Appendix C

Proposed Data Substitution Method for Breton

Monitoring/Data Analysis Workgroup Call
September 28, 2005
Joe Adlhoch
Air Resource Specialist

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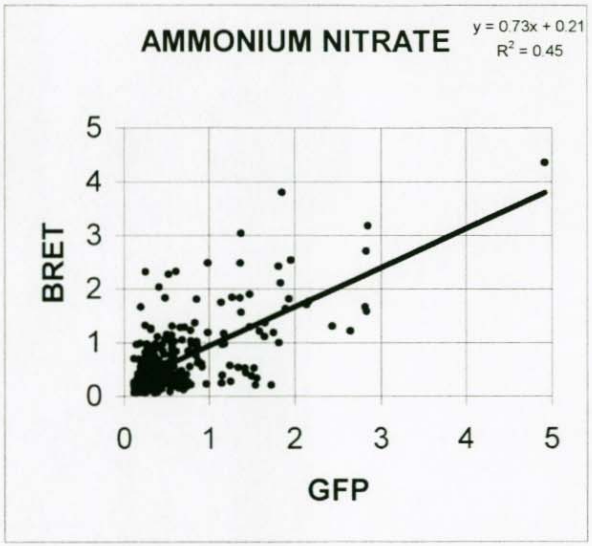
Method for Data Substitution (1)

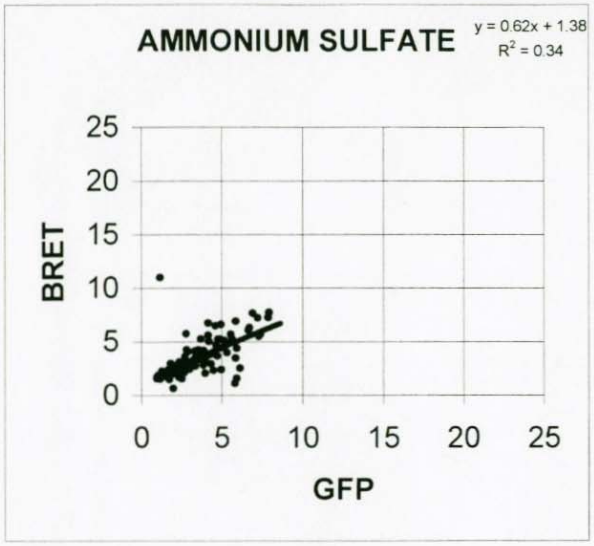
- Breton Island (BRET) monitoring site did not meet the Regional Haze Rule data capture requirements for 2000 (all qtrs), 2001 (qtr 1), 2002 (qtr 2), and 2003 (qtr 4)
- No data substitution was attempted for 2000
- No data substitution was attempted for quarters deemed "complete enough" by RHR guidelines
- Data substitutions only for the incomplete quarters in 2001, 2002, and 2003 were attempted
- Data from the Sikes (SIKE), LA, IMPROVE site and Gulfport (GFP), MS, SEARCH site were investigated as possible candidates for data substitution for BRET.

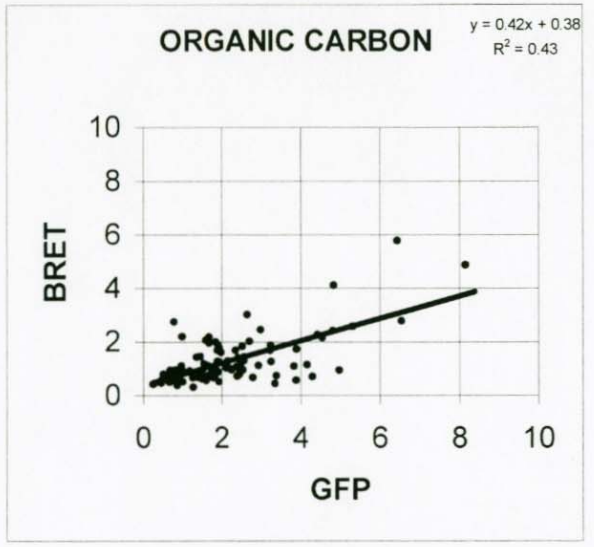
Method for Data Substitution (2)

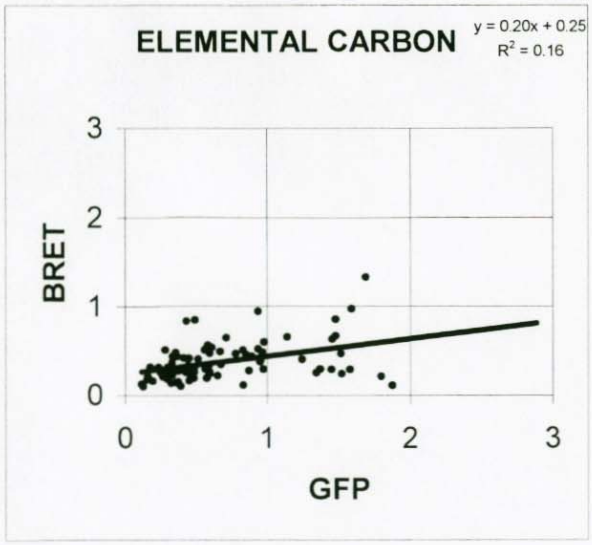
- Species mass comparisons were made based on combined calendar quarters using all available data between pairs of sites (a handful of outlier samples were excluded – shown as red in following scatter plots)
- Seasonal correlations for sulfate, organic carbon, and nitrate were often much better between BRET and GFP than BRET and SIKE
- GFP was selected as the sole donor site
- Linear regression statistics from seasonal comparisons (slope and intercept) were used to scale GFP data for substitution in the BRET data record

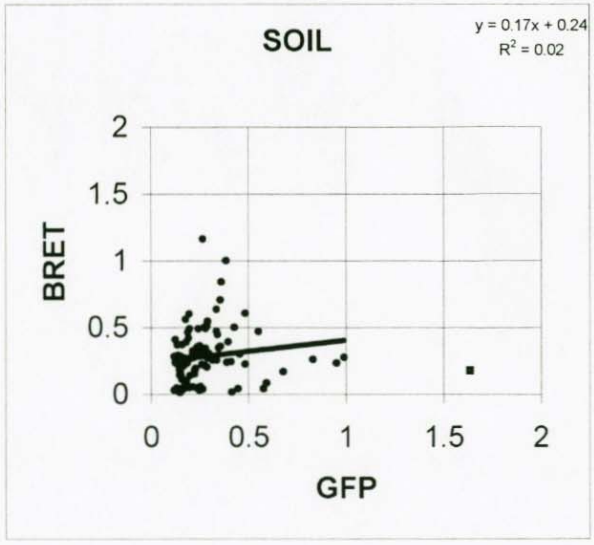
Aerosol Mass Comparisons – BRET vs. GFP (Quarter 1)

