/26/94	14:00	3.72	4.76	0.41	0.23	89.18	1.001	89.7	747.77	8.60	1.16	71%	9%
944011	HCOF#1	3	10/27/94	14:00	3.97	4.76	0.43	0.23	89.09	1.001	89.7	747.47	8.14	1.16	70%	10%
944240	HCOF#1	3	10/28/94	14:00	4.00	4.76	0.42	0.22	90.20	1.005	89.7	750.85	12.62	1.58	72%	9%
944246	HCOF#1	3	10/31/94	14:00	3.72	4.76	0.40	0.22	88.65	1.001	89.7	747.64	8.16	1.36	68%	11%
944252	HCOF#1	3	11/1/94	14:00	3.48	4.76	0.39	0.19	91.25	0.997	89.7	745.21	4.97	1.42	64%	18%
944258	HCOF#1	3	11/2/94	14:00	3.62	4.76	0.41	0.22	90.46	1.001	89.7	747.73	8.36	1.51	69%	12%
944264	HCOF#1	3	11/3/94	14:00	3.66	4.76	0.41	0.22	89.82	1.000	89.7	747.21	7.68	1.37	69%	12%
944273	HCOF#1	3	11/4/94	14:00	3.89	4.76	0.43	0.22	89.41	1.001	89.7	747.77	8.38	1.39	69%	11%
944279	HCOF#1	3	11/7/94	14:00	3.77	4.76	0.41	0.22	87.85	1.001	89.7	747.73	8.31	1.22	69%	10%
944285	HCOF#1	3	11/8/94	14:00	3.97	4.76	0.45	0.23	90.02	1.001	89.7	747.64	8.38	1.27	70%	11%
944291	HCOF#1	3	11/9/94	14:00	3.98	4.76	0.44	0.24	92.55	1.001	89.7	747.68	8.77	1.24	73%	10%
944297	HCOF#1	3	11/10/94	14:00	3.83	4.76	0.44	0.25	90.59	1.000	89.7	747.38	8.41	0.95	73%	8%
944303	HCOF#1	3	11/11/94	14:00	3.77	4.76	0.43	0.24	92.36	1.000	89.7	747.38	8.36	1.21	73%	11%
944478	HCOF#1	3	11/18/94	14:00	3.65	4.76	0.38	0.21	88.09	1.002	89.7	748.46	8.50	2.09	63%	16%
944482	HCOF#1	3	11/21/94	14:00	3.68	4.76	0.40	0.23	88.64	1.002	89.7	748.20	8.42	1.88	65%	15%
944608	HCOF#1	3	11/22/94	13:00	3.82	4.76	0.41	0.23	90.39	1.001	107.6	897.32	9.82	2.06	67%	14%
944614	HCOF#1	3	11/23/94	14:00	3.83	4.76	0.41	0.23	92.10	1.001	89.7	747.77	8.29	1.81	68%	15%
944620	HCOF#1	3	11/28/94	14:00	3.31	4.76	0.37	0.21	89.00	1.000	89.7	747.12	6.93	1.95	63%	18%
944626	HCOF#1	3	11/29/94	14:00	2.85	4.76	0.33	0.16	90.76	1.002	89.7	748.29	7.03	3.79	54%	29%
944632	HCOF#1	3	11/30/94	14:00	3.87	4.76	0.42	0.23	90.65	1.000	89.7	746.73	7.04	1.41	68%	14%
944638	HCOF#1	3	11/30/94	18:00	3.69	4.76	0.39	0.21	91.62	1.000	89.7	747.03	7.29	1.71	67%	16%
944644	HCOF#1	3	12/1/94	14:00	3.68	4.76	0.39	0.20	90.89	1.001	89.7	748.16	8.33	2.20	65%	17%
944650	HCOF#1	3	12/5/94	14:00	3.79	4.76	0.37	0.20	88.98	1.001	89.7	747.47	7.44	1.87	64%	16%
944656	HCOF#1 (w/polymer)	3	12/6/94	12:00	3.75	4.76	0.38	0.20	87.89	1.000	89.7	747.42	7.38	1.75	64%	15%
944661	HCOF#1 (w/polymer)	3	12/6/94	13:00	3.80	4.76	0.38	0.20	91.23	1.000	89.7	747.42	7.66	1.85	66%	16%
944666	HCOF#1 (w/polymer)	3	12/6/94	14:00	3.66	4.76	0.37	0.19	91.21	1.001	89.7	747.60	7.64	2.14	64%	18%
944671	HCOF#1	3	12/6/94	14:00	3.65	4.76	0.37	0.19	91.14	1.022	89.7	763.61	25.79	7.34	64%	18%
944690	HCOF#1 (w/polymer)	3	12/6/94	15:00	3.62	4.76	0.36	0.18	91.78	1.001	89.7	747.77	7.73	2.37	63%	19%

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	$MgSiO_2$ (calc.)	$CaCO_3$ (calc.)	Al_2O_3	Fe_2O_3	Total	Spec. Gravity	Gal/min	Lbs/min	$Mg(OH)_2$ (Lbs./min)	$CaSO_4*2H_2O$ (Lbs./min)	$Mg(OH)_2$ wt% Purity	Gypsum wt% Purity
944695	HCOF#1 (w/polymer)	3	12/6/94	16:00	3.44	4.76	0.35	0.18	90.58	1.001	89.7	747.94	7.56	2.66	61%	21%
944700	HCOF#1 (w/polymer)	3	12/8/94	12:00	3.94	4.76	0.39	0.22	90.03	1.000	89.7	746.77	7.33	1.11	70%	11%
944705	HCOF#1 (w/polymer)	3	12/8/94	13:00	3.90	4.76	0.39	0.23	87.43	0.999	89.7	746.69	7.02	1.03	68%	10%
944710	HCOF#1 (w/polymer)	3	12/8/94	14:00	3.91	4.76	0.39	0.22	89.99	1.000	89.7	746.82	7.30	1.20	69%	11%
944715	HCOF#1	3	12/8/94	14:00	3.91	4.76	0.39	0.22	90.95	1.000	89.7	746.86	7.36	1.31	69%	12%
944721	HCOF#1 (w/polymer)	3	12/8/94	15:00	3.82	4.76	0.39	0.21	90.16	1.000	89.7	746.99	7.33	1.44	68%	13%
944726	HCOF#1 (w/polymer)	3	12/8/94	16:00	3.77	4.76	0.38	0.21	90.49	1.000	89.7	747.08	7.33	1.60	67%	15%
944731	HCOF#1	3	12/9/94	14:00	3.90	4.76	0.40	0.21	90.93	1.000	89.7	747.08	7.51	1.45	68%	13%
941738	HCUF#1	4	5/19/94	12:15	0.58	0.00	0.10	0.08	99.16							
941858	HCUF#1	4	5/27/94	8:30	0.00	0.00	0.00	0.00	0.00							
941857	HCUF#1	4	5/27/94	9:30	0.53	1.25	0.09	0.07	98.26							
941897	HCUF#1	4	6/7/94	14:50	0.86	1.50	0.13	0.07	97.28	1.075	10.3	92.70	1.40	11.19		
942105	HCUF#1	4	6/15/94	12:00	0.58	1.36	0.10	0.06	97.04	1.165	10.3	100.42	2.08	26.05		
942111	HCUF#1	4	6/16/94	14:00	0.66	1.52	0.10	0.06	97.23	1.151	10.3	99.23	1.97	23.49		
942117	HCUF#1	4	6/17/94	13:00	0.66	1.48	0.11	0.06	97.29	1.154	10.3	99.47	1.92	24.19		
942207	HCUF#1	4	6/27/94	14:00	0.53	1.48	0.10	0.06	96.98	1.131	10.3	97.53	1.74	20.32		
942201	HCUF#1	4	6/28/94	14:00	0.59	1.41	0.10	0.06	96.25	1.144	10.3	98.65	2.03	22.08		
942195	HCUF#1	4	6/28/94	20:00	0.69	1.57	0.10	0.06	96.43	1.188	10.3	102.39	2.88	29.21		
942189	HCUF#1	4	6/29/94	18:00	0.77	1.64	0.12	0.06	96.19	1.091	10.3	94.07	1.76	13.17		
942179	HCUF#1	4	6/30/94	13:30	0.79	1.73	0.12	0.06	97.19	1.122	10.3	96.75	2.37	17.96		
942185	HCUF#1	4	6/30/94	20:00	0.62	1.55	0.10	0.06	96.73	1.203	10.3	103.72	2.90	32.01		
942311	HCUF#1	4	7/5/94	14:00	0.49	1.21	0.12	0.06	95.67	1.151	10.3	99.19	1.85	22.94		
942317	HCUF#1	4	7/5/94	18:00	0.56	1.46	0.12	0.06	97.00	1.188	10.3	102.41	2.72	29.78		
942321	HCUF#1	4	7/5/94	22:00	0.49	1.39	0.11	0.06	96.44	1.195	10.3	102.98	2.87	30.83		
942327	HCUF#1	4	7/6/94	13:00	0.52	1.27	0.10	0.06	97.14	1.137	8.3	78.41	1.49	16.96		
942333	HCUF#1	4	7/6/94	20:00	0.52	1.39	0.10	0.06	96.60	1.190	10.3	102.58	2.68	30.03		
942339	HCUF#1	4	7/7/94	14:00	0.53	1.46	0.11	0.06	97.05	1.176	12.42	121.76	2.80	33.57		
942345	HCUF#1	4	7/8/94	14:00	0.59	1.34	0.11	0.06	96.88	1.176	8.3	81.11	1.88	22.22	7%	86%
942351	HCUF#1	4	7/11/94	17:00	0.55	1.50	0.10	0.06	97.00	1.138	10.3	98.12	1.81	21.41	7%	86%
942357	HCUF#1	4	7/11/94	22:00	0.62	1.48	0.11	0.06	96.97	1.188	10.3	102.42	2.60	29.81	8%	86%
942363	HCUF#1	4	7/12/94	13:00	0.58	1.57	0.10	0.06	96.63	1.203	10.3	103.72	2.66	32.75	7%	87%
942369	HCUF#1	4	7/12/94	17:30	0.60	1.25	0.11	0.06	97.74	1.208	10.3	104.16	2.46	34.40	6%	88%
942375	HCUF#1	4	7/13/94	14:00	0.55	1.52	0.11	0.06	97.25	1.153	10.3	99.37	1.53	24.44	6%	89%
942381	HCUF#1	4	7/13/94	18:00	0.52	1.32	0.10	0.06	97.71	1.246	10.3	107.42	2.39	42.23	5%	90%
942439	HCUF#1	4	7/14/94	13:00	0.49	5.39	0.12	0.06	94.76	1.153	10.3	99.44	1.78	22.46	6%	81%
942445	HCUF#1	4	7/14/94	18:00	0.51	1.07	0.11	0.06	97.92	1.231	10.3	106.11	3.14	38.26	7%	87%
942451	HCUF#1	4	7/14/94	22:00	0.51	1.02	0.10	0.06	97.26	1.180	10.3	101.74	2.43	28.77	7%	87%
942457	HCUF#1	4	7/18/94	14:00	0.49	1.39	0.10	0.06	94.42	1.333	10.3	114.93	4.69	57.14	7%	84%
942461	HCUF#1	4	7/18/94	18:00	0.46	1.21	0.10	0.06	96.50	1.184	10.3	102.04	2.56	29.21	8%	86%
942467	HCUF#1	4	7/18/94	22:00	0.48	1.23	0.10	0.06	97.63	1.192	10.3	102.76	2.66	30.99	7%	87%
942473	HCUF#1	4	7/19/94	14:00	0.73	1.36	0.11	0.06	97.37	1.130	10.3	97.45	1.74	20.16	7%	86%
942479	HCUF#1	4	7/19/94	18:00	0.73	1.16	0.11	0.06	97.47	1.198	10.3	103.28	2.72	32.05	7%	87%
942485	HCUF#1	4	7/19/94	22:00	0.67	1.16	0.11	0.06	97.13	1.189	10.3	102.47	2.53	30.18	7%	87%
942490	HCUF#1	4	7/20/94	14:00	0.53	1.25	0.10	0.06	97.07	1.129	10.3	97.31	1.72	19.90	7%	87%
942494	HCUF#1	4	7/20/94	18:00	0.53	1.18	0.10	0.06	97.07	1.203	10.3	103.71	2.78	32.69	7%	87%
942497	HCUF#1	4	7/20/94	22:00	0.59	1.27	0.10	0.06	97.74	1.239	10.3	106.81	3.31	39.76	7%	87%
942545	HCUF#1	4	7/21/94	14:00	0.59	1.21	0.10	0.06	96.50	1.126	10.3	97.09	1.48	19.61	7%	87%
942551	HCUF#1	4	7/21/94	21:00	0.51	1.11	0.10	0.06	96.10	1.197	10.3	103.17	2.34	31.86	6%	87%
942557	HCUF#1	4	7/25/94	14:00	0.65	1.32	0.10	0.06	97.07	1.127	10.3	97.17	1.51	19.82	7%	87%
942563	HCUF#1	4	7/25/94	18:00	0.63	1.16	0.10	0.06	97.52	1.194	10.3	102.94	2.59	31.42	7%	88%
942569	HCUF#1	4	7/25/94	22:00	0.62	1.23	0.10	0.06	97.71	1.192	10.3	102.77	2.51	31.19	7%	88%

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	$MgSiO_2$ (calc.)	$CaCO_3$ (calc.)	Al_2O_3	Fe_2O_3	Total	Spec. Gravity	Gal/min	Lbs/min	$Mg(OH)_2$ (Lbs./min)	$CaSO_4*2H_2O$ (Lbs./min)	$Mg(OH)_2$ wt% Purity	Gypsum wt% Purity
942575	HCUF#1	4	7/26/94	14:00	0.76	1.30	0.10	0.06	97.12	1.132	10.3	97.58	1.57	20.60	7%	87%
942581	HCUF#1	4	7/26/94	18:00	0.73	1.27	0.10	0.06	97.40	1.213	10.3	104.60	2.65	35.04	7%	88%
942587	HCUF#1	4	7/26/94	22:00	0.73	1.14	0.10	0.06	97.23	1.201	10.3	103.54	2.40	32.86	6%	88%
942752	HCUF#1	4	7/27/94	13:00	0.66	1.34	0.10	0.06	95.86	1.137	10.3	98.06	1.54	21.41	6%	87%
942758	HCUF#1	4	7/27/94	19:00	0.73	1.11	0.10	0.06	97.23	1.192	10.3	102.76	2.72	30.99	8%	87%
942764	HCUF#1	4	7/28/94	13:00	0.60	1.00	0.08	0.07	96.33	1.149	10.3	99.01	1.74	23.38	6%	87%
942770	HCUF#1	4	7/28/94	21:00	0.53	1.11	0.08	0.06	96.76	1.236	10.3	106.58	2.58	39.70	6%	88%
942776	HCUF#1	4	8/1/94	15:00	0.56	1.48	0.09	0.06	96.53	1.144	10.3	98.64	1.72	22.50	7%	87%
942782	HCUF#1	4	8/1/94	22:00	0.63	1.23	0.09	0.06	96.48	1.225	10.3	105.61	2.94	36.82	7%	87%
942788	HCUF#1	4	8/2/94	19:00	0.65	1.14	0.09	0.06	96.98	1.196	10.3	103.08	2.52	31.53	7%	87%
942794	HCUF#1	4	8/3/94	14:00	0.63	1.43	0.09	0.06	96.65	1.132	10.3	97.58	1.56	20.58	7%	87%
943053	HCUF#1	4	8/11/94	14:00	0.55	1.30	0.09	0.06	96.97	1.140	10.3	98.28	1.44	22.31	6%	89%
943059	HCUF#1	4	8/11/94	18:00	0.60	1.11	0.10	0.06	97.23	1.215	10.3	104.76	2.55	35.58	6%	88%
943065	HCUF#1	4	8/11/94	22:00	0.60	1.34	0.09	0.06	96.67	1.208	10.3	104.13	2.19	34.09	6%	88%
943029	HCUF#1	4	8/29/94	13:30	0.56	1.48	0.10	0.06	96.54	1.106	10.3	95.34	1.21	16.41	6%	87%
943035	HCUF#1	4	8/30/94	14:00	0.53	1.46	0.09	0.06	96.54	1.197	10.3	103.15	2.36	31.75	6%	87%
943041	HCUF#1	4	8/31/94	14:00	0.56	1.34	0.09	0.06	96.95	1.197	10.3	103.16	2.27	32.07	6%	88%
943047	HCUF#1	4	9/1/94	14:00	0.62	1.36	0.10	0.06	96.76	1.163	10.3	100.22	1.94	25.84	7%	88%
943183	HCUF#1	4	9/6/94	14:00	0.58	1.71	0.09	0.06	96.40	1.129	10.3	97.34	1.29	20.11	6%	87%
943189	HCUF#1	4	9/6/94	18:00	0.65	1.46	0.09	0.06	96.68	1.126	10.3	97.08	1.40	19.65	6%	87%
943195	HCUF#1	4	9/14/94	14:00	0.59	1.86	0.09	0.06	96.31	1.130	10.3	97.43	1.43	20.09	6%	86%
943304	HCUF#1	4	9/19/94	14:00	0.60	1.34	0.09	0.06	96.67	1.166	8.3	80.41	1.46	21.08	6%	87%
943310	HCUF#1	4	9/19/94	18:00	0.65	1.21	0.09	0.06	97.05	1.186	8.3	81.81	1.84	23.90	7%	87%
943316	HCUF#1	4	9/19/94	22:00	0.72	1.41	0.10	0.06	96.70	1.183	8.3	81.59	1.94	23.20	7%	86%
943322	HCUF#1	4	9/20/94	14:00	0.58	1.32	0.09	0.06	96.43	1.165	10.3	100.45	1.93	26.15	6%	87%
943328	HCUF#1	4	9/20/94	18:00	0.59	1.39	0.09	0.06	96.73	1.174	10.3	101.22	1.98	27.83	6%	87%
943334	HCUF#1	4	9/22/94	15:00	0.60	1.34	0.09	0.06	97.52	1.128	10.3	97.28	1.45	20.23	6%	88%
943340	HCUF#1	4	9/22/94	18:00	0.60	1.57	0.10	0.06	96.49	1.179	10.3	101.66	2.07	28.57	6%	87%
943346	HCUF#1	4	9/22/94	22:00	0.52	1.48	0.08	0.05	96.74	1.205	10.3	103.91	1.99	33.45	5%	87%
943466	HCUF#1	4	9/28/94	18:00	0.67	1.50	0.10	0.06	97.34	1.213	10.3	104.57	2.42	35.20	6%	88%
943472	HCUF#1	4	9/28/94	22:00	0.67	1.57	0.09	0.06	96.41	1.188	10.3	102.39	2.34	29.92	7%	86%
943476	HCUF#1	4	9/29/94	14:00	0.56	3.07	0.09	0.06	95.03	1.193	10.3	102.85	2.54	29.74	7%	83%
943482	HCUF#1	4	10/3/94	14:00	0.00	1.59	0.00	0.00	-1.29	1.124	10.3	96.93	0.00	-0.81	0%	-4%
943486	HCUF#1	4	10/3/94	18:00	0.63	1.73	0.11	0.06	96.40	1.080	10.3	93.15	1.30	12.02	9%	84%
943492	HCUF#1	4	10/3/94	22:45	0.60	1.59	0.11	0.06	96.83	1.154	10.3	99.48	2.47	23.64	9%	85%
943498	HCUF#1	4	10/4/94	14:00	0.65	1.66	0.11	0.06	96.69	1.127	8.3	77.75	1.40	15.56	8%	86%
943504	HCUF#1	4	10/4/94	18:00	0.59	1.48	0.10	0.06	96.22	1.189	8.3	81.98	2.18	23.81	8%	85%
943510	HCUF#1	4	10/4/94	21:30	0.65	1.75	0.10	0.06	96.13	1.174	8.3	80.94	2.08	21.48	8%	85%
943516	HCUF#1	4	10/5/94	14:00	0.66	1.57	0.11	0.06	96.90	1.122	10.3	96.77	1.73	18.75	8%	86%
943772	HCUF#1	4	10/6/94	14:00	0.63	1.45	0.12	0.06	96.40	1.122	10.3	96.75	1.51	18.87	7%	87%
943778	HCUF#1	4	10/7/94	14:00	0.65	1.45	0.11	0.06	96.92	1.123	10.3	96.85	1.71	18.93	8%	86%
943784	HCUF#1	4	10/10/94	14:00	0.70	1.45	0.15	0.06	96.88	1.145	10.3	98.75	1.98	22.64	8%	86%
943790	HCUF#1	4	10/10/94	18:00	0.67	1.45	0.12	0.06	96.60	1.186	10.3	102.24	2.22	29.88	6%	87%
943796	HCUF#1	4	10/10/94	22:00	0.69	1.45	0.11	0.06	96.50	1.173	10.3	101.16	2.07	27.63	7%	87%
943800	HCUF#1	4	10/11/94	14:00	0.70	1.45	0.13	0.06	97.89	1.102	10.3	95.03	1.34	15.88	7%	87%
943804	HCUF#1	4	10/11/94	22:00	0.87	1.45	0.15	0.06	96.14	1.146	10.3	98.82	2.87	21.63	11%	82%
943810	HCUF#1	4	10/12/94	14:00	0.93	1.45	0.15	0.07	96.37	1.076	10.3	92.72	1.55	10.95	12%	82%
943816	HCUF#1	4	10/12/94	18:00	0.74	1.45	0.12	0.06	97.17	1.193	12.4	123.39	3.31	36.99	8%	86%
943822	HCUF#1	4	10/12/94	22:00	0.67	1.45	0.11	0.06	96.67	1.182	12.4	122.32	2.56	35.12	6%	87%
943828	HCUF#1	4	10/13/94	20:00	0.76	1.45	0.11	0.06	96.56	1.187	12.4	122.75	3.03	35.80	7%	87%
943834	HCUF#1	4	10/19/94	14:00	0.86	1.45	0.13	0.06	97.48	1.087	10.3	93.71	1.56	13.10	10%	85%

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	$MgSiO_2$ (calc.)	$CaCO_3$ (calc.)	Al_2O_3	Fe_2O_3	Total	Spec. Gravity	Gal/min	Lbs/min	$Mg(OH)_2$ (Lbs./min)	$CaSO_4*2H_2O$ (Lbs./min)	$Mg(OH)_2$ wt% Purity	Gypsum wt% Purity
943996	HCUF#1	4	10/24/94	14:00	0.80	1.45	0.15	0.06	96.79	1.077	10.3	92.86	1.33	11.60	10%	85%
944002	HCUF#1	4	10/25/94	14:00	0.80	1.45	0.13	0.06	96.70	1.079	10.3	93.06	1.48	11.80	11%	84%
944007	HCUF#1	4	10/26/94	14:00	0.72	1.45	0.13	0.06	96.55	1.078	10.3	92.96	1.47	11.62	11%	84%
944012	HCUF#1	4	10/27/94	14:00	0.80	1.45	0.13	0.06	97.36	1.077	10.3	92.87	1.44	11.58	11%	84%
944241	HCUF#1	4	10/28/94	14:00	0.87	1.45	0.14	0.07	96.37	1.077	10.3	92.83	1.59	11.21	12%	82%
944247	HCUF#1	4	10/31/94	14:00	0.76	1.45	0.13	0.06	96.85	1.082	10.3	93.31	1.42	12.37	10%	85%
944253	HCUF#1	4	11/1/94	14:00	0.76	1.45	0.13	0.06	97.09	1.081	10.3	93.22	1.38	12.27	10%	85%
944259	HCUF#1	4	11/2/94	14:00	0.80	1.45	0.13	0.07	96.26	1.080	10.3	93.11	1.51	11.81	11%	83%
944265	HCUF#1	4	11/3/94	14:00	0.70	1.45	0.13	0.06	96.70	1.085	10.3	93.57	1.43	12.86	9%	85%
944274	HCUF#1	4	11/4/94	14:00	0.79	1.45	0.13	0.06	96.13	1.078	10.3	92.93	1.42	11.55	10%	83%
944280	HCUF#1	4	11/7/94	14:00	0.80	1.45	0.13	0.06	96.30	1.081	10.3	93.22	1.46	12.09	10%	84%
944286	HCUF#1	4	11/8/94	14:00	0.84	1.45	0.13	0.07	96.15	1.083	10.3	93.34	1.56	12.17	11%	83%
944292	HCUF#1	4	11/9/94	14:00	0.77	1.45	0.13	0.06	95.72	1.083	10.3	93.35	1.52	12.18	10%	83%
944298	HCUF#1	4	11/10/94	14:00	0.69	1.45	0.13	0.07	95.82	1.079	10.3	93.03	1.46	11.68	10%	83%
944304	HCUF#1	4	11/11/94	14:00	0.81	1.45	0.14	0.07	96.60	1.078	10.3	92.90	1.52	11.45	11%	83%
944479	HCUF#1	4	11/18/94	14:00	0.58	1.45	0.10	0.06	96.66	1.159	10.3	99.91	1.34	25.89	5%	90%
944483	HCUF#1	4	11/21/94	14:00	0.52	1.45	0.10	0.06	96.20	1.148	10.3	99.00	1.34	23.82	5%	89%
944609	HCUF#1	4	11/22/94	13:00	0.51	1.45	0.10	0.06	97.15	1.175	12.4	121.54	1.85	34.62	5%	90%
944615	HCUF#1	4	11/23/94	14:00	0.51	1.45	0.10	0.06	97.53	1.146	10.3	98.77	1.36	23.67	5%	90%
944621	HCUF#1	4	11/28/94	14:00	0.36	1.45	0.10	0.06	97.11	1.151	10.3	99.26	1.08	24.93	4%	91%
944627	HCUF#1	4	11/29/94	14:00	0.45	1.45	0.10	0.06	97.36	1.191	10.3	102.65	1.65	31.91	5%	91%
944633	HCUF#1	4	11/30/94	14:00	0.52	1.45	0.09	0.06	97.02	1.149	10.3	99.08	1.71	23.85	6%	89%
944639	HCUF#1	4	11/30/94	18:00	0.48	1.45	0.09	0.06	97.33	1.145	10.3	98.70	1.35	23.50	5%	90%
944645	HCUF#1	4	12/1/94	14:00	0.41	1.45	0.09	0.06	97.03	1.150	10.3	99.18	1.23	24.56	5%	90%
944651	HCUF#1	4	12/5/94	14:00	0.45	1.45	0.10	0.06	97.11	1.135	10.3	97.87	1.09	21.95	4%	91%
944657	HCUF#1 (w/polymer)	4	12/6/94	12:00	0.39	1.45	0.09	0.06	96.45	1.153	10.3	99.39	1.22	24.86	4%	90%
944662	HCUF#1 (w/polymer)	4	12/6/94	13:00	0.42	1.45	0.10	0.06	97.42	1.156	10.3	99.63	1.29	25.59	5%	91%
944667	HCUF#1 (w/polymer)	4	12/6/94	14:00	0.43	1.45	0.10	0.06	97.30	1.155	10.3	99.60	1.32	25.45	5%	91%
944672	HCUF#1	4	12/6/94	14:00	0.43	1.45	0.10	0.06	97.24	1.155	10.3	99.56	1.30	25.36	5%	91%
944691	HCUF#1 (w/polymer)	4	12/6/94	15:00	0.45	1.45	0.10	0.06	96.85	1.155	10.3	99.60	1.35	25.30	5%	90%
944696	HCUF#1 (w/polymer)	4	12/6/94	16:00	0.46	1.45	0.10	0.06	97.43	1.154	10.3	99.53	1.36	25.28	5%	90%
944701	HCUF#1 (w/polymer)	4	12/8/94	12:00	0.69	1.45	0.12	0.07	96.17	1.013	10.3	87.34	0.32	2.74	10%	84%
944706	HCUF#1 (w/polymer)	4	12/8/94	13:00	0.70	1.45	0.13	0.06	97.48	1.057	10.3	91.16	0.97	8.88	9%	86%
944711	HCUF#1 (w/polymer)	4	12/8/94	14:00	0.70	1.45	0.13	0.07	97.25	1.061	10.3	91.50	1.06	9.41	10%	85%
944716	HCUF#1	4	12/8/94	14:00	0.66	1.45	0.12	0.06	96.92	1.061	10.3	91.45	1.04	9.29	10%	85%
944722	HCUF#1 (w/polymer)	4	12/8/94	15:00	0.43	1.45	0.10	0.06	96.79	1.118	10.3	96.42	1.14	18.83	5%	89%
944727	HCUF#1 (w/polymer)	4	12/8/94	16:00	0.45	1.45	0.10	0.06	96.91	1.117	10.3	96.33	1.16	18.66	6%	89%
944732	HCUF#1	4	12/9/94	14:00	0.46	1.45	0.10	0.06	96.98	1.117	10.3	96.34	1.14	18.70	5%	89%
941896	HCOF#2	5	6/7/94	15:05	3.73	4.59	0.49	0.18	93.55							
942106	HCOF#2	5	6/15/94	12:00	2.22	3.37	0.28	0.13	92.67	1.000	91.2	759.91	4.62	5.08		
942112	HCOF#2	5	6/16/94	14:00	3.11	1.27	0.34	0.14	94.21	0.995	91.2	755.68	1.69	1.85		
942118	HCOF#2	5	6/17/94	14:00	3.07	1.27	0.32	0.14	93.75	0.994	91.2	755.06	1.23	1.37		
942208	HCOF#2	5	6/27/94		2.09	2.89	0.32	0.14	93.34	1.001	91.2	760.89	5.69	5.63		
942196	HCOF#2	5	6/28/94		2.78	3.37	0.36	0.17	91.37	1.007	91.2	765.17	11.91	5.16		
942202	HCOF#2	5	6/28/94		1.95	3.37	0.27	0.12	93.41	0.994	91.2	755.41	1.41	1.66		
942190	HCOF#2	5	6/29/94		2.90	3.62	0.37	0.21	91.97	1.001	91.2	760.58	8.03	2.44		
942180	HCOF#2	5	6/30/94		2.79	3.62	0.35	0.17	92.05	0.995	91.2	756.12	2.51	1.49		
942312	HCOF#2	5	7/5/94	14:00	0.00	3.27	0.00	0.00	-2.48	0.997	91.2	757.35	0.00	-0.44		
942322	HCOF#2	5	7/5/94	22:00	0.00	3.62	0.00	0.00	-2.70	0.994	91.2	755.41	0.00	-0.24		
942328	HCOF#2	5	7/6/94	13:00	0.00	#####	0.00	0.00	######	0.993	72.9	603.59	0.00	#VALUE!		
942334	HCOF#2	5	7/6/94	20:00	0.00	#####	0.00	0.00	######	0.993	91.2	754.71	0.00	#VALUE!		

