1765368

SAMPLE PREPARATION LOG

Property ID:	PC-0181

Initials/Date of Preparer:	CRC / JW

Sample ID	Pre-Drying Mass: Total Mass (g)	Pre-Drying Mass: Date/Time	Post-Drying Mass: Total Dry Mass (g)	Post-Drying Mass: Date/Time	Post-Sieving Masses: Mass of fraction > 10-mesh (g)	Post-Sieving Masses: Mass of fraction between 10-mesh and 60-mesh (g)	Post-Sieving Masses: Mass of fraction < 60-mesh (g)	Post-Sieving Masses: Date/Time
Back Yard								
50181-BY-0612-03	241.3	5/7/15 11:11	213.1	5-11/1237	45.2	98.9	68.9	5-12/1015
50181-BY-0206-03	152.2	5/7/15 14:48	128.0	5/12/10:05	27.1	52.6	~~47.8~~ 47.8	5-12/1022
50181-BY-1218-03	313.1	" 14~~3~~4	277.2	5/12/1042	76.1	125.5	75.3	5-12/1118
" " 0002-03	67.4	" 1445	50.4	5-11/1240	7.4	29.9	13.0	5-12/1038
" " 0002-02	77.6	" 1426	92.2		6.4	26.1	29.1	5-12/1133
" " 0206-02	154.2	" 1429	131.4	5-12/1000	27.1	53.0	46.5	5-12/1045
" " 1218-02	276.2	" 1436	247.0	5-12/1033	77.4	103.0	66.8	
" " 0612-02	206.7	" 1433	179.9	5/12 1050	37.9	73.9	67.1	5-12/1159
" " 0002-01	67.9	" 1400	51.6	5-10/1352	5.3	22.1	24.0	5-10/1933
" " 0206-01	153.6	" 1403	128.6	5-10/1350	24.0	59.0	45.7	5-10/1442
" " 0612-01	231.6	" 1406	202.6	5-10/1300	51.6	96.0	54.3	5-10/1342
" " 1218-01	307.5	" 1409	273.4	5-10/1457	100.5	123.4	49.3	5-10/1944
Garden								
" -GA-0002-01	87.8	" 1316	71.3	5-12/1505	5.9	32.1	32.6	5-13/1052
" " -0206-01	171.1	" 1319	144.5	5-13/1040	13.6	72.4	59.2	5-13/1150
" " -0612-01	274.7	" 1322	240.5	5-13/1218	60.2	115.6	71.6	5-13/1340
" " -1218-01	301.2	" 1326	265.7	5-13/1140	62.7	143.5	84.2	5-13/1242
Front YARD								
" FY-0002-03	130.0	" 1219	~~92.2~~ 105.3	5-12/1141	27.4	49.2	23.8	5/12-1505
" FY-0206-03	201.9	" 1222	178.4	5-13/0957	46.3	94.8	36.4	5-13/1120
" " -0612-03	260.2	" 1226			~~57.0~~	~~125~~ 107.5	69.9	5-12/1517
" " -1218-03	293.2	" 1229	~~260.4~~	5-13/1130	75.3	131.1	58.8	5-12/1297
" " -0002-01	130.9	" 1143	104.6	5/13/0955	28.1	60.4	16.1	5-13/1115
" " -0206-01	207.3	" 1146	176.2	5/12-1158	59.5	86.8	29.6	5-12/1342
" " -0612-01	327.8	" 1150	290.2	5-12/1148	100.9	125.5	64.7	5/12-1320
" " -1218-01	345.2	" 1152	304.6	5/12-1256	88.3	171.5	44.6	5-12/1357
" " -0002-02	113.5	" 1200			24.9	40.9	26.8	5-12/1310
" " 0206-02	214.0	" 1203	187.5	5-12/1346	62.7	94.6	39.9	
" " 0612-02	292.2	" 1206			~~72.3~~ 72.3	~~125~~ 126 (121.6)	71.0	5-13/1055
" " 1218-02	334.9	" 1209	300.3		~~82~~ 376.4	~~171.8~~ 155.8	~~44.6~~ 68.4	5-13/1351

Scale A

Scale B

SAMPLE PREPARATION LOG

Property ID:	PC-0181

Initials/Date of Preparer:	CW / 5W

Sample ID	Pre-Drying Mass: Total Mass (g)	Pre-Drying Mass: Date/Time	Post-Drying Mass: Total Dry Mass (g)	Post-Drying Mass: Date/Time	Post-Sieving Masses: Mass of fraction > 10-mesh (g)	Post-Sieving Masses: Mass of fraction between 10-mesh and 60-mesh (g)	Post-Sieving Masses: Mass of fraction < 60-mesh (g)	Post-Sieving Masses: Date/Time
SC181-SY-0002-01	99.3	5/7/15 1004	74.3	5-9/1417	13.3	43.1	17.9	5-9/1557
" SY-0206-01	228.9	" 1007	189.7	5-9/1415	32.9	111.7	44.7	5-9/1606
" " 0612-01	339.2	" 1009	299.7	5-9/1415	74.9	160.9	71.0	5-9/1530
" " 1218-01	351.5	" 1011	309.7	5-10/1255	104.8	144.6	59.3	5-10/1325
" " 0002-03	97.0	" 1057	72.5	5-9/1609	14.3	33.9	24.4	5-10/1249
" " 0206-03	187.4	" 1100	154.9	5-10/1348	43.2	76.9	35.6	5-10/1413
" " 0612-03	300.0	" 1103	260.8	5-10/1257	94.9	123.2	42.6	5-10/1333
" " 1218-03	304.4	" 1106	260.3	5-10/1346	129.0	95.8	41.6	5-10/1424
" " 0002-02	82.5	" 1044	59.5	5-9/1542	18.0	25.6	16.2	5-10/1205
" " 0206-02	100.6	" 1047	82.3	5-10/1253	16.4	36.0	29.7	5-10/1315
" " 0612-02	272.6	" 1050	227.6	5-9/1544	93.1	88.7	45.8	5-10/1230
" " 1218-02	339.0	" 1052	294.3	5-9/1611	145.2	95.8	53.3	5-10/1240