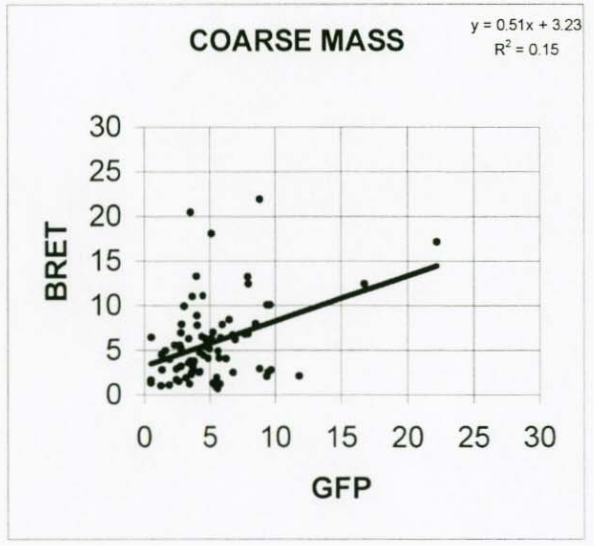




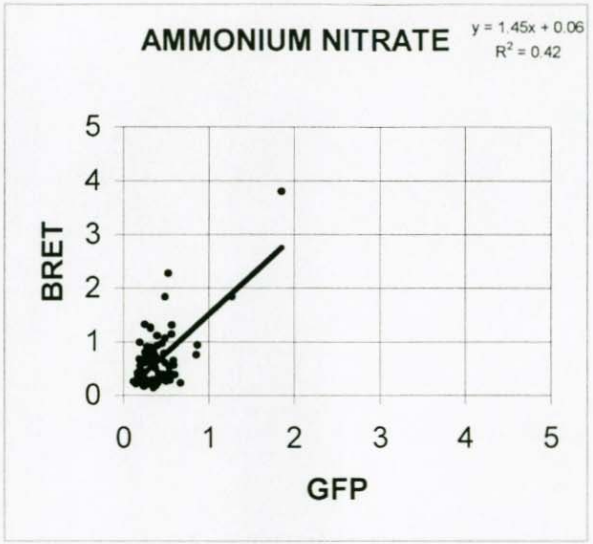


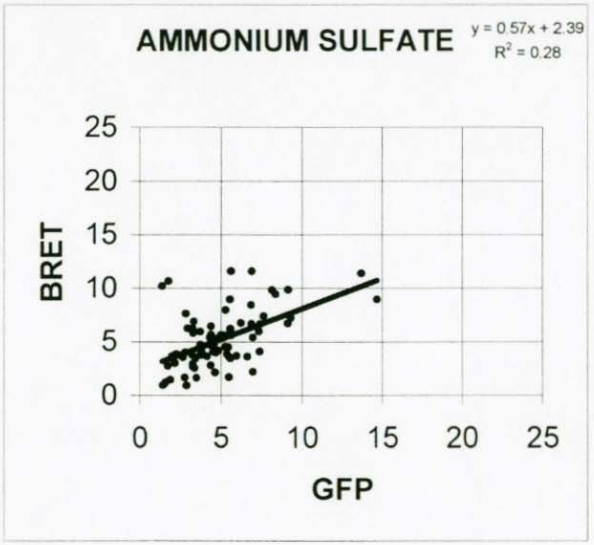


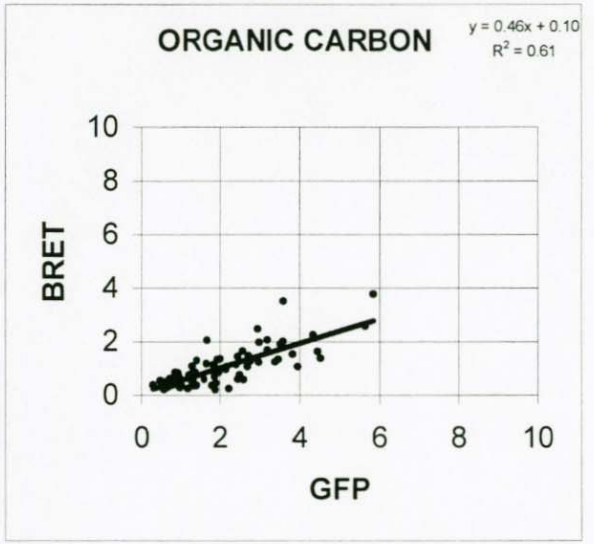


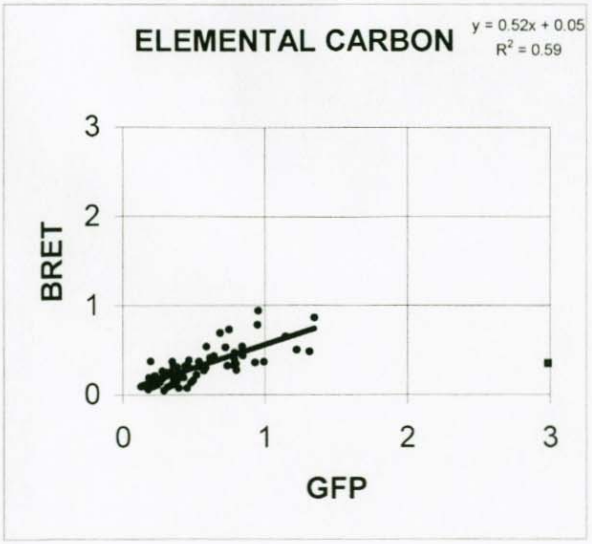


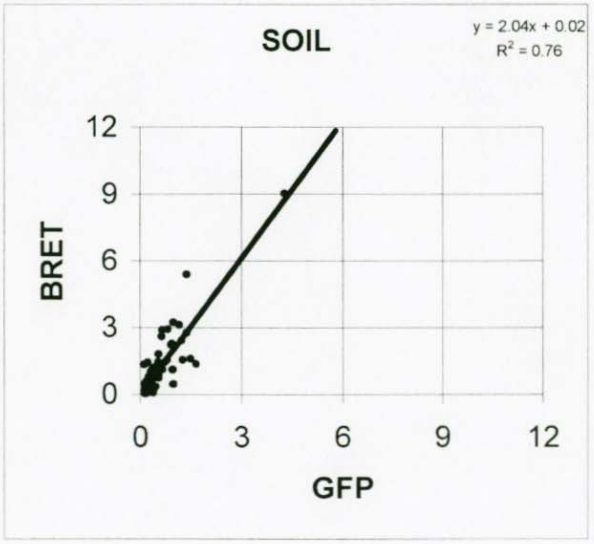
Aerosol Mass Comparisons – BRET vs. GFP (Quarter 2)

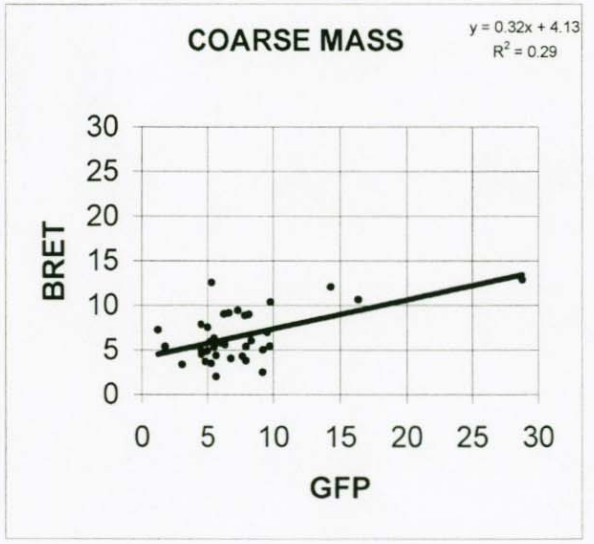




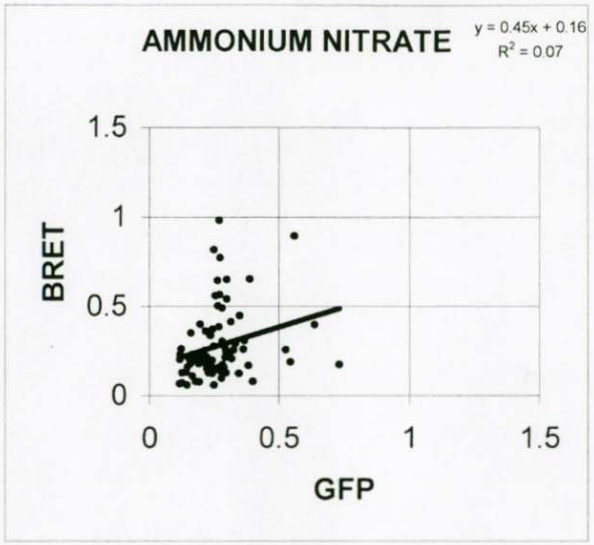


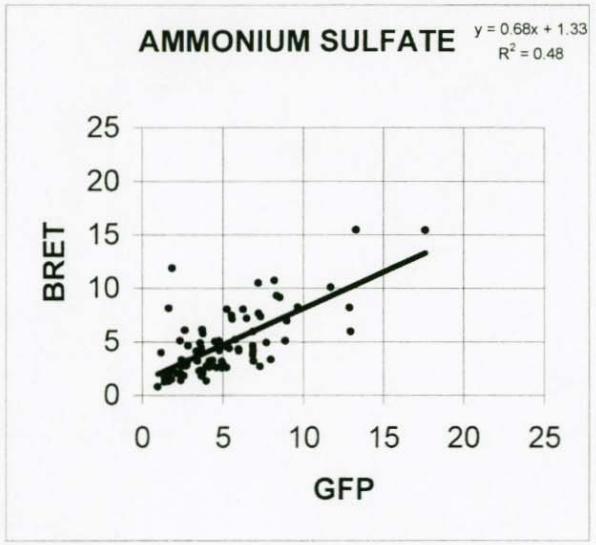


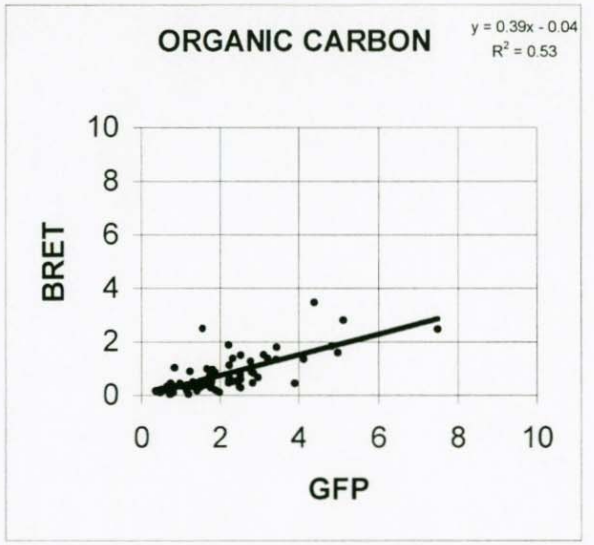


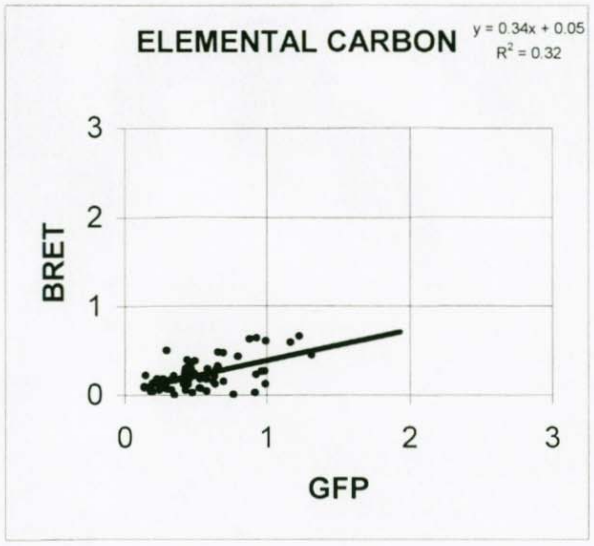


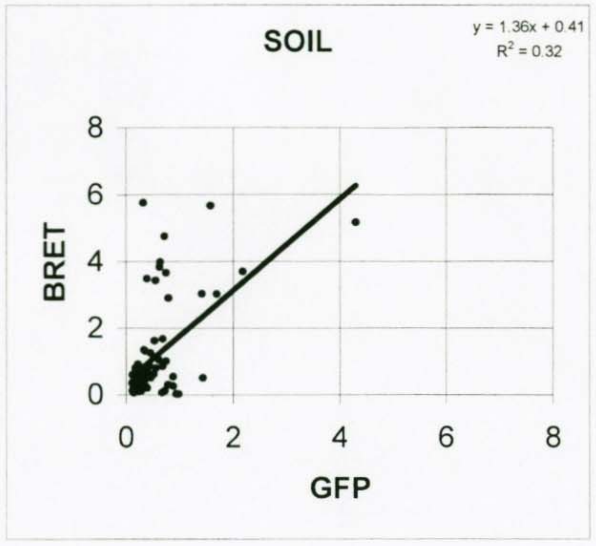
Aerosol Mass Comparisons – BRET vs. GFP (Quarter 3)