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	$MgSiO_2$ (calc.)	$CaCO_3$ (calc.)	Al_2O_3	Fe_2O_3	Total	Spec. Gravity	Gal/min	Lbs/min	$Mg(OH)_2$ (Lbs./min)	$CaSO_4*2H_2O$ (Lbs./min)	$Mg(OH)_2$ wt% Purity	Gypsum wt% Purity
942340	HCOF#2	5	7/7/94	14:00	0.00	3.46	0.00	0.00	-2.68	0.995	91.2	755.99	0.00	-0.32		
942346	HCOF#2	5	7/8/94	14:00	0.00	3.14	0.00	0.00	-2.43	0.994	72.9	604.08	0.00	-0.16		
942346	HCOF#2	5	7/8/94	14:00		3.14			3.14	0.994	72.9	604.08				
942352	HCOF#2	5	7/11/94	17:00	0.00	3.09	0.00	0.00	-2.35	0.993	91.2	754.62	0.00	-0.13	0%	-6%
942358	HCOF#2	5	7/11/94	22:00	2.10	0.00	0.27	0.13	96.60	0.995	91.2	756.16	1.98	2.53	41%	52%
942364	HCOF#2	5	7/12/94	13:00	0.00	4.34	0.00	0.00	-3.30	0.993	91.2	754.66	0.00	-0.19	0%	-9%
942370	HCOF#2	5	7/12/94	17:30	2.54	4.12	0.32	0.16	94.51	0.994	91.2	755.37	1.57	1.44	45%	41%
942376	HCOF#2	5	7/13/94	14:00	2.50	4.30	0.33	0.18	95.67	0.996	91.2	756.83	2.83	2.42	47%	40%
942440	HCOF#2	5	7/14/94	13:00	0.00	5.25	0.00	0.00	-4.22	0.995	91.2	755.85	0.00	-0.51	0%	-12%
942446	HCOF#2	5	7/14/94	18:00	2.15	3.09	0.26	0.14	93.98	0.994	91.2	755.10	1.26	1.38	42%	46%
942452	HCOF#2	5	7/14/94	22:00	2.96	3.00	0.32	0.18	92.94	0.996	91.2	756.96	3.71	1.62	60%	26%
942462	HCOF#2	5	7/18/94	18:00	1.71	2.41	0.21	0.11	94.06	0.994	91.2	755.24	1.12	1.76	34%	54%
942468	HCOF#2	5	7/18/94	22:00	2.01	2.68	0.25	0.14	93.45	0.994	91.2	755.06	1.19	1.38	40%	47%
942474	HCOF#2	5	7/19/94	14:00	0.00	3.25	0.00	0.00	-2.49	0.995	91.2	756.30	0.00	-0.33	0%	-7%
942480	HCOF#2	5	7/19/94	18:00	2.50	2.96	0.27	0.12	93.65	0.995	91.2	755.85	1.81	1.94	42%	45%
942486	HCOF#2	5	7/19/94	22:00	2.48	0.00	0.27	0.13	94.40	0.994	91.2	754.93	1.12	1.34	41%	49%
942537	HCOF#2	5	7/20/94	14:00	2.97	3.82	0.30	0.15	92.47	1.136	91.2	863.05	98.23	83.21	46%	39%
942539	HCOF#2	5	7/20/94	18:00	2.34	3.32	0.27	0.13	93.68	1.135	91.2	862.78	90.47	95.93	42%	45%
942542	HCOF#2	5	7/20/94	22:00	2.64	2.77	0.28	0.13	93.77	0.994	91.2	755.02	1.20	1.31	42%	46%
942546	HCOF#2	5	7/21/94	14:00	2.53	2.14	0.26	0.12	92.74	0.993	91.2	754.71	0.82	1.21	35%	52%
942552	HCOF#2	5	7/21/94	21:00	2.30	1.27	0.25	0.12	93.07	0.994	91.2	755.46	1.38	1.82	38%	50%
942558	HCOF#2	5	7/25/94	14:00	2.75	2.73	0.29	0.14	92.98	0.995	91.2	755.90	1.93	1.84	44%	42%
942564	HCOF#2	5	7/25/94	18:00	2.44	2.34	0.25	0.11	93.64	0.994	91.2	754.93	0.98	1.40	36%	52%
942570	HCOF#2	5	7/25/94	22:00	0.00	3.21	0.00	0.00	-2.43	0.992	91.2	753.56	0.00	-0.02	0%	-6%
942576	HCOF#2	5	7/26/94	14:00	2.71	2.73	0.28	0.13	93.34	0.996	91.2	757.13	2.69	2.93	41%	45%
942582	HCOF#2	5	7/26/94	18:00	2.64	2.96	0.27	0.11	93.76	0.993	91.2	754.44	0.74	0.89	39%	47%
942588	HCOF#2	5	7/26/94	22:00	2.82	2.77	0.28	0.12	92.53	0.994	91.2	754.97	1.19	1.20	43%	43%
942753	HCOF#2	5	7/27/94	13:00	2.96	3.00	0.30	0.13	92.30	0.994	91.2	755.55	1.67	1.55	44%	41%
942759	HCOF#2	5	7/27/94	19:00	2.79	2.84	0.28	0.12	93.05	0.994	91.2	755.02	1.17	1.29	41%	45%
942765	HCOF#2	5	7/28/94	13:00	0.00	3.39	0.00	0.00	-2.57	0.992	91.2	753.91	0.00	-0.07	0%	-7%
942771	HCOF#2	5	7/28/94	21:00	2.69	3.12	0.25	0.11	92.46	0.993	91.2	754.71	0.81	1.18	35%	51%
942777	HCOF#2	5	8/1/94	15:00	2.90	3.23	0.32	0.16	92.25	0.993	91.2	754.80	1.20	0.92	48%	37%
942783	HCOF#2	5	8/1/94	22:00	2.82	3.55	0.31	0.14	93.07	0.993	91.2	754.66	0.99	0.94	44%	42%
942789	HCOF#2	5	8/2/94	19:00	2.86	3.68	0.31	0.14	92.26	0.994	91.2	755.15	1.39	1.21	45%	39%
942795	HCOF#2	5	8/3/94	14:00	3.13	3.41	0.34	0.15	91.90	0.994	91.2	755.32	1.66	1.22	49%	36%
943054	HCOF#2	5	8/11/94	14:00	2.72	5.03	0.31	0.16	90.63	0.993	91.2	754.49	0.85	0.76	43%	39%
943060	HCOF#2	5	8/11/94	18:00	2.30	4.41	0.25	0.12	94.11	0.993	91.2	754.27	0.57	0.80	36%	51%
943066	HCOF#2	5	8/11/94	22:00	2.36	4.30	0.26	0.12	91.94	0.993	91.2	754.40	0.66	0.87	36%	48%
943030	HCOF#2	5	8/29/94	13:30	2.19	#####	0.28	0.12	#######	0.994	91.2	755.15	1.20	#VALUE!	39%	#VALUE!
943036	HCOF#2	5	8/30/94	14:00	2.71	5.69	0.34	0.16	89.07	0.995	91.2	756.08	2.24	1.48	48%	32%
943042	HCOF#2	5	8/31/94	14:00	2.81	5.69	0.33	0.15	89.50	0.994	91.2	755.63	1.90	1.24	48%	32%
943048	HCOF#2	5	9/1/94	14:00	2.57	4.87	0.31	0.13	89.98	0.995	91.2	756.08	2.08	1.75	44%	37%
943184	HCOF#2	5	9/6/94	14:00	3.25	5.50	0.34	0.16	89.74	0.994	91.2	755.63	1.89	1.24	48%	32%
943190	HCOF#2	5	9/6/94	18:00	2.50	5.57	0.27	0.12	90.35	0.993	91.2	754.71	0.88	1.02	38%	43%
943305	HCOF#2	5	9/19/94	14:00	2.69	4.05	0.31	0.15	91.56	0.995	91.2	756.08	1.98	1.93	42%	41%
943311	HCOF#2	5	9/19/94	18:00	2.48	3.57	0.28	0.12	92.21	0.995	91.2	755.90	1.73	1.98	40%	45%
943317	HCOF#2	5	9/19/94	22:00	2.86	4.48	0.32	0.14	91.79	0.994	91.2	754.93	1.22	1.03	45%	38%
943323	HCOF#2	5	9/20/94	14:00	2.69	3.93	0.31	0.14	91.17	0.994	91.2	755.46	1.60	1.42	44%	39%
943329	HCOF#2	5	9/20/94	18:00	3.03	4.43	0.34	0.16	91.42	0.994	91.2	755.37	1.70	1.17	49%	34%
943335	HCOF#2	5	9/22/94	15:00	3.00	4.93	0.34	0.16	90.73	0.993	91.2	754.57	1.00	0.71	47%	34%
943341	HCOF#2	5	9/22/94	18:00	3.13	4.43	0.35	0.16	91.16	0.994	91.2	755.37	1.72	1.14	50%	33%

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	$MgSiO_2$ (calc.)	$CaCO_3$ (calc.)	Al_2O_3	Fe_2O_3	Total	Spec. Gravity	Gal/min	Lbs/min	$Mg(OH)_2$ (Lbs./min)	$CaSO_4*2H_2O$ (Lbs./min)	$Mg(OH)_2$ wt% Purity	Gypsum wt% Purity
943467	HCOF#2	5	9/28/94	18:00	2.01	3.96	0.26	0.11	92.89	0.997	91.2	757.53	2.25	3.93	31%	55%
943477	HCOF#2	5	9/29/94	14:00	2.58	5.09	0.31	0.14	90.95	0.994	91.2	755.41	1.55	1.36	44%	38%
943487	HCOF#2	5	10/3/94	18:00	2.85	5.32	0.34	0.16	91.41	0.996	91.2	756.43	2.65	1.70	50%	32%
943493	HCOF#2	5	10/3/94	22:45	3.24	5.43	0.37	0.19	92.07	0.996	91.2	756.69	3.30	1.43	57%	25%
943499	HCOF#2	5	10/4/94	14:00	2.83	5.37	0.33	0.16	90.71	0.994	91.2	755.37	1.66	1.16	48%	34%
943505	HCOF#2	5	10/4/94	18:00	2.65	6.62	0.32	0.14	89.91	0.995	91.2	755.81	1.88	1.48	45%	35%
943511	HCOF#2	5	10/4/94	21:30	0.00	5.30	0.00	0.00	-3.94	0.993	91.2	754.84	0.00	-0.25	0%	-10%
943517	HCOF#2	5	10/5/94	14:00	2.76	4.03	0.33	0.14	91.41	0.994	91.2	754.93	1.23	1.04	45%	38%
943773	HCOF#2	5	10/6/94	14:00	2.61	3.84	0.32	0.14	89.93	0.994	91.2	755.59	1.64	1.53	42%	40%
943779	HCOF#2	5	10/7/94	14:00	2.62	3.84	0.32	0.14	91.14	0.993	91.2	754.88	1.16	1.04	44%	39%
943785	HCOF#2	5	10/10/94	14:00	3.84	3.84	0.41	0.19	90.88	1.005	91.2	763.36	11.02	3.19	64%	18%
943791	HCOF#2	5	10/10/94	18:00	2.31	3.84	0.29	0.12	89.28	0.994	91.2	755.63	1.36	1.86	35%	47%
943805	HCOF#2	5	10/11/94	22:00	3.02	3.84	0.36	0.16	91.30	0.995	91.2	755.81	2.03	1.49	48%	35%
943811	HCOF#2	5	10/12/94	14:00	3.27	3.84	0.37	0.16	90.73	0.995	91.2	755.85	2.24	1.33	52%	31%
943817	HCOF#2	5	10/12/94	18:00	2.78	3.84	0.33	0.13	91.44	0.995	91.2	756.34	2.28	2.02	44%	39%
943823	HCOF#2	5	10/12/94	22:00	3.98	3.84	0.43	0.20	92.10	1.005	91.2	763.84	12.13	2.94	67%	16%
943829	HCOF#2	5	10/13/94	20:00	2.83	3.84	0.33	0.15	91.61	0.996	91.2	756.43	2.42	2.05	46%	39%
943835	HCOF#2	5	10/19/94	14:00	3.27	3.84	0.37	0.17	91.35	0.995	91.2	755.77	2.20	1.28	53%	31%
943997	HCOF#2	5	10/24/94	14:00	3.16	3.84	0.37	0.17	88.31	0.995	91.2	755.99	2.41	1.25	53%	28%
944003	HCOF#2	5	10/25/94	14:00	2.85	3.84	0.34	0.16	91.14	0.995	91.2	755.72	2.10	1.32	52%	32%
944013	HCOF#2	5	10/27/94	14:00	3.14	3.84	0.36	0.16	91.16	0.994	91.2	755.46	1.92	1.11	53%	31%
944242	HCOF#2	5	10/28/94	14:00	3.23	3.84	0.36	0.16	93.03	0.995	91.2	756.30	2.88	1.45	57%	29%
944248	HCOF#2	5	10/31/94	14:00	2.64	3.84	0.31	0.14	92.72	0.995	91.2	755.77	1.97	1.59	47%	38%
944254	HCOF#2	5	11/1/94	14:00	2.67	3.84	0.32	0.14	93.26	0.995	91.2	755.81	2.03	1.62	48%	38%
944260	HCOF#2	5	11/2/94	14:00	2.68	3.84	0.32	0.15	91.96	0.995	91.2	755.81	2.06	1.54	49%	36%
944266	HCOF#2	5	11/3/94	14:00	2.62	3.84	0.31	0.15	91.84	0.995	91.2	755.68	1.91	1.49	48%	37%
944275	HCOF#2	5	11/4/94	14:00	3.02	3.84	0.34	0.15	92.84	0.994	91.2	755.63	2.05	1.31	52%	33%
944281	HCOF#2	5	11/7/94	14:00	2.83	3.84	0.32	0.14	93.37	0.994	91.2	755.63	1.97	1.42	50%	36%
944287	HCOF#2	5	11/8/94	14:00	3.13	3.84	0.36	0.17	91.74	0.994	91.2	755.50	1.97	1.15	53%	31%
944293	HCOF#2	5	11/9/94	14:00	3.07	3.84	0.36	0.17	93.87	0.994	91.2	755.59	2.10	1.23	54%	32%
944299	HCOF#2	5	11/10/94	14:00	2.97	3.84	0.36	0.18	93.26	0.994	91.2	755.46	2.02	1.09	56%	30%
944305	HCOF#2	5	11/11/94	14:00	3.02	3.84	0.36	0.18	92.20	0.994	91.2	755.55	2.07	1.14	55%	30%
944484	HCOF#2	5	11/21/94	14:00	2.27	3.84	0.27	0.13	92.41	0.993	91.2	754.71	0.89	1.12	38%	48%
944610	HCOF#2	5	11/22/94	13:00	1.12	3.84	0.17	0.08	95.72	0.996	91.2	756.52	0.94	3.99	17%	73%
944616	HCOF#2	5	11/23/94	14:00	1.68	3.84	0.23	0.10	94.05	0.994	91.2	755.06	0.83	1.76	28%	60%
944622	HCOF#2	5	11/28/94	14:00	0.72	3.84	0.11	0.06	96.20	0.992	91.2	754.00	0.14	0.90	12%	79%
944628	HCOF#2	5	11/29/94	14:00	1.09	3.84	0.15	0.07	95.75	0.993	91.2	754.88	0.54	1.85	21%	70%
944634	HCOF#2	5	11/30/94	14:00	1.50	3.84	0.20	0.09	94.75	0.993	91.2	754.62	0.53	1.42	24%	65%
944640	HCOF#2	5	11/30/94	18:00	1.67	3.84	0.22	0.09	94.02	0.993	91.2	754.53	0.58	1.21	29%	60%
944646	HCOF#2	5	12/1/94	14:00	1.52	3.84	0.20	0.09	93.52	0.993	91.2	754.53	0.51	1.28	25%	63%
944652	HCOF#2	5	12/5/94	14:00	1.52	3.84	0.20	0.09	93.11	0.993	91.2	754.57	0.53	1.32	25%	62%
944658	HCOF#2 (w/polymer)	5	12/6/94	12:00	0.00	0.00	0.00	0.00	0.00	0.993	91.2	754.44				
944663	HCOF#2 (w/polymer)	5	12/6/94	13:00	0.00	0.00	0.00	0.00	0.00	0.993	91.2	754.44				
944668	HCOF#2 (w/polymer)	5	12/6/94	14:00	0.00	0.00	0.00	0.00	0.00	0.993	91.2	754.44				
944673	HCOF#2	5	12/6/94	14:00	1.59	3.84	0.20	0.09	93.54	0.993	91.2	754.49	0.51	1.21	26%	62%
944692	HCOF#2 (w/polymer)	5	12/6/94	15:00	0.00	0.00	0.00	0.00	0.00	0.993	91.2	754.31				
944697	HCOF#2 (w/polymer)	5	12/6/94	16:00	0.00	0.00	0.00	0.00	0.00	0.993	91.2	754.40				
944702	HCOF#2 (w/polymer)	5	12/8/94	12:00	0.00	0.00	0.00	0.00	0.00	0.994	91.2	754.97				
944707	HCOF#2 (w/polymer)	5	12/8/94	13:00	0.00	0.00	0.00	0.00	0.00	0.994	91.2	755.02				
944712	HCOF#2 (w/polymer)	5	12/8/94	14:00	2.81	3.84	0.31	0.15	91.38	0.994	91.2	755.15	1.48	1.13	48%	36%
944717	HCOF#2	5	12/8/94	14:00	2.89	3.84	0.32	0.16	92.41	0.994	91.2	755.10	1.53	1.04	51%	35%

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	$MgSiO_2$ (calc.)	$CaCO_3$ (calc.)	Al_2O_3	Fe_2O_3	Total	Spec. Gravity	Gal/min	Lbs/min	$Mg(OH)_2$ (Lbs./min)	$CaSO_4*2H_2O$ (Lbs./min)	$Mg(OH)_2$ wt% Purity	Gypsum wt% Purity
944723	HCOF#2 (w/polymer)	5	12/8/94	15:00	1.99	3.84	0.25	0.11	92.29	0.993	91.2	754.57	0.70	1.12	33%	53%
944728	HCOF#2 (w/polymer)	5	12/8/94	16:00	1.98	3.84	0.25	0.11	92.06	0.993	91.2	754.62	0.73	1.15	33%	53%
944733	HCOF#2	5	12/9/94	14:00	2.09	3.84	0.26	0.12	93.39	0.993	91.2	754.75	0.84	1.27	35%	52%
950398	HCOF#2 Roping	5	2/16/95	12:15	2.13	3.84	0.28	0.14	94.69	0.993	91.2	754.66	0.80	1.19	36%	53%
941898	HCUF#2	6	6/7/94	15:05	0.51	0.96	0.08	0.05	97.58	1.149	8.8	84.49	0.78	21.18		
942107	HCUF#2	6	6/15/94	12:00	0.38	1.07	0.07	0.05	97.36	1.136	8.8	83.53	0.64	19.08		
942113	HCUF#2	6	6/16/94	14:00	0.48	1.27	0.07	0.05	97.07	1.150	8.8	84.49	0.87	20.75		
942119	HCUF#2	6	6/17/94	13:00	0.48	1.18	0.08	0.05	97.75	1.154	8.8	84.82	0.84	21.73		
942209	HCUF#2	6	6/27/94	14:00	0.34	0.89	0.07	0.05	98.44	1.138	8.8	83.63	0.64	19.63		
942203	HCUF#2	6	6/28/94	14:00	0.59	1.14	0.09	0.06	97.79	1.151	8.8	84.59	1.37	20.62		
942197	HCUF#2	6	6/28/94	20:00	0.43	1.14	0.08	0.05	97.93	1.197	8.8	88.01	1.23	28.44		
942191	HCUF#2	6	6/29/94	18:00	0.48	1.09	0.08	0.05	97.72	1.181	8.8	86.78	1.24	25.62		
942181	HCUF#2	6	6/30/94	13:30	0.49	1.16	0.08	0.05	97.36	1.207	8.8	88.68	1.56	29.45		
942313	HCUF#2	6	7/5/94	14:00	0.35	1.14	0.09	0.06	97.58	1.139	8.8	83.68	0.83	19.31		
942323	HCUF#2	6	7/5/94	22:00	0.36	4.91	0.09	0.05	94.52	1.208	8.8	88.79	1.40	27.75		
942329	HCUF#2	6	7/6/94	13:00	0.36	1.05	0.08	0.05	96.96	1.130	7.1	66.47	0.60	14.36		
942335	HCUF#2	6	7/6/94	20:00	0.36	1.09	0.08	0.05	96.61	1.218	8.8	89.52	1.35	31.38		
942341	HCUF#2	6	7/7/94	14:00	0.35	1.02	0.08	0.05	97.15	1.193	8.8	87.66	1.05	27.57		
942347	HCUF#2	6	7/8/94	14:00	0.41	1.02	0.08	0.05	98.08	1.133	7.1	66.63	0.57	14.97	3%	92%
942353	HCUF#2	6	7/11/94	17:00	0.41	1.21	0.09	0.05	101.23	1.139	8.8	83.72	0.83	20.04	4%	94%
942359	HCUF#2	6	7/11/94	22:00	0.45	1.16	0.09	0.06	97.65	1.204	8.8	88.51	1.30	29.48	4%	91%
942365	HCUF#2	6	7/12/94	13:00	0.39	1.21	0.08	0.05	98.10	1.142	8.8	83.94	0.76	20.06	3%	92%
942371	HCUF#2	6	7/12/94	17:30	0.45	1.11	0.09	0.06	97.37	1.220	8.8	89.68	0.98	32.19	3%	91%
942377	HCUF#2	6	7/13/94	14:00	0.38	1.11	0.09	0.05	97.68	1.158	8.8	85.08	0.57	22.47	2%	92%
942441	HCUF#2	6	7/14/94	13:00	0.27	0.84	0.08	0.05	97.77	1.130	8.8	83.08	0.44	18.26	2%	92%
942447	HCUF#2	6	7/14/94	18:00	0.31	0.91	0.08	0.05	97.72	1.228	8.8	90.25	1.09	33.91	3%	92%
942453	HCUF#2	6	7/14/94	22:00	0.32	1.07	0.08	0.05	94.84	1.204	8.8	88.50	0.99	28.92	3%	89%
942463	HCUF#2	6	7/18/94	18:00	0.31	1.39	0.08	0.06	97.08	1.197	8.8	87.95	1.11	28.25	4%	91%
942469	HCUF#2	6	7/18/94	22:00	0.28	1.07	0.07	0.05	98.11	1.206	8.8	88.62	1.06	30.23	3%	92%
942475	HCUF#2	6	7/19/94	14:00	0.46	0.96	0.08	0.06	97.52	1.126	8.8	82.79	0.62	17.69	3%	92%
942481	HCUF#2	6	7/19/94	18:00	0.53	1.25	0.08	0.06	97.69	1.208	8.8	88.82	1.16	30.40	3%	92%
942487	HCUF#2	6	7/19/94	22:00	0.48	1.18	0.08	0.06	97.48	1.223	8.8	89.89	1.14	32.80	3%	92%
942491	HCUF#2	6	7/20/94	14:00	0.32	1.11	0.08	0.05	97.85	1.127	8.8	82.85	0.59	17.92	3%	93%
942495	HCUF#2	6	7/20/94	18:00	0.32	1.09	0.07	0.05	97.65	1.236	8.8	90.86	1.20	35.25	3%	92%
942498	HCUF#2	6	7/20/94	22:00	0.41	1.14	0.07	0.05	97.44	1.225	8.8	90.02	1.24	33.08	3%	91%
942547	HCUF#2	6	7/21/94	14:00	0.38	0.80	0.07	0.05	97.26	1.129	8.8	83.00	0.54	18.19	3%	92%
942553	HCUF#2	6	7/21/94	21:00	0.35	0.89	0.08	0.06	97.79	1.206	8.8	88.62	0.93	30.40	3%	93%
942559	HCUF#2	6	7/25/94	14:00	0.41	0.84	0.09	0.05	94.77	1.125	8.8	82.69	0.43	17.09	2%	90%
942565	HCUF#2	6	7/25/94	18:00	0.48	0.91	0.08	0.06	98.16	1.232	8.8	90.55	1.29	34.56	3%	92%
942571	HCUF#2	6	7/25/94	22:00	0.43	0.91	0.08	0.05	97.90	1.197	8.8	88.00	1.04	28.68	3%	92%
942577	HCUF#2	6	7/26/94	14:00	0.55	0.70	0.08	0.06	98.39	1.132	8.8	83.18	0.60	18.70	3%	93%
942583	HCUF#2	6	7/26/94	18:00	0.53	0.23	0.08	0.06	98.34	1.167	8.8	85.75	0.76	24.21	3%	94%
942589	HCUF#2	6	7/26/94	22:00	0.52	0.82	0.07	0.06	98.19	1.194	8.8	87.74	0.86	28.41	3%	93%
942754	HCUF#2	6	7/27/94	13:00	0.45	0.93	0.07	0.05	96.54	1.128	8.8	82.93	0.49	17.88	3%	92%
942760	HCUF#2	6	7/27/94	19:00	0.52	0.91	0.07	0.05	96.99	1.224	8.8	89.95	1.10	32.92	3%	91%
942766	HCUF#2	6	7/28/94	13:00	0.49	0.73	0.07	0.06	97.33	1.124	8.8	82.63	0.59	17.41	3%	92%
942772	HCUF#2	6	7/28/94	21:00	0.36	3.77	0.06	0.05	94.53	1.220	8.8	89.68	0.96	30.71	3%	87%
942778	HCUF#2	6	8/1/94	15:00	0.38	0.80	0.07	0.05	97.17	1.141	8.8	83.85	0.60	19.91	3%	92%
942784	HCUF#2	6	8/1/94	22:00	0.45	0.86	0.07	0.05	97.31	1.172	8.8	86.14	0.94	24.52	4%	92%
942790	HCUF#2	6	8/2/94	19:00	0.45	0.68	0.07	0.05	97.28	1.224	8.8	89.95	1.04	33.09	3%	92%
942796	HCUF#2	6	8/3/94	14:00	0.42	0.77	0.07	0.05	96.88	1.144	8.8	84.12	0.57	20.46	3%	92%

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	$MgSiO_2$ (calc.)	$CaCO_3$ (calc.)	Al_2O_3	Fe_2O_3	Total	Spec. Gravity	Gal/min	Lbs/min	$Mg(OH)_2$ (Lbs./min)	$CaSO_4*2H_2O$ (Lbs./min)	$Mg(OH)_2$ wt% Purity	Gypsum wt% Purity
943055	HCUF#2	6	8/11/94	14:00	0.36	0.84	0.07	0.05	97.96	1.139	8.8	83.73	0.51	19.95	2%	94%
943061	HCUF#2	6	8/11/94	18:00	0.41	1.07	0.07	0.05	98.17	1.214	8.8	89.23	0.86	31.88	3%	93%
943067	HCUF#2	6	8/11/94	22:00	0.48	1.05	0.08	0.05	97.64	1.258	8.8	92.47	1.09	39.27	3%	92%
943031	HCUF#2	6	8/29/94	13:30	0.35	0.82	0.07	0.05	97.75	1.117	8.8	82.10	0.42	16.60	2%	94%
943037	HCUF#2	6	8/30/94	14:00	0.31	0.89	0.06	0.05	97.27	1.194	8.8	87.74	0.75	28.43	2%	93%
943043	HCUF#2	6	8/31/94	14:00	0.41	0.89	0.07	0.05	97.87	1.184	8.8	87.02	0.66	26.93	2%	93%
943049	HCUF#2	6	9/1/94	14:00	0.45	0.91	0.07	0.05	97.93	1.196	8.8	87.87	0.72	28.83	2%	93%
943185	HCUF#2	6	9/6/94	14:00	0.38	0.80	0.06	0.05	97.99	1.130	8.8	83.05	0.39	18.58	2%	94%
943191	HCUF#2	6	9/6/94	18:00	0.43	0.93	0.07	0.05	97.97	1.122	8.8	82.44	0.37	17.28	2%	94%
943306	HCUF#2	6	9/19/94	14:00	0.38	0.86	0.07	0.05	97.87	1.178	8.8	86.55	0.57	25.88	2%	93%
943312	HCUF#2	6	9/19/94	18:00	0.45	1.00	0.07	0.05	97.93	1.219	8.8	89.60	0.92	32.55	3%	93%
943318	HCUF#2	6	9/19/94	22:00	0.51	0.91	0.07	0.05	98.37	1.203	8.8	88.42	0.95	29.98	3%	93%
943324	HCUF#2	6	9/20/94	14:00	0.39	0.89	0.07	0.05	98.09	1.194	8.8	87.77	0.71	28.60	2%	93%
943330	HCUF#2	6	9/20/94	18:00	0.42	0.89	0.06	0.05	98.61	1.219	8.8	89.60	0.83	32.97	2%	94%
943336	HCUF#2	6	9/22/94	15:00	0.39	0.91	0.07	0.05	98.12	1.130	8.8	83.09	0.45	18.61	2%	94%
943348	HCUF#2	6	9/22/94	22:00	0.41	0.89	0.07	0.05	98.64	1.208	8.8	88.77	0.76	31.10	2%	94%
943468	HCUF#2	6	9/28/94	18:00	0.45	0.98	0.07	0.05	97.93	1.210	8.8	88.97	0.76	31.33	2%	93%
943478	HCUF#2	6	9/29/94	14:00	0.39	1.14	0.07	0.05	98.11	1.202	8.8	88.37	0.95	29.76	3%	93%
943488	HCUF#2	6	10/3/94	18:00	0.35	1.27	0.07	0.05	97.11	1.192	8.8	87.64	1.09	27.69	4%	91%
943494	HCUF#2	6	10/3/94	22:45	0.36	1.11	0.08	0.05	97.61	1.220	8.8	89.66	1.17	32.42	3%	92%
943500	HCUF#2	6	10/4/94	14:00	0.38	1.16	0.08	0.05	97.71	1.133	8.8	83.25	0.60	18.67	3%	92%
943506	HCUF#2	6	10/4/94	18:00	0.32	1.11	0.06	0.05	96.82	1.214	8.8	89.20	1.08	31.18	3%	91%
943512	HCUF#2	6	10/4/94	21:30	0.41	1.09	0.08	0.05	97.73	1.191	8.8	87.52	0.97	27.66	3%	92%
943518	HCUF#2	6	10/5/94	14:00	0.39	0.93	0.07	0.05	98.24	1.130	8.8	83.04	0.59	18.39	3%	93%
943774	HCUF#2	6	10/6/94	14:00	0.35	1.01	0.07	0.05	96.10	1.132	8.8	83.24	0.56	18.45	3%	91%
943780	HCUF#2	6	10/7/94	14:00	0.63	1.01	0.12	0.07	97.78	1.161	8.8	85.31	0.78	22.85	3%	92%
943786	HCUF#2	6	10/10/94	14:00	0.39	1.01	0.08	0.05	96.87	1.156	8.8	84.96	0.72	22.09	3%	92%
943792	HCUF#2	6	10/10/94	18:00	0.42	1.01	0.08	0.05	96.82	1.199	8.8	88.09	0.78	28.99	2%	92%
943806	HCUF#2	6	10/11/94	22:00	0.65	1.01	0.11	0.06	97.17	1.182	8.8	86.89	1.75	25.26	6%	89%
943812	HCUF#2	6	10/12/94	14:00	0.48	1.01	0.08	0.06	96.42	1.138	8.8	83.64	0.84	19.04	4%	90%
943818	HCUF#2	6	10/12/94	18:00	0.45	1.01	0.08	0.05	96.62	1.203	8.8	88.43	1.05	29.35	3%	91%
943824	HCUF#2	6	10/12/94	22:00	0.55	1.01	0.09	0.06	96.21	1.148	8.8	84.39	1.01	20.38	4%	89%
943830	HCUF#2	6	10/13/94	20:00	0.58	1.01	0.08	0.06	96.90	1.209	8.8	88.86	1.34	30.33	4%	91%
943836	HCUF#2	6	10/19/94	14:00	0.49	1.01	0.08	0.05	97.16	1.141	8.8	83.89	0.75	19.93	3%	92%
943993	#18 HCUF (Roping)	6	10/20/94		0.41	1.02	0.06	0.05	96.78	1.185	8.8	87.09	0.83	26.80	3%	92%
943998	HCUF#2	6	10/24/94	14:00	0.41	1.01	0.08	0.05	97.18	1.128	8.8	82.90	0.69	17.92	4%	92%
944008	HCUF#2	6	10/26/94	14:00	0.36	1.01	0.08	0.05	96.67	1.131	8.8	83.15	0.69	18.37	3%	92%
944014	HCUF#2	6	10/27/94	14:00	0.48	1.01	0.09	0.05	97.37	1.126	8.8	82.79	0.71	17.71	4%	92%
944243	HCUF#2	6	10/28/94	14:00	0.42	1.01	0.08	0.05	96.47	1.130	8.8	83.06	0.64	18.17	3%	92%
944249	HCUF#2	6	10/31/94	14:00	0.41	1.01	0.09	0.05	96.98	1.135	8.8	83.39	0.73	18.89	4%	92%
944255	HCUF#2	6	11/1/94	14:00	0.42	1.01	0.08	0.05	97.19	1.130	8.8	83.02	0.70	18.17	4%	92%
944261	HCUF#2	6	11/2/94	14:00	0.46	1.01	0.10	0.06	97.32	1.128	8.8	82.91	0.73	17.93	4%	92%
944267	HCUF#2	6	11/3/94	14:00	0.38	1.01	0.09	0.05	97.20	1.122	8.8	82.45	0.61	17.08	3%	92%
944276	HCUF#2	6	11/4/94	14:00	0.45	1.01	0.09	0.05	96.83	1.126	8.8	82.75	0.65	17.58	3%	92%
944282	HCUF#2	6	11/7/94	14:00	0.55	1.01	0.10	0.06	97.88	1.112	8.8	81.73	0.54	15.76	3%	93%
944288	HCUF#2	6	11/8/94	14:00	0.49	1.01	0.08	0.06	97.14	1.123	8.8	82.57	0.70	17.22	4%	92%
944294	HCUF#2	6	11/9/94	14:00	0.43	1.01	0.08	0.05	97.30	1.134	8.8	83.38	0.71	18.93	3%	92%
944300	HCUF#2	6	11/10/94	14:00	0.45	1.01	0.09	0.06	97.52	1.132	8.8	83.21	0.73	18.59	4%	92%
944306	HCUF#2	6	11/11/94	14:00	0.35	1.01	0.08	0.06	97.32	1.134	8.8	83.32	0.69	18.85	3%	92%
944485	HCUF#2	6	11/21/94	14:00	0.34	1.01	0.08	0.05	96.85	1.137	8.8	83.60	0.39	19.65	2%	94%
944611	HCUF#2	6	11/22/94	13:00	0.36	1.01	0.08	0.05	96.97	1.140	8.8	83.76	0.48	19.91	2%	93%