side yard

SAMPLE PREPARATION LOG

Property ID:	0269

Initials/Date of Preparer:	69/

Sample ID	Pre-Drying Mass: Total Mass (g)	Pre-Drying Mass: Date/Time	Post-Drying Mass: Total Dry Mass (g)	Post-Drying Mass: Date/Time	Post-Sieving Masses: Mass of fraction > 10-mesh (g)	Post-Sieving Masses: Mass of fraction between 10-mesh and 60-mesh (g)	Post-Sieving Masses: Mass of fraction < 60-mesh (g)	Post-Sieving Masses: Date/Time
S0269-DZ-0001-01	69.7	5-18/1436	64.7	5-20/1346	4.7	26.1	33.9	5-20/1415
S0269-DZ-0001-02	46.5	/1436	43.3	6-8/1400	1.4	15.2	26.4	6-8/1452
S0269-DZ-0001-03	61.9	/1437	56.6	6-8/1502	3.5	21.6	31.3	6-8/1520
S0269-AP-0001-01	71.6	/1438		5-20/1230	8.3	29.8	24.5	5-20/1355
S0269-AP-0106-01	238.8	/1438	207.1	6-8/1517	24.9	104.6	77.7	6-8/1604
S0269-AP-0612-01	312.0	/1438	270.6	6-8/1527	46.5	130.0	93.8	6-8/1613
S0269-AP-1218-01	335.5	/1439	291.5	6-8/1656	54.6	122.6	113.9	6-8/1714
S0269-AP-0001-02	70.5 RW	/1440	62.5	6-8/1540	5.5	27.7	29.7	6-8/1558
S0269-AP-0106-02	~~231.6~~ 231.5	/1440	201.7	6-8/1707	11.8	99.4	92.6	6-9/0820
S0269-AP-0612-02	320.1	/1441	279.7	6-9/0951	47.2	130.5	95.6	6-9/1008
S0269-AP-1218-02	347.4	/1441	303.9	6-9/0932	65.1	137.4	101.2	6-9/0932
S0269-AP-0001-03	73.6	5-18/1443	65.5	6-8/1611	4.7	28.4	32.6	6-8/1628
S0269-AP-0106-03	238.6	/1443	210.6	6-9/0930	15.1	106.8	88.5	6-9/0915
S0269-AP-0612-03	321.7	/1444	277.0	6-8/1629	9.2	152.3	115.7	6-8/1646
S0269-AP-1218-03	342.7	/1444	298.8	6-8/1602	36.3	125.1	137.6	6-8/1630
S0269-BY-0001-01	43.6	5-18/1446	40.8	5-21/1040	2.4	15.4	22.7	5-21/1130
S0269-BY-0106-01	231.1	/1447	205.0	6-8/1634	11.5	87.1	106.2	6-8/1653
S0269-BY-0612-01	339.6	/1447	305.9	6-8/1641	16.8	146.7	142.5	6-8/1820
S0269-BY-1218-01	326.2	/1448	290.8	6-8/1724	28.6	144.5	118.0	6-9/0905
S0269-BY-0001-02	51.2	5-18/1449	47.0	6-8/1616	1.3	15.8	29.7	6-8/1645
BY-0106-02	216.2	/1449	195.4	6-9/0825	16.2	80.6	98.2	6-9/0926
BY-0612-02	347.2	/1450	*313.5	6-8/1555	28.6	149.7	135.4	6-9/1020
BY-1218-02	322.2	/1450	287.6	6-8/1248	8.4	119.8	159.3	6-8/1332
S0269-BY-0001-03	54.8	5-18/1451	50.7	6-8/1210	4.1	16.9	29.7	6-8/1326
-BY-0106-03	218.9	5-18/1451	195.8	6-8/1303	18.4	81.2	94.9	6-8/1435
-BY-0612-03	283.2	/1452	253.5	6-8/1512	24.7	117.8	111.6	6-8/1552
-BY-1218-03	364.0	/1452	324.1	6-8/1357	28.1	152.3	143.6	6-8/1414
S0269-SY-0002-01	85.1	5-18/1455	72.5	5-20/1630	11.2	30.6	24.5	5-20/0933
S0269-SY-0206-01	199.8	/1456	174.9	6-8/1135	16.3	97.4	60.9	6-8/1213
S0269-SY-0612-01	294.4	/1456	260.3	6-8/1238	17.0	139.9	103.1	6-8/1323
S0269-SY-1218-01	334.7	/1457	288.0	6-8/1254	34.7	149.6	103.6	6-8/1340

SAMPLE PREPARATION LOG

Property ID:	PC-0269

Initials/Date of Preparer:	6-9/M

Sample ID	Pre-Drying Mass: Total Mass (g)	Pre-Drying Mass: Date/Time	Post-Drying Mass: Total Dry Mass (g)	Post-Drying Mass: Date/Time	Post-Sieving Masses: Mass of fraction > 10-mesh (g)	Post-Sieving Masses: Mass of fraction between 10-mesh and 60-mesh (g)	Post-Sieving Masses: Mass of fraction < 60-mesh (g)	Post-Sieving Masses: Date/Time
S0269-SY-0002-02	90.8	5-18/1457	78.5	6-8/1126	4.0	~~114.6~~ 43.1	30.2	6-8/1152
SY-0206-02	213.3	/1458	186.6	6-8/1222	12.9	114.6	59.0	6-8/1316
SY-0612-02	343.8	/1458	302.7	6-8/1407	70.9	156.8	74.9	6-8/1428
SY-1218-02	337.7	/1458	289.4	6-8/1508	33.7	150.3	105.2	6-8/1521
S0269-SY-0002-03	92.0	5-18/1459	76.5	6-8/1039	2.5	45.0	28.9	6-8/1101
SY-0206-03	185.5	/1459	161.2	6-8/1112	15.0	90.0	56.0	6-8/1138
SY-0612-03	328.6	/1500	285.1	6-8/1142	40.3	157.1	90.5	6-8/1209
SY-1218-03	336.1	/1500	296.3	6-8/1118	31.5	158.2	105.0	6-8/1155
S0269-SY-0002-31	564.2	5-18/1501	475.1	5-26/1400	106.5	244.4	123.1	5-26/1417
SY-0206-31	1967.1	5-18/1502	1737.0	5-27/1422	448.5	824.7	~~456.1~~ 460.3	5-27/1557
~~SY-0612-31~~								
~~SY-1218-31~~								
S0269-SY-0002-32	593.6	5-18/1503	496.0	5-27/1425	77.2	242.5	175.4	5-28/1055
-SY-0206-32	1994.9	5-18/1503	1752.7	5-27/1424	509.9	790.2	~~446.4~~ 451.1	5-27/1529
S0269-SY-0002-33	554.8	5-18/1504	460.3	6-8/1146	38.9	244.0	177.6	6-8/1204
-SY-0206-33	1457.8	5-18/1505	1276.7	6-8/1207	215.9	633.5	425.4	6-8/1225

SAMPLE PREPARATION LOG

Property ID:	SD389

Initials/Date of Preparer:	MH

	Pre-Drying Mass		Post-Drying Mass		Post-Sieving Masses			
Sample ID	Total Mass (g)	Date/Time	Total Dry Mass (g)	Date/Time	Mass of fraction > 10-mesh (g)	Mass of fraction between 10-mesh and 60-mesh (g)	Mass of fraction < 60-mesh (g)	Date/Time
SD389-DZ-0001-01	69.2	5/13/1700	65.3	5-21/0954	4.2	25.6	33.5	5-26/1618
" -02	59.7		54.3	6-2/1245	2.8	22.7	28.2	6-1/1310
" -03	69.8		64.5	6-2/1426	2.9	27.6	34.1	6-2/1507
FY-0001-01	105.2		95.0	5-21/0924	19.2	34.3	41.3	5-21/1003
-0106-01	457.6		409.4	6-2/1105	86.6	152.5	170.5	6-2/1136
-0612-01	496.4		449.2	6-2/0955	48.5	176.2	223.8	6-2/947
-1218-01	527.9		491.2	6-2/0900	72.0	152.4	266.6	6-2/1043
-0001-02	63.3		54.4	5-28/1734	2.5	18.8	35.2	5-31/0926
-0106-02	229.9		206.9	5-28/1732	16.1	92.4	97.4	5-29/1048
-0612-02	317.2		285.0	5-29/1330	19.1	125.2	140.3	5-27/1409
-1218-02	343.7		314.4	5-29/1326	9.8	122.1	182.1	5-29/1342
-0001-03	65.1		61.5	5-28/1735	4.5	19.7	36.3	5-31/0950
-0106-03	241.2		217.9	5-28/1747	11.3	96.6	109.1	5-31/1027
-0612-03	310.1		280.8	5-28/1743	12.0	124.1	142.6	5-31/0956
-1218-03	303.5		276.5	5-28/1740	6.4	95.9	173.7	5-31/0943
BY-0001-01	64.3		55.6	5-21/1015	9.9	26.3 27.5 5-21-15	19.4	5-21/1031
-0106-01	240.9		218.3	5-22/0939	27.1	90.5	100.3	5-22/1604
-0612-01	367.7		334.0	6-2/1420	47.0	150.2	136.9	6-2/1501
-1218-01	407.3		364.3	6-2/1437	43.0	176.4	144.9	6-2/1522
-0001-02	60.3		53.4	6-2/1400	8.0	25.7	19.8	6-2/1409
-0106-02	204.8		186.1	6-2/1305	24.6	82.3	79.5	6-2/1352
-0612-02	295.1		268.5	6-2/1346	24.9	122.5	121.3	6-2/1356
-1218-02	283.4		254.7	6-2/1308	72.9	95.2	86.5	6-2/1330
-0001-03	59.1		50.6	6-2/1115	2.5	28.6	19.5	6-2/1144
-0106-03	220.8		192.8	6-2/1316	25.9	84.4	87.5	6-2/1243
-0612-03	336.1		300.8	6-2/1130	40.4	143.0	118.0	6-2/1247
-1218-03	334.8		297.8	6-2/1057	96.7	120.5	90.3	6-2/1127
-0001-31	347.3		303.3	5-20/1526	39.6	138.2	125.8	5-20/1545
-0106-31	1477.6		1320.5	5-31/1109	215.0	548.8	555.0	5-31/1321
-0001-32	349.1		303.3	6-2/1547	26.1	137.7	139.4	6-2/1610
-0106-32	1562.6		1390.0	5-26/1452	578.6	221.2	587.7	5-27/1704