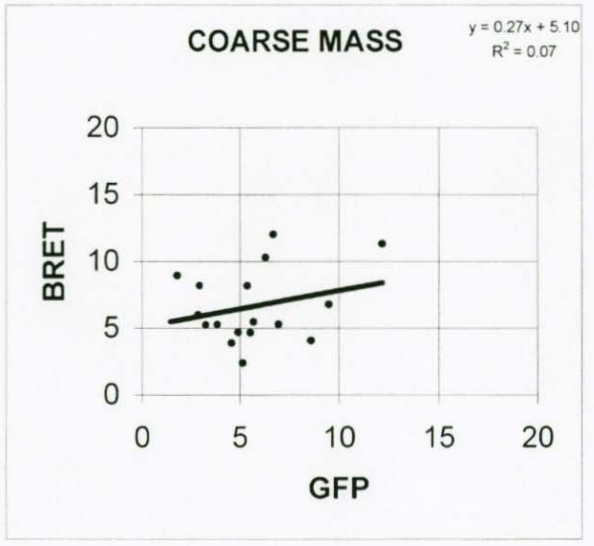




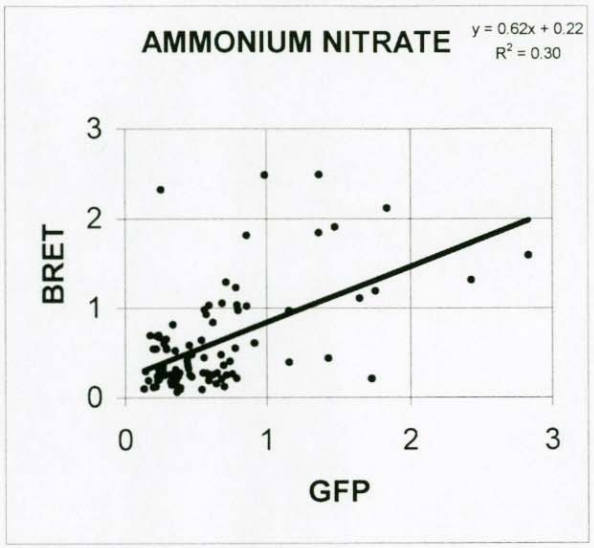


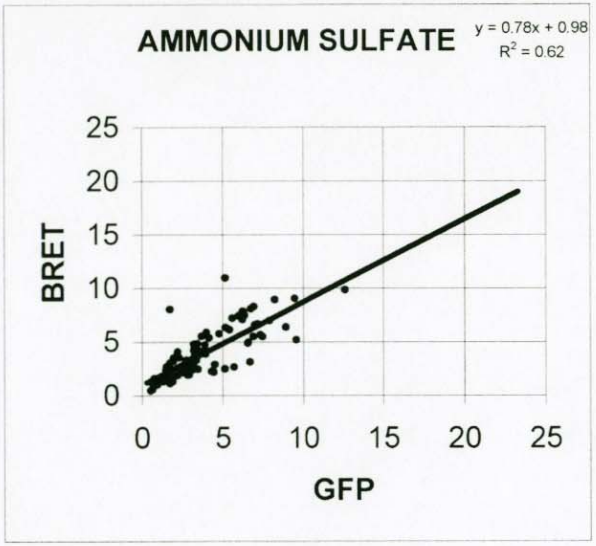


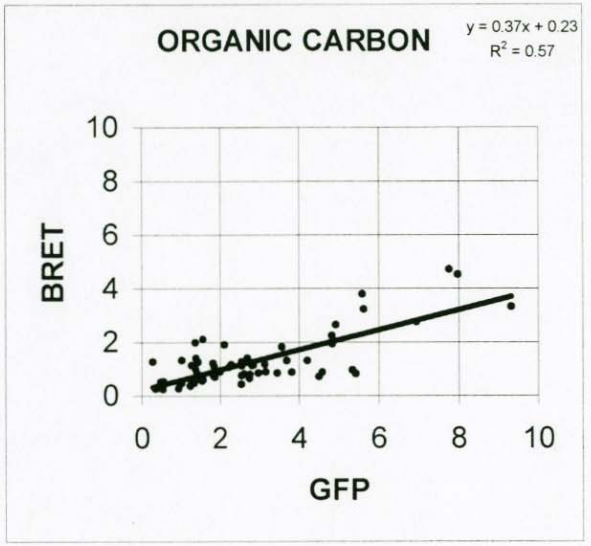


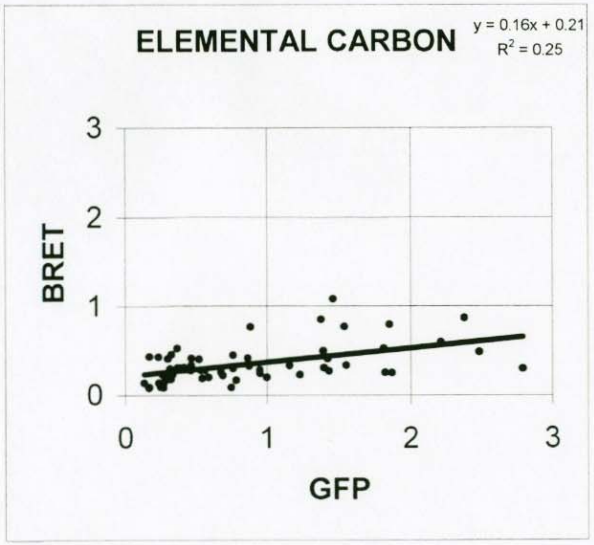


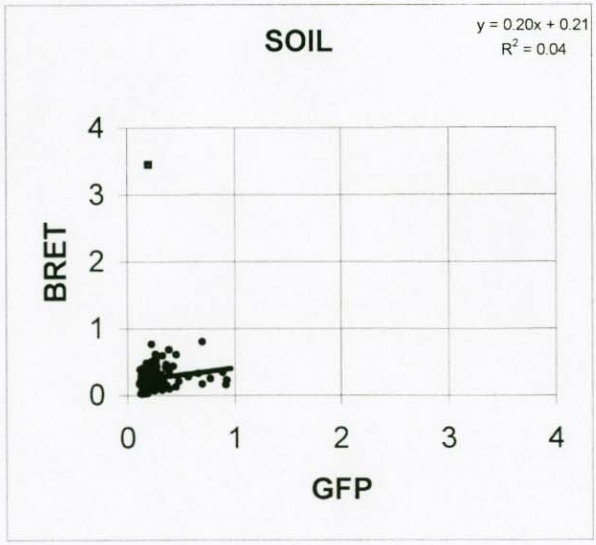
Aerosol Mass Comparisons – BRET vs. GFP (Quarter 4)

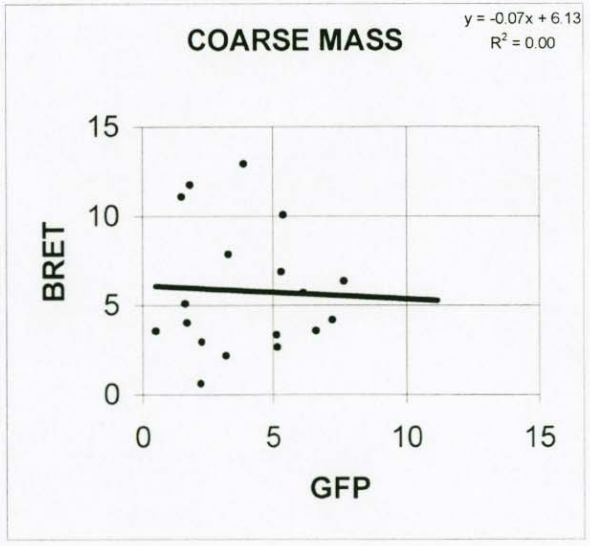












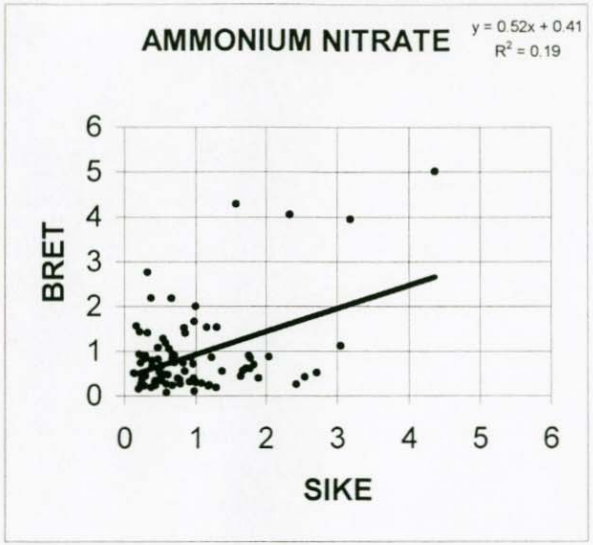
Summary of Site Comparisons BRET vs. GFP

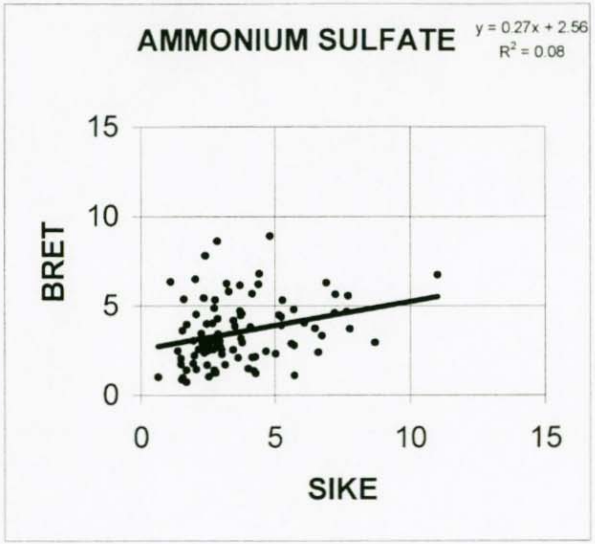
Site Pair	Stat.	Years	Season	Species Statistics					
				AmmNitrate	AmmSulfate	Organics	E-Carbon	Soil	Coarse-Mass
BRET/GFP	R^2	2000-2004	Winter	0.45	0.34	0.43	0.16	0.02	0.15
BRET/GFP	Intercept	2000-2004	Winter	0.21	1.38	0.38	0.25	0.24	3.23
BRET/GFP	Slope	2000-2004	Winter	0.73	0.62	0.42	0.20	0.17	0.51
BRET/GFP	R^2	2000-2004	Spring	0.42	0.28	0.61	0.59	0.76	0.29
BRET/GFP	Intercept	2000-2004	Spring	0.06	2.39	0.10	0.05	0.02	4.13
BRET/GFP	Slope	2000-2004	Spring	1.45	0.57	0.46	0.52	2.04	0.32
BRET/GFP	R^2	2000-2004	Summer	0.07	0.48	0.53	0.32	0.32	0.07
BRET/GFP	Intercept	2000-2004	Summer	0.16	1.33	-0.04	0.05	0.41	5.10
BRET/GFP	Slope	2000-2004	Summer	0.45	0.68	0.39	0.34	1.36	0.27
BRET/GFP	R^2	2000-2004	Fall	0.30	0.62	0.57	0.25	0.04	0.00
BRET/GFP	Intercept	2000-2004	Fall	0.22	0.98	0.23	0.21	0.21	6.13
BRET/GFP	Slope	2000-2004	Fall	0.62	0.78	0.37	0.16	0.20	-0.07

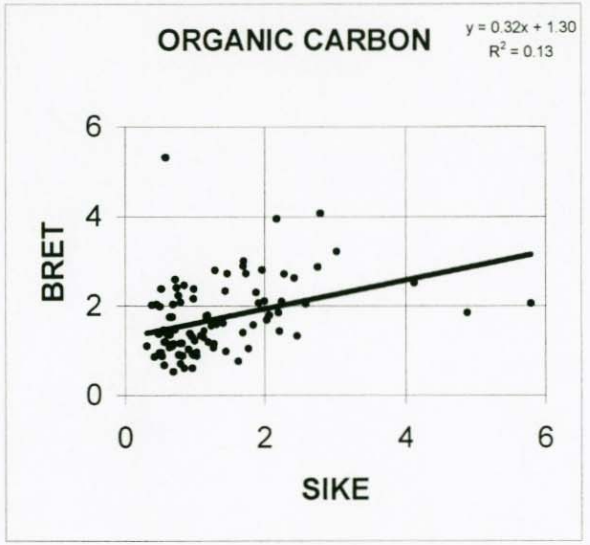
Notes:

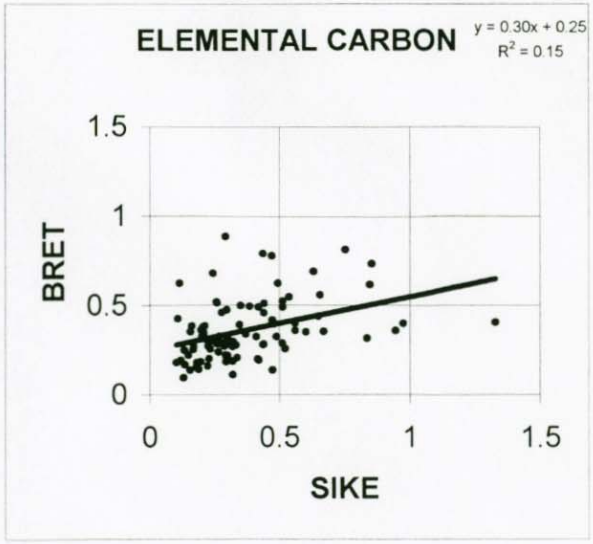
R^2, Intercept, and Slope were taken from the linear regression shown on the plots. These statistics were calculated without the outliers indicated in red.