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	$MgSiO_2$ (calc.)	$CaCO_3$ (calc.)	Al_2O_3	Fe_2O_3	Total	Spec. Gravity	Gal/min	Lbs/min	$Mg(OH)_2$ (Lbs./min)	$CaSO_4*2H_2O$ (Lbs./min)	$Mg(OH)_2$ wt% Purity	Gypsum wt% Purity
944617	HCUF#2	6	11/23/94	14:00	0.35	1.01	0.08	0.05	97.95	1.128	8.8	82.93	0.44	18.40	2%	94%
944623	HCUF#2	6	11/28/94	14:00	0.24	1.01	0.09	0.05	97.69	1.038	8.8	76.27	0.10	5.74	2%	95%
944629	HCUF#2	6	11/29/94	14:00	0.36	1.01	0.10	0.06	97.70	1.132	8.8	83.18	0.52	18.80	3%	94%
944635	HCUF#2	6	11/30/94	14:00	0.38	1.01	0.07	0.05	97.74	1.135	8.8	83.43	0.76	19.09	4%	93%
944641	HCUF#2	6	11/30/94	18:00	0.34	1.01	0.08	0.05	97.93	1.119	8.8	82.23	0.45	16.94	3%	94%
944647	HCUF#2	6	12/1/94	14:00	0.25	1.01	0.07	0.05	97.78	1.123	8.8	82.54	0.36	17.66	2%	94%
944653	HCUF#2	6	12/5/94	14:00	0.27	1.01	0.07	0.05	98.00	1.132	8.8	83.17	0.27	19.12	1%	95%
944659	HCUF#2 (w/polymer)	6	12/6/94	12:00	0.27	1.01	0.08	0.05	97.60	1.138	8.8	83.61	0.39	19.84	2%	94%
944664	HCUF#2 (w/polymer)	6	12/6/94	13:00	0.27	1.01	0.08	0.05	98.12	1.136	8.8	83.47	0.40	19.64	2%	95%
944669	HCUF#2 (w/polymer)	6	12/6/94	14:00	0.28	1.01	0.08	0.05	97.84	1.136	8.8	83.51	0.42	19.64	2%	94%
944674	HCUF#2	6	12/6/94	14:00	0.28	1.01	0.08	0.05	97.58	1.130	8.8	83.08	0.40	18.70	2%	94%
944693	HCUF#2 (w/polymer)	6	12/6/94	15:00	0.29	1.01	0.08	0.05	97.70	1.134	8.8	83.37	0.43	19.32	2%	94%
944698	HCUF#2 (w/polymer)	6	12/6/94	16:00	0.32	1.01	0.09	0.06	97.24	1.129	8.8	83.01	0.44	18.44	2%	94%
944703	HCUF#2 (w/polymer)	6	12/8/94	12:00	0.32	1.01	0.08	0.05	97.59	1.115	8.8	81.99	0.48	16.35	3%	93%
944708	HCUF#2 (w/polymer)	6	12/8/94	13:00	0.29	1.01	0.08	0.05	97.61	1.124	8.8	82.63	0.49	17.67	3%	94%
944713	HCUF#2 (w/polymer)	6	12/8/94	14:00	0.28	1.01	0.08	0.05	97.82	1.118	8.8	82.20	0.45	16.85	3%	94%
944718	HCUF#2	6	12/8/94	14:00	0.29	1.01	0.08	0.05	97.89	0.991	8.8	72.87				
944724	HCUF#2 (w/polymer)	6	12/8/94	15:00	0.22	1.01	0.07	0.05	97.74	1.117	8.8	82.09	0.34	16.75	2%	94%
944729	HCUF#2 (w/polymer)	6	12/8/94	16:00	0.24	1.01	0.07	0.05	97.42	1.121	8.8	82.39	0.36	17.28	2%	94%
944734	HCUF#2	6	12/9/94	14:00	0.25	1.01	0.07	0.05	97.48	1.123	8.8	82.53	0.33	17.62	2%	94%
950399	HCUF#2 Roping	6	2/16/95	12:15	0.36	1.01	0.12	0.06	98.73	1.175	8.8	86.38	0.52	26.04	2%	95%
941855	Product	8	5/27/94		4.21	3.41	0.48	0.24	91.25							
941856	Product	8	6/2/94	13:45	3.94	3.25	0.44	0.24	92.70							
941894	Product	8	6/7/94	15:00	3.82	3.07	0.47	0.22	94.02							
942108	Product	8	6/15/94	12:00	3.77	4.30	0.42	0.25	92.58	1.098	10.0	91.50	11.57	2.30		
942114	Product	8	6/16/94	14:00	3.79	4.12	0.42	0.25	93.85	1.099	8.6	78.76	10.25	2.05		
942120	Product	8	6/17/94	13:00	3.79	3.89	0.42	0.25	94.06	1.099	10.5	96.13	12.44	2.59		
942210	Product	8	6/27/94	14:00	3.68	3.75	0.41	0.25	93.47	1.123	8.1	75.79	11.92	2.53		
942204	Product	8	6/28/94	14:00	3.69	3.77	0.42	0.24	93.54	1.111	10.8	100.03	14.34	2.87		
942198	Product	8	6/28/94	20:00	3.72	3.87	0.42	0.25	94.00	1.108	18.5	170.77	23.81	5.08		
942192	Product	8	6/29/94	18:00	3.69	3.87	0.42	0.24	94.09	1.111	8.2	75.92	10.89	2.39		
942182	Product	8	6/30/94	13:30	3.49	4.39	0.41	0.23	93.95	1.087	13.8	124.96	13.99	3.09		
942186	Product	8	6/30/94	20:00	3.41	4.16	0.41	0.22	93.23	1.082	18.1	163.17	17.05	4.10		
942314	Product	8	7/5/94	14:00	3.28	4.37	0.39	0.21	94.26	1.070	10.0	89.19	8.22	2.16		
942318	Product	8	7/5/94	18:00	3.28	4.30	0.40	0.21	93.96	1.070	10.0	89.19	8.21	2.10		
942324	Product	8	7/5/94	22:00	3.27	4.46	0.39	0.21	93.53	1.071	10.0	89.24	8.26	2.11		
942330	Product	8	7/6/94	13:00	3.30	4.14	0.40	0.21	93.99	1.073	10.0	89.39	8.50	2.14		
942336	Product	8	7/6/94	20:00	3.30	4.39	0.40	0.21	93.99	1.074	10.0	89.53	8.70	2.14		
942342	Product	8	7/7/94	14:00	3.28	4.41	0.39	0.21	93.72	1.076	10.0	89.65	8.83	2.18		
942348	Product	8	7/8/94	14:00	3.25	4.50	0.39	0.21	93.24	1.077	10.0	89.71	8.87	2.19		
942354	Product	8	7/11/94	17:00	3.20	4.30	0.39	0.23	93.83	1.071	10.0	89.22	8.46	1.84	70%	15%
942360	Product	8	7/11/94	22:00	3.18	3.73	0.39	0.23	94.58	1.071	10.0	89.22	8.55	1.93	70%	16%
942366	Product	8	7/12/94	13:00	3.20	4.18	0.39	0.23	94.48	1.071	10.0	89.27	8.66	1.86	71%	15%
942372	Product	8	7/12/94	17:30	3.18	4.25	0.39	0.23	93.91	1.072	10.0	89.36	8.70	1.90	70%	15%
942378	Product	8	7/13/94	14:00	3.21	4.18	0.38	0.22	94.13	1.065	10.0	88.79	7.94	1.74	70%	15%
942382	Product	8	7/13/94	18:00	3.21	3.98	0.38	0.22	94.41	1.065	10.0	88.72	7.87	1.70	70%	15%
942442	Product	8	7/14/94	13:00	3.49	5.94	0.40	0.23	96.41	1.038	10.0	86.54	5.00	0.82	71%	12%
942448	Product	8	7/14/94	18:00	3.25	6.05	0.38	0.23	94.08	1.031	10.0	85.96	4.09	0.84	69%	14%
942454	Product	8	7/14/94	22:00	3.37	5.32	0.38	0.25	94.15	1.029	10.0	85.74	3.99	0.67	72%	12%
942458	Product	8	7/18/94	14:00	3.37	4.48	0.37	0.23	95.18	1.046	10.0	87.19	6.00	1.08	73%	13%
942464	Product	8	7/18/94	18:00	3.48	4.55	0.38	0.25	94.10	1.035	10.0	86.25	4.86	0.62	75%	10%
942470	Product	8	7/18/94	22:00	3.32	3.66	0.36	0.23	94.21	1.029	10.0	85.79	4.03	0.79	72%	14%
942476	Product	8	7/19/94	14:00	3.51	3.80	0.38	0.25	93.41	1.031	10.0	85.89	4.22	0.69	73%	12%
942482	Product	8	7/19/94	18:00	3.63	3.57	0.39	0.39	94.54	1.030	10.0	85.85	4.15	0.78	72%	14%
942488	Product	8	7/19/94	22:00	3.68	3.59	0.38	0.21	93.00	1.025	10.0	85.39	3.44	0.69	71%	14%
942492	Product	8	7/20/94	14:00	3.72	3.21	0.38	0.20	93.19	1.042	10.0	86.86	5.36	1.10	70%	14%
942540	Product	8	7/20/94	18:00	3.69	4.23	0.38	0.23	92.45	1.037	10.0	86.40	4.93	0.68	73%	10%

Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	$MgSiO_2$ (calc.)	$CaCO_3$ (calc.)	Al_2O_3	Fe_2O_3	Total	Spec. Gravity	Gal/min	Lbs/min	$Mg(OH)_2$ (Lbs./min)	$CaSO_4*2H_2O$ (Lbs./min)	$Mg(OH)_2$ wt% Purity	Gypsum wt% Purity
942499	Product	8	7/20/94	22:00	3.41	3.32	0.36	0.20	94.78	1.032	10.0	86.02	4.16	1.06	69%	18%
942548	Product	8	7/21/94	14:00	3.58	3.82	0.38	0.22	91.54	1.034	10.0	86.19	4.53	0.74	71%	12%
942554	Product	8	7/21/94	14:00	3.66	3.80	0.39	0.22	92.87	1.037	10.0	86.44	4.92	0.80	72%	12%
942560	Product	8	7/25/94	14:00	3.56	3.55	0.38	0.21	92.86	1.050	10.0	87.46	6.13	1.25	70%	14%
942566	Product	8	7/25/94	18:00	3.58	3.68	0.37	0.21	91.31	1.049	10.0	87.39	5.88	1.25	68%	15%
942572	Product	8	7/25/94	22:00	3.58	3.82	0.37	0.21	91.17	1.050	10.0	87.49	6.01	1.23	68%	14%
942578	Product	8	7/26/94	14:00	3.63	3.43	0.38	0.21	92.93	1.051	10.0	87.57	6.25	1.32	70%	15%
942584	Product	8	7/26/94	18:00	3.62	3.71	0.37	0.21	92.66	1.049	10.0	87.39	6.01	1.24	70%	14%
942590	Product	8	7/26/94	22:00	3.63	3.57	0.38	0.22	92.97	1.050	10.0	87.48	6.15	1.24	70%	14%
942755	Product	8	7/27/94	13:00	3.09	3.66	0.33	0.22	81.63	1.052	10.0	87.68	5.47	1.29	60%	14%
942761	Product	8	7/27/94	19:00	3.07	3.52	0.32	0.22	80.71	1.053	10.0	87.78	5.50	1.33	59%	14%
942767	Product	8	7/28/94	13:00	3.16	3.75	0.33	0.22	81.94	1.051	10.0	87.61	5.44	1.25	60%	14%
942773	Product	8	7/28/94	21:00	3.30	3.75	0.35	0.22	85.01	1.042	10.0	86.80	4.72	1.04	63%	14%
942779	Product	8	8/1/94	15:00	3.14	3.77	0.33	0.22	79.95	1.063	10.0	88.55	6.36	1.43	59%	13%
942785	Product	8	8/1/94	22:00	3.34	3.50	0.34	0.21	80.11	1.060	10.0	88.31	6.18	1.25	60%	12%
942791	Product	8	8/2/94	19:00	3.23	3.50	0.33	0.20	82.48	1.054	10.0	87.87	5.63	1.44	59%	15%
942797	Product	8	8/3/94	14:00	3.13	3.96	0.33	0.20	80.88	1.030	10.0	85.81	3.27	0.84	58%	15%
943056	Product	8	8/11/94	14:00	3.93	5.32	0.41	0.21	91.20	1.061	10.0	88.46	7.35	1.26	69%	12%
943062	Product	8	8/11/94	18:00	3.98	5.25	0.41	0.21	91.74	1.041	10.0	86.71	5.10	0.83	70%	11%
943068	Product	8	8/11/94	22:00	3.97	5.28	0.41	0.21	92.41	1.059	10.0	88.21	7.15	1.14	70%	11%
943032	Product	8	8/29/94	13:30	3.86	5.41	0.41	0.21	89.45	1.091	10.0	90.94	10.62	1.69	68%	11%
943038	Product	8	8/30/94	14:00	3.91	5.21	0.41	0.22	91.15	1.076	10.0	89.69	9.10	1.43	70%	11%
943044	Product	8	8/31/94	14:00	4.01	5.23	0.42	0.23	91.25	1.070	10.0	89.19	8.60	1.19	71%	10%
943050	Product	8	9/1/94	14:00	3.98	5.82	0.42	0.22	90.53	1.069	10.0	89.12	8.47	1.03	71%	9%
943186	Product	8	9/6/94	14:00	4.00	5.55	0.42	0.22	91.17	1.080	10.0	89.96	9.69	1.28	71%	9%
943192	Product	8	9/6/94	14:00	3.93	5.43	0.41	0.22	91.07	1.083	10.0	90.22	9.88	1.50	70%	11%
943196	Product	8	9/14/94	14:00	3.97	6.66	0.41	0.22	89.85	1.089	10.0	90.74	10.76	1.10	71%	7%
943307	Product	8	9/19/94	14:00	3.94	5.09	0.41	0.22	90.69	1.079	10.0	89.91	9.57	1.24	71%	9%
943313	Product	8	9/19/94	18:00	3.93	5.53	0.41	0.22	90.35	1.077	10.0	89.76	9.35	1.12	71%	8%
943319	Product	8	9/19/94	22:00	3.94	5.48	0.41	0.22	90.38	1.079	10.0	89.93	9.59	1.19	71%	9%
943325	Product	8	9/20/94	14:00	4.00	5.66	0.42	0.22	90.00	1.077	10.0	89.76	9.33	1.09	70%	8%
943331	Product	8	9/20/94	18:00	4.01	7.60	0.41	0.23	88.71	1.077	10.0	89.73	9.29	0.65	71%	5%
943337	Product	8	9/22/94	15:00	4.05	6.05	0.41	0.22	90.31	1.079	10.0	89.93	9.61	1.05	71%	8%
943343	Product	8	9/22/94	18:00	3.97	6.44	0.41	0.22	88.49	1.079	10.0	89.88	9.34	0.98	69%	7%
943349	Product	8	9/22/94	22:00	3.90	4.96	0.40	0.21	89.63	1.079	10.0	89.91	9.17	1.55	68%	11%
943469	Product	8	9/28/94	18:00	4.08	4.66	0.42	0.22	91.99	1.082	10.0	90.13	9.89	1.56	71%	11%
943473	Product	8	9/28/94	22:00	4.10	4.14	0.42	0.22	92.66	1.082	10.0	90.18	10.00	1.70	71%	12%
943479	Product	8	9/29/94	14:00	4.12	4.71	0.43	0.22	92.35	1.080	10.0	89.99	9.77	1.48	71%	11%
943483	Product	8	10/3/94	14:00	4.14	4.00	0.43	0.22	92.50	1.081	10.0	90.05	9.82	1.64	71%	12%
943489	Product	8	10/3/94	18:00	4.14	5.16	0.42	0.22	92.20	1.083	10.0	90.21	10.07	1.43	71%	10%
943495	Product	8	10/3/94	22:45	4.15	7.60	0.43	0.22	90.16	1.082	10.0	90.16	10.00	0.79	71%	6%
943501	Product	8	10/4/94	14:00	4.14	6.16	0.43	0.22	91.22	1.083	10.0	90.26	10.12	1.21	71%	8%
943507	Product	8	10/4/94	18:00	4.12	6.64	0.43	0.22	90.99	1.083	10.0	90.22	10.05	1.11	71%	8%
943513	Product	8	10/4/94	21:30	4.14	4.46	0.43	0.22	92.60	1.081	10.0	90.11	9.93	1.59	71%	11%
943519	Product	8	10/5/94	14:00	4.12	6.25	0.43	0.22	91.33	1.080	10.0	90.01	9.77	1.14	71%	8%
943775	Product	8	10/6/94	14:00	4.03	4.69	0.43	0.22	91.52	1.081	10.0	90.11	9.83	1.49	70%	11%
943781	Product	8	10/7/94	14:00	4.04	4.69	0.43	0.22	91.62	1.083	10.0	90.23	10.02	1.49	71%	11%
943787	Product	8	10/10/94	14:00	4.08	4.69	0.44	0.23	91.75	1.086	10.0	90.52	10.50	1.57	71%	11%
943793	Product	8	10/10/94	18:00	4.07	4.69	0.44	0.23	92.03	1.087	10.0	90.55	10.58	1.58	71%	11%
943797	Product	8	10/10/94	22:00	4.08	4.69	0.44	0.23	92.08	1.087	10.0	90.62	10.68	1.58	71%	11%
943801	Product	8	10/11/94	14:00	4.07	4.69	0.46	0.23	91.59	1.089	10.0	90.71	10.72	1.62	71%	11%
943807	Product	8	10/11/94	22:00	4.08	4.69	0.44	0.23	91.90	1.087	10.0	90.56	10.56	1.58	71%	11%
943813	Product	8	10/12/94	14:00	4.11	4.69	0.44	0.23	91.64	1.085	10.0	90.44	10.36	1.54	71%	11%
943819	Product	8	10/12/94	18:00	4.07	4.69	0.45	0.23	91.60	1.086	10.0	90.53	10.42	1.65	70%	11%
943825	Product	8	10/12/94	22:00	4.08	4.69	0.45	0.24	91.67	1.082	10.0	90.14	9.92	1.50	71%	11%
943831	Product	8	10/13/94	20:00	4.01	4.69	0.43	0.23	90.48	1.081	10.0	90.12	9.70	1.63	69%	12%
943837	Product	8	10/19/94	14:00	4.10	4.69	0.44	0.22	91.18	1.090	10.0	90.82	10.60	1.97	69%	13%

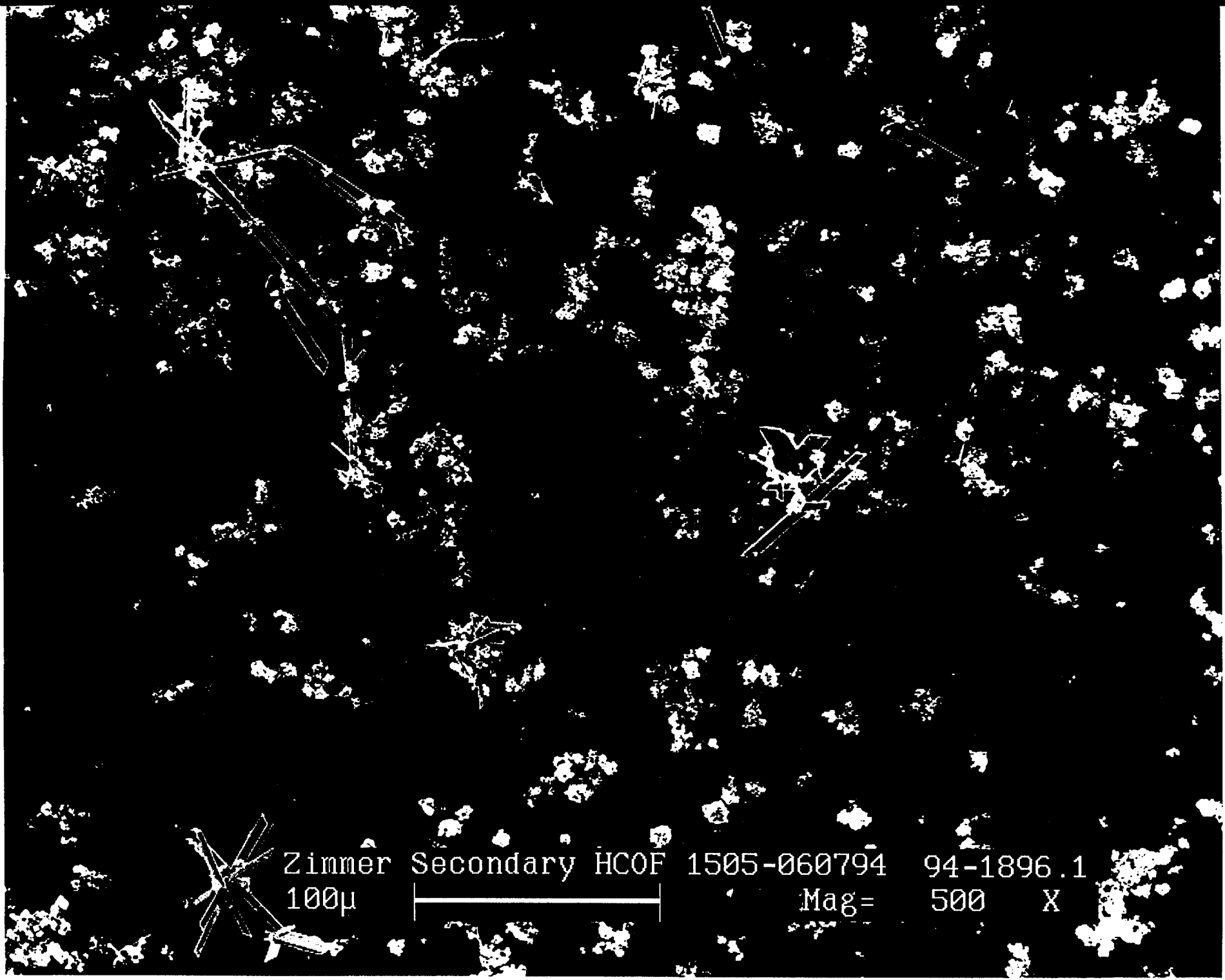
Lab#	Spl ID1	SampleID	Spl ID2	Spl ID3	$MgSiO_2$ (calc.)	$CaCO_3$ (calc.)	Al_2O_3	Fe_2O_3	Total	Spec. Gravity	Gal/min	Lbs/min	$Mg(OH)_2$ (Lbs./min)	$CaSO_4*2H_2O$ (Lbs./min)	$Mg(OH)_2$ wt% Purity	Gypsum wt% Purity
943999	Product	8	10/24/94	14:00	4.12	4.69	0.45	0.22	91.22	1.090	10.0	90.82	10.63	1.95	69%	13%
944004	Product	8	10/25/94	14:00	4.14	4.69	0.44	0.23	91.85	1.084	10.0	90.29	9.92	1.86	69%	13%
944009	Product	8	10/26/94	14:00	3.89	4.69	0.43	0.22	92.33	1.065	10.0	88.76	7.70	1.66	68%	15%
944015	Product	8	10/27/94	14:00	3.84	4.69	0.42	0.22	92.63	1.084	10.0	90.29	9.97	1.97	70%	14%
944244	Product	8	10/28/94	14:00	3.77	4.69	0.41	0.22	92.47	1.062	10.0	88.50	7.55	1.42	70%	13%
944250	Product	8	10/31/94	14:00	3.94	4.69	0.41	0.21	92.26	1.072	10.0	89.30	8.76	1.47	71%	12%
944256	Product	8	11/1/94	14:00	3.79	4.69	0.41	0.22	92.84	1.058	10.0	88.18	7.22	1.25	71%	12%
944262	Product	8	11/2/94	14:00	3.63	4.69	0.41	0.21	91.69	1.058	10.0	88.17	6.89	1.47	68%	15%
944268	Product	8	11/3/94	14:00	3.65	4.69	0.41	0.22	92.02	1.065	10.0	88.74	7.77	1.55	69%	14%
944277	Product	8	11/4/94	14:00	3.62	4.69	0.41	0.22	91.68	1.069	10.0	89.05	8.09	1.70	68%	14%
944283	Product	8	11/7/94	14:00	3.87	4.69	0.42	0.23	91.91	1.069	10.0	89.08	8.30	1.53	70%	13%
944289	Product	8	11/8/94	14:00	3.84	4.69	0.41	0.21	92.84	1.061	10.0	88.43	7.40	1.49	70%	14%
944295	Product	8	11/9/94	14:00	3.89	4.69	0.43	0.22	93.62	1.072	10.0	89.31	8.70	1.70	71%	14%
944301	Product	8	11/10/94	14:00	3.83	4.69	0.43	0.22	92.69	1.067	10.0	88.89	8.08	1.53	70%	13%
944307	Product	8	11/11/94	14:00	3.82	4.69	0.43	0.23	92.01	1.063	10.0	88.62	7.78	1.32	71%	12%
944480	Product	8	11/18/94	14:00	3.87	4.69	0.43	0.23	92.62	1.082	10.0	90.14	10.09	1.59	72%	11%
944486	Product	8	11/21/94	14:00	3.86	4.69	0.43	0.23	92.59	1.083	10.0	90.28	10.28	1.63	72%	11%
944612	Product	8	11/22/94	13:00	3.90	4.69	0.43	0.23	92.45	1.082	10.0	90.15	10.05	1.61	72%	12%
944618	Product	8	11/23/94	14:00	3.93	4.69	0.43	0.23	93.11	1.085	10.0	90.40	10.51	1.68	72%	12%
944624	Product	8	11/28/94	14:00	3.90	4.69	0.41	0.24	93.34	1.080	10.0	90.00	9.64	1.90	70%	14%
944630	Product	8	11/29/94	14:00	3.51	4.69	0.39	0.21	93.40	1.050	10.0	87.51	5.77	1.72	65%	19%
944636	Product	8	11/30/94	14:00	3.10	4.69	0.36	0.17	93.05	1.068	10.0	89.03	6.91	3.09	59%	26%
944642	Product	8	11/30/94	18:00	3.11	4.69	0.36	0.17	93.35	1.067	10.0	88.89	6.77	3.01	59%	26%
944648	Product	8	12/1/94	14:00	3.34	4.69	0.37	0.19	93.24	1.065	10.0	88.73	6.92	2.55	62%	23%
944654	Product	8	12/5/94	14:00	3.70	4.69	0.39	0.20	92.85	1.054	10.0	87.86	6.28	1.70	66%	18%
944675	Product	8	12/6/94	14:00	3.86	4.69	0.39	0.21	92.26	1.052	10.0	87.64	6.11	1.44	67%	16%
944719	Product	8	12/8/94	14:00	3.75	4.69	0.38	0.20	90.59	1.056	10.0	88.01	6.31	1.69	64%	17%
944735	Product	8	12/9/94	14:00	3.91	4.69	0.39	0.22	89.66	1.045	10.0	87.10	5.47	1.02	68%	13%
943987	Mg(OH)2 as received	#N/A														
943988	Mg(OH)2 Eimco Product	#N/A														
943989	Mg(OH)2 Bird Product	#N/A														
943990	Mg(OH)2 Sharples Product	#N/A														
942218	Washed Mg(OH)2 Test #15	#N/A	10 minutes													
942219	Washed Mg(OH)2 Test #16	#N/A	10 minutes													
942220	Washed Mg(OH)2 Test #17	#N/A	10 minutes													
942221	Washed Mg(OH)2 Test #18	#N/A	20 minutes													
942222	Washed Mg(OH)2 Test #19	#N/A	20 minutes													
942223	Washed Mg(OH)2 Test #20	#N/A	20 minutes													
943165	MAG Slurry Wash	#N/A	O for 10 mi													
943166	MAG Slurry Wash	#N/A	O for 20 mi													
943164	MAG Slurry Solids	#N/A	H dissoluti													
930148	Mg(OH)2 Slurry	#N/A	Zimmer Station													
943163	Solids from MAG Slurry	#N/A	3													
943162	Solids from MAG Slurry	#N/A	0													
930148	DOW Prod.	#N/A			0.56	0.00	0.00	0.00	97.23							
941976	Washed Mg(OH)2 Test #1	#N/A														
941977	Washed Mg(OH)2 Test #2	#N/A														
941978	Washed Mg(OH)2 Test #3	#N/A														
941979	Washed Mg(OH)2 Test #4	#N/A														
942225	Test 1A Solids	#N/A														
944238	FGD TUF2	13	10/31/94													

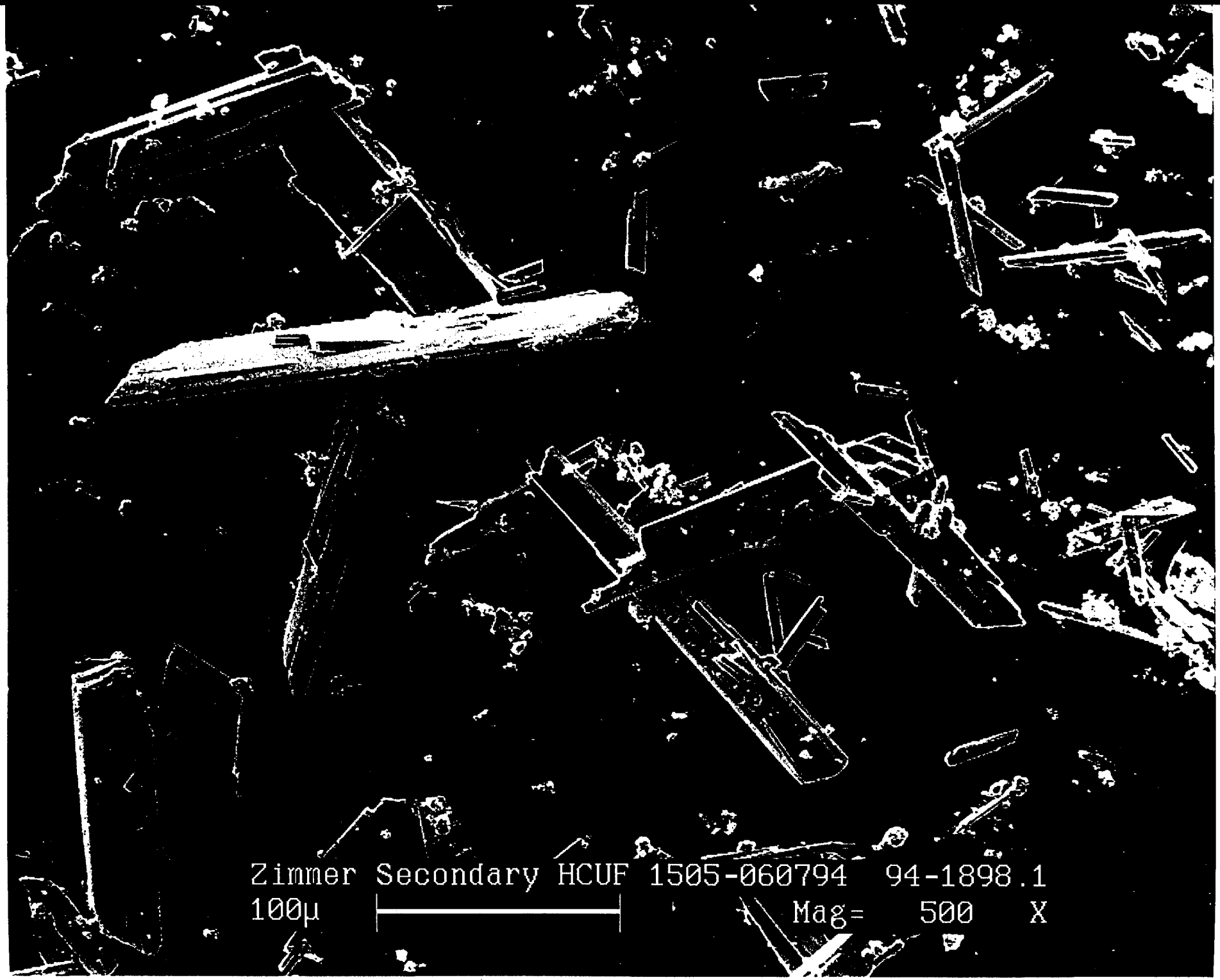
Zimmer Regen. 1430-060794 94-1899.1
100µ
Mag= 500 X

Zimmer - Normal #1 HCOF 012695-1030 95-0183.1
30µ
Mag= 750 X
DRAVO LIME
COMPANY

DRAVO LIME
COMPANY
Zimmer - Normal #1 HCUF 012695-1030 95-0184.2
20µ
Mag= 1.00 K X

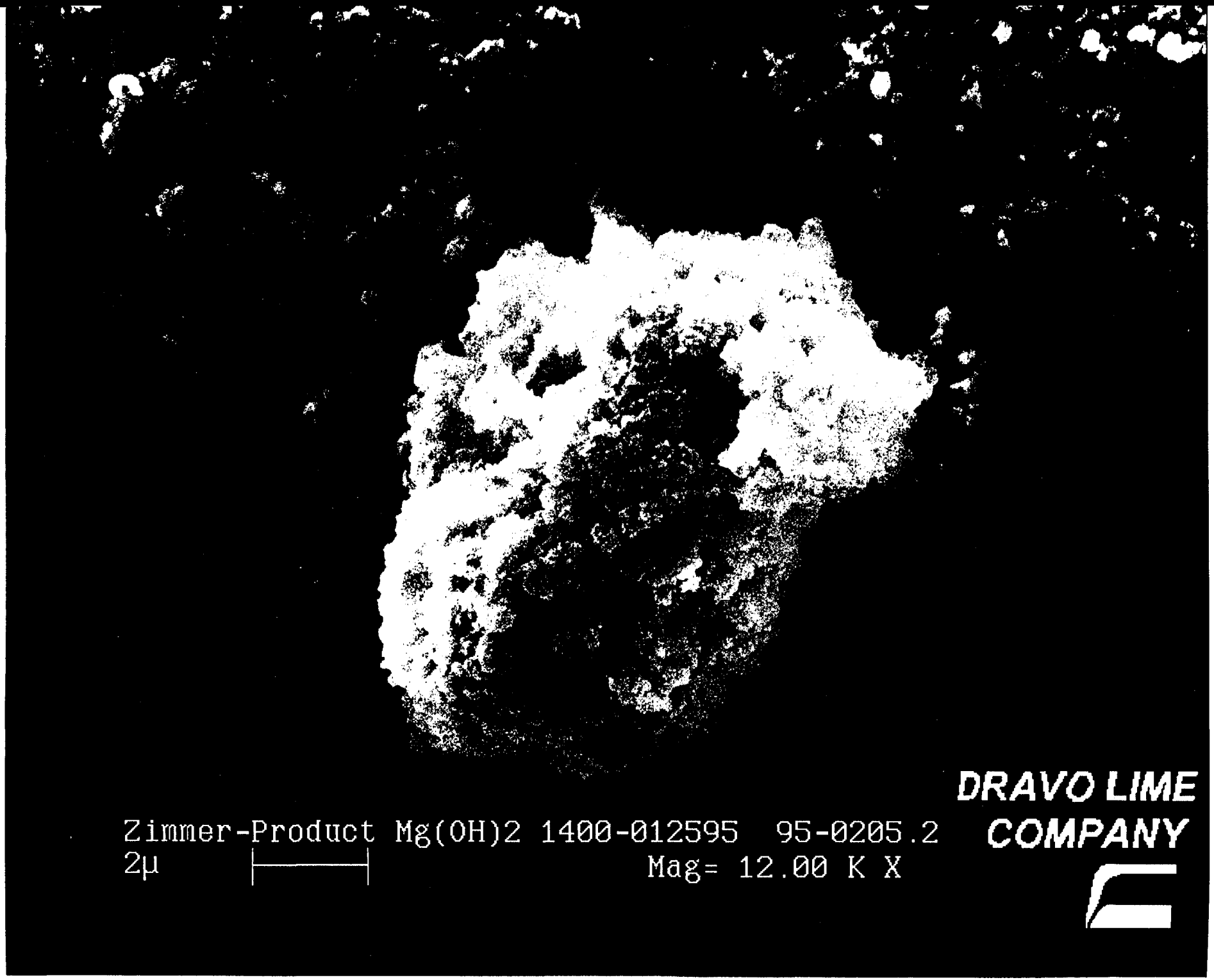
55


Zimmer Secondary HCOF 1505-060794 94-1896.1
100µ
Mag= 500 X


Zimmer Secondary HCUF 1505-060794 94-1898.1
100µ
Mag= 500 X

DRAVO LIME
COMPANY
Zimmer - Mg(OH)2 Product 012595-1400 95-0205.2
10µ
Mag= 1.50 K X