SAMPLE PREPARATION LOG

Property ID:	S0389

Initials/Date of Preparer:	M

Sample ID	Pre-Drying Mass		Post-Drying Mass		Post-Sieving Masses			
	Total Mass (g)	Date/Time	Total Dry Mass (g)	Date/Time	Mass of fraction > 10-mesh (g)	Mass of fraction between 10-mesh and 60-mesh (g)	Mass of fraction < 60-mesh (g)	Date/Time
S0389-0000-01	336.9	5-13/1700	292.8	5-26/1455	23	126.9	142.1	1741/5-27
-Ø1Ø6-33	1369.7		1225.6	6-2/1010	243.9	500.9	478.4	6/2/1035
-0000-Ø1	67.7		63.3	5-21/1155	11.1	30.3	18.6	5-21/1427
-Ø1Ø6-Ø1	256.3		224.9	5-21/1430	31.4	121.6	71.0	5-27/1615
-Ø612-Ø1	309.9		273.4	5-26/1444	17.6	110.7	144.3	5-27/1435
-1218-Ø1	319.5		295.1	5-28/1107	19.0	125.9	[illegible] 148	
-0000-Ø2	62.2		55.3	5-31/1013	3.5	25.0	26.6	5-31/1048
-Ø1Ø6-Ø2	248.0		220.1	5-31/1115	22.5	113.9	83.2	5-31/1342
-Ø612-Ø2	339.5		277.4	5-31/1435	45.7	119.0	114.9	5-31/1509
-1218-Ø2	318.9		306.8	6-2/0945	19.7	152.0	134.8	6-2/925
-0000-Ø3	63.3		56.2	6-2/1156	4.0	30.2	21.7	6-2/1301
-Ø1Ø6-Ø3	252.6		223.1	5-21/1552	26.7	122.8	72.9	1612/5-22
-Ø612-Ø3	313.1		272.3	6-2/1448	24.7	119.1	128.8	6-2/1529
-1218-Ø3	327.7		292.9	6-2/1334	17.0	121.9	154.5	6-2/1505
S1-0000-Ø1	33.1		28.5	5-21/1425	1.5	10.1	16.3	5-28/1009
-Ø1Ø6-Ø1	162.4		149.4	5-22/0945	6.7	56.6	85.7	5-22/1342
-Ø612-Ø1	264.2		231	6-2/1321	34.7	99.9	95.7	6-2/1336
-1218-Ø1	289.2		252.7	6-2/1141	33.8	111.6	106.9	6-2/1254
-0000-Ø2	49.3		42.5	5-29/1144	1.3	13.7	27.4	5-29/1227
-Ø1Ø6-Ø2	230.7		~~206.6~~ 202.5	~~5-21/1033~~ 5-31/1339	18.6	96.6	86.9	5-31/1304
-Ø612-Ø2	260.1		220.9	5-31/1103	21.6	106.0	91.9	5-31/1334
-1218-Ø2	292.7		257.9	5-29/1320	14.4	121.4	121.5	5-28/1350
-0000-Ø3	44.7		39.2	5-31/1006	1.0	15.1	22.6	5-31/1033
-Ø1Ø6-Ø3	228.1		200.6	5-29/1033	17.8	88.6	94.0	5-29/1057
-Ø612-Ø3	291.7		256.0	5-29/1334	28.9	113.0	113.9	5-29/1403
-1218-Ø3	306.9		265.1	5-27/1030	18.7	113.0	133.3	5-29/1108

Last of 5/22/15

26

SAMPLE PREPARATION LOG

Property ID:	PC-0423

Initials/Date of Preparer:	MH/RW 5-5-15

Sample ID	Pre-Drying Mass		Post-Drying Mass		Post-Sieving Masses			
	Total Mass (g)	Date/Time	Total Dry Mass (g)	Date/Time	Mass of fraction > 10-mesh (g)	Mass of fraction between 10-mesh and 60-mesh (g)	Mass of fraction < 60-mesh (g)	Date/Time
SØ423-SYE-1218-31	1795.9	5-5/1057	1795.4	5-5/1109	108.4	1312.6	368.9	5-5/1245
SØ423-SYE-0612-32	1825.6	5-5/1416	1799.0	5-8/0956	~~151.2~~ 193.7	723.7	781.1	5-8/1200
SØ423-SYE-1218-32	1796.5	5-5/1417	1692.6	5-6/1521	151.2	693.5		5-6/1615
SØ423-SYE-0106-32	1578.0	5-5/1419	1486.4	5-6/1515	129.9	596.4	756.2	5-6/1602
SØ423-SYE-0106-32	1544.7	5-5/1421	1439.4 RW	5-8/1000	200.6	567.1	670.7	
SØ423-SYE-0612-33	1874.1	5-5/1422	~~2773.8~~	5-8/1400	299.3	734.1	736.8	5-8/1500
SØ423-SYE-1218-33	1788.2	5-5/1422	1699.3	5-8/1550	196.8	730.8	769.2	5-9/1138
SØ423-SYE-0612-Ø2	287.6	5-5/1425	268.9	5-6/1015	25.5	101.8	140.7	5-6/1107
SØ423-SYE-0106-Ø2	241.3	5-5/1426	~~268.9~~ 269.2	5-6/1001	~~25.5~~ 18.8	~~101.8~~ 78.8	~~140.7~~ 126.9	5-8/1430 1116
SØ423-SYE-1218-Ø2	305.9	5-5/1426	297.2	5-6	27.7	116.6	150.8	5-5/1533
SØ423-SYE-0001-Ø2	46.8	5-5/1427	~~297.2~~ 43.1	5-6	7.6	12.2	23.3	5-5/1519
SØ423-SYE-0106-31	1561.2	5-5/1430	1443.7	5-8/1350	228.3	544.3	671.6	5-8/1445
SØ423-SYE-0612-31	1783.0	5-5/1430	~~312.5~~ 1669.6	5-6/1012	232.8	658.9	775.2	5-9/1150
SØ423-SYE-0001-31	328.6	5-5/1432	~~272.8~~	5-6/1003	19.9	105.5	187.5	5-6/1136
SØ423-SYE-0001-32	285.5	5-5/1433	272.8	5-6/1003	26.8	97.0	148.7	5-6/1110
SØ423-SYE-0001-33	292.6	5-5/1434	278.5	5-6/1147	19.6	108.9	147.0	5-6/1420
SØ423-SYE-0106-Ø1	247.4	5-5/1438	235.5	5-9/1120	36.4	113.8	85.2	5-7/1300
SØ423-SYE-0612-Ø1	288.7	5-5/1439	270.4	5-9/1411	36.0	128.0	105.6	5-9/1511
SØ423-SYE-1218-Ø1	277.8	5-5/1440	269.5	5-9/1125	29.9	~~55.6~~ 123.4	116.4	5-9/1311
" -0001-Ø1	40.8	5-5/1441	38.1	5-9/1232	1.6	13.6	23.7	5-9/1319
" -1218-Ø3	301.3	5-5/1443	286.0	5-6/1153	43.3	121.0	121.1	5-6/1218
-0612-Ø3	290.2	1443	275.5	5-6/1503	18.9	122.0	138.6	
-0106-Ø3	259.2	1443	~~235.6~~	5-9/1120	24.2	94.7		
-0001-Ø3	57.2	1444	~~55.6~~ 55.6	5-10/1631	~~11.5~~	17.2	27.0	5-9/1331
SØ0000-WP5-0001-01	1319.7	5-6/1446	1166.0	5-10/1640	640.5	273.7	252.9	5-10/1703
" -WP3- "	~~1194.5~~ 1194.5	/1434	989.9	5-10/1659	523.7	236.6	228.0	5-10/1624
" -WP6- "	1235.4	/1443	1094.8	5-10/1647	535.7	322.0	296.1	5-10/1610
" -WP1- "	1294.9	/1446	1168.9	5-10/1459	631.0	296.3	240.9	5-10/1535
" -WP2- "	2016	/1458	1929.5	5-10/1502	1346.6	422.3	159.0	5-10/1550
" -WP4- "	1270.7	/1457	1147.2	5-10/1611	929.7	143.7	73.4	5-10/1640