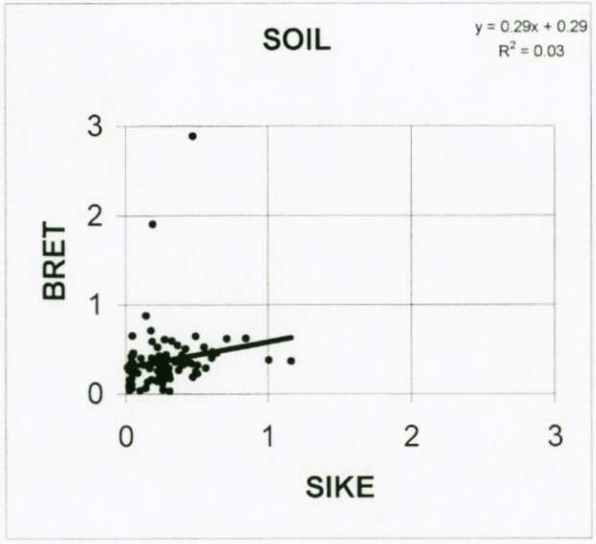
Aerosol Mass Comparisons – BRET vs. SIKE (Quarter 1)

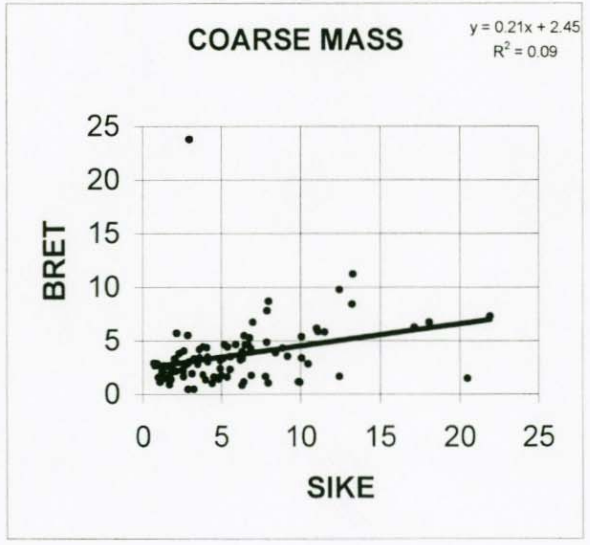




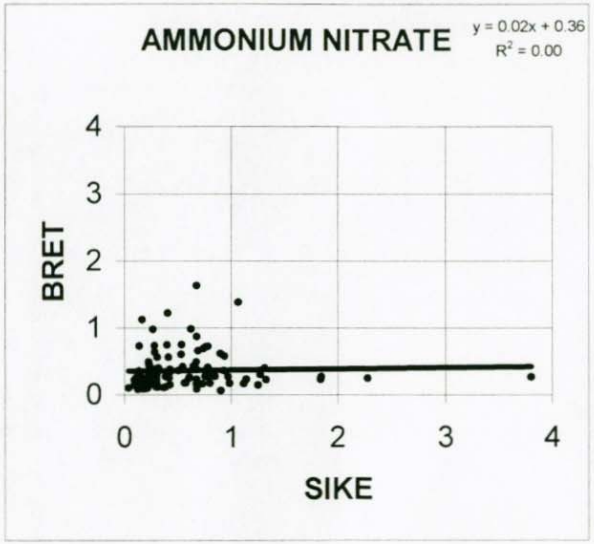


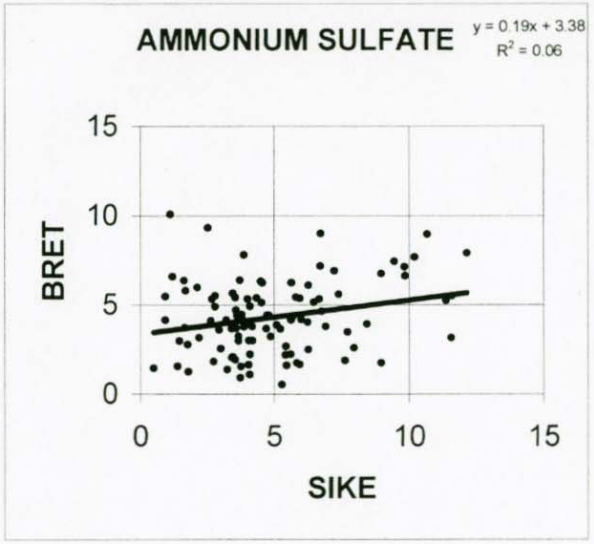


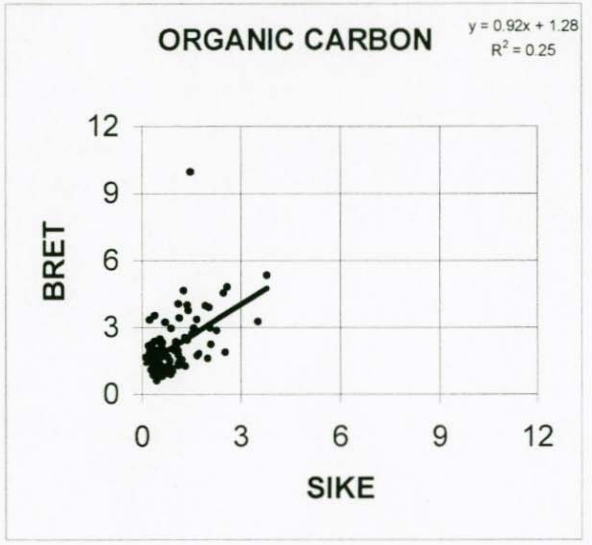


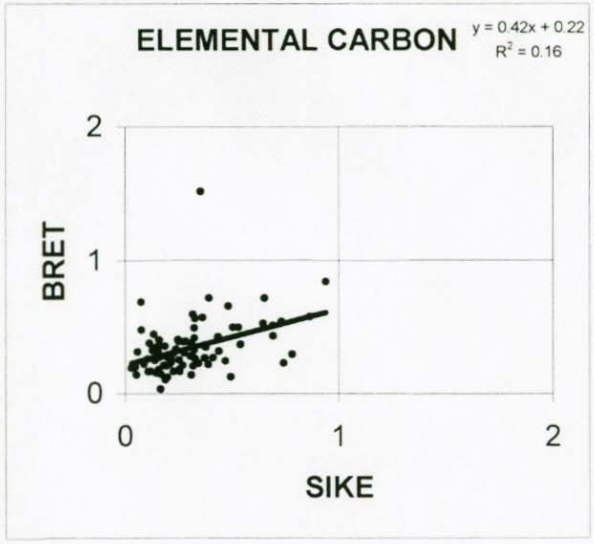


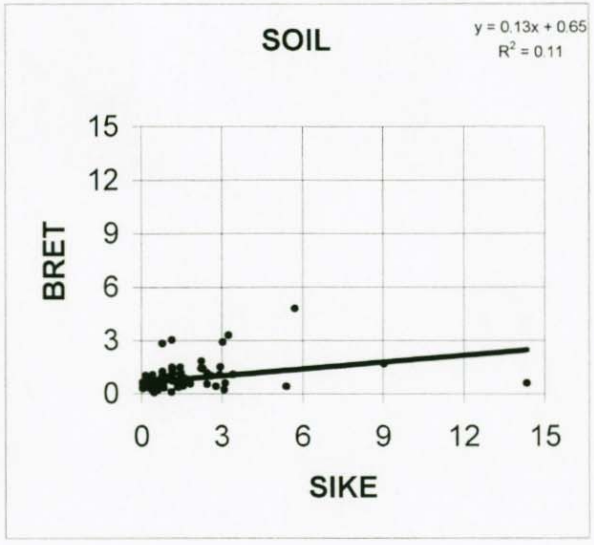
Aerosol Mass Comparisons – BRET vs. SIKE (Quarter 2)