52


DRAVO LIME
COMPANY
Zimmer-Product Mg(OH)2 1400-012595 95-0205.2
2µ
Mag= 12.00 K X

Project No: 5252
Lab no : 94-1899
Date : 06/14/94
Sampled by: Client
Test No. : 17125

ent Name: DLC - ZIMMER STA
n: KS JWC

ple Identification: REGEN 1430-060794

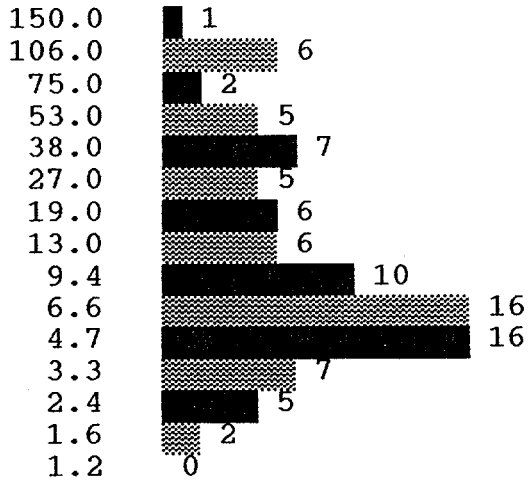
ple Preparation : SMALL CELL METHANOL

Particle Size Distribution by Leeds & Northrup Microtrac

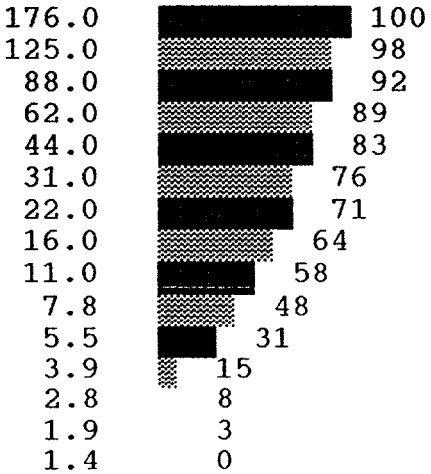
Percent Passing

Chan.	Cum.	Vol.
176.0	100.0	1.0
125.0	99.0	6.4
88.0	92.6	2.8
62.0	89.8	5.8
44.0	84.0	7.9
31.0	76.1	5.1
22.0	71.0	6.4
16.0	64.6	6.2
11.0	58.4	10.3
7.8	48.1	16.3
5.5	31.8	16.1
3.9	15.7	7.4
2.8	8.2	5.0
1.9	3.2	2.5
1.4	0.6	0.6

Relative Volume Graph



Cummulative Graph



Summary Data

%10 = 3.06
%50 = 8.38
%90 = 63.68

MV = 23.09
CS = 0.894
DV = 0.2310

Remarks: 25 SEC RUN JS
SOME +80 MESH

Respectfully Submitted,

Mary Lou Cupp
Laboratory Supervisor
Dravo Lime Company

Project No: 5252
Lab no : 94-1896
Date : 06/14/94
Sampled by: Client
Test No. : 17122

ent Name: DLC - ZIMMER STA
n: KS JWC

ple Identification: SEC/HCOF 1505-060794

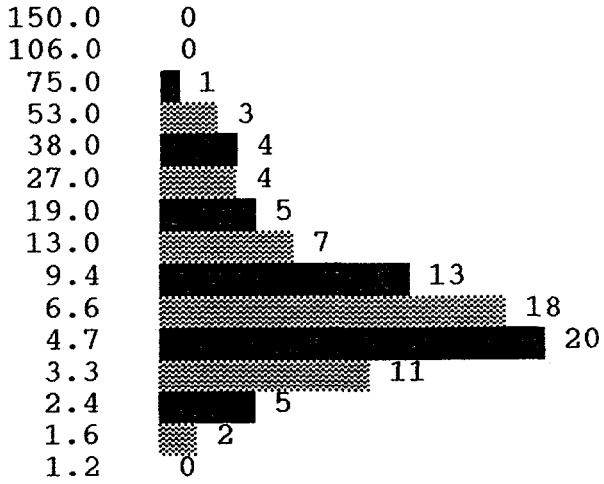
ple Preparation : SMALL CELL METHANOL

Particle Size Distribution by Leeds & Northrup Microtrac

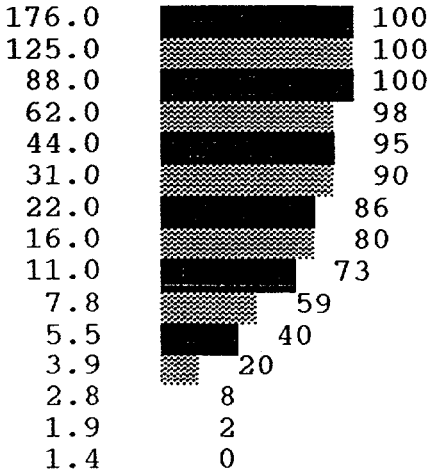
Percent Passing

Chan.	Cum.	Vol.
176.0	100.0	0.0
125.0	100.0	0.0
88.0	100.0	1.3
62.0	98.8	3.4
44.0	95.3	4.6
31.0	90.7	4.2
22.0	86.5	6.0
16.0	80.5	7.2
11.0	73.3	13.9
7.8	59.3	18.4
5.5	40.9	20.4
3.9	20.5	11.9
2.8	8.6	5.8
1.9	2.8	2.5
1.4	0.3	0.3

Relative Volume Graph



Cummulative Graph



Summary Data

%10 = 2.93
%50 = 6.63
%90 = 29.48

MV = 11.79
CS = 1.061
DV = 0.2431

Remarks: 25 SEC RUN JS
NO +80 MESH

Respectfully Submitted,

Mary Lou Cupp
Laboratory Supervisor
Dravo Lime Company

Project No: 5252
Lab no : 94-1898
Date : 06/14/94
Sampled by: Client
Test No. : 17124

ent Name: DLC - ZIMMER STA
n: KS JWC

ple Identification: SEC/HCUF 1505-060794

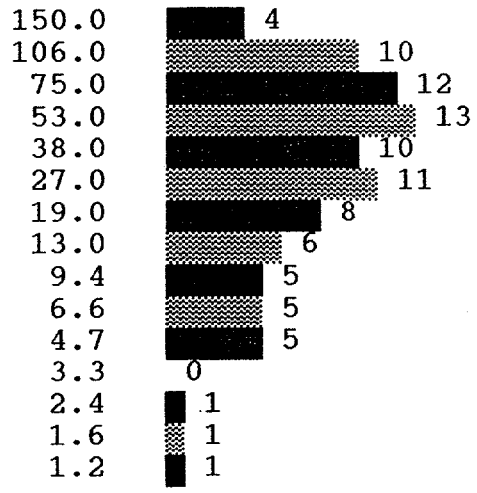
ple Preparation : SMALL CELL METHANOL

Particle Size Distribution by Leeds & Northrup Microtrac

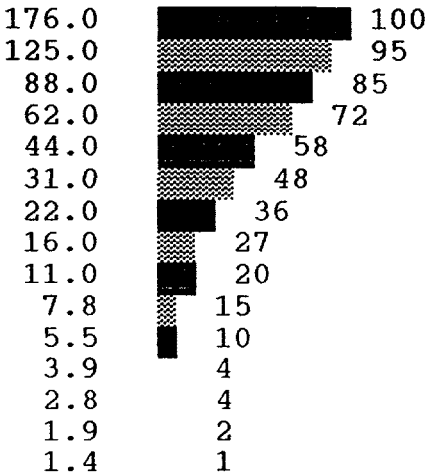
Percent Passing

Chan.	Cum.	Vol.
176.0	100.0	4.6
125.0	95.4	10.3
88.0	85.1	12.8
62.0	72.3	13.4
44.0	58.9	10.8
31.0	48.1	11.7
22.0	36.3	8.7
16.0	27.7	7.0
11.0	20.7	5.1
7.8	15.7	5.3
5.5	10.4	5.8
3.9	4.6	0.0
2.8	4.6	1.9
1.9	2.8	1.5
1.4	1.2	1.2

Relative Volume Graph



Cummulative Graph



Summary Data

%10 = 5.39
%50 = 33.33
%90 = %105.62

MV = 45.54
CS = 0.455
DV = 0.7755

Remarks: 25 SEC RUN JS
SOME +80 MESH

Respectfully Submitted,

Mary Lou Cupp
Laboratory Supervisor
Dravo Lime Company

Project No: 5248
Lab no : 94-4654
Date : 01/05/94
Sampled by: Client
Test No. : 18335

ent Name: DLC - ZIMMER
n: KS JWC

ple Identification: PRODUCT 120594 1400

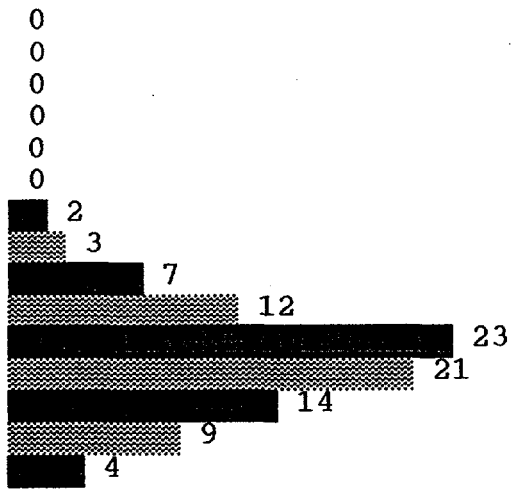
ple Preparation : SMALL CELL METHANOL

Particle Size Distribution by Leeds & Northrup Microtrac

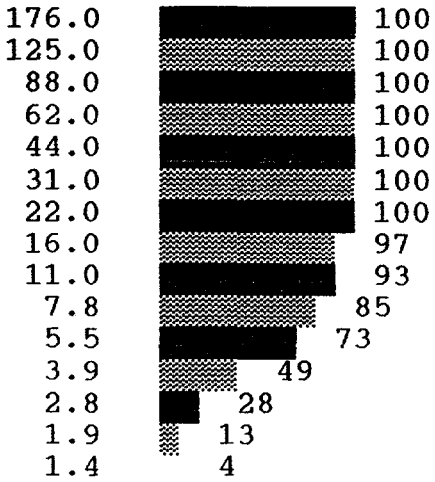
Percent Passing

Chan.	Cum.	Vol.
176.0	100.0	0.0
125.0	100.0	0.0
88.0	100.0	0.0
62.0	100.0	0.0
44.0	100.0	0.0
31.0	100.0	0.0
22.0	100.0	2.4
16.0	97.6	3.8
11.0	93.8	7.9
7.8	85.9	12.4
5.5	73.5	24.0
3.9	49.5	21.3
2.8	28.3	14.9
1.9	13.4	9.1
1.4	4.3	4.3

Relative Volume Graph



Cummulative Graph



Summary Data

%10 = 1.71
%50 = 3.93
%90 = 9.46

MV = 4.89
CS = 1.809
DV = 0.2429

Remarks: 25 SEC RUN MLC
80 MESH NOT USED

Respectfully Submitted,

Mary Lou Cupp
Laboratory Supervisor
Dravo Lime Company

Project No: 5248
Lab no : 95-0183
Date : 03/10/95
Sampled by: Client
Test No. : 18538

nt Name: DLC - ZIMMER
: KS JWC

le Identification: NORMPRIHCOF103012695

le Preparation : SMALL CELL METHANOL

Particle Size Distribution by Leeds & Northrup Microtrac

Percent Passing

Chan.	Cum.	Vol.
176.0	100.0	0.0
125.0	100.0	0.0
88.0	100.0	0.0
62.0	100.0	0.0
44.0	100.0	0.0
31.0	100.0	0.0
22.0	100.0	0.0
16.0	100.0	6.3
11.0	93.7	15.8
7.8	78.0	20.4
5.5	57.6	26.2
3.9	31.4	17.6
2.8	13.8	8.7
1.9	5.0	4.0
1.4	1.0	1.0

Relative Volume Graph

150.0	0
106.0	0
75.0	0
53.0	0
38.0	0
27.0	0
19.0	0
13.0	6
9.4	15
6.6	20
4.7	26
3.3	17
2.4	8
1.6	4
1.2	1

Cummulative Graph

176.0	100
125.0	100
88.0	100
62.0	100
44.0	100
31.0	100
22.0	100
16.0	100
11.0	93
7.8	77
5.5	57
3.9	31
2.8	13
1.9	5
1.4	1

Summary Data

%10 = 2.41
%50 = 5.04
%90 = 10.24

MV = 5.74
CS = 1.390
DV = 0.2257

Remarks: 25 SEC RUN JS
80 MESH NOT USED

Respectfully Submitted,

Mary Lou Cupp
Laboratory Supervisor
Dravo Lime Company

Project No: 5248
Lab no : 95-0184
Date : 03/10/95
Sampled by: Client
Test No. : 18510

ent Name: DLC - ZIMMER
a: KS JWC

ple Identification: NORMPRIHCUF103012695

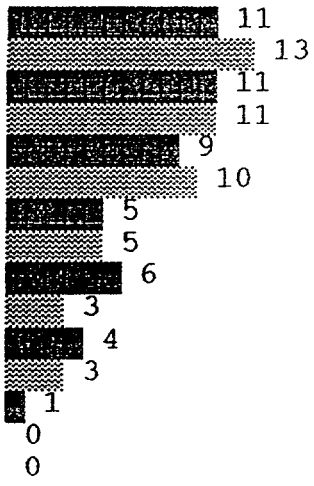
ple Preparation : LARGE CELL WATER

Particle Size Distribution by Leeds & Northrup Microtrac

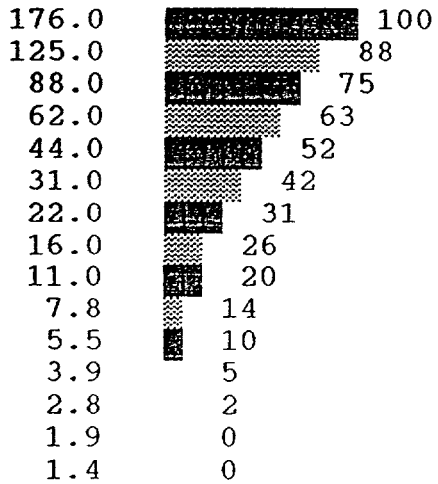
Percent Passing

Chan.	Cum.	Vol.
176.0	100.0	11.1
125.0	88.9	13.9
88.0	75.0	11.6
62.0	63.4	11.2
44.0	52.2	9.6
31.0	42.6	10.9
22.0	31.7	5.2
16.0	26.5	5.9
11.0	20.6	6.3
7.8	14.3	3.4
5.5	10.8	5.0
3.9	5.8	3.4
2.8	2.5	1.8
1.9	0.7	0.7
1.4	0.0	0.0

Relative Volume Graph



Cummulative Graph



Summary Data

%10 = 5.23
%50 = 41.00
%90 = %130.07

MV = 55.58
CS = 0.384
DV = 0.8945

Remarks: 25 SEC RUN JS
80 MESH NOT USED

Respectfully Submitted,

Mary Lou Cupp
Laboratory Supervisor
Dravo Lime Company

Project No: 5248
Lab no : 95-0185
Date : 03/10/95
Sampled by: Client
Test No. : 18539

ent Name: DLC - ZIMMER
n: KS JWC

ple Identification: 1ST HCOF 1030-012695

ple Preparation : SMALL CELL METHANOL

Particle Size Distribution by Leeds & Northrup Microtrac

Percent Passing

Chan.	Cum.	Vol.
176.0	100.0	0.0
125.0	100.0	0.0
88.0	100.0	0.0
62.0	100.0	0.0
44.0	100.0	0.0
31.0	100.0	0.0
22.0	100.0	2.1
16.0	97.9	8.1
11.0	89.9	16.3
7.8	73.6	19.9
5.5	53.7	25.4
3.9	28.3	16.2
2.8	12.2	7.9
1.9	4.3	3.5
1.4	0.8	0.8

Relative Volume Graph

150.0	0
106.0	0
75.0	0
53.0	0
38.0	0
27.0	0
19.0	2
13.0	8
9.4	16
6.6	19
4.7	25
3.3	16
2.4	7
1.6	3
1.2	0

Cummulative Graph

176.0	100
125.0	100
88.0	100
62.0	100
44.0	100
31.0	100
22.0	100
16.0	97
11.0	89
7.8	73
5.5	53
3.9	28
2.8	12
1.9	4
1.4	0

Summary Data

%10 = 2.55
%50 = 5.27
%90 = 11.07

MV = 6.26
CS = 1.314
DV = 0.2541

Remarks: 25 SEC RUN JS
80 MESH NOT USED

Respectfully Submitted,

Mary Lou Cupp
Laboratory Supervisor
Dravo Lime Company

Project No: 5248
Lab no : 95-0186
Date : 03/10/95
Sampled by: Client
Test No. : 18511

ent Name: DLC - ZIMMER
n: KS JWC

ple Identification: 1ST HCUF 1030-012695

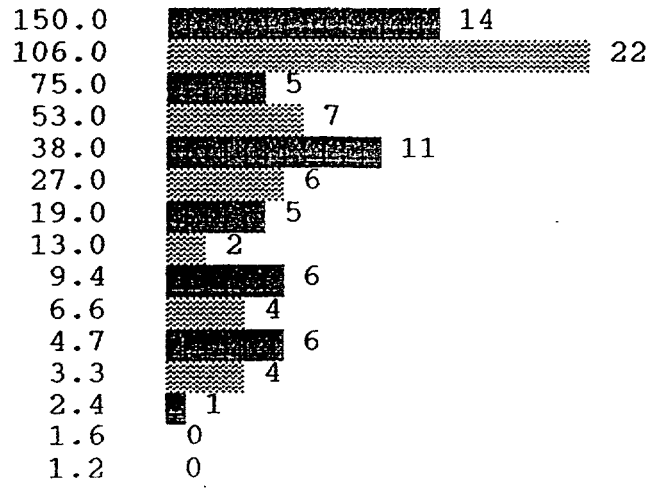
ple Preparation : LARGE CELL WATER

Particle Size Distribution by Leeds & Northrup Microtrac

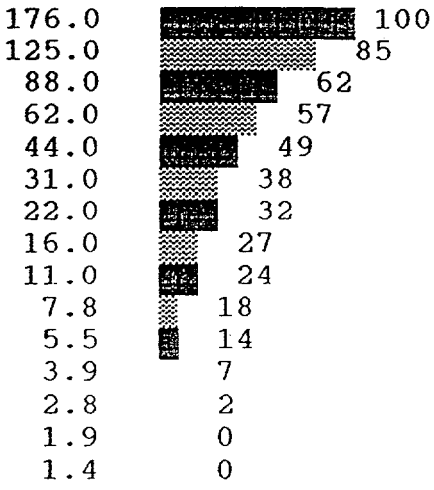
Percent Passing

Chan.	Cum.	Vol.
176.0	100.0	14.8
125.0	85.2	22.4
88.0	62.8	5.3
62.0	57.5	7.6
44.0	49.9	11.6
31.0	38.4	6.2
22.0	32.1	5.0
16.0	27.1	2.5
11.0	24.6	6.2
7.8	18.5	4.4
5.5	14.1	6.5
3.9	7.6	5.0
2.8	2.6	2.0
1.9	0.6	0.6
1.4	0.0	0.0

Relative Volume Graph



Cummulative Graph



Summary Data

%10 = 4.50
%50 = 44.13
%90 = %141.57

MV = 62.69
CS = 0.415
DV = 0.5054

Remarks: 25 SEC RUN JS
80 MESH NOT USED

Respectfully Submitted,

Mary Lou Cupp
Laboratory Supervisor
Dravo Lime Company

Project No: 5248
Lab no : 95-0187
Date : 03/10/95
Sampled by: Client
Test No. : 18540

ent Name: DLC - ZIMMER
: KS JWC

ple Identification: 2ND HCOF 1030-012695

ple Preparation : SMALL CELL METHANOL

Particle Size Distribution by Leeds & Northrup Microtrac

Percent Passing

Chan.	Cum.	Vol.
176.0	100.0	0.0
125.0	100.0	0.0
88.0	100.0	0.0
62.0	100.0	0.0
44.0	100.0	0.0
31.0	100.0	0.0
22.0	100.0	1.3
16.0	98.7	9.5
11.0	89.2	15.1
7.8	74.1	20.0
5.5	54.1	25.3
3.9	28.8	14.9
2.8	14.0	8.5
1.9	5.5	4.2
1.4	1.2	1.2

Relative Volume Graph

150.0	0
106.0	0
75.0	0
53.0	0
38.0	0
27.0	0
19.0	1
13.0	9
9.4	15
6.6	19
4.7	25
3.3	14
2.4	8
1.6	4
1.2	1

Cummulative Graph

176.0	100
125.0	100
88.0	100
62.0	100
44.0	100
31.0	100
22.0	100
16.0	98
11.0	89
7.8	74
5.5	54
3.9	28
2.8	13
1.9	5
1.4	1

Summary Data

%10 = 2.38
%50 = 5.24
%90 = 11.42

MV = 6.19
CS = 1.352
DV = 0.2620

Remarks: 25 SEC RUN JS
80 MESH NOT USED

Respectfully Submitted,

Mary Lou Cupp
Laboratory Supervisor
Dravo Lime Company

Project No: 5248
Lab no : 95-0188
Date : 03/10/95
Sampled by: Client
Test No. : 18541

ent Name: DLC - ZIMMER
n: KS JWC

ple Identification: 2ND HCOF 1030-012695

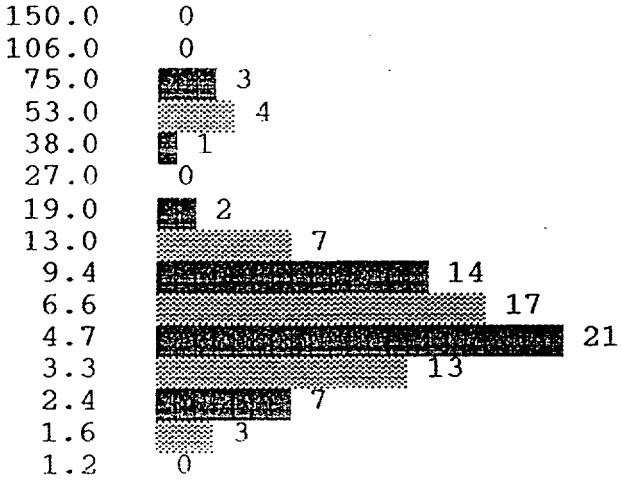
ple Preparation : SMALL CELL METHANOL

Particle Size Distribution by Leeds & Northrup Microtrac

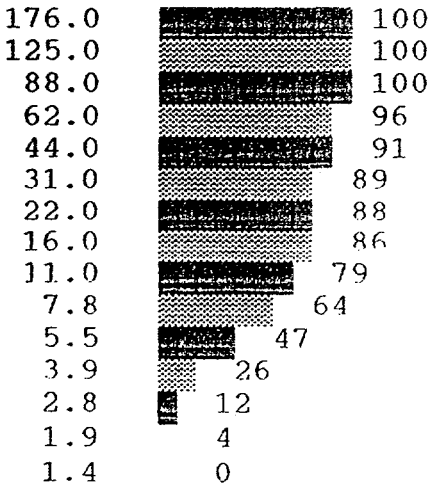
Percent Passing

Chan.	Cum.	Vol.
176.0	100.0	0.0
125.0	100.0	0.0
88.0	100.0	3.9
62.0	96.1	4.5
44.0	91.5	1.7
31.0	89.8	1.0
22.0	88.8	2.5
16.0	86.3	7.2
11.0	79.1	14.9
7.8	64.2	17.1
5.5	47.1	21.0
3.9	26.1	13.9
2.8	12.2	7.5
1.9	4.6	3.7
1.4	1.0	1.0

Relative Volume Graph



Cummulative Graph



Summary Data

%10 = 2.54
%50 = 5.89
%90 = 32.56

MV = 11.92
CS = 1.200
DV = 0.3299

Remarks: 25 SEC RUN JS
80 MESH NOT USED

Respectfully Submitted,

Mary Lou Cupp
Laboratory Supervisor
Dravo Lime Company

Project No: 5248
Lab no : 95-0284
Date : 02/15/95
Sampled by: Client
Test No. : 18433

ent Name: ZIMMER 5 KW
n: ST KS

ple Identification: FINAL SLURRY 020195

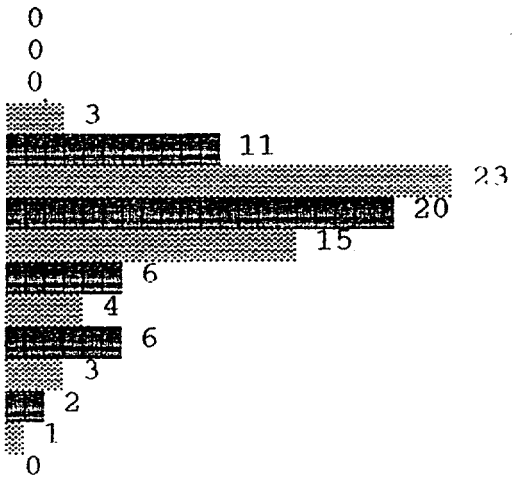
ple Preparation : US SMALL CELL METHANOL

Particle Size Distribution by Leeds & Northrup Microtrac

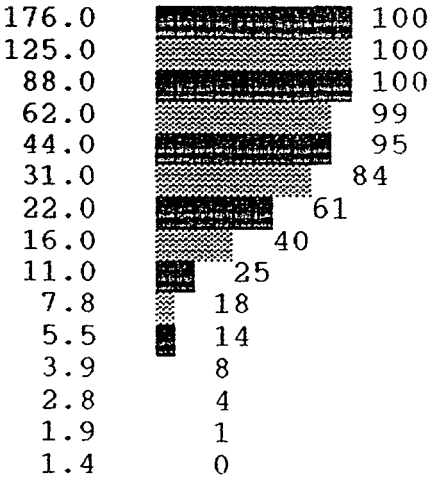
Percent Passing

Chan.	Cum.	Vol.
176.0	100.0	0.0
125.0	100.0	0.0
88.0	100.0	0.4
62.0	99.6	3.7
44.0	95.9	11.2
31.0	84.7	23.1
22.0	61.6	20.9
16.0	40.7	15.2
11.0	25.5	6.6
7.8	18.9	4.4
5.5	14.5	6.2
3.9	8.2	3.8
2.8	4.5	2.8
1.9	1.7	1.4
1.4	0.3	0.3

Relative Volume Graph



Cummulative Graph



Summary Data

%10 = 4.35
%50 = 18.66
%90 = 37.12

MV = 20.10
CS = 0.577
DV = 0.2077

Remarks: 25 SEC RUN JS
SOME +80 MESH

Respectfully Submitted,

Mary Lou Cupp
Laboratory Supervisor
Dravo Lime Company

Project No: 5248
Lab no : 95-0301
Date : 02/15/95
Sampled by: Client
Test No. : 18434

ent Name: ZIMMER 5 KW
n: ST KS

ple Identification: FIN SLR 1600-020295

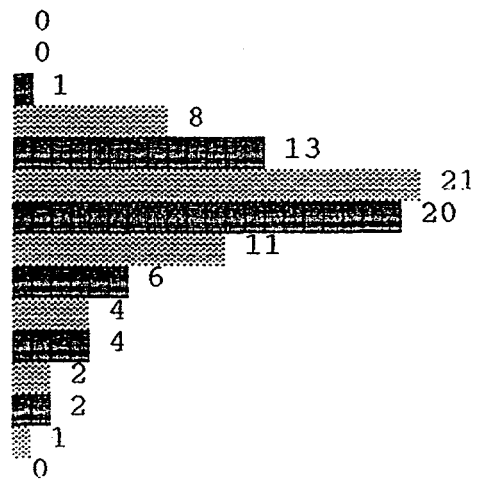
ple Preparation : US SMALL CELL METHANOL

Particle Size Distribution by Leeds & Northrup Microtrac

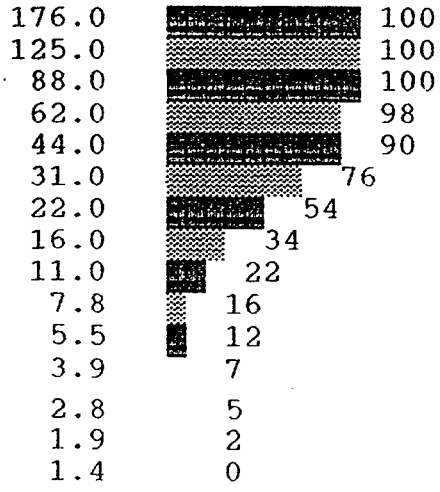
Percent Passing

Chan.	Cum.	Vol.
176.0	100.0	0.0
125.0	100.0	0.0
88.0	100.0	1.2
62.0	98.8	8.7
44.0	90.1	14.0
31.0	76.2	21.2
22.0	54.9	20.8
16.0	34.1	11.3
11.0	22.8	6.2
7.8	16.6	4.3
5.5	12.4	4.4
3.9	7.9	2.4
2.8	5.5	2.8
1.9	2.7	1.8
1.4	0.9	0.9

Relative Volume Graph



Cummulative Graph



Summary Data

%10 = 4.65
%50 = 20.58
%90 = 43.90

MV = 23.22
CS = 0.559
DV = 0.2062

Remarks: 25 SEC RUN JS
SOME +80 MESH

Respectfully Submitted,

Mary Lou Cupp
Laboratory Supervisor
Dravo Lime Company

Project No: 5248
Lab no : 95-0421
Date : 03/13/95
Sampled by: Client
Test No. : 18565

ent Name: ZIMMER - 5 KW
n: ST KS

ple Identification: 022095 FINAL SLURRY

ple Preparation : US SMALL CELL METHANOL

Particle Size Distribution by Leeds & Northrup Microtrac

Percent Passing

Chan.	Cum.	Vol.
176.0	100.0	0.0
125.0	100.0	0.0
88.0	100.0	0.0
62.0	100.0	12.3
44.0	87.7	22.9
31.0	64.7	19.7
22.0	45.1	13.5
16.0	31.6	7.1
11.0	24.5	8.4
7.8	16.1	4.6
5.5	11.5	3.0
3.9	8.5	5.8
2.8	2.7	2.1
1.9	0.6	0.6
1.4	0.0	0.0

Relative Volume Graph

150.0	0
106.0	0
75.0	0
53.0	12
38.0	22
27.0	19
19.0	13
13.0	7
9.4	8
6.6	4
4.7	2
3.3	5
2.4	2
1.6	0
1.2	0

Cummulative Graph

176.0	100
125.0	100
88.0	100
62.0	100
44.0	87
31.0	64
22.0	45
16.0	31
11.0	24
7.8	16
5.5	11
3.9	8
2.8	2
1.9	0
1.4	0

Summary Data

%10 = 4.71
%50 = 24.26
%90 = 47.41

MV = 25.54
CS = 0.483
DV = 0.1894

Remarks: 25 SEC RUN JS
SOME +80 MESH

Respectfully Submitted,

Mary Lou Cupp
Laboratory Supervisor
Dravo Lime Company

Hydroclone Testing at Zimmer

Date and Time	FIT-301	PIT-303	FIT-401	PIT-403
6/15/94 9:30	99.97	24.90	100.00	27.94
6/15/94 10:00	97.13	24.90	100.00	27.94
6/15/94 10:30	100.38	24.90	100.00	27.94
6/15/94 11:00	100.99	24.90	100.00	27.94
6/15/94 11:30	100.87	24.90	100.00	27.94
6/15/94 12:00	98.12	24.90	100.00	27.94
6/15/94 12:30	100.18	24.90	100.00	27.94
6/15/94 13:00	98.42	24.90	100.00	27.94
6/15/94 13:30	101.37	24.90	100.00	27.94
6/15/94 14:00	99.73	25.93	100.00	27.94
6/15/94 14:30	100.26	25.93	100.00	27.94
6/15/94 15:00	100.23	25.93	100.00	27.94
6/16/94 10:00	97.46	23.95	99.03	29.54
6/16/94 10:30	96.46	25.21	99.03	29.15
6/16/94 11:00	40.17	25.07	40.94	26.67
6/16/94 11:30	40.17	25.07	40.56	26.48
6/16/94 12:00	20.91	25.04	20.13	26.39
6/16/94 12:30	59.29	25.25	60.58	26.54
6/16/94 13:00	98.60	25.36	100.00	27.75
6/16/94 13:30	98.50	25.36	100.00	27.75
6/16/94 14:00	98.51	25.36	100.00	28.43
6/16/94 14:30	97.93	25.36	100.00	28.43
6/16/94 15:00	100.68	26.37	100.00	28.43
6/16/94 15:30	100.53	26.37	100.00	28.43
6/16/94 16:00	99.59	25.25	100.00	28.45
6/17/94 9:00	101.50	25.39	99.61	27.41
6/17/94 9:30	100.20	25.39	99.61	27.41
6/17/94 10:00	99.34	25.39	99.61	27.41
6/17/94 10:30	99.67	25.39	99.61	27.41
6/17/94 11:00	98.56	25.39	99.61	27.41
6/17/94 11:30	100.27	25.39	99.61	27.41
6/17/94 12:00	98.27	25.39	99.61	27.41
6/17/94 12:30	98.00	24.44	99.61	27.41
6/17/94 13:00	61.30	25.44	60.64	25.51
6/17/94 13:30	60.46	25.44	60.64	25.51
6/27/94 9:30	99.59	24.52	100.00	27.30
6/27/94 10:00	97.63	24.52	100.00	27.30
6/27/94 10:30	99.23	24.52	100.00	27.30
6/27/94 11:00	99.62	24.52	100.00	27.30
6/27/94 11:30	100.84	24.52	99.75	27.30
6/27/94 12:00	101.40	25.52	99.75	27.30
6/27/94 12:30	102.13	25.52	99.75	27.30
6/27/94 13:00	94.10	25.52	99.75	27.30
6/27/94 13:30	99.56	25.52	99.88	27.30
6/27/94 14:00	100.45	25.52	100.00	27.30
6/27/94 14:30	99.49	25.52	100.00	27.30
6/27/94 15:00	101.05	25.52	100.00	27.30
6/27/94 15:30	100.21	25.52	99.90	27.30