SAMPLE PREPARATION LOG

Property ID:	50423

Initials/Date of Preparer:	AL/5-12

Sample ID	Pre-Drying Mass		Post-Drying Mass		Post-Sieving Masses			
	Total Mass (g)	Date/Time	Total Dry Mass (g)	Date/Time	Mass of fraction > 10-mesh (g)	Mass of fraction between 10-mesh and 60-mesh (g)	Mass of fraction < 60-mesh (g)	Date/Time
50423-EO-0001	193.1	1745	164.9	5-17/1643	37.6	71.4	55.2	5-17/1659
-0001-02	204.1		172.8	5-17/1758	37.1	87.5	48.6	5-18/0932
-0001-03	194.5		167.3	5-17/1751	41.6	78.3	47.8	5-18/0948
GA-0001-01	79.9		59.2	5-17/1800	9.0	33.2	17.0	5-18/1051
-0106-01	248.7		202.4	5-18/952	37.4	104.4	60.7	5-18/1148
-0612-01	318.9		265.2	5-18/1116	43.0	134.5	90.2	5-18/1212
-1218-01	313.2		252.0	5-18/955	48.2	119.3	84.9	5-18/1149
DZ-0001-01	93.9		69.5	5-17/1458	15.1	28.1	25.5	5-17/1357
0106-01	269.5		215.8	5-17/1605	53.5	108.6	52.9	5-17/1629
0001-02	67.0		46.7	5-17/1633	16.7	20.1	19.4 RW	5-17/1714
0106-02	261.5		211.6	5-17/1753	56.2	103.6	52.4	5-18/1104
0001-03	69.9		47.5	5-17/1540	7.1	19.7	20.1	5-17/1818
0106-03	249.0		199.6	5-17/1705	44.8	101.9	51.7	5-17/1737
SW-0001-01	81.9		58.5	5-16/1218	7.5	29.0	22.3	5-18/1306
0106-01	254.0		209.3	5/18/1254	50.8	95.2	63.6	5-19/0913
0612-01	286.2		223.6	5-19/1031	54.3	105.7 94.5	73.8	5-19/1037
1218-01	277.6		215.8	5-19/0931	37.5	95.1	81.9	5-19/1004
0001-02	71.1		47.8	5-18/1221	5.9	24.8	17.2	5-18/1323
0106-02	260.9		216.2	5-19/0884	39.0	112.4	63.8	5-19/0921
0612-02	313.8		255.7	5-18/1419	48.5	135.4	71.1	5/19/0945
1218-02	273.9		207.0	5-18/1427	43.7	82.7	80.7	5/19-0923
0001-03	56.5		37.6	5-19/1041	5.2	18.5	13.9	5/19-1106
0106-03	247.5		203.5	5-19/0928	34.6	95.7	58.9	5/19 1004
0612-03	296.2		240.6	5-19/1236	52.7	109.7	77.6	5/19/1305
1218-03	272.6		206.8	5-19/1001	40.2	98.2	67.4	5/19 1015
BG-0001-01	65.3		42.4	5-16/1352	21.2	31.2	13.3	5-16/1545
0106-01	233.1		188.7	5-16/1638	69.3	86.2	31.7	5/16/1720
0612-01	365.1		308	5-16/1633	142.5	117.0	46.6	5-16/1721
1218-01	328.5		NA	5-16/1615	82.6	123.2	72.6	5-16/1614
0002-02	66.9		40.8	5-16/1521	7.1	18.1 17.9	13.5	5-16/1620
0206-02	271.4		224.6	5-17/1335	76.2	97.0	50.2	5-17/1431
0612-02	345.6		294.5	5-16/1734	114.2	106.8	72.1	5-17/1327

SAMPLE PREPARATION LOG

Property ID:	50423

Initials/Date of Preparer:	AL/5-12

Sample ID	Pre-Drying Mass		Post-Drying Mass		Post-Sieving Masses			
	Total Mass (g)	Date/Time	Total Dry Mass (g)	Date/Time	Mass of fraction > 10-mesh (g)	Mass of fraction between 10-mesh and 60-mesh (g)	Mass of fraction < 60-mesh (g)	Date/Time
BY 1218-02	322.8	5-12/~~1755~~ 1755	275.3	5-16/1636	69.1	102.8	101.4	~~1214~~ 5-16/1727
BY-0002-03	65.3		39.6	5-16	5.0	17.5	15.6	5-17/1300
0206-03	269.9		224.6	5-17/1337	96.4	74.2	52.2	5-17/1308
0612-03	344.1		~~391.4~~ 291.4	5-17/1335	126.9	104.9	58.5	5-17/1321
1218-03	351.9		302.6	5-17/1447	83.9	138.4	78.9	5-17/1511
BY 0002-31	638.9		496.0	5-17/1449	130.1	246.7	117.7	5-17/1521
0206-31	1294.5		1099.0	5-17/1339	494.6	442.1	186.7	5-17/1410
0002-32	628.2		492.1	5-18/1125	108.8	262.0	121.5	5-18/1242
0206-32	1342.6		~~774.0~~ 774.1	5-17/1703	444.5	497.3	212.9	5-17/1744
0002-33	620.5		497.6	5-17/1601	117.2	254.9	122.9	5-17/1640
0206-33	1275.9		1092.3	5-17/1344	434.8	475.4	179.7	5-17/1418