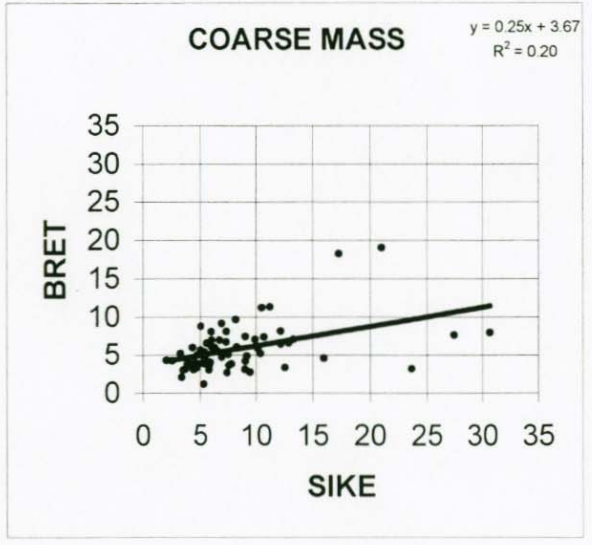




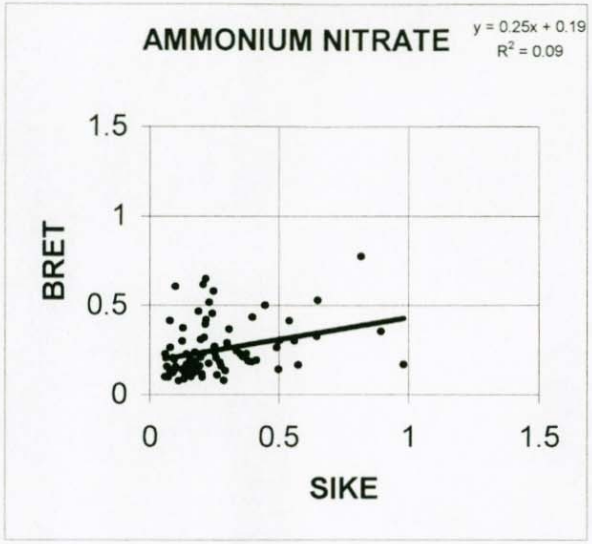


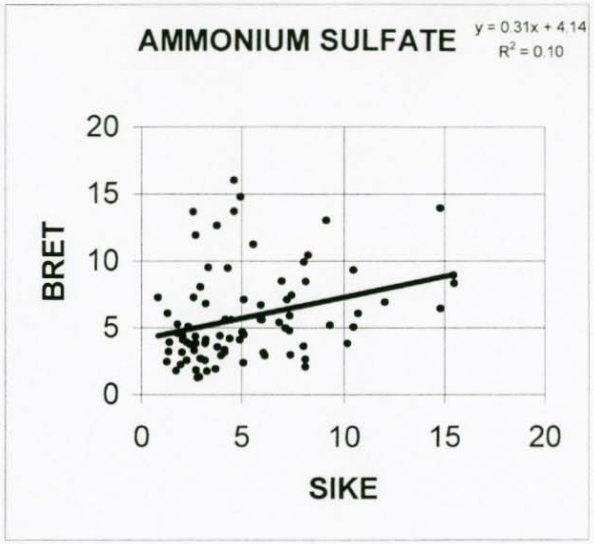


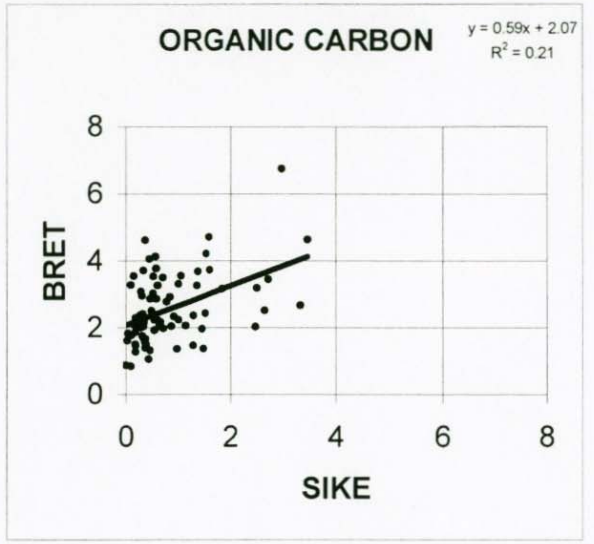


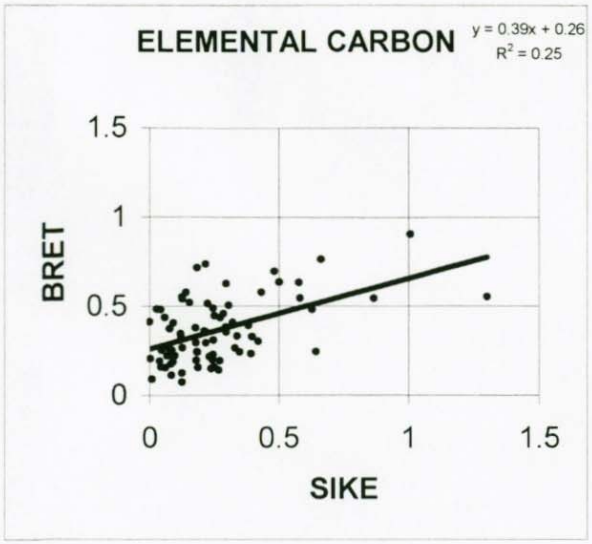


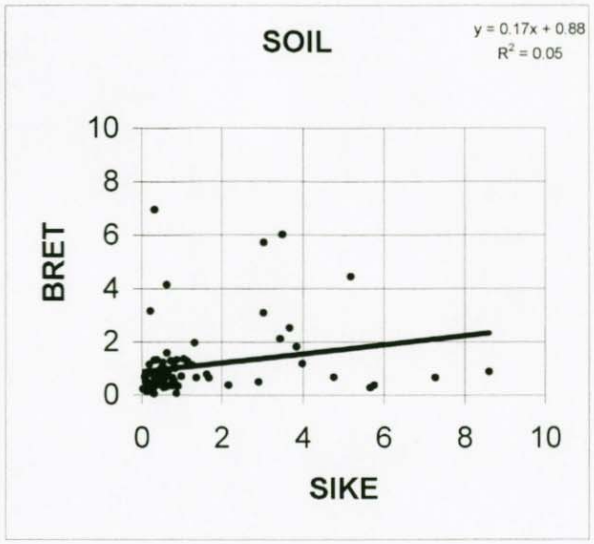
Aerosol Mass Comparisons – BRET vs. SIKE (Quarter 3)

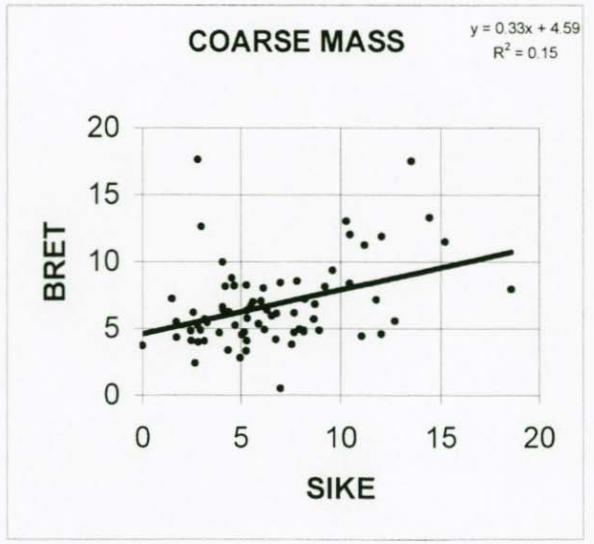




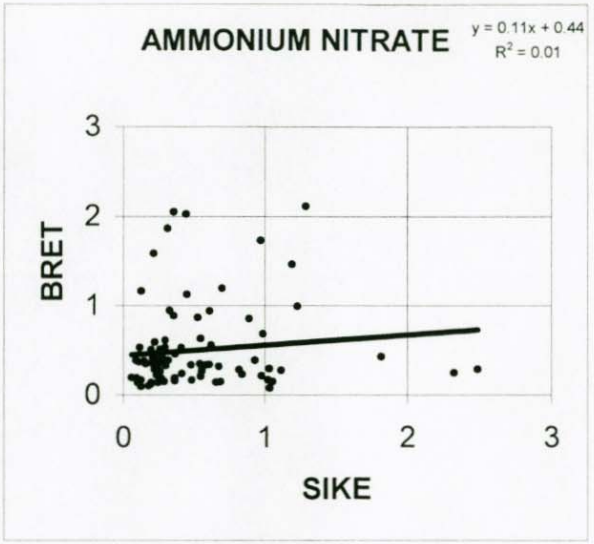


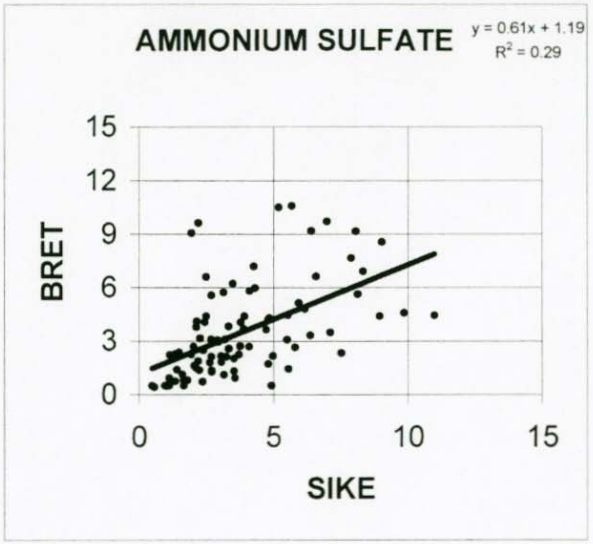


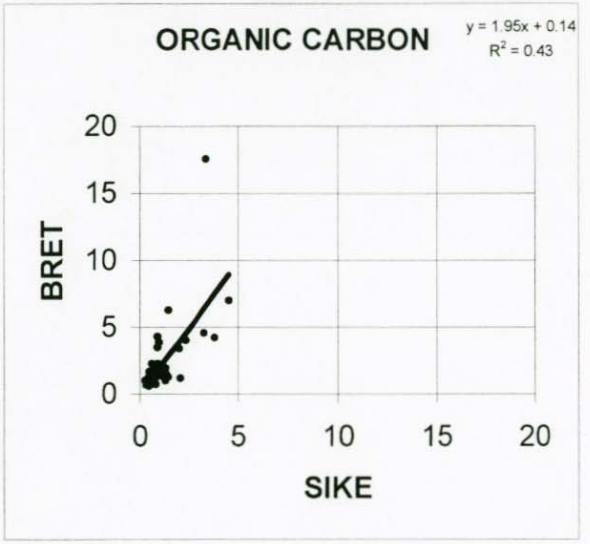


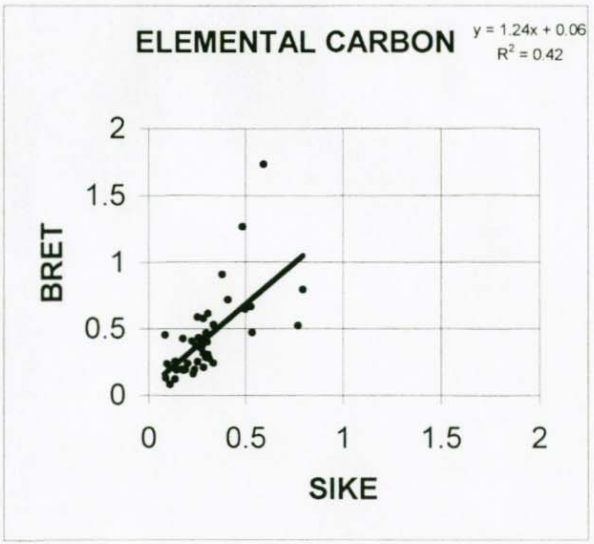


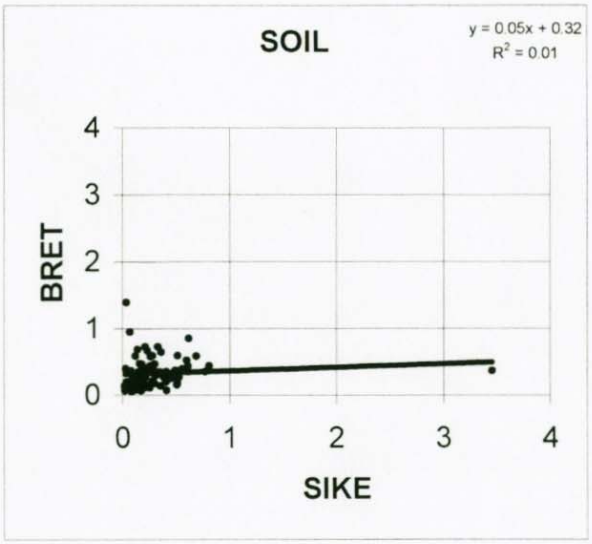
Aerosol Mass Comparisons – BRET vs. SIKE (Quarter 4)