FIT-301 = Primary Hydroclone Feed Flowrate (gpm)

PIT-303 = Primary Hydroclone Feed Pressure (psi)

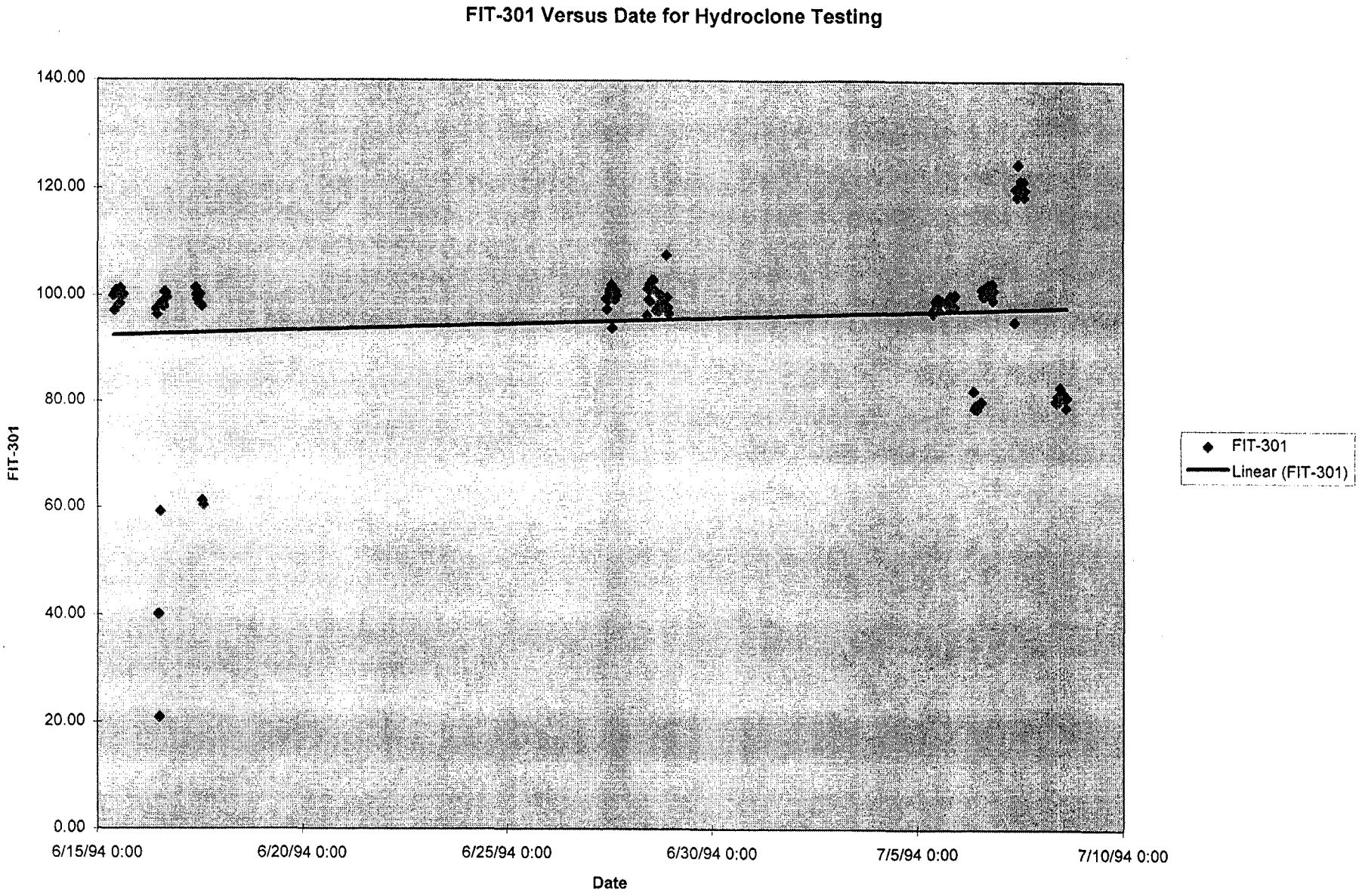
FIT-401 = Secondary Hydroclone Feed Flowrate (gpm)

PIT-403 = Secondary Hydroclone Feed Pressure (psi)

6/28/94 9:30	96.46	24.78	100.00	25.43
6/28/94 10:00	101.46	24.78	99.83	27.85
6/28/94 10:30	99.44	24.78	99.83	27.85
6/28/94 11:00	102.36	25.55	99.83	27.85
6/28/94 11:30	99.07	25.55	99.83	27.85
6/28/94 12:00	101.29	25.55	99.83	27.85
6/28/94 12:30	103.05	25.59	99.83	27.95
6/28/94 13:00	102.87	25.67	99.83	27.95
6/28/94 13:30	103.06	25.44	99.82	28.20
6/28/94 14:00	101.25	25.50	99.82	28.20
6/28/94 15:00	97.37	38.38	99.56	27.47
6/28/94 15:30	97.79	38.48	99.56	27.47
6/28/94 16:00	97.93	38.25	100.00	27.47
6/28/94 16:30	97.24	38.94	100.00	27.47
6/28/94 17:00	98.39	38.94	100.00	27.47
6/28/94 17:30	100.29	38.94	100.00	27.47
6/28/94 18:00	98.98	38.94	100.00	27.47
6/28/94 18:30	98.92	38.94	100.00	27.47
6/28/94 19:00	99.25	38.94	100.00	27.47
6/28/94 19:30	98.18	38.94	100.00	27.47
6/28/94 20:00	98.48	39.08	100.00	27.47
6/28/94 20:30	99.53	39.08	100.00	27.47
6/28/94 21:00	107.73	39.08	100.00	27.47
6/28/94 21:30	99.91	39.10	99.75	27.47
6/28/94 22:00	97.99	39.10	99.99	27.47
6/28/94 22:30	96.83	39.10	99.99	27.47
7/5/94 9:00	96.98	38.40	99.52	27.44
7/5/94 9:30	97.72	38.40	99.52	27.44
7/5/94 10:00	97.93	39.41	99.52	27.44
7/5/94 10:30	99.35	39.41	99.52	27.44
7/5/94 11:00	98.83	39.41	99.52	27.44
7/5/94 11:30	99.73	39.41	99.52	27.44
7/5/94 12:00	97.72	39.41	99.52	27.44
7/5/94 12:30	99.59	39.41	99.52	27.44
7/5/94 13:00	99.35	39.41	99.52	27.44
7/5/94 13:30	99.26	39.41	99.52	27.44
7/5/94 14:00	99.37	39.41	99.52	27.44
7/5/94 18:30	98.39	25.72	100.00	27.00
7/5/94 19:00	100.12	25.72	99.86	28.00
7/5/94 19:30	100.06	25.72	100.00	28.00
7/5/94 20:00	98.14	25.72	100.00	28.00
7/5/94 20:30	99.82	25.72	100.00	28.00
7/5/94 21:00	99.99	25.72	99.55	28.00
7/5/94 21:30	98.24	25.72	100.00	28.00
7/5/94 22:00	100.45	25.72	100.00	28.00
7/6/94 8:30	82.30	25.25	67.39	19.17
7/6/94 9:00	78.97	25.25	81.87	27.96
7/6/94 9:30	79.37	25.25	81.62	27.96
7/6/94 10:00	79.61	25.25	81.21	27.96

7/6/94 10:30	78.91	25.25	80.97	27.96
7/6/94 11:00	79.66	25.25	81.32	27.96
7/6/94 11:30	79.61	25.25	81.07	27.96
7/6/94 12:00	79.96	25.25	81.35	27.96
7/6/94 12:30	80.12	25.25	82.01	27.96
7/6/94 13:00	80.33	25.25	80.52	27.96
7/6/94 13:30	101.49	26.35	100.00	28.37
7/6/94 14:00	100.54	26.35	100.00	28.37
7/6/94 14:30	100.23	26.35	100.00	28.37
7/6/94 15:00	100.21	26.35	100.00	28.37
7/6/94 15:30	100.83	26.35	100.00	28.37
7/6/94 16:00	102.03	26.35	100.00	28.37
7/6/94 16:30	101.70	26.35	99.10	28.37
7/6/94 17:00	102.30	26.35	99.10	28.37
7/6/94 17:30	101.31	26.35	99.10	28.37
7/6/94 18:00	102.27	26.35	99.10	28.37
7/6/94 18:30	100.95	26.35	99.10	28.37
7/6/94 19:00	100.38	26.35	99.10	28.37
7/6/94 19:30	102.45	26.35	100.00	28.37
7/6/94 20:00	99.41	26.35	100.00	28.37
7/6/94 20:30	101.34	26.35	99.76	28.37
7/7/94 8:30	95.36	24.09	100.00	25.64
7/7/94 9:00	120.18	26.48	99.48	27.97
7/7/94 9:30	120.04	26.62	99.81	27.07
7/7/94 10:00	118.69	26.62	99.54	27.07
7/7/94 10:30	124.66	27.61	100.00	27.07
7/7/94 11:00	120.36	27.61	99.88	27.07
7/7/94 12:00	121.65	26.89	99.60	26.85
7/7/94 12:30	119.71	26.89	98.67	26.85
7/7/94 13:00	119.50	26.89	99.34	26.85
7/7/94 13:30	121.59	26.89	98.86	26.85
7/7/94 14:00	118.75	26.89	99.71	26.85
7/7/94 14:30	119.98	26.89	99.96	26.85
7/8/94 8:30	80.47	25.83	82.19	27.92
7/8/94 9:00	80.12	25.83	80.52	26.77
7/8/94 9:30	81.37	25.83	80.84	26.77
7/8/94 10:00	80.26	25.83	79.66	26.77
7/8/94 10:30	81.29	25.83	81.27	26.77
7/8/94 11:00	83.02	25.83	80.13	26.77
7/8/94 11:30	81.01	26.83	79.86	26.77
7/8/94 12:00	81.70	26.83	80.36	26.77
7/8/94 12:30	81.40	26.83	79.85	26.77
7/8/94 13:00	81.86	26.83	79.30	26.77
7/8/94 13:30	81.05	26.83	80.02	26.77
7/8/94 14:00	80.96	26.83	81.58	26.77
7/8/94 14:30	79.19	26.83	78.81	26.77
7/8/94 15:00	81.10	26.83	78.74	26.77

Minimum	20.91	23.95	20.13	19.17
Maximum	124.66	39.41	100.00	29.54
Average	95.84	28.25	94.23	27.49


FIT-301 Versus Date for Hydroclone Testing
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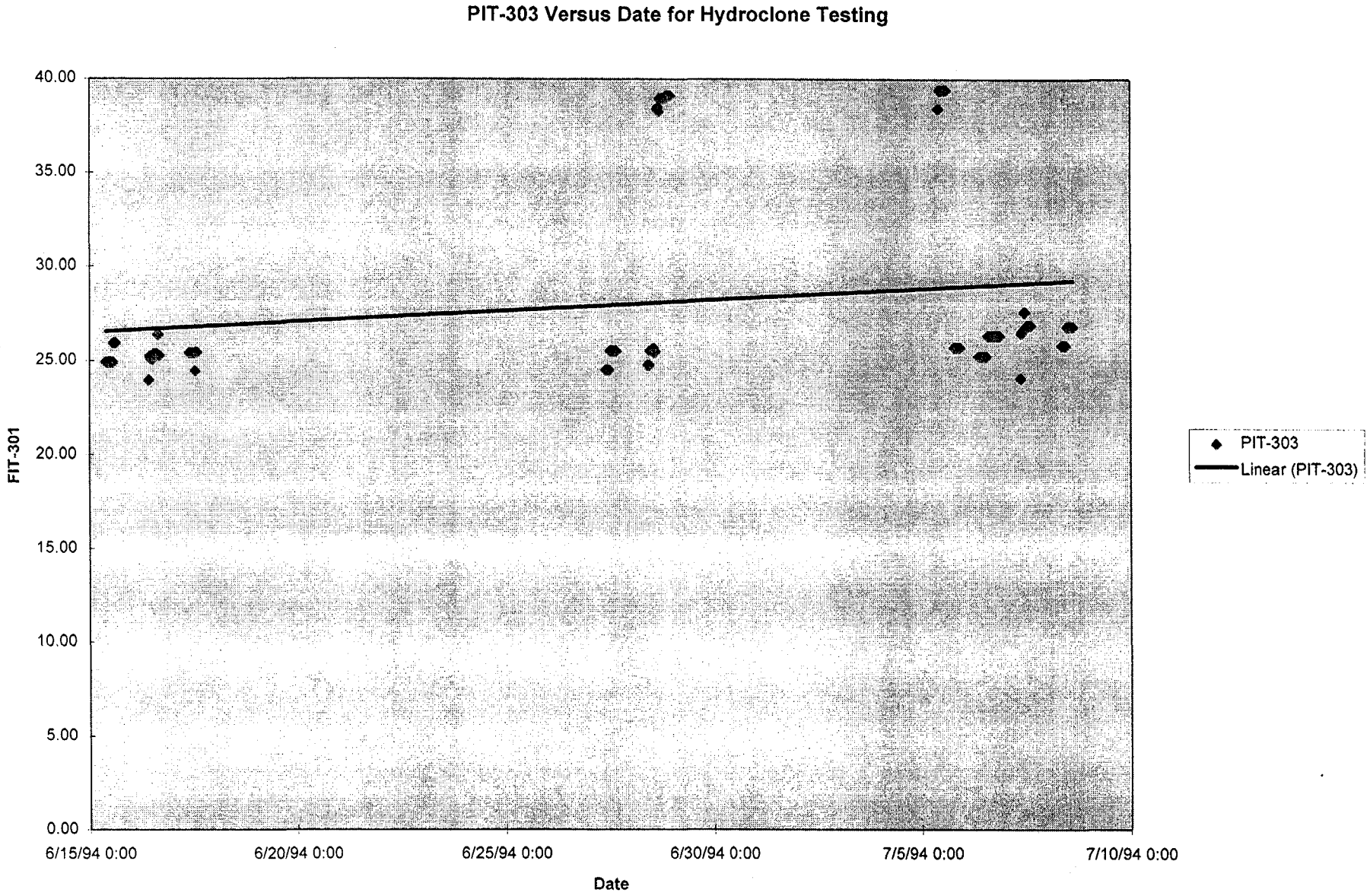
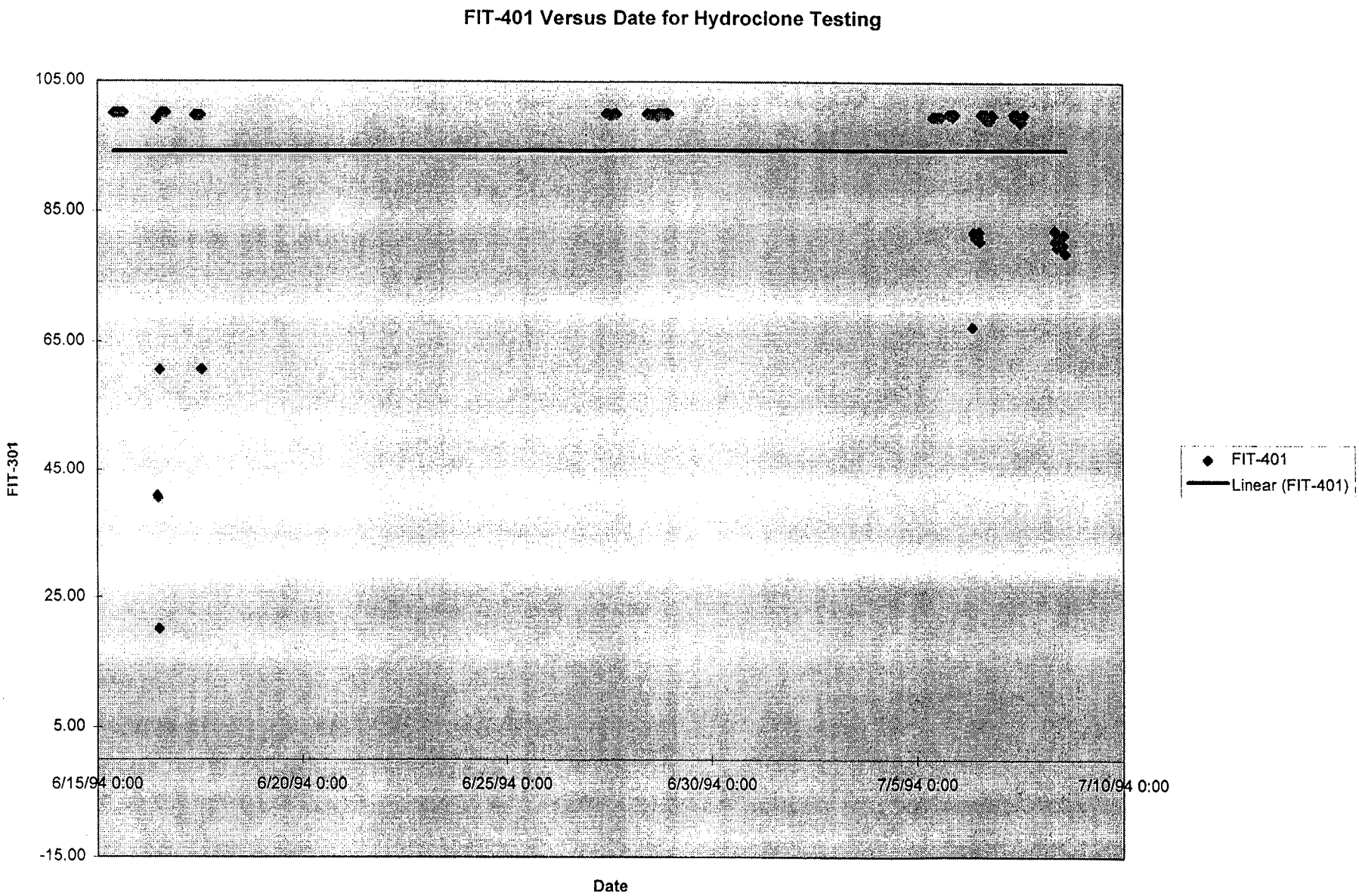
120.00
100.00
80.00
60.00
40.00
20.00
0.00
FIT-301
6/15/94 0:00
6/20/94 0:00
6/25/94 0:00
6/30/94 0:00
7/5/94 0:00
7/10/94 0:00
Date
FIT-301
Linear (FIT-301)

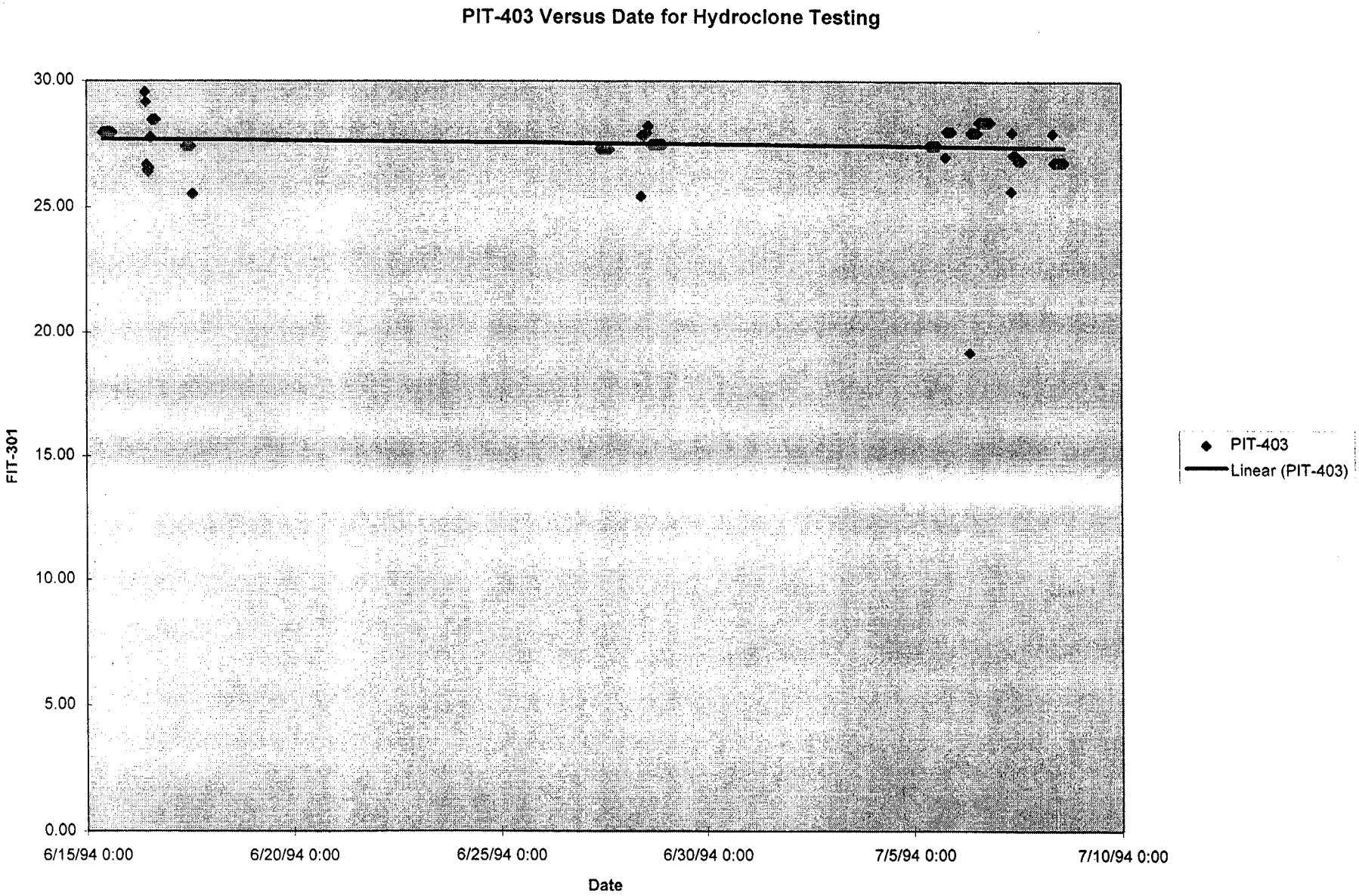
Hydroclone Testing at Zimmer



Hydroclone Testing at Zimmer



Hydroclone Testing at Zimmer



OPERATION OF THE MAGNESIUM HYDROXIDE RECOVERY SYSTEM

1.0 PURPOSE

This procedure provides instructions for starting up, operating, and shutting down the magnesium hydroxide recovery system using the computer control and PLC system. The magnesium hydroxide slurry is produced in batches and at a rate that will maintain an adequate supply in the magnesium hydroxide slurry storage tanks. The magnesium hydroxide recovery system must be started and stopped by the operator.

Automatic operation should be the standard mode of operation. The magnesium hydroxide recovery system can be operated manually using the computer by actuating each component individually in the same sequence as in automatic operation.

2.0 REFERENCES

2.1 Source Documents

- Dravo Lime Company; OPERATION AND MAINTENANCE MANUAL FOR THE WILLIAM H. ZIMMER GENERATING STATION MAGNESIUM HYDROXIDE RECOVERY SYSTEM
- Cincinnati Gas & Electric Process Flow Diagram 1-5195-02
- Dravo Lime Company; GENERAL DESCRIPTION OF THE MAGNESIUM HYDROXIDE RECOVERY SYSTEM
- Dravo Lime Company, MATERIAL SAFETY DATA SHEET; MAGNESIUM HYDROXIDE SLURRY

2.2 Procedural References

- OP H.xx, Operation of the Magnesium Hydroxide Storage System
- Dravo Lime Company; OPERATION AND MAINTENANCE MANUAL FOR THE WILLIAM H. ZIMMER GENERATING STATION MAGNESIUM HYDROXIDE RECOVERY SYSTEM

3.0 PRECAUTIONS

3.1 Lime slurry is highly alkaline and can cause severe burns. As a protection against burns, when the lime slurry supply line or any component of the lime slurry supply

line is opened for maintenance, all personnel in the magnesium hydroxide recovery area must . . .

- wear protective eye wear,
- wear rubber gloves, and
- have all skin covered.
- *Follow FGD lime silo safety procedures.*

SHOULD DRY LIME OR LIME SLURRY COME IN CONTACT WITH EYES OR SKIN, IMMEDIATELY FLUSH THE AFFECTED AREA(S) WITH WATER. Safety shower/eye wash stations are provided at the ground level of the magnesium hydroxide recovery building.

3.2 When lime is mixed with water in the slaking process, a hot alkaline vapor is produced. Avoid looking into vessels and tanks *unless you are protected with approved protective equipment.*

3.3 The flocculating agent used to promote magnesium hydroxide particle settling in the thickener has a viscous and slimy consistency when mixed with water in the correct proportions. Care should be taken to clean up any material that spills onto the floor to avoid slipping and falling.

3.4 Magnesium hydroxide slurry is less alkaline than lime slurry. The same is true of the crystallizer slurry which contains gypsum as well as magnesium hydroxide. Nonetheless, care should be taken to avoid splashing these slurries in one's eyes. As a protection from eye irritation, safety glasses or goggles should be worn at all times when handling these materials. Contact of magnesium hydroxide on the skin is not immediately dangerous, but the affected area should be washed with water as soon as possible.

3.5 One of the oxidizer reactions produce sulfuric acid that will tend to decrease pH in the oxidizer if left uncontrolled. If pH drops below 4.5, SO_2 will begin to form and "off-gas", venting to the outside roof area. Although this is not an immediately dangerous situation, it should be corrected as soon as it is discovered.

4.0 Plant Start Up and Shut Down Instructions

- Computer Start Up
  - Turn Computer On
  - While the computer is booting, makes sure that the Ethernet Board initializes. The message "SMP610.exe is installed at interrupt 60H"

should appear. If not, turn the computer off, wait a few seconds and then turn the computer back on. Do this until the board initializes.

- Once in DOS, type "win" to start windows.
- With the mouse, click twice on the Wonderware Windowviewer to start the control software. (See Attachment 5.1)
- Verify MCR is not activated on upper right corner of screen. (See Attachment 5.2)

- Make sure that all valves for incoming necessities, such as plant gland water, instrument air, air (wet), and potable water, are open.

4.1 Cold Plant Start Up

4.1.1 Magnesium Hydroxide Thickener ZM-TK820-00.

Before plant start up, the mag hydroxide thickener must filled with gland water and the thickener spiked with magnesium hydroxide. The mag hydroxide is necessary to control pH during the oxidation process. It is needed to prevent pH from decreasing below 4.5 and allowing SO_2 gas to vent to atmosphere.

- Place the following breakers in service.

  1C Oxidizer Feed Pump ZM-PP817-00
  1E Oxidizer Recirc Pump ZM-PP818-00
  2A Oxidizer Air Blower ZM-CP825-00
  2B Oxidizer Agitator ZM-QQ826-00
  2C Regen Agitator ZM-QQ827-00
  2D MH Product Pump ZM-PP821-00
  2E Thickener Rake Drive ZM-QQ828-00
  3A Plant Sump Pump ZM-PP823-00
  3B MH Transfer Pump ZM-PP816-00
  3C MH Tank Agitator ***A-108***
  5D Secondary Hydroclone Pump ZM-PP820-00
  6C Primary Hydroclone Pump ZM-PP819-00

- Prepare Sump Pump ZM-PP823-00 for service.

  a. Verify Sump discharge positioning valve 15F001 in TOF building is positioned correctly to desired FGD Feed Thickener
  b. Open plant air sparger valves ***A7*** to 1/4 open and ***A8***.
  c. Verify Sump Line drain valve ***A22*** is closed.
  d. Verify Sump Recirc valve ***A23*** is 1/2 open and pointed towards level floats.

e. Place pump Remote Switch in Automatic.

- Fill Thickener ZM-TK820-00 for service.

  a. Verify thickener supply valve ***A13*** is closed.
  b. Verify TOF valve 15FF025 to dilution tank is open.
  c. Verify Dilution Tank ZM-TK818-00 drain valve 15FF018 is closed.
  d. Fill thickener by connecting 1 1/2 inch hose to gland water service connection by thickener doorway.
  e. Secure hose in thickener or place inside Hydroclone Overflow Assembly ZM-SK826-00.
  f. Open gland water valve.
  g. Fill thickener to the overflow weir.
  h. Close gland water valve and remove hose.

- Add magnesium hydroxide to thickener.

  a. Add 10 fifty pound bags of dry magnesium hydroxide directly to thickener center well.

  b. Alternate method:

     A hose can be connected from Mag Hydroxide storage tank to thickener center well or HCOF collection assembly via the Mag Transfer Pump ZM-PP816-00.

Note: Follow appropriate safety precautions while handling magnesium hydroxide.

- Start Thickener Rake ZM-QQ828-00.

  Using MCS:
  - Click on thickener rake box.
  - Click on start rake.
  - Close window.

Note: Red indicates equipment is running, green indicates it is not.

4.1.2 Oxidizer ZM-TK816-00.

- Fill standpipe ZM-Q850 for service.

  a. Verify TOF feed drain valve ***A5*** is closed.
  b. Verify Standpipe discharge valve 15BF004 is closed.

c. Verify Standpipe drain valve B16B0009 is closed
d. Verify Ox Feed Pump suction valve 15BF011 is closed.
e. Open one of the following valves:

- FGD #1 Thickener TOF valve 15GF003
- FGD #2 Thickener TOF valve 15GF002

Note: This is dependent upon which thickener is in service and to be used to supply mag plant.

f. Verify valve not open in step 3.2.1.e is closed.
g. Verify mag plant sump discharge valve 15TF001 to corresponding FGD thickener brought into service in step 3.2.1.e.

- Prepare OX Feed Pump ZM-PP817-00 and Oxidizer Tank ZM-TK818-00 for service.

a. Verify Ox Feed sample port valve ***A1*** is closed.
b. Verify Oxidizer drain valve B16B059 is closed.
c. Verify Ox Recirc. Pump suction valve 15FF016 is closed.
d. Open Ox Feed pump suction valve 15BF011.
e. Open Ox Feed Pump discharge valve 15FF010.
f. Verify pump is primed via sample port valve ***A1***.

- Starting Ox Feed Pump ZM-PP817-00.

a. Place Ox Level Control LIC-104 in automatic.

Using MCS:
- Click on Oxidizer Level Control box.
- Verify level auto set point is at 80 %, if not adjust to 80 % using slider
- If "Auto/Manual" box is surrounded by a green border, control is already in Auto.
- If "Auto/Manual" box is surrounded by a red border, control is manual.
- Click on box to place in Automatic.
- Click on "Close" box to close window.

b. Start Ox Feed pump ZM-PP817-00.

Using MCS:
- Click on Ox Feed Pump box.
- Click on start pump.

- Click on close window.
- It is important to monitor tank level.

Note: At 50 % level Blower, Agitator and Recirc Pump will be started. At 80 % level Ox Feed pump should be shut off. The pump will dead head if it is not shut down.

Note: It may take some time for liquid to reach transmitter pressure plate and level to begin changing.

- Prepare Ox Recirc Pump ZM-PP818-00 for service.

  a. Verify Ox sample port valve B04B033 is open.
  b. Verify Ox Recirc pump flush valve B08B032 is closed.
  c. Open Ox Recirc pump suction valve 15FF016.
  d. Open Ox Recirc pump seal water needle valve *A3* one full revolution.
  e. Verify Ox Recirc bypass butterfly valve 15BF036 is open 1/3.

Note: It is important to have bypass valve 15BF036 open only partially to maintain back pressure on Ox Recirc pump (10 PSIG minimum). The agitation of the oxidizer liquid is relatively violent. Air in the tank can easily be drawn into pump and cause pump cavitation.

- Start Ox Recirc Pump ZM-PP818-00 at 50% tank level.

  a. Verify Crystallizer Level Control Valve LIC-201 is in manual and closed.

     Using MCS:
     - Click on "Crystallizer Level Control" box.
     - If "Auto/Manual" box is surrounded by a green border, control is Auto. Click on box to place in Manual.
     - If "Auto/Manual" box is surrounded by a red border, control is in already in Manual.
     - Using slider at right of window to close valve to 0 %.
     - Close window.

  b. Start Ox Recirc Pump ZM-PP818-00.

     Using MCS:
     - Click on Ox Recirc Pump box.
     - Click on start pump.
     - Click on close window.

- Start OX Blower ZM-CP825-00 and Ox Agitator ZM-QQ826-00 when tank reaches 50 % level in this sequence.

  a. Start Blower ZM-CP825-00.