SAMPLE PREPARATION LOG

Property ID:	50496

Initials/Date of Preparer:	AB / 5-13-2015

Sample ID	Pre-Drying Mass		Post-Drying Mass		Post-Sieving Masses			
	Total Mass (g)	Date/Time	Total Dry Mass (g)	Date/Time	Mass of fraction > 10-mesh (g)	Mass of fraction between 10-mesh and 60-mesh (g)	Mass of fraction < 60-mesh (g)	Date/Time
50496-FY-12-1208	347.0	5/13/1350	307.8	6-4/0855	13.3	146.0	148.3	6-4/0920
0206-03	165.1		56.7	6-4/0918	3.3	24.7	28.5	6-4/0934
0612-03	184.4		159.0	6-4/1130	10.0	92.6	56.0	6-4/1314
FY-0002-02	288.1		25[illegible].6	6-4/1022	~~12.2~~ 9.2	127.2	114.2	6-4/1050
0206-02	59.0		52.1	6-4/0859	1.8	27.4	22.3	6-4/0914
0612-02	195.8		169.0	6-4/0951	12.7	86.2	69.5	6-4/1017
1218-02	290.3		250.5	6-4/0948	9.2	122.7	117.5	6-4/1008
FY-0002-01	347.1		309.8	6-4/1025	17.3	170.5	116.4	6-4/1056
0206-01	71.7		62.8	5-21/1509	4.2	~~35.3~~ 35.2	24.0	5-22/0938
0612-01	197.1		173.3	6-4/1309	11.4	100.0	60.4	6-4/1324
1218-01	283.6		246.9	6-4/1312	~~10.0~~ RW 11.8	124.3	110.3	6-4/1331
SY-0002-01	316.9		* 278.9	6-4/1310	12.8	134.5	131.5	6-4/1305
0206-01	73.7		61.9	5-20/1315	4.8	32.1	25.0	5-20/1340
0612-01	195.8		166.4	6-3/0900	8.4	92.7	63.4	6-3/0926
1218-01	298.6		260.6	6-4/1048	14.1	155.6	90.3	6-4/1105
0002-02	338.1		295.7	6-3/1107	21.8	176.5	95.1	6-3/1127
0206-02	67.3		55.7	6-4/0913	1.6	18.3	35.5	6-4/0940
0612-02	189.2		160.1 [illegible] 169.0 M	6-4/0954	9.9	80.4	69.3	6-4/1404
1218-02	303.9		266.6	6-4/1333	10.3	147.1	108.2	6-4/1349
0002-03	340.6		297.4	6-4/1347	17.5	165.4	113.5	6-4/1410
0206-03	61.2		51.1	6-2/1417	1.4	30.5	19.2	6-3/0845
0612-03	178.5		151.9	6-3/1027	7.1	85.3	58.9	6-3/1045
1218-03	274.6		236.2	6-4/1107	16.0	131.4	88.4	6-4/1135
BY-0002-01	299.5		258.1	6-4/1111	17.1	136.8	103.8	6-4/1120
0206-01	59.3		47.5	5-20/1402	7.8	26.5	12.5	5-20/1436
0612-01	155.1		130.4	6-3/1004	15.6	77.0	38.0	6-3/1017
1218-01	240.1		205.2	6-3/1100	18.0	116.9	70.0	6-3/1120
0002-02	278.8		243.9	6-4/1052	13.9	129.6	100.2	6-4/1110
0206-02	48.7		39.6	6-3/0921	7.6	26.3	10.6	6-3/0954
0612-02	133.3		110.0	6-3/1140	6.2	65.9	38.0	6-4/0902
1218-02	234.8		201.7	6-3/1043	16.2	128.3	54.2	6-3/1105
	298.9		264.1	6-3/1117	20.4	139.0	104.3	6-4/0908

SAMPLE PREPARATION LOG

Property ID:	50496	Initials/Date of Preparer:	MJ 5-13-2015

Sample ID	Pre-Drying Mass		Post-Drying Mass		Post-Sieving Masses			
	Total Mass (g)	Date/Time	Total Dry Mass (g)	Date/Time	Mass of fraction > 10-mesh (g)	Mass of fraction between 10-mesh and 60-mesh (g)	Mass of fraction < 60-mesh (g)	Date/Time
50496-BH-0002-03	59.6		46.8	6-3/1019	1.7	27.0	18.2	6-3/1057
0206-03	174.5		147.4	6-3/1039	10.8	89.2	46.5	6-3/1057
0612-03	282.2		245.7	6-3/0907	13.0	129.3	101.2	6-3/0934
1218-03	324.4		286.5	6-3/0917	15.7	142.0	126.7	6-3/0947

SAMPLE PREPARATION LOG

Property ID:	50724

Initials/Date of Preparer:	MZ 6/8

Sample ID	Pre-Drying Mass		Post-Drying Mass		Post-Sieving Masses			
	Total Mass (g)	Date/Time	Total Dry Mass (g)	Date/Time	Mass of fraction > 10-mesh (g)	Mass of fraction between 10-mesh and 60-mesh (g)	Mass of fraction < 60-mesh (g)	Date/Time
50724-SYE-0002-02	43.4	5/14 15:47	44.5		1.2	19.7	23.3	
-SYE-0106-02	163.1		138.0	6-6/1436	4.3	57.8	75.4	6-6/1503
-SYE-0612-02	272.0		243.3	6-6/1440	12.1	112.5	118.1	6-6/1511
-SYE-1218-02	311.7				~~29.0~~ 23.9	124.0	138.0	6-6/1519
-SYE-0001-03	50.2		43.2	6-6/1341	1.7	18.1	23.4	6-6/1523
-SYE-0106-03	143.3		126.7	6-6/1308	4.6	50.4	71.3	6-6/1350
-SYE-0612-03	211.7		193.6	6-6/1322	9.6	75.2	107.1	6-6/1434
-SYE-1218-03	230.1		224.3	6-6/1541	15.2	66.8	132.9	6-6/1603
-SYE-0001-01	85.0		74.3	5/24 0905	8.7	35.1	29.2	5-24/0953
-SYE-0106-01	158.0		140.4	6-6/1456	6.6	60.9	72.5	6-6/1529
-SYE-0612-01	233.0		211.3	6-6/1508	12.4	82.1	116.5	6-6/1536
-SYE-1218-01	257.2		238.1	6-6/1424	20.4	86.2	131.3	6-8
-SYW-0002-01	84.1		71.0	5-21/0946	8.2	35.9	25.5	5-21/1030
-SYW-0206-01	177.3		156.9	6-8/0921	8.4	79.9	68.3	6-8/0746
-SYW-0612-01	279.8		253.0	6-8/0955	36.2	127.6	94.2	6-8/1029
-SYW-1218-01	340.7		306.5	6-6/1550	39.1	130.8	136.0	6-6/1603
-SYW-0002-02	69.8		291.8	6-8/0748	56.8	136.3	98.7	6-8/0831
-SYW-0206-02	175.1		157.7	6-8/0959	16.1	78.9	62.4	6-8/1036
-SYW-0612-02	270.3		244.7	6-8/0943	19.5	121.6	104.0	6-8/0819
-SYW-1218-02	319.2		59.8	6-8/0829	4.6	32.1	21.0	6-8/0902
-SYW-0002-03	76.8		64.8	6-6/1510	~~33.7~~ 22.2	28.5	33.7	6-8
-SYW-0206-03	205.4		186.8	6-8/0849	28.6	88.3	69.7	6-8/0909
-SYW-0612-03	295.0		267.7	6-8/0859	16.4	134.1	117.0	6-8/0934
-SYW-1218-03	334.7		303.8	6-8/0855	18.3	141.3	144.3	6-8/0915
FY-0002-02	55.4		50.3	6-6/1527	2.9	17.9	27.5	6-6/1544
-0206-02	147.3		130.6	6-8/0840	12.4	59.1	59.0	6-8/1854
-0612-02	281.9		255.6	6-8/0744	19.1	125.4	110.6	6-8/0826
-1218-02	354.1		320.4	6-8/0754	62.8	142.8	114.2	6-8/0849
-0002-03	86.9		78.0	6-8/0912	6.0	38.0	33.8	6-8/0922
-0206-03	191.0		176.5	6-8/0937	7.6	79.8	82.7	6-8/1042
-0612-03	291.8		265.4	6-8/0751	24.5	133.0	107.6	6-8/0843
-1218-03	341.3		311.2	6-6/1526	43.3	129.1	137.5	6-6/1551