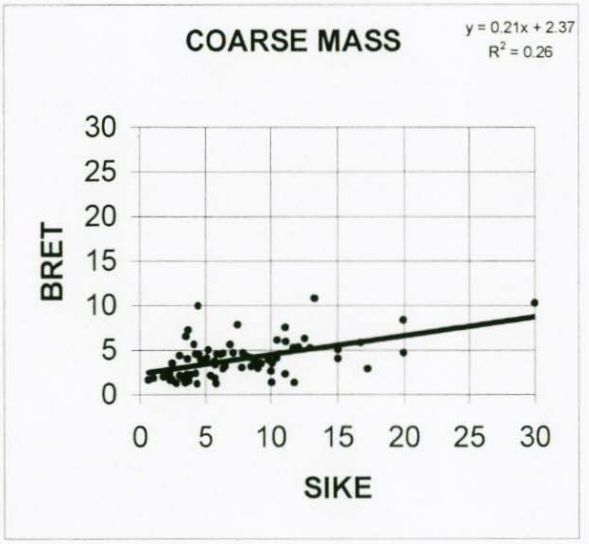












Summary of Site Comparisons BRET vs. SIKE

Site Pair	Stat.	Years	Season	Species Statistics					
				AmmNitrate	AmmSulfate	Organics	E-Carbon	Soil	Coarse-Mass
BRET/SIKE	R^2	2001-2004	Winter	0.19	0.08	0.13	0.15	0.03	0.09
BRET/SIKE	Intercept	2001-2004	Winter	0.41	2.56	1.30	0.25	0.29	2.45
BRET/SIKE	Slope	2001-2004	Winter	0.52	0.27	0.32	0.30	0.29	0.21
BRET/SIKE	R^2	2001-2004	Spring	0.00	0.06	0.25	0.16	0.11	0.20
BRET/SIKE	Intercept	2001-2004	Spring	0.36	3.38	1.28	0.22	0.65	3.67
BRET/SIKE	Slope	2001-2004	Spring	0.02	0.19	0.92	0.42	0.13	0.25
BRET/SIKE	R^2	2001-2004	Summer	0.09	0.10	0.21	0.25	0.05	0.15
BRET/SIKE	Intercept	2001-2004	Summer	0.19	4.14	2.07	0.26	0.88	4.59
BRET/SIKE	Slope	2001-2004	Summer	0.25	0.31	0.59	0.39	0.17	0.33
BRET/SIKE	R^2	2001-2004	Fall	0.01	0.29	0.43	0.42	0.01	0.26
BRET/SIKE	Intercept	2001-2004	Fall	0.44	1.19	0.14	0.06	0.32	2.37
BRET/SIKE	Slope	2001-2004	Fall	0.11	0.61	1.95	1.24	0.05	0.21

Notes:

R^2, Intercept, and Slope were taken from the linear regression shown on the plots. These statistics were calculated without the outliers indicated in red.

Selection of 20% Worst/Best Days 2001

20% Worst days

Site	Date	aero_bext	Sub from GFP
BRET	3/23/2001	157.3	
BRET	3/29/2001	106.9	
BRET	4/1/2001	103.1	
BRET	5/13/2001	105.2	
BRET	5/16/2001	121.6	
BRET	5/19/2001	124.4	
BRET	6/15/2001	99.3	
BRET	6/18/2001	151.8	
BRET	6/24/2001	115.2	
BRET	7/15/2001	203.2	
BRET	7/18/2001	116.5	
BRET	8/14/2001	113.3	
BRET	8/23/2001	160.7	
BRET	8/29/2001	101.3	
BRET	9/16/2001	115.5	
BRET	9/22/2001	111.4	
BRET	9/28/2001	121.7	
BRET	10/1/2001	104.2	
BRET	11/6/2001	105.5	
BRET	11/9/2001	115.5	
BRET	11/12/2001	145.7	
BRET	11/18/2001	130.6	

20% Best days

Site	Date	aero_bext	Sub from GFP
BRET	1/25/2001	41.7	All
BRET	2/15/2001	37.3	
BRET	2/18/2001	39.8	
BRET	2/27/2001	36.8	All
BRET	5/28/2001	26.8	
BRET	7/3/2001	29.6	
BRET	7/27/2001	42.7	
BRET	8/5/2001	41.9	
BRET	9/4/2001	31.2	
BRET	9/7/2001	26.5	
BRET	9/19/2001	37.7	
BRET	10/25/2001	35.9	
BRET	11/15/2001	39.8	
BRET	11/21/2001	30.5	
BRET	11/27/2001	30.5	
BRET	11/30/2001	36.7	
BRET	12/15/2001	41.3	
BRET	12/18/2001	23.7	
BRET	12/21/2001	26.3	
BRET	12/24/2001	21.8	
BRET	12/27/2001	23.4	
BRET	12/30/2001	39.4	

Selection of 20% Worst/Best Days 2002

20% Worst days

Site	Date	aero_bext	Sub from GFP
BRET	2/13/2002	116.7	
BRET	2/16/2002	122.6	
BRET	3/15/2002	95.2	
BRET	5/5/2002	96.6	All
BRET	5/23/2002	94.1	
BRET	6/28/2002	83.3	CM, Soil
BRET	7/25/2002	95.7	
BRET	8/3/2002	109.1	
BRET	8/27/2002	98.7	
BRET	9/5/2002	84.7	
BRET	9/8/2002	99.7	
BRET	9/14/2002	112.2	
BRET	9/17/2002	85.0	
BRET	9/20/2002	83.8	
BRET	9/23/2002	79.7	
BRET	9/29/2002	101.8	
BRET	10/8/2002	126.6	
BRET	10/11/2002	95.0	
BRET	10/14/2002	96.5	
BRET	11/1/2002	82.9	
BRET	11/7/2002	82.2	
BRET	11/16/2002	79.1	

20% Best days

Site	Date	aero_bext	Sub from GFP
BRET	1/8/2002	31.8	
BRET	1/14/2002	15.8	
BRET	1/20/2002	39.6	
BRET	2/1/2002	24.0	
BRET	2/7/2002	37.6	
BRET	3/9/2002	35.5	
BRET	4/11/2002	25.5	
BRET	5/2/2002	36.5	All
BRET	5/29/2002	39.6	
BRET	6/19/2002	25.1	Carbon, CM, Soil
BRET	6/25/2002	20.8	Carbon, CM, Soil
BRET	7/28/2002	36.7	
BRET	8/15/2002	39.8	
BRET	8/21/2002	28.0	
BRET	8/24/2002	33.8	
BRET	9/2/2002	23.7	
BRET	10/26/2002	34.9	
BRET	10/29/2002	23.1	
BRET	12/1/2002	31.0	
BRET	12/22/2002	38.9	
BRET	12/25/2002	40.0	
BRET	12/31/2002	29.1	

Selection of 20% Worst/Best Days 2003

20% Worst days

Site	Date	aero_bext	Sub from GFP
BRET	1/15/2003	117.9	
BRET	1/27/2003	103.5	
BRET	3/1/2003	93.3	
BRET	3/10/2003	127.1	
BRET	3/22/2003	100.3	
BRET	4/12/2003	99.4	
BRET	4/15/2003	171.2	
BRET	4/18/2003	151.1	
BRET	4/21/2003	119.6	
BRET	4/30/2003	126.3	
BRET	5/6/2003	93.0	
BRET	5/24/2003	154.8	
BRET	5/27/2003	131.7	
BRET	5/30/2003	142.8	
BRET	6/8/2003	110.4	
BRET	8/10/2003	195.5	
BRET	9/6/2003	125.8	
BRET	10/6/2003	99.8	Carbon
BRET	10/18/2003	98.9	Carbon
BRET	10/21/2003	140.9	Carbon
BRET	10/24/2003	127.2	Carbon
BRET	12/8/2003	104.5	Carbon, CM

20% Best days

Site	Date	aero_bext	Sub from GFP
BRET	2/5/2003	34.6	
BRET	3/4/2003	23.8	
BRET	3/7/2003	33.5	
BRET	3/16/2003	33.9	
BRET	3/28/2003	30.2	
BRET	6/5/2003	30.8	
BRET	6/20/2003	21.3	
BRET	6/26/2003	34.6	
BRET	6/29/2003	31.4	
BRET	7/2/2003	26.7	
BRET	7/14/2003	33.6	
BRET	8/1/2003	27.0	
BRET	8/13/2003	15.0	
BRET	8/22/2003	31.7	
BRET	8/28/2003	28.0	
BRET	10/15/2003	33.1	Carbon
BRET	11/11/2003	33.0	Carbon
BRET	11/17/2003	34.9	Carbon
BRET	11/20/2003	25.5	Carbon
BRET	11/29/2003	14.8	Carbon
BRET	12/11/2003	24.9	Carbon, CM, Soil
BRET	12/20/2003	24.2	CM, Soil

BRET1 (no sub)
Amm Sulf
Amm NO3
POM
LAC
Soil
CM
Sea Salt
Extinction (Mm-1)
2000
2001
2002
2003
2004
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

BRET1 (GFP)
RHR
Amm Sulf
Amm NO3
POM
LAC
Soil
CM
Sea Salt
Extinction (Mm-1)
2000
2001
20% W > 101
2002
20% W > 79
2003
20% W > 87
2004
20% W > 96
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

BRET1 (GFP)
Amm Sulf
Amm NO3
POM
LAC
Soil
CM
Sea Salt
Extinction (Mm-1)
2000
2001
2002
2003
2004
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