     Using MCS:
     - Click on Ox Blower with mouse.
     - Click on Start Blower.
     - Close window.

  b. Start Agitator ZM-QQ826-00.

     Using MCS:
     - Click on Ox Agitator with mouse.
     - Click on Start Agitator.
     - Close window.

  c. Adjust Agitator Speed

     Using MCS:
     - Click on Speed with mouse.
     - Using slider adjust speed to 90%.
     - Close window.

Note: Ox Agitator is interlocked with Ox Blower and will not start unless the blower is running. Blower and Agitator must be started in this sequence.

Note: Oxidizer Blower and Recirc Pump ZM-PP818-00 are interlocked with level transmitter LT-104 and will not operate below a 20 % tank level.

- Prepare Mag Hydroxide Metering pH Control Pump ***P-109*** for service.

  a. Verify the following valves are closed:
     - Product pump isolation valve B04B037.
     - Mag Metering pump flush connection isolation valve ***A21***.
     - Mag Metering pump sample port valve ***A15***.

  b. Open the Following valves:
     - Mag Thickener Under Flow supply valve ***A13***.
     - Mag Metering pump isolation valve B12B0021.
     - Mag Metering pump suction valve ***A14***.
     - Mag Metering pump discharge valve ***A20***.

- Start Mag Metering Pump ***P-109***.

  Using MCS:
  - Click on $Mg(OH)_2$ pump box.
  - Click on start pump.
  - Close window.

- Place Oxidizer pH control in Automatic.

  Using MCS:
  - Click on "$Mg(OH)_2$" box.
  - Verify pH auto set point is at pH 5.5 if not adjust to 5.5 using slider.
  - Click on probe you wish to control with, either A or B.

Note: The controlling pH probe has a green border surrounding it right side of control box.

  - If "Auto/Manual" box is surrounded by a green border, control is already in Auto.
  - If "Auto/Manual" box is surrounded by a red border, control is manual.
  - Click on box to place in Automatic.
  - Click on "Close" box to close window.

- When Oxidizer reaches 80 % level, shut off Ox Feed Pump ZM-PP817-00.

  Using MCS:
  - Click on Oxidizer Feed Pump box.
  - Click on Stop Pump.
  - Close window.

- Monitor Oxidizer pH and Sulfite Levels.

  Liquid in oxidizer should not be sent to crystallizer until the sulfites are oxidized. It may take up to an hour to oxidize the entire tank. There are two ways to determine if liquid is oxidized.

  Monitor Ox Sulfites: When sulfites are below 200 ppm, the oxidation process is complete.

During the oxidation of a full tank of TOF Liquid, the pH will drop to below 4.0. The $Mg(OH)_2$ Metering Pump ***P-109*** cannot maintain tank pH at that fast an oxidation rate. Once the tank is completely oxidized, the tank pH will overshoot to above 6.0. The tank pH overshooting is an indicator that all the sulfites are oxidized and the oxidized liquid is ready for transfer to the crystallizer.

4.1.3 Crystallizer ZM-TK817-00

- Preparing Crystallizer for Service

  Verify the following valves are closed:
  - Valve B04B035
  - Crystallizer drain valve 15FF060.
  - Primary HC Feed Pump (ZM-PP819) Suction valve 15FF017.

  Verify the following valves are open:
  - Verify crystallizer level control isolation valve 15FF01 (should always be left in open position).
  - Verify Precip drain valve ***A6***.

Open LS lines inside lime slurry building.

- Restart Ox Feed Pump ZM-PP817-00.

  Using MCS:
  - Click on Ox Feed Pump box.
  - Click on start pump.
  - Click on close window.

- Start Oxidized Liquid Feed to Crystallizer

  Using MCS:
  - At MCS, click on Crystallizer Level Control box with mouse.
  - Verify control is in manual.
  - Using slider open control valve to 30 %.
  - Monitor tank level.

Note: At 40 % level Crystallizer Agitator ZM-QQ827-00 will be started, at 60 % level Primary Hydroclone Feed Pump ZM-PP819-00 will be started and pH control placed in automatic.

Note: It may take some time for liquid to reach transmitter pressure plate and level to begin changing.

- Start Crystallizer Agitator ZM-QQ827-00 when tank reaches 40%.

  Using MCS:
  - Click on agitator with mouse.
  - Start agitator.
  - Close window.

Note: Crystallizer tank agitator is interlocked with level transmitter LT-201 and will not operate below a 20 % tank level.

- Prepare Primary Hydroclone Feed Pump ZM-PP820-00 for service.

  a. Verify following conditions are met:
     - Primary HC Feed Y-Strainer is installed.
     - Primary HC Feed Y-Strainer inlet valve ***A9*** is open.
     - Primary HC Feed Y-Strainer outlet valve ***A11*** is open.
     - Primary HC Feed Y-Strainer bypass valve ***A10*** is closed.
     - Close all Primary Hydroclone valves ***HC-101***.
     - Open Primary Hydroclone Feed Pump suction valve 15FF017.
     - Open Primary HC Feed Ricirc Valve ***A18*** to Crystallizer Tank (should always be open)
     - Close Primary HC Feed Recirc Valve ***A19*** to Precip Tank (should always be closed)
     - Primary HCUF drain valve ***A16*** to Dilution Tank ZM-TK818-00 is closed.
     - Primary HCUF drain valve ***A17*** to Sump ZM-TK819-00 is open.

  b. From the closed position, open crystallizer Primary HC Feed Recirc Valve B16B047 two revolutions.

- Start Primary Hydroclone Feed Pump ZM-PP819-00 when Crystallizer Tank reaches 60% level.

Note: Primary Hydroclone Feed Pump ZM-PP819-00-102 is interlocked with level transmitter LT-201 and will not operate below a 20 % tank level.

  a. Using MCS:
     - Click on Primary Hydroclone Feed pump flow control box. Verify controller is in manual and pump speed is set to zero.
     - Close window.
     - Click on Primary Hydroclone Feed Pump box.
     - Click on Start Pump.

- Close window.
- Open Flow control window.
- Using slider at right of window, slowly bring pump speed up to approximately 43%.
- Leave control in manual.
- Close window.

b. Verify pump pressure to be 25 to 35 PSIG

- Start Lime Slurry Recirculating

  Verify the following:

  a. Crystallizer Level pH Control valve AIC-201 is in manual and closed.

     Using MCS:
     - Click on Lime control box.
     - If "Auto/Manual" box is surrounded by a green border, control is Auto. Click on box to place in Manual.
     - If "Auto/Manual" box is surrounded by a red border, control is in already in Manual.
     - Using slider at right of window to close valve to 0%.
     - Close window.

  b. Lime Slurry Isolation valve B12B028 is closed.
  c. Lime Slurry feed valve B16B030 is open.
  d. Lime Slurry return valve B12B031 is open.

- Place Crystallizer pH Control AIC-202 in Automatic

  a. Verify lime slurry feed is on and recirculating.
  b. Verify lime slurry pH control valve AIV-202 is closed and in manual mode.
  c. Open Lime Slurry Lime Slurry Isolation valve B12B029.

- Put Crystallizer pH control AIC-202 in Automatic.

  a. Using MCS:
     - Click on Lime control box.
     - Verify pH auto set point is at pH 10.5, if not adjust to 10.5 using slider.
     - Click on probe you wish to control with, either A or B at right side of control box.

Note: Controlling pH probe is highlighted by a green box.

b. If "Auto/Manual" box is surrounded by a green border, control is already in Auto.
c. If "Auto/Manual" box is surrounded by a red border, control is manual. Click on box to place in Automatic.
d. Close window.

Note: Lime slurry should not be added to the Crystallizer unless Primary HC Feed pump is running.

- When Crystallizer level reaches 85%, put Crystallizer Tank Level Control LIC-201 in automatic.

Using MCS:
- Click on Crystallizer Level Control box.
- Verify level auto set point is at 85 %, if not adjust to 85 % using slider..
- If "Auto/Manual" box is surrounded by a green border, control is already in Auto.
- If "Auto/Manual" box is surrounded by a red border, control is manual. Click on box to place in Automatic.
- Close window.

4.1.4 Primary Hydroclones

- Starting feed to Primary Hydroclones

a. While some one closes Recirc valve B16B047 open 5 Primary Hydroclones.

Note: This is done to maintain adequate pump head pressure (at least 20 PSIG) on pump ZM-TK818-00.

All 5 Hydroclones should be functioning, clean any plugs if they occur.

b. Using MCS:
- Adjust Primary HC Feed Pump speed to achieve 100 GPM.
- Click on Primary Feed Pump "Flow" with mouse.
- Adjust manual control slider up or down until flow is at 100 GPM, slider is at far right of pop up window.
- Leave control in manual mode.
- Close window.

- Start Polymer Addition.

  Polymer is made up by adding approximately 30 grams of BETZ 1100 polymer to 50 gallons of water. This is done in a 55 gallon drum. Use a water hose to add gland water to drum and slowly add polymer to water stream. Mix thoroughly.

  - Verify polymer discharge valve ***A25*** is open.
  - Turn on polymer pump, ***P-111***, by moving power switch to left, marked internal control.
  - Set pump speed to approximately 80 %.
  - Set pump stroke to approximately 90 %. *This can only be adjusted while pump is operating.*

Note: For the polymer pump *P-111* to operate, the Oxidizer pH control pump *P-109* must be turned on. When the Oxidizer pH control pump is shut down at the MCS, the polymer pump will automatically shut off. If the power is left on internal control, the pump will automatically turn on and off with the Oxidizer pH control pump. It may be desirable to leave it in this state.

- Start Gypsum Recycle Pump ZM-PP824-00 if Crystallizer Solids are less than 5%.

  a. Open Gypsum Recycle Discharge valve B04B024 to Crystallizer Tank.
  b. Close Gypsum Recycle Discharge valve B04B023 to Oxidizer Tank.
  c. Close Gypsum Recycle Discharge valve B04B041 to grade.
  d. Close Gypsum Recycle Flush valve ***A26***.
  e. Open Gypsum Recycle Suction valve ***A24***.
  f. Open plant air to Gypsum Recycle Pump.
  g. Set Air Regulator (***HV-405***) for approximately 20 PSI.

Note: Continue pumping as long as Crystallizer Tank solids remain below 5%.

4.1.5 Secondary Hydroclone Feed Pump ZM-PP820-00.

The secondary hydroclone feed pump cannot be started until there is adequate flow from the thickener overflow weir into the Dilution Tank ZM-TK818-00. This may take some time, particularly if Magnesium Hydroxide

Product has been pumped to the storage tank or if the plant has not run for few days and liquid has evaporated from the thickener.

To check if the flow from the thickener is adequate simply look into the dilution tank and observe left portion of the tank were the 8 inch pipe enters. The liquid tank should be overflowing into the sump.

- Preparing Secondary Hydroclone Feed Pump ZM-PP820-00 for service.

  Verify following conditions are met:
  a. Secondary Hydroclone Feed Pump suction valve 15FF018 is open.
  b. Five Secondary Hydroclone valves are open.
  c. There is flow from the thickener overflow.

- Start Secondary Hydroclone Feed Pump ZM-PP820-00.

  a. Using MCS:
     - Click on Secondary Hydroclone Feed pump flow control box. Verify controller is in manual and pump speed is set to zero.
     - Close window.
     - Click on Secondary Hydroclone Feed Pump box.
     - Start pump.
     - Close window.
     - Open Flow control window.
     - Using slider at right of window, slowly bring pump speed up to approximately 56%.

  b. Open Primary HCUF drain valve ***A16*** to dilution tank.
  c. Verify flow is entering into tank.
  d. Close Primary HCUF drain valve ***A17*** to sump.
     Verify Secondary Hydroclones are functioning correctly and that there are no plugs.
  e. Using MCS:
     - Adjust Secondary HC flow rate to approximately 100 GPM.
     - Leave control in manual
     - Close window

Note: The flowmeter for the Secondary feed pump can only read up to 100 GPM. The flow should be set for 98~99 GPM since the MCS only can read up to 100 GPM, if flow rate is higher the MCS will assume it to be 100 GPM

4.1.6 Transfer Mag TUF to Product Storage Tank ZM-TK815-00.

- Prepare Product Storage Tank ZM-TK815-00.

  This section needs written.

- Prepare Product Pump ZM-PP821-00 for service.

  a. Open Mag TUF Supply valve ***A13***.
  b. Verify Valve B08B022 is Closed.
  c. Open Product Pump Suction Valve B04B037.
  d. Close Product Sump Valve B12B019.
  e. Open Valve to Product Storage Tank B12B020 approximately 1/3 open.

- Start Product Pump ZM-PP821-00.

  Using MCS:
  - Click on Product Pump box.
  - Click on start pump.
  - Click on close window

Note: Product Pump should be throttled back to approximately 1/3 valve opening. This is done so as not to take flow from the Mag Metering Pump *P-109* and to ensure there is enough flow from the Mag TOF to the dilution tank to run the Secondary Hydroclones. If the plant is not running, the Mag TUF can be pumped into the Storage Tank at full pump capacity by opening valve B12B09 full.

4.2 Hot Start Up

4.2.1 Make sure pH control valves Lime Slurry to Crystallizer (AIC-202) and $Mg(OH)_2$ to Oxidizer (AIC-108) are in manual control and closed.

Using MCS:

- Click on "$Mg(OH)_2$" box. Verify "Auto/Manual" box is surrounded by a red border, control is manual.
- Verify slider at right of window has valve closed to 0 %.
- Click on "Close" box to close window.
- Click on Lime control box. Verify "Auto/Manual" box is surrounded by a red border, control is manual.
- Verify slider at right of window has valve closed to 0 %.
- Close window.

4.2.2 Make sure Primary (FIC-301) and Secondary Hydroclone Feed Pumps (FIC-401) controls are in manual mode and set to zero.

Using MCS:

- Click on Primary Hydroclone Feed pump flow control box. Verify controller is in manual and pump speed is set to zero.
- Verify slider at right of window has pump speed at 0.
- Close window.
- Click on Secondary Hydroclone Feed pump flow control box. Verify controller is in manual and pump speed is set to zero.
- Verify slider at right of window has pump speed at 0.
- Close window.

4.2.3 Verify valves from C G & E TOF Feed / standpipe are open and Lime Slurry is recirculating.

4.2.4 Turn on gland water to packing gland on Oxidizer Recirc Pump seal (ZM-PP818-00).

4.2.5 Open valve 15FF016 at base of Oxidizer (ZM-TK816-00), suction line to Oxidizer Recirc Pump ZM-PP818-00 - open sample port to verify pump has prime.

4.2.6 Open valve BO12B021 on $Mg(OH)_2$ TUF (ZM-134-PI) to $Mg(OH)_2$ metering pump (P-109).

4.2.7 Open suction and discharge valve of pump P-109

4.2.8 Open valve on suction and discharge side of Oxidizer Feed Pump (ZM-PP817-00) - open sample port to verify pump has prime.

4.2.9 Open Crystallizer Tank (ZM-TK817-00) valve 15FF017 to Primary Hydroclone Feed Pump (ZM-PP819-00) -open sample port to verify pump has prime.

4.2.10 Close all primary Hydroclones

4.2.11 Open Primary Hydroclone Feed Recirc Valve (B16B047) to approximately 1/4 open.

4.2.12 Check if Primary Hydroclone Underflow tank drain is directed to sump. If not, close valve ***A16*** and open valve ***A17***.

4.2.13 Verify Plant Sump Pump (ZM-PP823-00) breaker is turned on and Control switch at pump is in auto.

4.2.14 Verify all breakers on MCC panel are in service.

4.2.15 At Computer, turn on:

- Oxidizer Recirc Pump (ZM-PP818-00)

  Using MCS:
  - Click on Ox Recirc Pump box.
  - Click on start pump.
  - Click on close window.
- Oxidizer Blower (ZM-CP825-00)

  Using MCS:
  - Click on Ox Blower with mouse.
  - Click on Start Blower.
  - Close window.
- Oxidizer Agitator (ZM-QQ826-00)

  a. Start Agitator ZM-QQ826-00.

  Using MCS:
  - Click on Ox Agitator with mouse.
  - Click on Start Agitator.
  - Close window.

  b. Adjust Agitator Speed

  Using MCS:
  - Click on Speed with mouse.
  - Using slider adjust speed to 90%.
  - Close window.

Note: Ox Agitator is interlocked with Ox Blower and will not start unless the blower is running. Blower and Agitator must be started in this sequence.

- Oxidizer Feed Pump (ZM-PP817-00)

  Using MCS:
  - Click on Ox Feed Pump box.
  - Click on start pump.
  - Click on close window.
  - Monitor tank level.

4.2.15 Put Oxidizer level control in Auto (LIC-104)

Using MCS:
- Click on Oxidizer Level Control box.
- Verify level auto set point is at 80 %, if not adjust to 80 % using slider
- If "Auto/Manual" box is surrounded by a green border, control is already in Auto.
- If "Auto/Manual" box is surrounded by a red border, control is manual.
- Click on box to place in Automatic.
- Click on "Close" box to close window.

4.2.16 Put Crystallizer level control in Auto (LIC-201)

Using MCS:
- Click on Crystallizer Level Control box.
- Verify level auto set point is at 85 %, if not adjust to 85 % using slider..
- If "Auto/Manual" box is surrounded by a green border, control is already in Auto.
- If "Auto/Manual" box is surrounded by a red border, control is manual. Click on box to place in Automatic.
- Close window.

4.2.17 Turn on Primary Hydroclone feed pump (ZM-PP819-00)

From flow control window (FIC-301), bring manual set point (SC-301) slider up to approximately 40. Pressure on pump should be approximately 20 to 25 PSIG.

Using MCS:
- Click on Primary Hydroclone Feed pump flow control box. Verify controller is in manual and pump speed is set to zero.
- Close window.

- Click on Primary Hydroclone Feed Pump box.
- Click on Start Pump.
- Close window.
- Open Flow control window.
- Using slider at right of window, slowly bring pump speed up to approximately 43%.
- Leave control in manual.
- Close window.

4.2.18 Turn on $Mg(OH)_2$ Metering pump (***P-109***):

pH controller (AIC-109) auto setpoint should be set to 5.5
Put Control in Auto.

Using MCS:
- Click on $Mg(OH)_2$ pump box.
- Click on start pump.
- Close window.

4.2.19 Open Lime Slurry Isolation valve B12B029 valve.
pH controller (AIC-202) auto setpoint should be set to 10.5
Put control valve in Auto.

a. Using MCS:
   - Click on Lime control box.
   - Verify pH auto set point is at pH 10.5, if not adjust to 10.5 using slider.
   - Click on probe you wish to control with, either A or B at right side of control box.

Note: Controlling pH probe is highlighted by a green box.

b. If "Auto/Manual" box is surrounded by a green border, control is already in Auto.
c. If "Auto/Manual" box is surrounded by a red border, control is manual. Click on box to place in Automatic.
d. Close window.

Note: Lime slurry should not be added to the Crystallizer unless Primary HC Feed pump is running.

4.2.20 Prepare Sump Pump ZM-PP823-00 for service.

- Open plant air sparger valves *A7* to 1/4 open and A8.

- Verify Sump Line drain valve is closed.
- Verify Sump Recirc valve is 1/2 open and pointed towards level floats.

4.2.21 Starting feed to Primary Hydroclones

a. While some one closes Primary HC Feed Recirc Valve B16B047 open 5 Primary Hydroclones.

Note: This is done to maintain adequate pump head pressure (at least 20 PSIG) on pump ZM-TK818-00.

All 5 Hydroclones should be functioning, clean any plugs if they occur.

b. Using MCS:
- Adjust pump speed to achieve 100 GPM.
- Click on Primary Feed Pump "Flow" with mouse.
- Adjust manual control slider up or down until flow is at 100 GPM, slider is at far right of pop up window.
- Leave control in manual mode.
- Close window.

4.2.22 Starting feed to Secondary Hydroclones

The secondary hydroclone feed pump cannot be started until there is adequate flow from the thickener overflow weir into the Dilution Tank ZM-TK818-00. This may take some time, particularly if Magnesium Hydroxide Product has been pumped to the storage tank or if the plant has not run for few days and liquid has evaporated from the thickener.

To check if the flow from the thickener is adequate simply look into the dilution tank and observe left portion of the tank were the 8 inch pipe enters. The liquid tank should be overflowing into the sump.

Verify following conditions are met:

a. Secondary Hydroclone Feed Pump suction valve 15FF018 should be open.
b. Five Secondary Hydroclone valves should be open.
c. There is flow from the thickener overflow.
d. The Primary HCUF tank drain has been valved *A17* to the sump.

- Start Secondary Hydroclone Feed Pump ZM-PP820-00.

a. Using MCS:

- Click on Secondary Hydroclone Feed pump flow control box. Verify controller is in manual and pump speed is set to zero.
- Close window.
- Click on Secondary Hydroclone Feed Pump box.
- Start pump.
- Close window.
- Open Flow control window.
- Using slider at right of window, slowly bring pump speed up to approximately 56%.

b. Open Primary HCUF drain valve ***A16*** to dilution tank.
c. Verify flow is entering into tank.
d. Close Primary HCUF drain valve ***A17*** to sump.
Verify Secondary Hydroclones are functioning correctly and that there are no plugs.
e. Using MCS:
   - Adjust Secondary HC flow rate to approximately 100 GPM.
   - Leave control in manual
   - Close window

Note: The flowmeter for the Secondary feed pump can only read up to 100 GPM. The flow should be set for 98~99 GPM since the MCS only can read up to 100 GPM, if flow rate is higher the MCS will assume it to be 100 GPM

4.2.23 Start Gypsum Recycle Pump ZM-PP824-00 if Crystallizer Solids are less than 5%.

a. Open Gypsum Recycle Discharge valve B04B024 to Crystallizer Tank.
b. Close Gypsum Recycle Discharge valve B04B023 to Oxidizer Tank.
c. Close Gypsum Recycle Discharge valve B04B041 to grade.
d. Close Gypsum Recycle Flush valve ***A26***.
e. Open Gypsum Recycle Suction valve ***A24***.
f. Open plant air to Gypsum Recycle Pump.
g. Set Air Regulator (***HV-405***) for approximately 20 PSI.

4.3 Plant Cold Shut Down Instructions

4.3.1 Remove Secondary HC Feed Pump ZM-PP820-00 from service.

a. Open Primary HCUF Drain Valve ***A17*** to Sump ZM-TK819-00.

b. Close Primary HCUF Drain Valve ***A16*** to Dilution Tank ZM-TK-818-00.
c. Wait Approximately 5 to 10 min. to purge solids from Dilution Tank.
d. Shut down Secondary HC Feed Pump ZM-PP820-00.

Using MCS:
- Click on Secondary HC Feed Pump.
- Click on Stop Pump.
- Close Window.

e. Set Secondary HC Feed Pump ZM-PP820-00 control to zero.

Using MCS:
- Click on Flow.
- If "Auto/Manual" box is surrounded by a red border, control is already in manual.
- If "Auto/Manual" box is surrounded by a green border, control is in automatic. Click on box to place in manual.
- Using slider at right of window, adjust manual setpoint to zero.
- Close window.

Note: Red indicates equipment is running, green indicates it is not.

4.3.2 Remove Mag Metering Pump ***P-109*** from service.

a. Shut down Mag Metering Pump ***P-109***.

Using MCS:
- Click on Mag Metering pump.
- Click on Stop Pump.
- Close Window.

b. Place Ox pH Control in manual and set to zero.

Using MCS:
- Click on $Mg(OH)_2$.
- If "Auto/Manual" box is surrounded by a red border, control is already in manual.
- If "Auto/Manual" box is surrounded by a green border, control is in automatic. Click on box to place in manual.
- Using slider at right of window, adjust manual setpoint to zero.
- Close window.

4.3.3 Shut Down Oxidizer Recirc Pump ZM-PP818-00.

a. Using MCS:
   - Click on Oxidizer Recirc Pump.
   - Click on Stop Pump.
   - Close Window.

b. Close Ox Recirc pump seal water needle valve A3.

4.3.4 Shut Down Oxidizer Agitator ZM-QQ826-00.

Using MCS:
- Click on Oxidizer Agitator.
- Click on Stop Pump.
- Close Window.

4.3.5 Shut Down Oxidizer Blower ZM-CP825-00.

Using MCS:
- Click on Oxidizer Blower.
- Click on Stop Pump.
- Close Window.

4.3.6 Shut Down Oxidizer Feed Pump ZM-PP817-00.

Using MCS:
- Click on Oxidizer Feed Pump.
- Click on Stop Pump.
- Close Window.

4.3.7 Place Oxidizer Level Control LIC-104 in Manual and close.

Using MCS:
- Click on Oxidizer Level Valve.
- If "Auto/Manual" box is surrounded by a red border, control is already in manual.
- If "Auto/Manual" box is surrounded by a green border, control is in automatic. Click on box to place in manual.
- Using slider at right of window, adjust manual setpoint to zero.
- Close window.

4.3.8 Place Crystallizer Level Control LIC-201 in Manual and close.

Using MCS:
- Click on Crystallizer Level Valve.

- If "Auto/Manual" box is surrounded by a red border, control is already in manual.
- If "Auto/Manual" box is surrounded by a green border, control is in automatic. Click on box to place in manual.
- Using slider at right of window, adjust manual setpoint to zero.
- Close window.

4.3.9 Place Crystallizer pH Control in manual and set to zero.

Using MCS:

- Click on Lime.
- If "Auto/Manual" box is surrounded by a red border, control is already in manual.
- If "Auto/Manual" box is surrounded by a green border, control is in automatic. Click on box to place in manual.
- Using slider at right of window, adjust manual setpoint to zero.
- Close window.

4.3.10 Primary HC Feed Pump ZM-PP819-00

Allow Primary HC Feed Pump ZM-PP819-00 to run until Crystallizer Tank level reaches 30%. This is done to recover the magnesium hydroxide that is in the Crystallizer Tank.

- Shut down Primary HC Feed Pump ZM-PP819-00 at 30 % Crystallizer Tank level.

  Using MCS:
  - Click on Primary HC Feed Pump.
  - Click on Stop Pump.
  - Close Window.

- Set Primary HC Feed Pump ZM-PP819-00 control to zero.

  Using MCS:
  - Click on Flow.
  - If "Auto/Manual" box is surrounded by a red border, control is already in manual.
  - If "Auto/Manual" box is surrounded by a green border, control is in automatic. Click on box to place in manual.
  - Using slider at right of window, adjust manual setpoint to zero.
  - Close window.

4.3.11 Shut Down Crystallizer Agitator ZM-QQ827-00.

Using MCS:

- Click on Oxidizer Agitator.
- Click on Stop Pump.
- Close Window.

4.3.12 Flush Primary HC Feed Pump ZM-PP819-00

a. Close Lime Slurry Isolation valve B12B028.
b. Close Primary HC Feed Pump Suction Valve 15FF017.
c. Open All Primary Hydroclone valves ***HC-101***.
d. Open Primary HC Feed Recirc valve B16B047 approximately 2~3 revolutions.
e. Connect hose from gland water to Primary HC Feed Pump Drain valve B08B041.
f. Open Valve B08B041.
g. Turn on gland water.
h. Open Primary HC Feed Y-Strainer bypass valve ***A10***.
i. Flush Primary HC with gland water until HCUF runs clear. Clean any plugs if they occur.
j. Turn off gland water.
k. Close Primary HC Feed Pump Drain valve B08B041.
l. Disconnect hose.
m. Clean Primary HC Feed Y-Strainer.
    - Close Primary HC Feed Y-Strainer inlet valve ***A9***.
    - Close Primary HC Feed Y-Strainer outlet valve ***A11***.
    - Close Primary HC Feed Y-Strainer bypass valve ***A10***.
    - Remove and clean Y-Strainer.
    - Reinstall Y-Strainer.
    - Open Primary HC Feed Y-Strainer inlet valve ***A9***.
    - Open Primary HC Feed Y-Strainer outlet valve ***A11***.

4.3.13 Drain Crystallizer Tank ZM-TK817-00.

a. Connect 1 1/2 " hose to Crystallizer Tank Drain Valve 15FF060.
b. Secure other end of hose in Sump ZM-TK819-00.
c. Verify Sump is in service and Sump Pump ZM-PP823-00 Remote Switch is placed in Auto (see section 3.3.2).
d. Open Crystallizer Tank Drain Valve 15FF060.
e. Verify sump is not filling to quickly and can pump down fast enough.
f. When Crystallizer Tank is empty, close Crystallizer Tank Drain Valve 15FF060
g. Disconnect and remove 1 1/2 hose.

4.3.14 Flush Mag Metering Pump P-109.

a. Connect 3/4" hose from gland water to Mag Metering pump flush connection isolation valve A21.
b. Open valve A21.
c. Close Mag Metering pump discharge valve ***A20***.
d. Verify Mag Metering pump isolation valve B12B0021 is open.
e. Turn on gland water approximately 1/3.
f. Flush with gland water until flexible hose is clear.
g. Open Mag Metering pump discharge valve ***A20***.
h. Close Mag Metering pump isolation valve B12B0021.
i. Allow gland water to run a couple of minutes.
j. Turn off gland water.
k. Close valve ***A21***.
l. Disconnect and remove hose.

4.3.15 Drain Oxidizer Tank ZM-TK816-00.

a. Connect 1 1/2 " hose to Oxidizer Tank Drain valve B16B059.
b. Secure other end of hose in Sump ZM-TK819-00.
c. Verify Sump is in service and Sump Pump ZM-PP823-00 Remote Switch is placed in Auto (see section 3.3.2).
d. Open Oxidizer Tank Drain valve B16B059.
e. Verify sump is not filling to quickly and can pump down fast enough
f. When Oxidizer Tank is empty, close Oxidizer Tank Drain valve B16B059.
g. Disconnect and remove 1 1/2 hose.
h. Close Ox Recirc pump suction valve 15FF016.

4.3.16 Pump surplus product from Mag Thickener ZM-TK820-00 to Storage Tank ZM-TK815-00.

a. Open Mag TUF Supply valve ***A13***.
b. Verify Valve B08B022 is Closed.
c. Open Product Pump Suction Valve B04B037.
d. Close Product Sump Valve B12B019.
e. Open Valve to Product Storage Tank B12B020.
f. Start Product Pump ZM-PP821-00.
   Using MCS:
   - Click on Product Pump box.
   - Click on start pump.
   - Click on close window

4.3.17 Pump Mag Thickener to Sump ZM-TK819-00 after Product has been transferred.

a. If Product Pump is running:

- Verify Sump is in service and Sump Pump ZM-PP823-00 Remote Switch is placed in Auto.
- Open Product Sump Valve B12B019.
- Close Valve to Product Storage Tank B12B020.

b. If Product Pump is not running:

- Open Mag TUF Supply valve ***A13***.
- Verify Valve B08B022 is Closed.
- Product Pump Suction Valve B04B037.
- Open Product Sump Valve B12B019.
- Close Valve to Product Storage Tank B12B020.

c. Start Product Pump ZM-PP821-00.

Using MCS:
- Click on Product Pump box.
- Click on start pump.
- Click on close window

d. Once Mag Thickener ZM-TK820-00 is empty, stop Product Pump ZM-PP821-00.

Using MCS:
- Click on Product Pump box.
- Click on stop pump.
- Click on close window

e. Stop Mag Thickener Rake ZM-QQ828-00.

Using MCS:
- Click on thickener rake box.
- Click on stop rake.
- Close window.

4.3.18 Drain Dilution Tank ZM-TK818-00. ***This is optional?***

a. Drain Secondary HC Feed pipe ZM-138-P1.

- Close Secondary HC Feed Suction valve 15FF018.
- Connect 3/4 " hose to Secondary HC Feed Drain valve B08B026.
- Secure hose in Sump.
- Verify Sump is in service and Sump Pump ZM-PP823-00 Remote Switch is placed in Auto.
- Open Secondary HC Feed Drain valve B08B026.
- When drained, close Secondary HC Feed Drain valve B08B026.
- Disconnect and remove hose.

b. Disconnect flexible coupling on Secondary HC Feed pipe ZM-138-P1.
c. Remove pipe between flexible coupling and Secondary HC Feed Suction valve 15FF018.
d. Install an 1 1/2 Cam Lock fitting to valve 15FF018.
e. Connect an 1 1/2 hose to valve 15FF018.
f. Secure hose in sump.
g. Open Secondary HC Feed Suction valve 15FF018.
h. Drain and hose out solids from inside Dilution Tank.
i. Close Secondary HC Feed Suction valve 15FF018.
j. When drained, disconnect and remove hose.
k. Remove 1 1/2 Cam Lock and reinstall Secondary HC Feed pipe ZM-138-P1.

4.3.19 Drain Standpipe ZM-Q850 and TOF Feed.

a. Close or verify the following valves are closed:
   - FGD #1 Thickener TOF valve 15GF003
   - FGD #2 Thickener TOF valve 15GF002
b. Verify Standpipe discharge valve 15BF004 is open.
c. Open Standpipe drain valve B16B0009.
d. Allow Standpipe to drain.
e. Connect a 3/4" hose to TOF Feed drain valve ***A5***.
f. Secure hose in Sump Overflow trough at building wall by pipe trench.
g. Open TOF feed drain valve ***A5*** and drain into pipe trench.
h. Open Oxidizer Sample Port valve ***A1***.

4.3.20 Flush Gypsum Recycle Pump ZM-PP824-00.

a. Connect 3/4" hose from gland water to Gypsum Recycle pump flush connection isolation valve ***A26***.
b. Close Gypsum Recycle Suction valve ***A24***.
c. Verify Gypsum Recycle Discharge valve B04B024 to Crystallizer Tank is open.
d. Verify Gypsum Recycle Discharge valve B04B023 to Oxidizer Tank is closed.

e. Verify Gypsum Recycle Discharge valve B04B041 to grade is closed.
f. Turn on gland water approximately 1/3.
g. Open plant air to Gypsum Recycle Pump.
h. Set Air Regulator for approximately 20 PSI.
i. Allow pump to pump gland water for a few minutes.
j. Close gland water.
k. Close Gypsum Recycle Flush valve ***A26***.
l. Disconnect and remove hose.