SAMPLE PREPARATION LOG

Property ID:	[redacted]S0724

Initials/Date of Preparer:	MT 6-8

	Pre-Drying Mass		Post-Drying Mass		Post-Sieving Masses			
Sample ID	Total Mass (g)	Date/Time	Total Dry Mass (g)	Date/Time	Mass of fraction > 10-mesh (g)	Mass of fraction between 10-mesh and 60-mesh (g)	Mass of fraction < 60-mesh (g)	Date/Time
FY-0002-01	63.5	5/14 15:47	55.4	5-21/1420	3.4	26.3	28.6	5-24/1502
FY-0206-01	170.7	↓	153.9	6-8/0915	10.3	72.4	71.0	6/10/940
FY-0612-01	291.5		264.1	6-6/1345	20.6	124.4	118.7	6/6/1424
FY-0218-01	304.7	↓	276.1	6-8/1034	36.3	139.3	102.9	6/8/1052

SAMPLE PREPARATION LOG

Property ID:	S1076

Initials/Date of Preparer:	GJH 5.18.15

Sample ID	Pre-Drying Mass: Total Mass (g)	Pre-Drying Mass: Date/Time	Post-Drying Mass: Total Dry Mass (g)	Post-Drying Mass: Date/Time	Post-Sieving Masses: Mass of fraction > 10-mesh (g)	Post-Sieving Masses: Mass of fraction between 10-mesh and 60-mesh (g)	Post-Sieving Masses: Mass of fraction < 60-mesh (g)	Post-Sieving Masses: Date/Time
S1076-ED-0001-01	79.0	5-18-15/1520	~~275.8~~	5-20/1442	13.4	27.4	29.3	5-20/1459
0106-01	189.1	5-18-15/1521	164.1	6-5/0952	13.0	61.5	89.0	6-5/1118
0612-01	277.4	5-18-15/1522	244.6	6-5/1648	24.4	98.3	121.5	6-5/1734
1218-01	305.6	5-18-15/1523	262.0	6-6/1239	39.7	138.1	83.6	6-6/1306
0001-02	71.1	5-18-15/1525	64.0	6-5/0946	14.3	23.9	23.5	6-5/1111
0106-02	223.6	5-18-15/1526	195.9	6-5/0934	21.8	77.4	95.6	6-5/1006
0612-02	266.9	5-18-15/1526	229.5	6-5/1329	21.1	87.3	120.7	6-5/1406
1218-02	319.1	5-18-15/1527	270.9	6-6/1218	35.2	124.4	110.6	
0001-03	72.4	5-18-15/1529	64.0	6-5/1438	10.2	22.3	31.4	6-5/1306
0106-03	187.8	5-18-15/1530	163.7	6-5/1209	25.1	58.8	79.6	6-5/1231
0612-03	246.5	5-18-15/1530	212.2	6-5/1213	28.1	88.2	95.8	6-5/1255
1218-03	281.1	5-18-15/1531	~~244.0~~	6-5/1217	33.7	104.2	106.1	6-5/1249
DZ 0001-01	122.9	5-18-15/1532	110.6	1335/5.20.15	17.6	54.7	37.7	5-20-15/1353
02	147.8	5-18-15/1533	134.5	6-5/1646	15.1	54.3	64.7	6-5/1725
03	163.9	5-18-15/1533	146.9	6-5/1640	17.4	58.1	71.4	6-5/1702
FY 0002-01	82.4	5-18-15/1535	66.3	5-21/1415	3.8	35.1	27.0	5-21/1511
0206-01	203.9	5-18-15/1536	182.2	6-6/1121	35.5	99.5	46.3	6-6/123
0612-01	342.1	5-18-15/1537	313.3	6-6/1219	80.7	172.6	59.5	6-6/1247
1218-01	364.2	5-18-15/1537	337.9	6-6/	107.9	154.0	75.2	6-6/1357
BY-0002-01	89.5	5-18-15/1540	72.0	5-21/1009	11.4	38.1	20.8	5-20/1045
0206-01	186.6	5-18-15/1541	157.7	6-5/1328	12.3	60.5	84.5	6-5/1400
0612-01	321.1	5-18-15/1542	280.6	6-5/1936	23.1	111.9	145.2	6-5/1513
1218-01	322.9	5-18-15/1543	282.3	6-5/1531	26.4	106.1	149.8	6-5/1605
0002-02	96.3	5-19-15/1543 *			5.4	30.1	41.5	6-5/1541
0206-02	184.2	5-18-15/1544	154.2	6-5/1818	12.8	59.7	80.9	6-5/1549
0612-02	293.9	5-18-15/1544	254.0	6-5/1543	23.2	106.6	123.7	6-5/1617
1218-02	327.9	5-18-15/1545	292.7	6-6/1114	41.2	123.5	126.9	6-6/1140
0002-03	89.7	5-18-15/1546	72.4	6-6/1108	2.5	29.0	40.5	6-6/1134
0206-03	190.3	5-18-15/1546	157.5	6-6/1114	13.6	70.6	73.3	6-6/1334
0612-03	294.6	5-18-15/1547	255.3	6-6/1118	23.9	114.3	116.4	6-6/1201
1218-03	319.1	5-18-15/1548	285.3	6-6/1317	38.6	101.4	144.9	6-6/1335

total dry mass 70.0

SAMPLE PREPARATION LOG

Property ID:	S1076

Initials/Date of Preparer:	GJH 5.18.15

Sample ID	Pre-Drying Mass: Total Mass (g)	Pre-Drying Mass: Date/Time	Post-Drying Mass: Total Dry Mass (g)	Post-Drying Mass: Date/Time	Post-Sieving Masses: Mass of fraction > 10-mesh (g)	Post-Sieving Masses: Mass of fraction between 10-mesh and 60-mesh (g)	Post-Sieving Masses: Mass of fraction < 60-mesh (g)	Post-Sieving Masses: Date/Time
S1076-BY-0002-31	529.0	5-18-15/1552	420.8	5-20/1424	78.3	217.9	122.3	5-20/1529
0206-31	1073.1	5-18-15/1552	903.0	6-3/1000	142.1	449.0	306.0	6-3/1023
0002-32	559.2	5-18-15/1553	439.8	6-4/1329	25.8	216.0	196.2	6-4/1352
0206-32	1137.3	5-18-15/1554	948.1	6-5/1050	107.5	431.8	407.8	6-5/1145
0002-33	519.7	5-18-15/1555	407.0	5-27/1417	28.9	174.7	203.1	5-28/1030
0206-33	1146.5	5-18-15/1556	942.3	6-5/1043	95.8	442.7	409.7	6-5/1126
AP-0002-01	89.6	5-18-15/1604	73.4	5-21/1257	6.9	32.4	38.2	5-21/1515
0206-01	181.2	5-18-15/1604	163.6	6-5/1452	20.7	73.7	67.1	6-5/1500
0612-01	290.0	5-18-15/1605	260.2	6-4/1403	37.4	132.3	90.1	6-4/1445
1218-01	289.0	5-18-15/1605	261.2	6-4/1438	Pw 45g 47.8	119.0	94.0	6-4/1450
0002-02	85.2	5-18-15/1606	69.8	6-4/1440	1.5	32.8	35.5	6-4/1450
0206-02	203.4	5-18-15/1607	181.3	6-4/1500	21.5	89.7	70.0	6-4/1510
0612-02	308.3	5-18-15/1608	275.2		34.3	120.5	121.0	6-5/0941
1218-02	324.3	5-18-15/1608	288.7	6-4/1455	32.3	139.8	115.9	6-4/1515
0002-03	96.1	5-18-15/1609	77.4	6-4/1406	3.4	39.2	34.6	6-4/1439
0206-03	200.2	5-18-15/1610	177.5	6-4/1515	27.7	89.3	59.4	6-4/1530
0612-03	302.5	5-18-15/1610	272.1	6-5/1205	36.6	111.0	123.4	6-5/1230
1218-03	309.7	5-18-15/1611	281.2	6-5/0929	29.4	102.8	148.0	6-5/1001
FY 0002-02	73.5	5-18-15/1615	58.9	6-5/1430	2.2	24.4	31.4	6-5/1454
0206-02	189.6	5-18-15/1615	165.7	6-5/1631	27.3	79.1	58.8	6-5/1708
0612-02	288.6	5-18-15/1616			65.9	148.3	49.4	6-6/1312
1218-02	343.7	5-18-15/1616	278.8	6-6/1156	105.7	140.1	73.3	6-6/1329
0002-03	102.0	5-18-15/1617	80.6	6-5/1535	3.2	36.7	40.4	6-5/1558
0206-03	214.4	5-18-15/1617	191.4	6-5/1538	44.4	94.5	51.7	6-5/1625
0612-03	344.5	5-18-15/1617	314.4	6-6/1155	73.2	176.5	63.8	6-6/1223
1218-03	408.3	5-18-15/1617	372.8	6-6/1157	86.5	172.8	112.1	6-6/1221