W20% Data used in 2018 VISTAS Visibility Projection															W20% BRET Data from raw database (VIEWS)							
Group	Site	Year	Month	Jdate	fsrh	flrh	fssrh	Rayleigh	Amm_SO4	Amm_NO3	OMC	LAC	Soil	CM	Sea_Salt	Amm_SO4	Amm_NO3	OMC	LAC	Soil	CM	Sea_Salt
W20	BRET1	2001	3	82	3.78	2.74	3.87	11	10.8181	2.38108	3.8511	0.8278	0.696397	3.4958	0	10.8181	2.381082	3.8511	0.8278	0.696397	3.4958	0
W20	BRET1	2001	3	88	3.78	2.74	3.87	11	7.12689	0.640139	3.00114	0.6888	0.296666	11.2874	0	7.126886	0	3.00114	0.6888	0.296666	11.2874	0
W20	BRET1	2001	4	91	3.71	2.71	3.84	11	6.15355	2.23725	2.97756	0.7884	0.363643	3.1768	0	6.153551	2.237247	2.97756	0.7884	0.363643	3.1768	0
W20	BRET1	2001	5	133	3.91	2.82	4.01	11	7.83185	0.598302	2.29158	0.5652	0.763863	6.8708	0	7.831849	0.598302	2.29158	0.5652	0.763863	6.8708	0
W20	BRET1	2001	5	136	3.91	2.82	4.01	11	10.0305	0.227943	2.02464	0.4741	1.45589	4.6459	0	10.03052	0.227943	2.02464	0.4741	1.455889	4.6459	0
W20	BRET1	2001	5	139	3.91	2.82	4.01	11	10.4972	0.281865	1.47996	0.3879	1.19614	5.3323	0	10.49718	0.281865	1.47996	0.3879	1.196135	5.3323	0
W20	BRET1	2001	6	166	4.08	2.92	4.19	11	5.50547	0.744588	1.07064	0.2234	8.86339	27.0273	0.85734	5.505473	0.744588	1.07064	0.2234	8.863392	27.0273	0.85734
W20	BRET1	2001	6	169	4.08	2.92	4.19	11	11.4037	0.381969	3.37104	0.6794	0.759783	8.1918	0	11.40369	0.381969	3.37104	0.6794	0.759783	8.1918	0
W20	BRET1	2001	6	175	4.08	2.92	4.19	11	8.81298	0.212076	2.71116	0.3217	0.542965	7.2666	0	8.81298	0.212076	2.71116	0.3217	0.542965	7.2666	0
W20	BRET1	2001	7	196	4.32	3.06	4.39	11	15.2277	0.269997	4.42386	0.4922	0.901881	7.4746	0	15.22773	0.269997	4.42386	0.4922	0.901881	7.4746	0
W20	BRET1	2001	7	199	4.32	3.06	4.39	11	9.0333	0.17544	1.23912	0.2924	0.758708	4.9254	0	9.033296	0.17544	1.23912	0.2924	0.758709	4.9254	0
W20	BRET1	2001	8	226	4.32	3.05	4.35	11	7.94772	0.39216	1.45566	0.2686	5.68212	7.7667	0	7.94772	0.39216	1.45566	0.2686	5.682124	7.7667	0
W20	BRET1	2001	8	235	4.32	3.05	4.35	11	11.734	0.165765	4.98348	0.4436	0.732514	5.6429	0	11.73402	0.165765	4.98348	0.4436	0.732514	5.6429	0
W20	BRET1	2001	8	241	4.32	3.05	4.35	11	7.64923	0.122292	1.1772	0.2866	0.436952	8.4852	0	7.649235	0.122292	1.1772	0.2866	0.436952	8.4852	0
W20	BRET1	2001	9	259	4.14	2.95	4.21	11	8.09647	0.356298	3.18996	0.5997	0.256974	9.2501	0	8.096468	0.356298	3.18996	0.5997	0.256974	9.2501	0
W20	BRET1	2001	9	265	4.14	2.95	4.21	11	7.24395	0.370359	4.83336	0.5747	0.30066	9.3797	0	7.243954	0.370359	4.83336	0.5747	0.30066	9.3797	0
W20	BRET1	2001	9	271	4.14	2.95	4.21	11	7.9393	0.207561	6.13206	0.6503	0.305893	8.5905	0	7.939305	0.207561	6.13206	0.6503	0.305893	8.5905	0
W20	BRET1	2001	10	274	3.9	2.81	3.98	11	7.77653	0.205755	3.99294	0.4929	0.205581	6.3982	0	7.776533	0.205755	3.99294	0.4929	0.205581	6.3982	0
W20	BRET1	2001	11	310	3.93	2.83	4.01	11	6.06177	0.917061	5.73102	0.7857	0.252769	11.0018	0	6.06177	0.917061	5.73102	0.7857	0.252769	11.0018	0
W20	BRET1	2001	11	313	3.93	2.83	4.01	11	6.89708	1.21054	5.91588	0.5873	0.325492	10.3538	0	6.897083	1.210536	5.91588	0.5873	0.325492	10.3538	0
W20	BRET1	2001	11	316	3.93	2.83	4.01	11	8.92275	1.78988	6.7473	0.5209	0.274741	12.3966	0	8.922746	1.789875	6.7473	0.5209	0.274741	12.3966	0
W20	BRET1	2001	11	322	3.93	2.83	4.01	11	6.3091	2.45397	8.03934	0.479	0.209313	14.867	0	6.309105	2.453967	8.03934	0.479	0.209313	14.867	0
W20	BRET1	2002	2	44	3.81	2.76	3.89	11	4.58758	2.4995	8.6454	1.2964	0.242359	6.9327	0	4.587578	2.499504	8.6454	1.2964	0.242359	6.9327	0
W20	BRET1	2002	2	47	3.81	2.76	3.89	11	4.19818	3.00441	10.2992	0.9518	0.225037	12.1165	0	4.198178	3.00441	10.29924	0.9518	0.225037	12.1165	0
W20	BRET1	2002	3	74	3.78	2.74	3.87	11	6.00794	0.291024	3.92634	0.8199	0.054376	17.871	0.29268	6.007939	0.291024	3.92634	0.8199	0.054376	17.871	0.29268
W20	BRET1	2002	5	125	3.91	2.82	4.01	11	6.72185	1.13201	2.01107	0.341975	1.81915	7.69845	0.202477	0	0	0	0	0	0	0
W20	BRET1	2002	5	143	3.91	2.82	4.01	11	7.12074	0.227556	2.2095	0.3564	0.291881	12.2292	0	7.12074	0.227556	2.2095	0.3564	0.291881	12.2292	0
W20	BRET1	2002	6	179	4.08	2.92	4.19	11	5.34614	0.409962	0.99036	0.1649	11.4739	7.08828	0.202477	5.346138	0.409962	0.99036	0.1649	0	0	0
W20	BRET1	2002	7	194	4.32	3.06	4.39	11	7.30744	0.492393	2.55348	0.3877	0.947549	5.73494	0.072161	7.307438	0.492393	2.55348	0.3877	0	0	0
W20	BRET1	2002	7	197	4.32	3.06	4.39	11	8.01886	0.357201	0.55044	0.2415	2.2573	5.16654	0.072161	8.018863	0.357201	0.55044	0.2415	0	0	0
W20	BRET1	2002	7	200	4.32	3.06	4.39	11	10.356	0.636873	4.16862	0.7558	1.68793	5.48434	0.072161	10.35595	0.636873	4.16862	0.7558	0	0	0
W20	BRET1	2002	7	206	4.32	3.06	4.39	11	6.74013	0.375906	2.48472	0.4927	0.099102	2.5645	0	6.740126	0.375906	2.48472	0.4927	0.099102	2.5645	0
W20	BRET1	2002	8	215	4.32	3.05	4.35	11	8.14056	0.26832	2.3715	0.2109	0.61427	4.2496	0	8.140564	0.26832	2.3715	0.2109	0.61427	4.2496	0
W20	BRET1	2002	8	239	4.32	3.05	4.35	11	6.85736	0.288057	2.40732	0.4759	0.45182	6.41545	0	6.857359	0.288057	2.40732	0.4759	0.45182	6.41545	0
W20	BRET1	2002	9	248	4.14	2.95	4.21	11	5.46707	0.564762	2.83482	0.421	0.311806	6.7201	0	5.467069	0.564762	2.83482	0.421	0.311806	6.7201	0
W20	BRET1	2002	9	251	4.14	2.95	4.21	11	7.33083	0.550701	1.0728	0.1121	0.378215	11.8497	0	7.330826	0.550701	1.0728	0.1121	0.378215	11.8497	0
W20	BRET1	2002	9	254	4.14	2.95	4.21	11	7.14362	0.274537	2.28554	0.344554	0.852656	4.65808	0.072161	0	0	0	0	0	0	0
W20	BRET1	2002	9	257	4.14	2.95	4.21	11	8.00176	0.878232	1.8333	0.2151	0.592171	8.0751	0	8.001758	0.878232	1.8333	0.2151	0.592171	8.0751	0
W20	BRET1	2002	9	260	4.14	2.95	4.21	11	5.86505	0.803025	1.13004	0.2361	1.65465	5.2486	0	5.865049	0.803025	1.13004	0.2361	1.65465	5.2486	0
W20	BRET1	2002	9	263	4.14	2.95	4.21	11	5.68908	0.651708	0.7992	0.125	3.64838	10.1335	0	5.689076	0.651708	0.7992	0.125	3.648384	10.1335	0
W20	BRET1	2002	9	272	4.14	2.95	4.21	11	7.0217	0.773097	2.25522	0.3721	0.536415	6.41545	0	7.021699	0.773097	2.25522	0.3721	0.536415	6.41545	0
W20	BRET1	2002	10	281	3.9	2.81	3.98	11	8.79656	2.32277	1.42776	0.4175	0.753082	7.04978	0	8.796563	2.322774	1.42776	0.4175	0.753082	7.049775	0
W20	BRET1	2002	10	284	3.9	2.81	3.98	11	6.98693	0.841983	2.25324	0.3965	0.496432	7.04978	0	6.986925	0.841983	2.25324	0.3965	0.496432	7.049775	0
W20	BRET1	2002	10	287	3.9	2.81	3.98	11	7.38474	0.544896	1.78884	0.5179	0.493456	7.04978	0	7.38474	0.544896	1.78884	0.5179	0.493456	7.049775	0
W20	BRET1	2002	11	305	3.93	2.83	4.01	11	6.26629	0.403899	1.74042	0.422	0.399252	5.609	0	6.266288	0.403899	1.74042	0.422	0.399252	5.609	0
W20	BRET1	2002	11	311	3.93	2.83	4.01	11	5.46513	1.11237	2.05308	0.4432	0.503707	4.1085	0	5.46513	1.112367	2.05308	0.4432	0.503707	4.1085	0
W20	BRET1	2003	1	15	4.06	2.9	4.1	11	4.32877	4.37968	4.30398	0.7399	0.387773	6.6281	0	4.328775	4.379679	4.30398	0.7399	0.387773	6.6281	0