4.3.21 Lime Slurry

This Section needs written.

4.3.22 Product Storage Tank

This Section needs written.

4.3.23 Remove the following breakers from service.

1C Oxidizer Feed Pump ZM-PP817-00
1E Oxidizer Recirc Pump ZM-PP818-00
2A Oxidizer Air Blower ZM-CP825-00
2B Oxidizer Agitator ZM-QQ826-00
2C Regen Agitator ZM-QQ827-00
2D MH Product Pump ZM-PP821-00
2E Thickener Rake Drive ZM-QQ828-00
3A Plant Sump Pump ZM-PP823-00
3B MH Transfer Pump ZM-PP816-00
3C MH Tank Agitator ***A-108***
5D Secondary Hydroclone Pump ZM-PP820-00
6C Primary Hydroclone Pump ZM-PP819-00

4.4 Plant Hot Shut Down Instructions

4.4.1 Remove Secondary HC Feed Pump ZM-PP820-00 from service.

a. Open Primary HCUF Drain Valve ***A17*** to Sump ZM-TK819-00.
b. Close Primary HCUF Drain Valve ***A16*** to Dilution Tank ZM-TK-818-00.
c. Wait Approximately 5 to 10 min. to purge solids from Dilution Tank.

d. Shut down Secondary HC Feed Pump ZM-PP820-00.

Using MCS:
- Click on Secondary HC Feed Pump.
- Click on Stop Pump.
- Close Window.

e. Set Secondary HC Feed Pump ZM-PP820-00 control to zero.

Using MCS:
- Click on Flow.
- If "Auto/Manual" box is surrounded by a red border, control is already in manual.
- If "Auto/Manual" box is surrounded by a green border, control is in automatic. Click on box to place in manual.
- Using slider at right of window, adjust manual setpoint to zero.
- Close window.

Note: Red indicates equipment is running, green indicates it is not.

4.4.2 Remove Mag Metering Pump ***P-109*** from service.

a. Shut down Mag Metering Pump P-109.

Using MCS:
- Click on Mag Metering pump.
- Click on Stop Pump.
- Close Window.

b. Place Ox pH Control in manual and set to zero.

Using MCS:
- Click on $Mg(OH)_2$.
- If "Auto/Manual" box is surrounded by a red border, control is already in manual.
- If "Auto/Manual" box is surrounded by a green border, control is in automatic. Click on box to place in manual.
- Using slider at right of window, adjust manual setpoint to zero.
- Close window.

4.4.3 Shut Down Oxidizer Recirc Pump ZM-PP818-00.

a. Using MCS:
- Click on Oxidizer Recirc Pump.

- Click on Stop Pump.
- Close Window.

b. Close Ox Recirc pump seal water needle valve ***A3***.

c. Close Ox Recirc pump suction valve 15FF016

4.4.4 Shut Down Oxidizer Agitator ZM-QQ826-00.

Using MCS:

- Click on Oxidizer Agitator.
- Click on Stop Pump.
- Close Window.

4.4.5 Shut Down Oxidizer Blower ZM-CP825-00.

Using MCS:

- Click on Oxidizer Blower.
- Click on Stop Pump.
- Close Window.

4.4.6 Shut Down Oxidizer Feed Pump ZM-PP817-00.

Using MCS:

- Click on Oxidizer Feed Pump.
- Click on Stop Pump.
- Close Window.

4.4.7 Place Oxidizer Level Control LIC-104 in Manual and close.

Using MCS:

- Click on Oxidizer Level Valve.
- If "Auto/Manual" box is surrounded by a red border, control is already in manual.
- If "Auto/Manual" box is surrounded by a green border, control is in automatic. Click on box to place in manual.
- Using slider at right of window, adjust manual setpoint to zero.
- Close window.

4.4.8 Place Crystallizer Level Control LIC-201 in Manual and close.

Using MCS:

- Click on Crystallizer Level Valve.
- If "Auto/Manual" box is surrounded by a red border, control is already in manual.

- If "Auto/Manual" box is surrounded by a green border, control is in automatic. Click on box to place in manual.
- Using slider at right of window, adjust manual setpoint to zero.
- Close window.

4.4.9 Place Crystallizer pH Control in manual and set to zero.

Using MCS:

- Click on Lime.
- If "Auto/Manual" box is surrounded by a red border, control is already in manual.
- If "Auto/Manual" box is surrounded by a green border, control is in automatic. Click on box to place in manual.
- Using slider at right of window, adjust manual setpoint to zero.
- Close window.

4.4.10 Primary HC Feed Pump ZM-PP819-00

- Shut down Primary HC Feed Pump ZM-PP819-00.

  Using MCS:
  - Click on Primary HC Feed Pump.
  - Click on Stop Pump.
  - Close Window.

- Set Primary HC Feed Pump ZM-PP819-00 control to zero.

  Using MCS:
  - Click on Flow.
  - If "Auto/Manual" box is surrounded by a red border, control is already in manual.
  - If "Auto/Manual" box is surrounded by a green border, control is in automatic. Click on box to place in manual.
  - Using slider at right of window, adjust manual setpoint to zero.
  - Close window.

4.4.11 Flush Primary HC Feed Pump ZM-PP819-00

a. Close Lime Slurry Isolation valve B12B028.
b. Close Primary HC Feed Pump Suction Valve 15FF017.
c. Open All Primary Hydroclone valves ***HC-101***.
d. Open Primary HC Feed Recirc valve B16B047 approximately 2~3 revolutions.

e. Connect hose from gland water to Primary HC Feed Pump Drain valve B08B041.
f. Open Valve B08B041.
g. Turn on gland water.
h. Open Primary HC Feed Y-Strainer bypass valve ***A10***.
i. Flush Primary HC with gland water until HCUF runs clear. Clean any plugs if they occur.
j. Turn off gland water.
k. Close Primary HC Feed Pump Drain valve B08B041.
l. Disconnect hose.
m. Clean Primary HC Feed Y-Strainer.
   - Close Primary HC Feed Y-Strainer inlet valve ***A9***.
   - Close Primary HC Feed Y-Strainer outlet valve ***A11***.
   - Close Primary HC Feed Y-Strainer bypass valve ***A10***.
   - Remove and clean Y-Strainer.
   - Reinstall Y-Strainer.
   - Open Primary HC Feed Y-Strainer inlet valve ***A9***.
   - Open Primary HC Feed Y-Strainer outlet valve ***A11***.

4.4.12 Flush Mag Metering Pump P-109.

a. Connect 3/4" hose from gland water to Mag Metering pump flush connection isolation valve ***A21***.
b. Open valve ***A21***.
c. Close Mag Metering pump discharge valve ***A20***.
d. Verify Mag Metering pump isolation valve B12B0021 is open.
e. Turn on gland water approximately 1/3.
f. Flush with gland water until flexible hose is clear.
g. Open Mag Metering pump discharge valve ***A20***.
h. Close Mag Metering pump isolation valve B12B0021.
i. Allow gland water to run a couple of minutes.
j. Turn off gland water.
k. Close valve ***A21***.
l. Disconnect and remove hose.

4.4.13 Drain Standpipe ZM-Q850 and TOF Feed.

a. Close or verify the following valves are closed:
   - FGD #1 Thickener TOF valve 15GF003
   - FGD #2 Thickener TOF valve 15GF002
b. Verify Standpipe discharge valve 15BF004 is open.
c. Open Standpipe drain valve B16B0009.
d. Allow Standpipe to drain.
e. Connect a 3/4" hose to TOF Feed drain valve ***A5***.

f. Secure hose in Sump Overflow trough at building wall by pipe trench.
g. Open TOF feed drain valve ***A5*** and drain into pipe trench.
h. Open Oxidizer Sample Port valve ***A1***.

Note: This procedure is only necessary in cold weather to prevent freezing of the liquid in the standpipe and TOF Feed.

4.4.14 Flush Gypsum Recycle Pump ZM-PP824-00.

a. Connect 3/4" hose from gland water to Gypsum Recycle pump flush connection isolation valve ***A26***.
b. Close Gypsum Recycle Suction valve ***A24***.
c. Verify Gypsum Recycle Discharge valve B04B024 to Crystallizer Tank is open.
d. Verify Gypsum Recycle Discharge valve B04B023 to Oxidizer Tank is closed.
e. Verify Gypsum Recycle Discharge valve B04B041 to grade is closed.
f. Turn on gland water approximately 1/3.
g. Open plant air to Gypsum Recycle Pump.
h. Set Air Regulator for approximately 20 PSI.
i. Allow pump to pump gland water for a few minutes.
j. Close gland water.
k. Close Gypsum Recycle Flush valve ***A26***.
l. Disconnect and remove hose.

5.0 Attachments

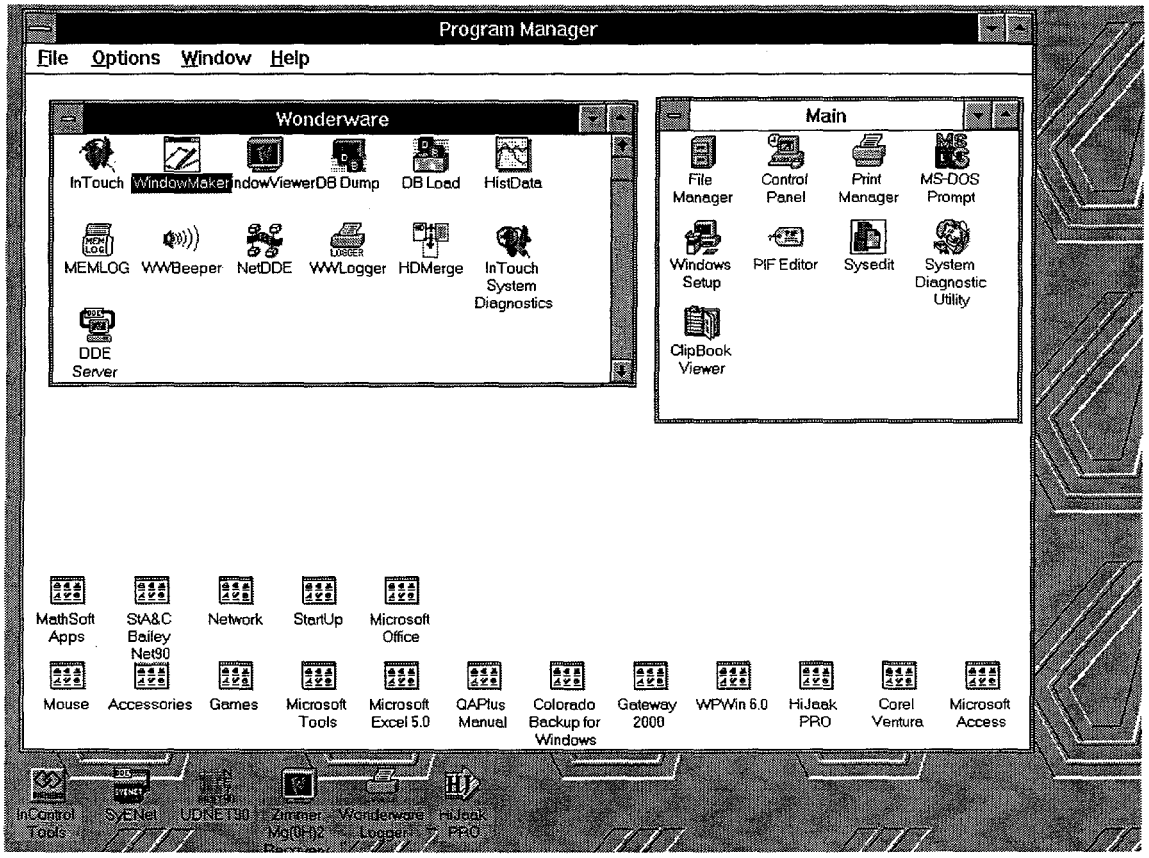
5.1 $Mg(OH)_2$ Recovery Unit Computer Screen in Windows' Environment.

5.2 $Mg(OH)_2$ Recovery Unit Computer Screen in Control Environment.

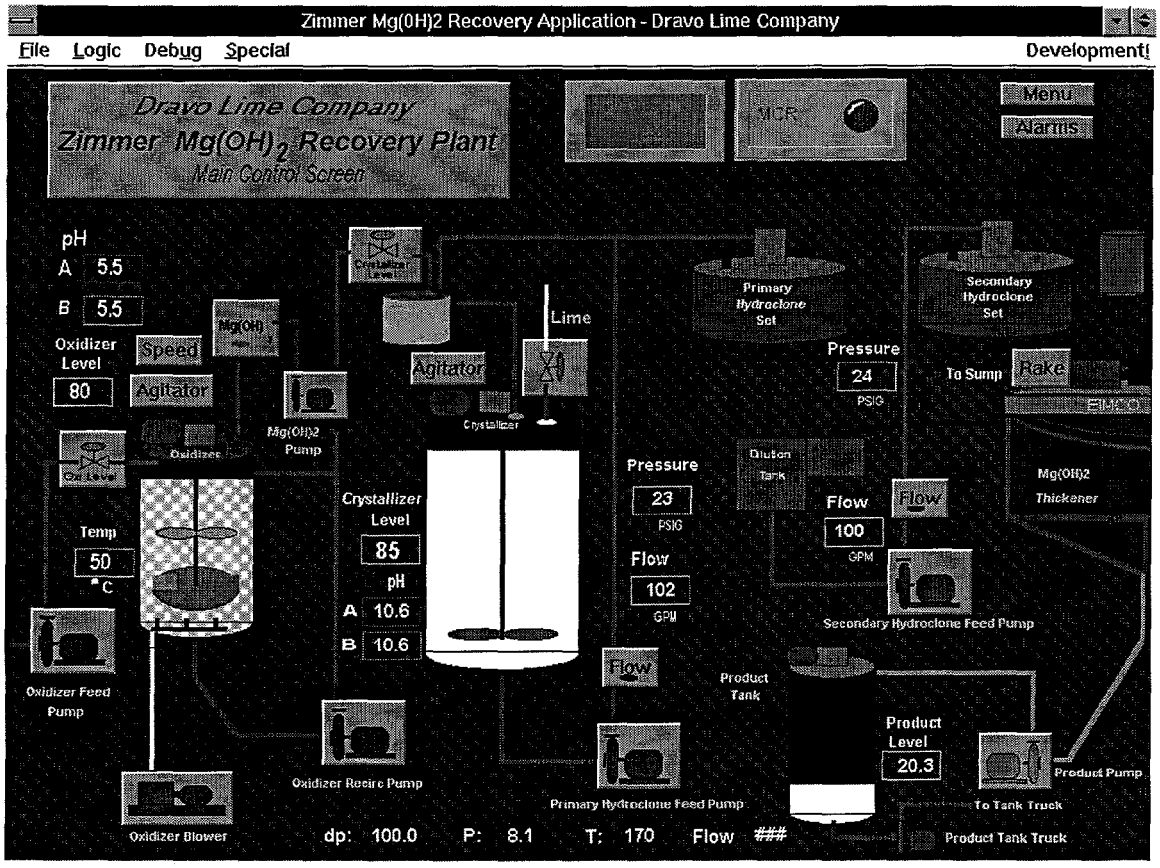
5.3 $Mg(OH)_2$ Recovery Process Description

5.4 Major Component Description

5.1 $Mg(OH)_2$ Recovery Unit Computer Screen in Windows' Environment.



5.2 $Mg(OH)_2$ Recovery Unit Computer Screen in Control Environment.



5.3 Magnesium Hydroxide Recovery Process Description

A. Oxidizer Operation

The feed stream for this plant is a bleed from one of two FGD thickener overflow streams (TOF). The FGD TOF first fills a 24 inch ID standpipe that insures a constant head of liquid to the oxidizer feed pump. The TOF stream proceeds to the 7,000 gallon oxidizer column that is 9' ϕ by 14'-6" tall. Liquid level (and residence time) is typically maintained at 85% of the total column height by automatic control.

The thickener overflow contains dissolved magnesium ions in the form of $MgSO_3$, $Mg(HSO_3)_2$, $MgCl_2$ and $MgSO_4$. In the oxidizer the sulfites convert to sulfates by the following reactions:

$$MgSO_3 + 1/2O_2 \Rightarrow MgSO_4$$
$$Mg(HSO_3)_2 + O_2 \Rightarrow MgSO_4 + H_2SO_4$$

The oxidizer design provides one hour of residence time for this reaction. An air blower produces the air required for oxidation up to a stoichiometry of 9.5 moles of monatomic oxygen to 1 mole $SO_3^{=}$. The tower design maximizes liquid and gas contact using air sparging and liquid agitation. The agitator has a single speed and will automatically shut-off if the oxidizer air blower loses pressure. This will occur if air flow to the sparger is too low or shuts off. Air flow from the blower is manually controlled using a hand valve. Typically, all air flow from the blower is directed to the oxidizer.

As seen from the above oxidation reactions, sulfuric acid is a product that will tend to decrease pH in the oxidizer if left uncontrolled. If pH drops below 5.0, SO_2 will begin to form and "off-gas", venting to the outside. If pH approaches 6.0, dissolved $SO_3^{=}$ will begin to precipitate with any Ca+2 in solution. Magnesium hydroxide (from the magnesium hydroxide thickener underflow stream) is injected into the oxidizer as required to maintain pH at the set point of 5.5.

B. Crystallizer Tank Operation

The oxidized liquor stream is fed to the 17,000 gallon crystallizer tank that is 12'-6" ϕ by 20'-0" tall. Liquid level is maintained to 85% of the total column. This liquid level provides a minimum of 2.5 hours of residence time. A mixer operating at a single speed, agitates the crystallizer tank. Crystallizer tank pH is controlled to 10.8 by the addition of lime slurry. The oxidized magnesium compounds and salts react with lime slurry ($Ca(OH)_2$) through the following reactions in the crystallizer tank:

$$MgSO_4 + Ca(OH)_2 + 2H_2O \Rightarrow Mg(OH)_2 + CaSO_4 \cdot 2H_2O$$
$$MgCl_2 + Ca(OH)_2 \Rightarrow Mg(OH)_2 + CaCl_2$$
$$H_2SO_4 + Ca(OH)_2 \Rightarrow CaSO_4 \cdot 2H_2O$$

$Mg(OH)_2$ and $CaSO_4 \cdot 2H_2O$(gypsum) crystals precipitate in this crystallizer tank while $CaCl_2$ remains in solution.

Gypsum from the primary hydroclone underflow stream is added to the crystallizer for the purpose mentioned previously. The small flow of gypsum slurry provides seed crystal to promote large gypsum crystal production in the $Mg(OH)_2$ crystallizer tank.

C. Solids Separation

Solid gypsum separates from the solid $Mg(OH)_2$ mechanically by the hydroclones. However complete separation is never possible. Some gypsum will contaminate the $Mg(OH)_2$ product and $Mg(OH)_2$ will contaminate the gypsum product.

1. Primary Hydroclone System

The $Mg(OH)_2$ and gypsum slurry produced in crystallizer tank flows to the primary hydroclone system through a variable speed pump. This variable speed pump sets the production capacity of the entire plant which designed to be 100 GPM. Lower flowrates will reduce the

capacity of the plant and raise the residence times of the oxidizer and $Mg(OH)_2$ crystallizer tanks, if their liquid levels remain unchanged.

The seven primary hydroclones will function optimally at a volumetric flowrate ranging between 16 and 20 GPM each. This range is the difference of 7 and 6 operating hydroclones at the design capacity of the plant and requires each individual primary hydroclone to be 3 inch ID. Typical operation is with 5 operating hydroclones, leaving 2 hydroclones as spares. As the throughput of the plant reduces by an increment of approximately 16 to 20 GPM, one hydroclone should be brought off-line by closing the shut-off valve located immediately upstream of that hydroclone.

Each primary hydroclone has two exit streams, overflow and underflow. The overflow stream consists of most of the $Mg(OH)_2$, some gypsum, and the bulk of the inlet liquid. The overflow streams from all operating primary hydroclones flow to a catch basin from which the combined streams proceed to the center well of the $Mg(OH)_2$ thickener. The underflow stream consists of most of the gypsum produced by the process and some of the $Mg(OH)_2$. The underflow streams of all operating primary hydroclones proceed to a collection tank. T-105 has two exit streams. A small recycle stream to both oxidizer and crystallizer tank proceeds via a diaphragm pump. A second stream proceeds to a dilution tank.

2. Primary Hydroclone Underflow Dilution

Overflow from the $Mg(OH)_2$ thickener, mixes with the primary hydroclone underflow stream in the primary hydroclone underflow dilution tank, to produce a 6 weight percentage solids stream. This mixture is pumped to the secondary hydroclone system. This step provides a way to recover more $Mg(OH)_2$ than is recovered by the primary hydroclone system alone. Excess liquid from the $Mg(OH)_2$ thickener will overflow to an in ground sump.

3. Secondary Hydroclone System

The primary hydroclone underflow stream, diluted with $Mg(OH)_2$ thickener overflow liquor, feeds the secondary hydroclone system with another variable speed pump. Typical flowrate to the secondary hydroclones is 100 GPM.

The seven secondary hydroclones are identical to the primary hydroclones and operate similarly. Typical operation is with 5 operating hydroclones, leaving 2 hydroclones as spares. As flowrate through the secondary hydroclone system decreases by an increment of 16 to 20 GPM, one hydroclone should be brought off-line by closing the shut-off valve located immediately upstream of that hydroclone.

Each secondary hydroclone has two exit streams, overflow and underflow. The overflow stream consists mostly of $Mg(OH)_2$ and some gypsum and the bulk of the inlet liquid. The overflow stream from all operating secondary hydroclones proceeds to a catch basin from which the combined streams proceed to the center well of the $Mg(OH)_2$ thickener.

The underflow stream consists mostly of gypsum and less $Mg(OH)_2$ than existed in the primary hydroclone underflow stream. The underflow streams from all operating secondary proceeds directly to the in ground sump.

D. $Mg(OH)_2$ Product Dewatering

Both the primary and secondary hydroclone overflow streams are gravity fed to the center well of the $Mg(OH)_2$ thickener. The thickener allows the solid $Mg(OH)_2$ crystals to settle to the bottom while decanting solids free liquor through a weir and out overflow piping. As mentioned previously, most of the $Mg(OH)_2$ thickener overflow stream dilutes the primary hydroclone underflow stream. A product pump withdraws thickened $Mg(OH)_2$ from the bottom of the thickener and directs thickened $Mg(OH)_2$ to either a product storage tank or the sump. Thickened $Mg(OH)_2$ does not typically exceed 20 weight percent solids. The thickener rake includes a

high-torque sensing device that will alarm and automatically shut down the rake motor if a problem develops.

Operation of the Thioclear process at Miami Fort station pilot plant, which is a similar process to the $Mg(OH)_2$ recovery process, has shown $Mg(OH)_2$ solids difficult to settle. To promote solid's settling at Miami Fort, a flocculating agent is added to the stream feeding the $Mg(OH)_2$ thickener. The thickener at Zimmer Station is four times larger than the thickener at the Miami Fort pilot plant. A flocculating agent feed system is in use at Zimmer Station to keep the thickener overflow stream clear. Use of the flocculating agent has not effected the ultimate settled solids content of the thickener underflow stream.

5.4 Major Component Descriptions

Tank List

ID	Description	Size (ft)	Volume (gallons)
ZM-Q850	FGD TOF Standpipe	2'ϕ x 12'	
ZM-TK816-00	Oxidizer Tank	9'ϕ x 14'-6"	9,000
ZM-TK817-00	Regeneration Tank	ϕ x 20'	17,000
HC-101	Primary Hydroclone Underflow Collection Tank	ϕ x 3'	~300
ZM-TK818-00	Primary Hydroclone Underflow Dilution Tank	4' x 5' x 6'	468
HC-102	Secondary Hydroclone Underflow Collection Tank	ϕ x 3'	~300
ZM-SK826-00	Hydroclone Overflow Collection Tank	ϕ x 2'	~73
ZM-PP823-00	Sump Return to FGD Centerwell		
ZM-PP823-00	$Mg(OH)_2$ Thickener	32'ϕ x 10'-6"	
ZM-TK815-00	$Mg(OH)_2$ Storage Tank	? x ?	

Agitator List

ID	Description	Manufacturer	HP
ZM-QQ826-00	Oxidizer Agitator	Chemineer	
ZM-QQ827-00	Regeneration Agitator	Lightnin	
ZM-QQ828-00	$Mg(OH)_2$ Thickener Rake Drive		

Pump List

ID	Description	Capacity	HP
ZM-PP817-00	Oxidizer Feed Pump	120 GPM	5 HP
ZM-CP825-00	Oxidizer Air Blower	200 SCFM	25 HP
ZM-PP818-00	Oxidizer Recirculation/ Regen Feed Pump	150 GPM	5 HP
ZM-PP820-00	Primary Hydroclone Feed Pump	150 GPM	7.5 HP
ZM-PP820-00	Secondary Hydroclone Feed Pump	100 GPM	7.5 HP
ZM-PP821-00	$Mg(OH)_2$ Product Pump	30 GPM	5 HP
P-109	Mag Metering Pump	1 GPM	1/3 HP
ZM-PP824-00	Gypsum Recycle Diaphragm Pump	GPM	N/A
ZM-PP823-00	Recovery Plant Sump Pump	150 GPM	7.5 HP
P-111	Polymer Pump	7 GPM	1/3 HP

Instrumentation and Control Components

ID	Description	Control Range	Notes
PAL-001 PSL-001	Instrument Air Pressure Low Alarm/Switch		Computer Alarm
HCV-101	Oxidizer Air Flow Hand Control Valve	SCFM	
PI-102	Air Blower Exhaust Pressure	PSIG	Local Indication
FI-102	Air Flow Indicator	SCFM	Local Indication

PI-103 PSL-103 PAL-103	Air Supply Pressure to Oxidizer/Low Switch/Low Alarm		Computer Alarm
LT-104	Oxidizer Level Transmitter		
	Oxidizer Level Indicating Controller		Computer Control
	Oxidizer Level Control Valve		Adjusts FGD TOF flow to Oxidizer
PI-105	Discharge Pressure		Local Indication
AE-106a/b	Oxidizer pH Measurement		
AIT-106a/b	pH Transmitter		
AIC-106	pH Indicating Controller	pH 4.5 - 5.5	Computer Control
SC-106	Acid Pump Speed Control		Delivers acid if pH is above set point
ACV-106	$Mg(OH)_2$ Flow Control		Delivers $Mg(OH)_2$ if pH is below set point
TI-107	Oxidizer Temperature		
	Temperature Transmitter		
TIR-107	Temperature Recorder		Recorded by Computer
HV-108	Hand Control Valve Recirculating Liquor		Controls flowrate of recirculating oxidized liquor. Usually open full.
LT-201	Regeneration Tank Level Transmitter		
	Regeneration Tank Level Indicating Controller		Computer Control

	Regeneration Tank Level Control Valve		Adjusts Oxidizer Bleed to Regeneration Tank
AE-202a/b	Regeneration Tank pH		
AIT-202a/b	Regeneration Tank pH Indicating Transmitters		
AIC-202	Regeneration Tank pH Indicating Controller	pH 10.0 - 11.0	Computer Control
ACV-202	pH Control Valve		Adjusts lime slurry flow to maintain pH setpoint
HV-203	Hand Control Valve Recirculating Liquor		Controls flowrate of recirculating Regen Tank liquor. Usually open full.
FE-301	Primary Hydroclone Feedstream Flow Measurement		
FT-301	Flow Transmitter		
FIC-301	Flow Indicating Controller		Computer Control
SC-301	Pump Speed Control		Pump speed adjusted to maintain flowrate set point
PI-302	Discharge Pressure		Local Indication
PT/PIR-303	Primary HC Supply Pressure Transmitter/Recorder		Recorded by Computer
LSL-401	Low Level Switch		

FE-401	Secondary Hydroclone Feedstream Flow Measurement		
FT-401	Flow Transmitter		
FIC/FSL-401	Flow Indicating Controller/Low Flow Switch		Computer Control
PI-402	Discharge Pressure		Local Indication
PT/PIR-403	Secondary HC Supply Pressure Transmitter/Recorder		Recorded by Computer
HV-405	Instrument Air Supply Hand Valve to P-105		Regulates Pump Flowrate
LSH/LSHH/LAHH-500	High Level Switch/Alarm for Sump		Computer Alarm/activates ZM-PP823-00
PI-501	Discharge Pressure		Local Indication

Internal Correspondence

Appendix VIII
Vendor Dewatering Reports and
Additional Information on Magnesium
Hydroxide Washing

To	M. Babu	Location	Research Center	Date	1/31/91
From	J. College	Location	Research Center	Page No.	1 of 4
Subject	THIOCLEAR $Mg(OH)_2$ PRODUCT IMPROVEMENT BY GYPSUM DISSOLUTION				

cc: Gary Miller
Lew Benson
M. L. Cupp
File 5216

During the Thioclear test program at Mitchell Station it was found that gypsum was reporting to the hydroclone overflow of the Thioclear circuit. This gypsum concentration ranged between 15-25% of the solids phase in the overflow. Discussions with $Mg(OH)_2$ vendors indicated that an acceptable $Mg(OH)_2$ should be on a calcined basis, at least 90% MgO. This indicated that the gypsum had to be removed. A simple method exists for the removal of the gypsum. The solubility of gypsum in water is 2410 mg/L. The solubility of $Mg(OH)_2$ in water is 9 mg/L. The gypsum could therefore be dissolved away with excess water from the $Mg(OH)_2$ solid phase. Thereby purifying the $Mg(OH)_2$.

The big question was, at what rate would the gypsum dissolve and would it be practical to use this in a commercial purification system?

As it turns out the gypsum dissolution is very fast. Three tests were run at three different water ratios. Most of the gypsum dissolved in the first 5 minutes. The Ca^{++} ion concentration was followed to verify gypsum dissolution. The results are as follows:

Time (Min)	Test #1 Mitchell Sta. HCOF Product Excess Water 16.5 liters H_2O/ 40 grams dry solids	Test #2 Miami Fort HCOF Product Exact Water 3.2 liters of H_2O/ 40 grams dry solid	Test #3 Miami Fort HCOF Product Slight Excess of Water 5.0 liters H_2O/ 40 grams dry solids
0	500	500	500
immediately after mixing	114	486	294
5	116	638	395
15	118	669	395
30	117	671	406
45	116	670	402
60	118	667	435
75	118	660	429
90	118	678	415
105	118	670	419
120	120	647	419

The initial and residual solid phases for each of the tests were filtered dried and analyzed. The results are tabulated:

	Test #1 Mitchell Sta.	Test #2 Miami Fort	Test #3 Miami Fort
Initial Solids Chemical Analysis			
MgO	45.28	30.81	30.81
CaO	8.67	9.09	9.09
SIOT as SO_4	11.28	13.11	13.11
Inerts (SiO_2	0.98	11.35	11.35
Initial Solids Calculated Composition (dried at 50°C)			
$Mg(OH)_2 \cdot .5H_2O$	76.07	51.61	51.61
$Ca(SO_4) \cdot 2H_2O$	20.21	23.56	23.56
$Ca(OH)_2$	2.74	1.42	1.42
Inerts (SiO_2)	0.98	11.35	11.35
Final Solids Chemical Analysis			
MgO	55.88	36.84	36.16
CaO	2.11	4.12	3.09
SIOT as SO_4	1.23	4.56	4.20
Inerts (SiO_2)	0.99	13.94	14.06
Final Solids Calculated Composition			
$Mg(OH)_2 \cdot .5H_2O$	93.87	61.71	60.57
$CaSO_4 \cdot 2H_2O$	2.20	8.26	7.56
$Ca(OH)_2$	1.85	1.46	0.62
Inerts (SiO_2)	0.99	13.94	14.06
Final Solid Calculated Composition on a Calcined Basis			
MgO	92.81	61.96	62.88
CaO	3.50	6.93	5.37
SIOT as SO_4	2.04	7.67	7.30
Inerts (SiO_2)	1.64	23.44	24.44

From the results it can be seen that the gypsum concentration can be reduced by using water. Most of the gypsum dissolves in the first 5 minutes of the reaction. After 30 minutes equilibrium between the solid and liquid phase has been achieved.

The purity of the calcined products is of concern to the magnesium hydroxide vendors. Thiosorbic thickener overflow treated with lime produces gypsum and magnesium hydroxide. The separated $Mg(OH)_2$ in the hydroclone overflow can be diluted with water to produce a 90% pure MgO product when calcined (in this case 92.81% MgO). The Silica (SiO_2) analysis of many hydroclone overflow samples at Mitchell Station ranged from 2-3.5%.

The difference in the purity of the hydroclone overflow at Mitchell Station and Miami Fort was due to the accumulation of fine silica in the scrubber loop at Miami Fort.

The silica particles are obviously very fine. At Mitchell Station the hydroclone overflow made only one pass through the system. The silica reporting to the overflow product. This single pass did not allow for the small silica compounds to accumulate.

At Miami Fort the $Mg(OH)_2$ and the silica compounds are recycled many times. The accumulation rate of the silica compounds in the hydroclone overflow is much faster than that of the magnesium hydroxide. The silica levels climbed gradually throughout the program. At the end of the 6 week test program the hydroclone overflow analyzed at about 11% SiO_2. Unfortunately, water does not dissolve these silica compounds. The gypsum can be removed to a great extent but the silica cannot. From the results it can be seen that this material can be purified to approximately 60% MgO on a calcined basis.