SAMPLE PREPARATION LOG

Property ID:	51504

Initials/Date of Preparer:	AL/5-11

Sample ID	Pre-Drying Mass		Post-Drying Mass		Post-Sieving Masses			
	Total Mass (g)	Date/Time	Total Dry Mass (g)	Date/Time	Mass of fraction > 10-mesh (g)	Mass of fraction between 10-mesh and 60-mesh (g)	Mass of fraction < 60-mesh (g)	Date/Time
51504-FY-0002-31	601.3	5-11/1720	484.7	5-16/1220	91.7	228.9	162.4	
51504-FY-0206-31	1294.1	5-11/1720	769.1	5-16/1226	353.4	553.8	257.7	
-0002-32	558.8	5-11/1721	442.7	5-14/1051	101.3	204.9	158.2	5-19-1059
-0206-32	1272.5	5-11/1722	1067.8	5-19/0958	307.5	481.1	279.3	5-19/1058
-0002-33	573.9	5-11/1723	471.6	5-16/1230	99.6	214.3	154.2	5-16
-0206-33	1376.8	5-11/1724	1223.7	5-16/1234	361.6	535.5	316.6	5-16
FY-0002-01	106.5	5-11/1728	84.6	5-14/1355	14.5	40.2	30.0	5-14/1450
-0206-01	207.1	5-11/1728	174.9	5-14/1350	48.0	87.2	39.3	5-14/1430
-0612-01	312.1	5-11/1729	272.1	5-16/1117	83.8	132.2	56.1	5-16/1150
1218-01	320.7	1720	~~320.4~~ 318.6	5-14/0931	63.9	85.6	142.3	5-14/1000 313.6 Total Dry Wt
0002-02	95.8	1730	NA	5-16/1102	12.5	30.6	31.2	5-16
0206-02	220.7	1730	188.6	5-16/1003	46.3	70.7	51.4	5-16/1111
0612-02	324.0	1731	~~292.4~~ 285.9	5-14/0929	73.8	126.9	83.9	5-15
1218-02	328.5	1731	292.2	5-13/1619	63.4	136.1	91.4	5-14/0911
0002-03	88.6	1732	69.9	5-16/1123	15.0	26.7	28.5	5-16/1223
0206-03	221.0	1733	188.4	5-13/1609	65.1	82.3	40.2	5-13/1630
0612-03	306.3	1733	268.0	5-15	80.4	131.7	55.3	5-15
1218-03	318.9	1733	280.5	5-13/1615	68.0	131.9	80.0	5-13/1640
DZ-0002-01	93.7	1736	68.7	5-16/1442	21.5	37.9	28.2	5-16/1530
0002-02	113.4	1736	83.2	5-16/1438	13.3	30.8	38.8	5-16/1605
0002-03	103.0	1736	74.1	5-16/1432	8.9	28.4	36.7	5-16/1403
BY-0001-31	504.2	1702	400.5	5-16/1118	27.8	179.0	193.5	5-16/1156
-0106-31	1457.4	1738	1250.4	5-15/1735	168.2	571.4	510.0	5-16/1017
-0001-32	446.9	1738	NA		29.1	167.4	161.6	5-17/1040
-0106-32	1457.3	1739	1233.6	5-14/1036	113.5	545.9	570.8	5-28/1115
0001-33	419.3	1739	352.3	5-19/1055	~~22.5~~ 21.9	145.3	164.8	5-19/1122
0106-33	1562.4	1739	1342.4	5-16/1631				
BY-0002-01	74.8	1734	60.8	5-13/1045	2.0	19.9	38.4	5-13/1200
0006-01	236.5	1739	~~NA~~ 209.5	5-13/	23.8	92.3	92.5	5-13/1430
0612-01	285.1	1739	255.2	5-13/1425	42.2	109.5	103.4	5-13/1504
1218-01	293.5	1740	272.3	5-13/1259	36.2	98.7	137.9	5-13/1435
~~BY-0612-02~~	~~40.8~~				40.8			

VP

SAMPLE PREPARATION LOG

Property ID:	51504

Initials/Date of Preparer:	[illegible] 5-11

Sample ID	Pre-Drying Mass		Post-Drying Mass		Post-Sieving Masses			
	Total Mass (g)	Date/Time	Total Dry Mass (g)	Date/Time	Mass of fraction > 10-mesh (g)	Mass of fraction between 10-mesh and 60-mesh (g)	Mass of fraction < 60-mesh (g)	Date/Time
51504-B4-0002	61.7	5-11/1240	49.6	5-13/1405	3.2	21.8	24.5	5-13/1511
-0006-02	228.5	/1240	198.7	5-13	20.6	92.8	84.8	5-13/1230
-0012-02	277.7	/1240	250.2	5-13/1618	40.8	115.2	93.6	5-14/0924
1218-02	287.7	/1241	266.4	5-13/1222	48.4	94.2	123.4	
0002-03	63.2	/1241	51.4	5-13	3.6	23.3	23.9	5-13/1520
0006-03	221.3	/1241	194.6	5-13/1514	30.9	93.1	69.7	5-13/1555
0012-03	253.2	/1242	232.5	5-13/1440	41.5	95.2	95.2	5-13/1530
1218-03	299.5	/1242	277.7	5-13/1515				