W20	BRET1	2003	1	27	4.06	2.9	4.1	11	3.36819	3.18037	7.30566	0.6172	0.352294	6.7045	0	3.368186	3.180366	7.30566	0.6172	0.352294	6.7045	0
W20	BRET1	2003	3	60	3.78	2.74	3.87	11	5.63054	2.03717	2.23398	0.6797	0.095762	4.6546	0.43182	5.630543	2.037168	2.23398	0.6797	0.095762	4.6546	0.43182
W20	BRET1	2003	3	69	3.78	2.74	3.87	11	7.58146	2.33206	4.36698	0.9328	0.626248	5.0787	0	7.581461	2.332062	4.36698	0.9328	0.626249	5.0787	0
W20	BRET1	2003	3	81	3.78	2.74	3.87	11	6.4133	1.29258	4.58154	0.6625	0.457807	1.8296	1.14642	6.413303	1.29258	4.58154	0.6625	0.457807	1.8296	1.14642
W20	BRET1	2003	4	102	3.71	2.71	3.84	11	6.78228	0.976917	4.24404	0.6596	0.728131	3.7681	0	6.782284	0.976917	4.24404	0.6596	0.728131	3.7681	0
W20	BRET1	2003	4	105	3.71	2.71	3.84	11	11.2182	3.80331	3.66192	0.8209	0.991298	4.1641	0	11.21819	3.803307	3.66192	0.8209	0.991298	4.1641	0
W20	BRET1	2003	4	108	3.71	2.71	3.84	11	11.3744	1.83696	2.9142	0.4864	1.43161	6.91175	0	11.37436	1.83696	2.9142	0.4864	1.431615	6.91175	0
W20	BRET1	2003	4	111	3.71	2.71	3.84	11	8.84668	1.3327	2.20194	0.8615	0.820056	6.91175	0	8.846681	1.332699	2.20194	0.8615	0.820056	6.91175	0
W20	BRET1	2003	4	120	3.71	2.71	3.84	11	9.28348	1.84509	2.1501	0.4422	0.896413	6.91175	0.25056	9.283478	1.845087	2.1501	0.4422	0.896413	6.91175	0.25056
W20	BRET1	2003	5	126	3.91	2.82	4.01	11	5.53988	1.06631	1.2132	0.2658	5.62616	20.6589	1.62288	5.539875	1.066314	1.2132	0.2658	5.626164	20.6589	1.62288
W20	BRET1	2003	5	144	3.91	2.82	4.01	11	11.9881	0.849078	3.58164	0.8518	0.115433	3.576	0	11.98812	0.849078	3.58164	0.8518	0.115433	3.576	0
W20	BRET1	2003	5	147	3.91	2.82	4.01	11	9.65283	0.984141	3.65922	0.6772	0.131609	4.6455	0	9.65283	0.984141	3.65922	0.6772	0.13161	4.6455	0
W20	BRET1	2003	5	150	3.91	2.82	4.01	11	9.72097	0.605139	6.68556	0.9228	1.12227	7.0985	0	9.720975	0.605139	6.68556	0.9228	1.122266	7.0985	0
W20	BRET1	2003	6	159	4.08	2.92	4.19	11	9.11419	0.427635	2.27484	0.626	0.666372	3.4069	0	9.114188	0.427635	2.27484	0.626	0.666372	3.4069	0
W20	BRET1	2003	8	222	4.32	3.05	4.35	11	15.241	0.198789	3.25764	0.6193	0.127399	2.7969	0	15.24097	0.198789	3.25764	0.6193	0.127399	2.7969	0
W20	BRET1	2003	9	249	4.14	2.95	4.21	11	10.5821	0.204723	0.52434	0.028	0.797017	5.7509	0	10.58211	0.204723	0.52434	0.028	0.797017	5.7509	0
W20	BRET1	2003	9	255	4.14	2.95	4.21	11	9.19298	0.125259	2.36368	0.364163	0.637472	4.4203	0	9.192975	0.125259	0	0	0.637472	4.4203	0
W20	BRET1	2003	9	261	4.14	2.95	4.21	11	10.0566	0.190662	3.01851	0.449167	0.727112	6.3082	0	10.05663	0.190662	0	0	0.727112	6.3082	0
W20	BRET1	2003	10	279	3.9	2.81	3.98	11	7.94566	0.204465	2.67071	0.402717	0.605887	4.2817	0	7.945658	0.204465	0	0	0.605887	4.2817	0
W20	BRET1	2003	10	291	3.9	2.81	3.98	11	8.01137	0.200337	4.5348	0.589452	0.54636	3.3797	0.17136	8.011369	0.200337	0	0	0.546361	3.3797	0.17136
W20	BRET1	2003	10	294	3.9	2.81	3.98	11	10.8298	1.03535	5.60526	0.696685	0.796937	5.0634	0	10.82978	1.035354	0	0	0.796937	5.0634	0
W20	BRET1	2003	10	297	3.9	2.81	3.98	11	9.72295	1.00684	4.38566	0.574512	0.677964	3.3084	0	9.722955	1.006845	0	0	0.677964	3.3084	0
W20	BRET1	2003	12	342	4.04	2.89	4.1	11	8.2064	0.433956	1.40312	0.275736	0.071277	5.75741	0	8.206399	0.433956	0	0	0.071277	0	0
W20	BRET1	2004	1	10	4.06	2.9	4.1	11	7.66107	0.689505	2.6388	0.4124	0.60266	3.1794	0	7.661074	0.689505	2.6388	0.4124	0.60266	3.1794	0
W20	BRET1	2004	1	13	4.06	2.9	4.1	11	7.24523	0.689505	2.08026	0.4658	0.502594	2.0534	0	7.245233	0.689505	2.08026	0.4658	0.502594	2.0534	0
W20	BRET1	2004	2	49	3.81	2.76	3.89	11	6.74211	1.63262	3.0852	0.6121	0.497592	1.3161	0.0441	6.742106	1.632624	3.0852	0.6121	0.497592	1.3161	0.0441
W20	BRET1	2004	3	73	3.78	2.74	3.87	11	8.68985	1.8874	5.01606	0.5223	0.831406	2.1018	0.13338	8.689849	1.887399	5.01606	0.5223	0.831406	2.1018	0.13338
W20	BRET1	2004	3	76	3.78	2.74	3.87	11	7.77967	1.76369	3.58812	0.2925	0.561243	0.6942	0.19134	7.779668	1.763688	3.58812	0.2925	0.561243	0.6942	0.19134
W20	BRET1	2004	4	94	3.71	2.71	3.84	11	5.66552	1.11469	6.31404	0.5401	0.690225	2.501	0.08694	5.665523	1.114689	6.31404	0.5401	0.690225	2.501	0.08694
W20	BRET1	2004	6	172	4.08	2.92	4.19	11	7.70789	0.228459	4.58676	0.7186	1.02008	7.381	0.09522	7.707893	0.228459	4.58676	0.7186	1.020081	7.381	0.09522
W20	BRET1	2004	7	202	4.32	3.06	4.39	11	11.9337	0.220074	5.67108	0.6401	0.920184	2.5307	0.0864	11.93367	0.220074	5.67108	0.6401	0.920184	2.5307	0.0864
W20	BRET1	2004	7	205	4.32	3.06	4.39	11	10.2757	0.756327	5.17356	0.642	2.01809	2.8986	0.3735	10.27575	0.756327	5.17356	0.642	2.018088	2.8986	0.3735
W20	BRET1	2004	7	208	4.32	3.06	4.39	11	11.0803	0.466206	4.41342	0.5239	1.10251	4.2609	0.09522	11.08029	0.466206	4.41342	0.5239	1.102512	4.2609	0.09522
W20	BRET1	2004	7	211	4.32	3.06	4.39	11	12.6694	1.32818	2.67768	0.5525	0.89744	1.122	1.51902	12.66944	1.328184	2.67768	0.5525	0.89744	1.122	1.51902
W20	BRET1	2004	8	217	4.32	3.05	4.35	11	14.7891	0.286767	5.4072	0.9778	1.14608	1.6892	0.0819	14.78912	0.286767	5.4072	0.9778	1.146076	1.6892	0.0819
W20	BRET1	2004	8	220	4.32	3.05	4.35	11	12.0537	0.119067	4.8159	1.2742	0.771929	4.3552	0.11034	12.0537	0.119067	4.8159	1.2742	0.771929	4.3552	0.11034
W20	BRET1	2004	8	223	4.32	3.05	4.35	11	10.4858	0.093525	2.89134	0.549	0.723555	1.6626	0.06732	10.48579	0.093525	2.89134	0.549	0.723555	1.6626	0.06732
W20	BRET1	2004	8	226	4.32	3.05	4.35	11	8.11664	0.096234	2.68794	0.3933	0.748233	3.1116	0.06822	8.116639	0.096234	2.68794	0.3933	0.748233	3.1116	0.06822
W20	BRET1	2004	8	229	4.32	3.05	4.35	11	14.8031	0.170538	6.0462	0.8382	0.990438	0	0.0693	14.8031	0.170538	6.0462	0.8382	0.990438	0	0.0693
W20	BRET1	2004	9	253	4.14	2.95	4.21	11	8.55892	0.341721	3.38922	0.5837	0.777728	0	0.10062	8.558921	0.341721	3.38922	0.5837	0.777728	0	0.10062
W20	BRET1	2004	9	271	4.14	2.95	4.21	11	10.3028	0.235848	2.31768	0.32181	0.937356	5.94801	0.072161	0	0	0	0	0	0	0
W20	BRET1	2004	9	274	4.14	2.95	4.21	11	18.5727	0.26467	2.46503	0.325656	0.964611	6.64029	0.072161	0	0	0	0	0	0	0
W20	BRET1	2004	10	277	3.9	2.81	3.98	11	12.8478	0.443351	2.52399	0.367066	0.271945	5.74723	0.203438	0	0	0	0	0	0	0
W20	BRET1	2004	10	280	3.9	2.81	3.98	11	10.143	0.465935	2.29079	0.343521	0.285929	7.66594	0.203438	0	0	0	0	0	0	0
W20	BRET1	2004	10	295	3.9	2.81	3.98	11	9.45454	0.465042	1.52588	0.338922	0.277928	7.03996	0.203438	0	0	0	0	0	0	0
W20	BRET1	2004	10	301	3.9	2.81	3.98	11	7.81012	0.338084	1.43972	0.288406	0.265868	5.81563	0.203438	0	0	0	0	0	0	0
W20	BRET1	2004	10	304	3.9	2.81	3.98	11	11.2097	0.328107	1.02501	0.265445	0.268224	5.65581	0.203438	0	0	0	0	0	0	0

Appendix D

Consolidation of Emissions Inventories
(Schedule 9; Work Item 3)

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And
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