Samples of the hydroclone overflows are being prepared. These samples will include the as produced solids and purified solids from both Mitchell Station and Miami Fort. These will be sent to $Mg(OH)_2$ vendors for their evaluation.

J. W. College

EIMCO Process Equipment
A Baker Hughes company
SALT LAKE CITY

INTEROFFICE MEMO

Appx IX

To: Fred Kelly
From: Todd Wisdom TW
Subject: Dravo Lime/Zimmer Station Test Results

Date: December 8, 1994
Copies: Steve Slottee
Chad McClear CKM
Bill Timmins
JF: T25170-015

Dravo Lime has developed a new process for recovering $Mg(OH)_2$ from FGD waste. To be commercially competitive, the process must produce $Mg(OH)_2$ at a solids concentration near 50 wt%.

A sample from this process was received from Dravo Lime which contained 9.62 wt% suspended solids, 0.05 wt% dissolved solids, and had a pH of 10. The particle size distribution had a mean of 10.39 microns with 10% passing 2.51 microns. Vacuum filtration and recessed chamber pressure filtration tests were conducted with the goal of achieving the desired 50 wt% suspended solids in the cake produced.

Bench scale vacuum filtration tests using NY317F as the filtration media and at 20 Hg" vacuum were run to determine if the a full scale vacuum filter could produce the desired solids concentration. The test results indicated that the maximum cake solids achievable on a vacuum filter would be approximately 33 wt%. A 4 mm cake was formed in 2.5 minutes and severe cake cracking was observed after 30 seconds of dry time. The full scale filtration rate for a high submergence drum filter would be approximately 2 $lbs/hr/ft^2$. Some solids were observed in the initial filtrate and a cloudy port recycle is recommended.

Two 1.25 inch recessed chamber pressure filtration tests using P950 as the filtration media were also conducted. The first test used a fill pressure of 100 psi and achieved a cake solids concentration of 40 wt% with a chamber fill time of 50 minutes. A dry cake density of 32.6 lbs/ft^3 was achieved. The second test used a fill pressure of 225 psi and achieved a cake solids concentration of 44 wt% with a fill time of 50 minutes. A dry cake density of 37.9 lbs/ft^3 was achieved. The filtrate for both tests contained a significant amount of solids for the first 4 minutes of the test before cake filtration began. To capture the solids lost during initial cake formation recycling, the first 5 minutes of filtrate back to the filter feed tank is recommended. These tests did not include airblowing or membrane squeezing the cakes. Airblowing and membrane squeezing the cakes may produce a dryer cake.

Pressure filtration appears to be the most realistic method of achieving the desired cake solids concentration. Cake airblow and/or membrane squeeze will most likely increase the cake solids concentration with a possible increase in full scale production rate. If there are any questions or comments concerning this report, please call me.

tww.cst
dravco.m1

BIRD

TECH SERVICE
FAX TRANSMISSION

Log No:

Date: 12/12/94

Company: DRAVO LIME Fax No.: 412-777-0727

Attn: MR DON KERIVAN

From: R. G. HAVRIN

Page(s) 1 OF 9 (Includes cover page, if any)

Comments/Message:

As per our conversation, please receive and review the attached lab report

Best regards,

Robert G Havrin

If responding via FAX, please use FAX number (508)668-5430
100 Neponset Street, South Walpole, MA 02071, Phone (508)668-0400

BIRD MACHINE COMPANY
A Baker Hughes company

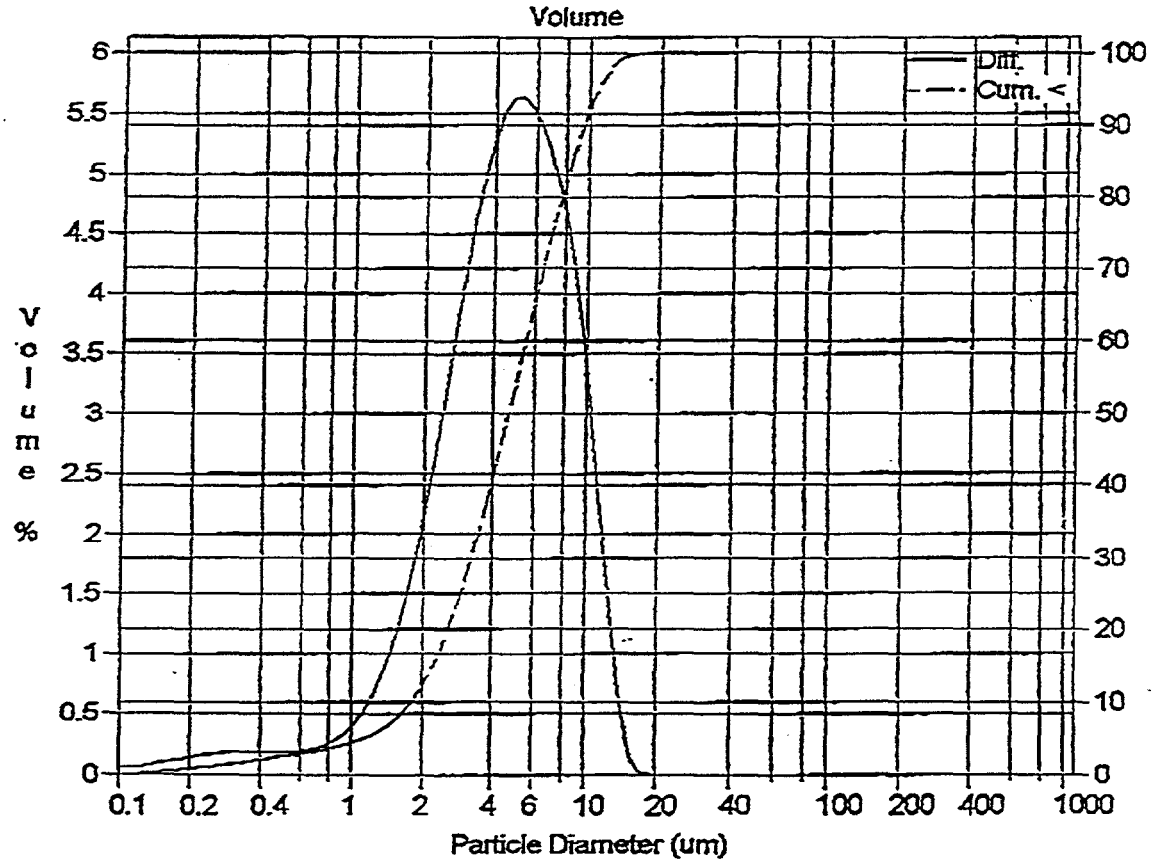
LABORATORY REPORT NO: 12281

CUSTOMER:	Dravo Lime Pittsburg, PA
MATERIAL:	Magnesium Hydroxide
PRODUCT NO.:	323700
PROCESS:	
SAMPLE RECEIVED:	5 gallons (10/25/94)
PURPOSE OF TEST:	Decanter
RESULTS:	Floc is needed for a decanter. This is a poor filter application.
DATE:	November 1, 1994

100 NEPONSET STREET, SOUTH WALPOLE, MA 02071-1001
PHONE 508-668-0400 / FAX 508-668-6855 / TELEX 924428

Run 1 of 1

File name:		Group ID:	
Sample ID:			
Operator:		Run number: 1	
Comments:			
Start time:	8:40 28 Oct 1994	Run length:	91 Seconds
Pump Speed:	62		
Obscuration:	14%		
PIDS Obscur:	87%		
Optical model:	garnet.omd		
Fluid:	Water		
LS 130	Fluid module		
Software:	1.53	Firmware:	1.3 1.8



Run 1 of 1

Volume Statistics (Arithmetic) (Untitled)

Calculations from 0.100 um to 900.0 um

Volume	100.0%		
Mean:	5.199 um	95% Conf. Limits:	0-11.1 um
Median:	4.661 um	S.D.:	3 um
Mean/Median Ratio:	1.116	Variance:	8.99 um^2
Mode:	5.249 um	C.V.:	57.7%
		Skewness:	0.718 Right skewed
		Kurtosis:	0.115 Leptokurtic

% <	10	25	50	75	90
Size um	1.799	2.942	4.661	7.056	9.502

COULTER LS300

The average particle size of a distribution is not as useful as knowing the distribution about the average. If the distribution is not symmetrical, the average is not a typical value. Statistical analysis of the distribution measures the degree of variation of a sample.

Measurements of the Center of a Distribution

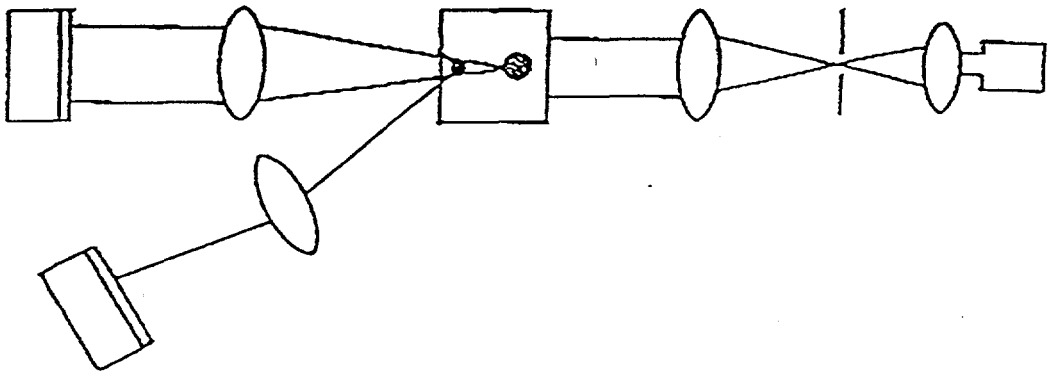
Arithmetic Mean	average quantity of all particles influenced by population distribution
Geometric Mean	computed logarithmetically the antilog of the size of all particles less affected by population distribution
Mode	most frequent value
Median	the value which splits data into two equal halves

Distribution Measurements

Variance	the distribution from the mean Can be calculated both arithmetically and geometrically.
Standard Deviation	the measure of the variation in a set of data. The square root of the variance. Affected by size distribution. Can be calculated both arithmetically and geometrically.
Coefficient of Variation	The standard deviation divided by the mean. Measures relative variation of a distribution. Most useful in comparing different sets of data
Confidence Limits	Defines a range of sizes about the mean within which a specified percent of particles should fall based on the standard deviation.
Skewness	Distortion from symmetry of a distribution.
Kurtosis	Measure of the peakedness of a frequency distribution. Calculated both arithmetically and geometrically.

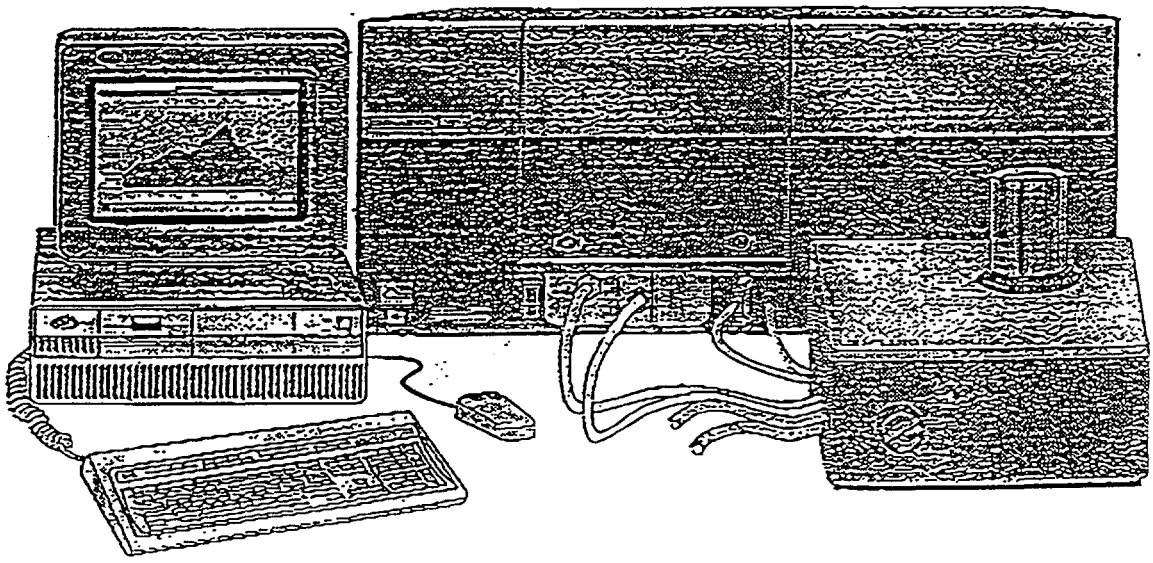
COULTER LS130 (LASER) PARTICLE SIZE ANALYZER

The Coulter LS130 Analyzer uses laser diffraction (scattered light) to determine particle size distribution by volume or surface area. A binocular optical system pictures the diffraction pattern created as dispersed solids are pumped through a detector. The instrument automatically chooses the correct settings to obtain a complete picture of a sample. The LS130 is the most accurate instrument and currently the state of the art in particle size measurement.



Laser light is diffracted around particles in angles proportional to the size of the particle. The smaller the particle, the greater the angle of diffraction. Two optical trains are used to capture the full range of diffracted light simultaneously.

The range of the LS130 is 0.1 to 800 microns. Measurement time is less than 1 minute. Data can be represented in both tabular form or in graphs. The data can also be stored on diskette for future use.

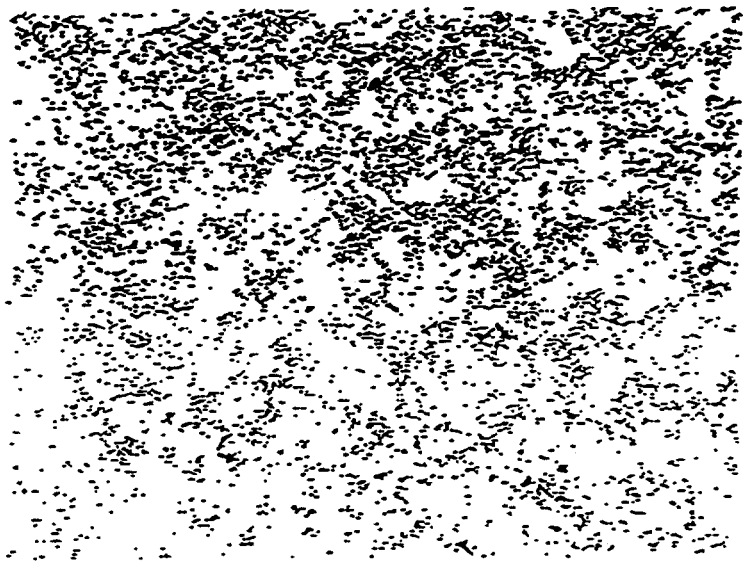


The results and recommendations described in this report assume that the sample tested is representative of the material which would be seen in production.

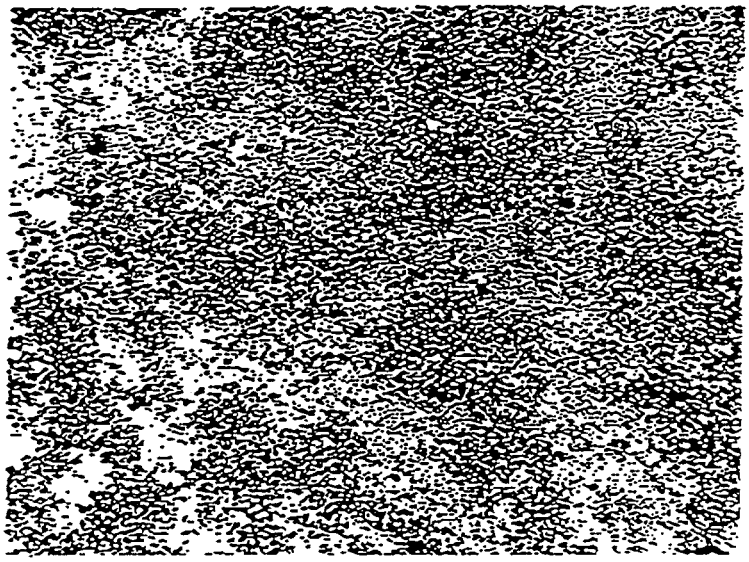
Sample Preparation:	**As Received**
Temperature Used For Testing:	**23 C**
Feed	
% Suspended Solids:	**8.97**
% Solids By Volume (Spun at 10,000 XG for 3 min.):	**30**
Specific Gravity:	1.76
Viscosity (centipoise): (Brookfield)	176
Liquor	
% Dissolved Solids:	0.7
Specific Gravity:	1.00
Viscosity (centipoise): (Brookfield)	3.0
pH:	8
Composition:	Water
Color:	Clear
Solids	
Composition:	Magnesium Hydroxide
Color:	White
Specific Gravity:	1.74
Shape:	Granular
Other Physical Characteristics:	Milkshake like slurry

PHOTOGRAPH

magnification 50x



magnification 100x



SPIN TUBE TEST

THE ABILITY TO CENTRIFUGE A MATERIAL CAN BE DETERMINED WITH A TEST TUBE SPINNER. IF A MATERIAL IS APPLICABLE TO CENTRIFUGATION, THE SOLIDS WILL SPIN DOWN IN A REASONABLE TIME AT A GIVEN CENTRIFUGAL FORCE AND COMPACT INTO A BULKY CAKE SUITABLE FOR CONVEYING. A STANDARD CLINICAL SPIN TUBE IS USED FOR THE TEST. A 15ml TUBE IS FILLED TO THE 10ml MARK AND SPUN AT A NUMBER OF GRAVITATIONAL LEVELS MEASURING THE AMOUNT OF SETTLED SOLIDS AND SUPERNATE QUALITY COMPACTION OF THE SETTLED SOLIDS IS MEASURED BY PLACING A GLASS ROD ON THE SURFACE OF THE CAKE AND MEASURING THE POINT TO WHICH THE ROD PENETRATES:

SPIN TIME CUM SEC	ml CAKE	%VOL CAKE	ROD PENETRATION	% CONDITION	EFFLUENT QUALITY
1000 XG					
10	0.5	5.0	0.1	10.0	0.9 CLOUDY
30	0.9	9.0	0.2	16.7	1.5 CLOUDY
60	2.0	20.0	0.3	15.0	2.8 CLOUDY
90	3.8	38.0	0.5	13.2	3.4 CLOUDY
150	4.8	48.0	1.2	25.0	3.8 CLOUDY

UNDER EFFLUENT QUALITY THE NUMBER LISTED INDICATES THE AMOUNT OF CLEAR LIQUOR WHICH APPEARS AT THE TOP OF THE SLURRY VOLUME IN THE TUBE. THE ENTIRE VOLUME OF SOLIDS SETTLES AS ONE MASS OF MATERIAL.

2000 XG					
10	0.8	8.0	0.2	18.8	1.2 CLOUDY
30	2.2	22.0	0.6	27.3	3.2 CLOUDY
60	4.5	45.0	1.9	42.2	3.0 CLOUDY
90	5.7	57.0	1.7	29.8	3.3 CLOUDY
150	3.4	34.0	2.3	67.6	3.4 CLOUDY
3000 XG					
10	1.4	14.0	0.3	17.9	1.7 CLOUDY
30	3.0	30.0	0.8	26.7	2.5 CLOUDY
60	5.3	53.0	1.5	28.3	3.3 CLOUDY
90	3.4	34.0	2.0	58.8	SLIGHTLY CLOUDY
4000 XG					
10	1.6	16.0	0.4	25.0	1.9 CLOUDY
30	5.5	55.0	1.1	20.0	2.9 CLOUDY
60	4.5	45.0	2.1	46.7	SLIGHTLY CLOUDY

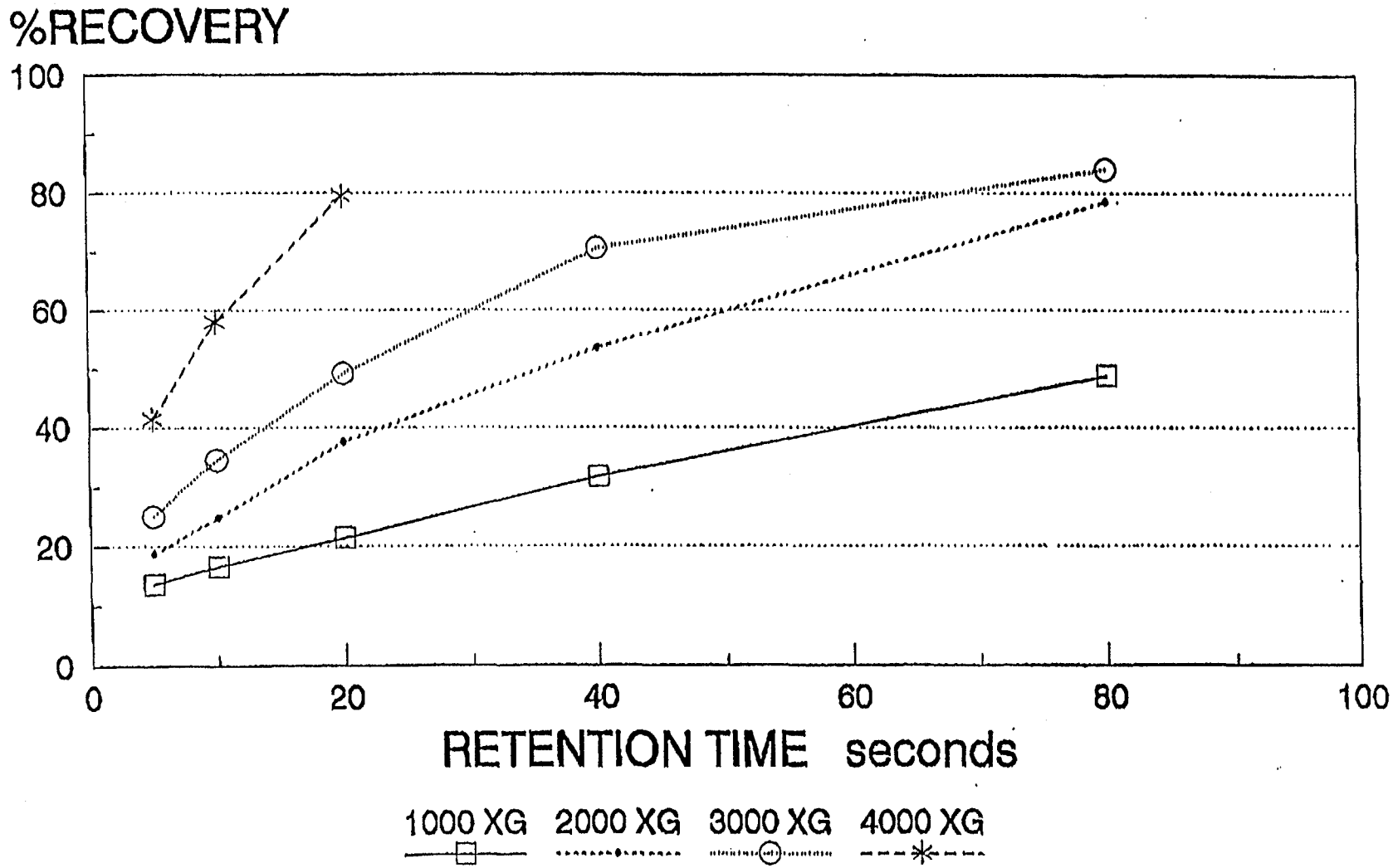
SPIN TUBE TEST

The supernate from the spin tube was decanted and measured for unsettled solids.

Spin Time sec	Force XG	%Unsettled Solids	%Recovery
5	1000	8.61	13.6
10		8.31	16.6
20		7.84	21.4
40		6.80	31.8
80		5.10	48.8
120		3.46	65.3
5	2000	8.11	18.7
10		7.50	24.8
20		6.22	37.6
40		4.64	53.5
80		2.13	78.6
5	3000	7.48	25.0
10		6.52	34.6
20		5.07	49.1
40		2.93	70.6
60		1.60	84.0
10	4000	5.84	41.4
20		4.19	58.0
40		2.04	79.5

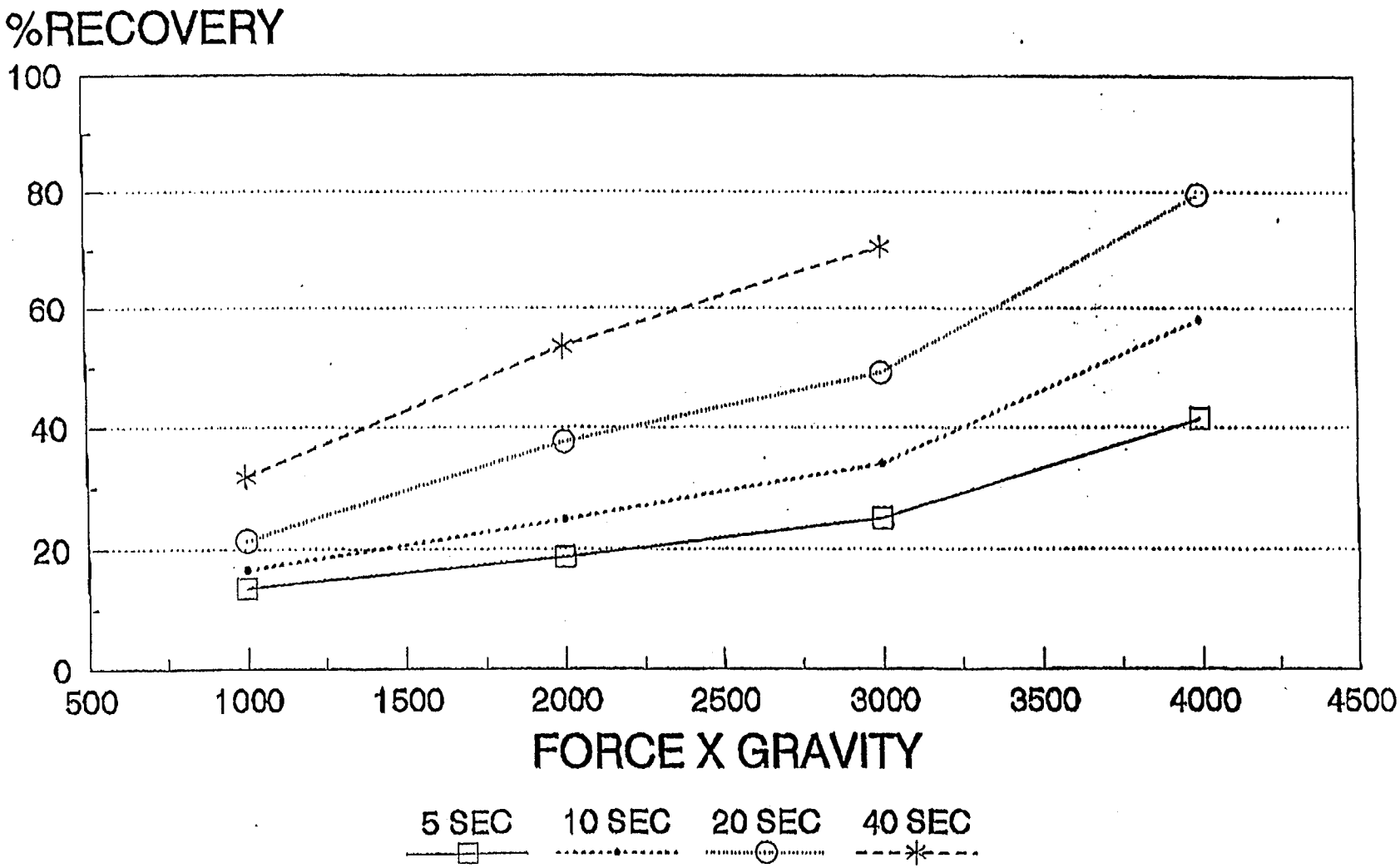
SPIN TUBE TEST

%RECOVERY VS SPIN TIME



SPIN TUBE TEST

%RECOVERY VS FORCE X GRAVITY



The following flocculents will agglomerate the solids in this sample:

Cytek

1839A	1594C
863A	1598C
835A	SD2081
866A	

Rhone Poulenc

C9475
A3005

Allied Colloids

726A
767C

Both anionic and cationic flocs will work.

12/12/94 16:10 ☎508 668 3430 BIRD MACHINE ☑013

SPIN TUBE TEST

FLOCCED SAMPLE
THE FLOC USED IS CYTEK 1839A (LIQUID)
FLOC DOSAGE IS LBS FLOC PER TON DRY FEED SOLIDS

SPUN AT 1000 XG

SPIN TIME CUM SEC	ml CAKE	%VOL CAKE	ROD PENETRATION	% CONDITIION	EFFLUENT QUALITY
2.7 #/T					
10	3.1	31.0	0.3	9.7	CLOUDY
30	5.3	53.0	0.5	9.4	SLIGHTLY CLOUDY
60	4.9	49.0	1.5	30.6	CLEAR
5.4 #/T					
10	4.8	48.0	0.8	16.7	CLOUDY
30	5.5	55.0	2.0	36.4	ESSENTIALLY CLEAR
60	4.9	49.0	2.2	44.9	CLEAR
8.1 #/T					
10	5.2	52.0	2.0	38.5	ESSENTIALLY CLEAR
30	5.0	50.0	3.0	60.0	CLEAR
60	4.5	45.0	2.9	64.4	CLEAR
10.8 #/T					
10	5.0	50.0	3.0	60.0	CLEAR
30	4.5	45.0	3.2	71.1	CLEAR
60	4.4	44.0	3.5	79.5	CLEAR

SPUN AT 2000 XG

10.8 #/T					
10	5.0	50.0	3.0	60.0	CLEAR
30	4.5	45.0	3.2	71.1	CLEAR
60	4.4	44.0	3.5	79.5	CLEAR

SPUN AT 3000 XG

10.8 #/T					
10	5.0	50.0	3.5	70.0	CLEAR
30	4.5	45.0	3.5	77.8	CLEAR

Solid Bowl Decanter Test

Equipment

Bird Solid Bowl Decanter
Model 0100
Cylinder 100
2" Double Lead

There was sufficient sample to make 2 test runs using a pilot scale decanter.

One run was made with the as received slurry. One run was made with feed flocced with Cytek 1839A in the feed tank.

TEST: SOLID BOWL DECANTER TEST
MODEL 0100

MATERIAL: MAGNESIUM HYDROXIDE IN WATER

RUN	1	2
%FEED	8.97	8.97
%CAKE	36.3	23.7
%EFFLUENT	7.6	0.32
%RECOVERY	19.3	97.8
FEED GPM	1.0	1.0
SP.G.	1.02	1.02
PPHds	45.8	45.8
TEMPERATURE	23 C	23 C
FLOC DOSAGE #/T	0.0	13.0
CAKE PPH dry	8.8	44.8
PPH wet	24.4	188.8
#/FT3 wet	69.7	71.6
FT3/Hr wet	0.3	2.6
MACHINE RPM	5000	5000
XG	2129	2129
POOL INCHES	15/32	15/32
GEAR RATIO	100	100
DELTA	50	50
TORQUE IN-LB	23.8	23.5
VOLT	192	194
AMP	9.2	8.7

BIRD YOUNG ROTARY VACUUM FILTER
LEAF TEST DATA

MATERIAL: MAGNESIUM HYDROXIDE IN WATER

RUN NO. 1

FILTER MEDIA	TETKO 7 5/2
FILTER SPEED (RPM)	2.4
% SUBMERGENCE	40.0
VACUUM (IN. HG)	15.0
SUBMERGE TIME(SEC)	10.0
WASH TIME (SEC)	
DRYING TIME (SEC)	15.0
TOTAL TIME (SEC)	25.0
FEED % SOLIDS	8.97
SP. GR.	1.02
%SOLIDS (CALC)	4.93
VOLUME (CC)	6.75
TEMPERATURE	23 C
CAKE % SOLIDS	14.8
WET CAKE (GM)	2.29
DRY CAKE (GM)	0.34
PPH/FT2 DRY	10.78
THICKNESS (CM)	0.1
CAKE CONDITION	WET
DISCHARGE	SPITBACK
FILTRATE % SOLIDS	0.01
SP. GR.	1.00
TOTAL VOLUME (CC)	4.60
NET VOLUME (CC)	4.60
NET GPM/FT2	0.29
% RECOVERY	99.96
WASH VOLUME (CC)	
WASH RATIO	0.00

NOTE: 1.) THE CALCULATED FEED SOLIDS IS BASED ON THE CAKE AND FILTRATE COLLECTED TO GIVE AN INDICATION OF THE QUALITY OF CAKE PICK UP.
2.) THE NET FILTRATE IS THE TOTAL FILTRATE VOLUME MINUS THE WASH VOLUME.

Belt Filter Leaf

To estimate performance with a belt type filter one tst was run with a 0.1 ft2 square filter leaf.

Vacuum	**16" Hg**
Area	**0.1 Ft2**
Cloth	**Tetko 7 5/2**
Feed	
mls used	250
surface dry time sec	525
Cake	
thickness cm	0.8
grams wet	84.3
grams dry	23.5
%	27.9
dry time sec	45
Filtrate	
mls collected	174
%	0.01

This is very slow filtering material. A tight cloth is needed.

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Bird Young Leaf Test

The Bird Young Rotary Drum Filter is simulated with the use of a 0.01 Ft2 round leaf. The leaf is submerged into the feed slurry for varying amounts of time at a constant drying time to measure the amount of cake pickup and the volume of filtrate obtained. This allows the filtration characteristics of the material to be determined. Drying time is then varied to measure the maximum cake solids which is possible by filtration. The effect of vacuum level on cake consistency and filtrate volume is also measured.

Cloth used in testing: Tetko 7 5/2
Polyester
5 micron

Note: A nylon cloth (3-80K14, 18-23 micron) gave a filtrate containing 0.7% solids.

Very slow filtering
Wet cake.
Spitback on cake discharge.