SAMPLE PREPARATION LOG

Property ID:	1592

Initials/Date of Preparer:	MA

Sample ID	Pre-Drying Mass		Post-Drying Mass		Post-Sieving Masses			
	Total Mass (g)	Date/Time	Total Dry Mass (g)	Date/Time	Mass of fraction > 10-mesh (g)	Mass of fraction between 10-mesh and 60-mesh (g)	Mass of fraction < 60-mesh (g)	Date/Time
1592-FY-0002-01	89.9	5-13-15 1515	60.8	1429/5-21	3.9	34.0	22.0	5-27/0925
-0006-01	174.2		125.6	5-21/1732	8.0	73.2	55.3	5-22/0959
-0612-01	297.1		242.8	5-26/1433	44.8	117.0	80	5-27/0954
-1218-01	342.4		287.4	5-22/1017	34.6	150.1	101.0	5-22/1407
-0002-02	96.5		61.7	5-28/1565	16.1	31.2	19.0	~~5-28/1645~~
-0006-02	186.4		143.7	5-28/1600	17.3	81.2	44.4	5-28/1645
-0612-02	375.7		233	5-28/1535	51.5	100.5	80.9	5-29/0943
-1218-02	285.5		314.1	5-28/1550	43.9	162.8	106.8	5-28/1711
-0002-03	99.7		69.0	1025/5-21	5.1	39.3	24.2	5-22/1025
-0006-03	198.5		155.2	5-28/1435	31.2	76.0	48.0	5-28/1548
-0612-03	321.6		264.8	5-28/1530	66.3	113.5	83.4	5-28/1660
-1218-03	372.6		327	5-28/1535	76.2	139.5	105.0	5-28/1657
-PA-0002-01	87.0		65.4	5-21/0910	6.9	36.1	22.1	5-21/0911
-0006-01	201.7		162.7	5-21/1500	14.8	87.2	60.2	5-21/1600
-0612-01	316.4		257.6	5-22/1008	25.9	137.9	92.2	5-22/1106
-1218-01	341.3		283.4	5-22/1112	29.6	136.7	114.2	
-0002-02	75.2		56.3	5-21/0937	6.0	32.6	17.5	5-21/0938
-0006-02	174.2		~~133.1~~	5-21/1558	4.5	71.1	60.5	~~5-22/1153~~
-0612-02	289.8		239.8	5-22/1315	~~21.5~~ 16.9	~~71.1~~ 75.9 5-22-15 1207	~~46.5~~ 100.1	5-22/1055
-1218-02	332.9	~~234.2~~	272.9	5-22/1320	30.8	126.9	112.7	5-22/1426
-0002-03	87.4		69.2	5-21/1420	4.0	42.6	21.8	5-21/1520
-0006-03	174.8		142.3	5-21/1601	10.4	81.2	50.6	5-21/1706
-0612-03	268.5		223.3	5-22/1059	29.7	124.1	67.9	5-22/1058
-1218-03	317.5		263.1	5-22/1115	48.2	124.9	87.5	~~5-22/1458~~
-GA-0002-01	39.1		33.2	5-21/1319	1.4	13.4	17.3	0905 5-27
-0006-01	179.8		151.2	5-21/1516	6.5 ~~14.8~~	62.8 ~~87.2~~	~~60.2~~ 81.1	5-21/1540
-0612-01	285.4		270.6	5-22/1350	29.4	124.7	115.4	5-27/1120
-1218-01	322.5		254.4	1310	25.6	137.6	90.8	5-27/1015
-BA-0002-01	94.1		78.2	5-20/1428	25.5	39.7	12.5	5-20/1620
-0006-01	181.8		152.7	5-22/0941	8.5	84.1 ~~85.6~~ 5-22	59.0	5-22/1015
-0612-01	301.7		241.3	5-22/1502	~~23.8~~ 22.5	~~122.7~~ 121.5	96.8	5-27/1046
-1218-01	372.0		314.8	5-22/1400	57.4	148.2	107.9	5-27/1338

5-28/1722

* Forgot to subtract bag weight from wet mass. Bags labeled =

SAMPLE PREPARATION LOG

Property ID:	1592

Initials/Date of Preparer:	MH

Sample ID	Pre-Drying Mass		Post-Drying Mass		Post-Sieving Masses			
	Total Mass (g)	Date/Time	Total Dry Mass (g)	Date/Time	Mass of fraction > 10-mesh (g)	Mass of fraction between 10-mesh and 60-mesh (g)	Mass of fraction < 60-mesh (g)	Date/Time
S1592-PA-~~0002~~-02	84.7	5-15-15	69.7	0909/5.28	8.7	42.4	18.2	1118/5.28
-~~0206~~-02	182.1		152.8	5.28/0908	25	84	43.2	1163/5.28
-~~0612~~-02	306.4		260.3	5.28/0904	57.7	137.9	66.4	5.28/1309
-1218-02	404.1		336.7	5.28/0906	79.1	153.9	102.7	1138/5.28
-~~0002~~-03	82.9		66.9	5.29/1436	19.6	29.4	17.4	5.28/1611
-~~0206~~-03	156.7		129.6	5.28 0903	15.7	73.3	39.8	5.29/1041
-~~0612~~-03	298.1		249.9	5/28/0901	35.7	136.1	74.9	5.28/1443
-1218-03	365.5		301.6	5/28/1420	81.5	139.8	80.0	5.29/1017
S1592-PA-SAND31	1125.9	5-28-15	1097.3	5.28/1145	76.1	766.3	253.7	5.28/1335
1592-PA SAND 32	1106.9		1080.5	5.28/1212	78.1	755.5	245.4	5.28/1526
1592-PA SAND 33	1141.6		1110.5	5.28/1322	77.2	783.1	256.1	5.28/1520

SAMPLE PREPARATION LOG

Property ID:	S1615

Initials/Date of Preparer:	SW

Sample ID	Pre-Drying Mass		Post-Drying Mass		Post-Sieving Masses			
	Total Mass (g)	Date/Time	Total Dry Mass (g)	Date/Time	Mass of fraction > 10-mesh (g)	Mass of fraction between 10-mesh and 60-mesh (g)	Mass of fraction < 60-mesh (g)	Date/Time
~~S1615-BY-0002-21~~								
S1615-BY-0002-31	542.7	5-15-15 1530	439.6	5-20/1138	104.1	207.7g	122.0g	5-20/1234
S1615-BY-0206-31	1176.3		983.6	5-20/1245	239.1	488.9	313.6	5-20/1329
S1615-BY-0002-32	537.2		427.1	5-20/1305	98.5	214.1	119.1	5-20/1554
S1615-BY-0206-32	1190.3		1034.3	5-22/0946	200.2	458.7	371.3	5-22/1320
S1615-BY-0002-33	543.5		435.1	6-3/0836	52.1	197.4	177.9	6-3/0913
S1615-BY-0206-33	1154.0		964	6-2/1055	227.8	438.6	296.7	6-2/1120
S1615-BY-0002-01	80.8		65.8	5-26/1512	15.0	32.5	~~45.2~~ 44.4	5-20/1359
S1615-BY-0206-01	178.9		151.4	5-28/1105	22.6	74.8	53.4	5-28/1250
S1615-BY-0612-01	330.6	EERT 5-26	~~294.9~~ 282.1	5-26/1436	52.7	131.8	96.9	16442
S1615-BY-1218-01	277.6		236.2	5-28/1318	25.8	92.7	115.9	5/28/1405
S1615-BY-0002-02	80.7		65.4	6-2/1519	3.1	35.1	27.5	6-2/1526
S1615-BY-0206-02	193.4		164.4	6-2/1540	23.6	83.2	52.3	6-2/1600
S1615-BY-0612-02	270.9		232.4	6-2/1614	26.5	127.1	78.9	6-2/1629
S1615-BY-1218-02	295.0				45.6	139.3	69.4	6-3/0856
S1615-BY-0002-03	57.0		46.6	6-2/1609	2.0	27.9	16.7	6-2/1638
S1615-BY-0206-03	158.1		131.3	6-2/1411	19.4	70.5	40.9	6-2/1422
S1615-BY-0612-03	273.0		231.1	6-2/1607	40.4	115.8	75.0	6-2/1620
S1615-BY-1218-03	276.5		237.9	6-3/0844	~~45.8~~ 42.2	120.7	~~72.8~~	6-3/0915
S1615-ED-0001-01	65.3		62.0	5-20/1607	7.8	28.1	26.1	5-20/1125
S1615-ED-0106-01	239.3		227.4	5-28/1435	27.6	102.4	95.7	5-28/1627
S1615-ED-0612-01	318.4	286.4g → EERT 5-26-15	~~294.9~~ ~~279.2~~	5-26/1436	18.9	116.0	~~149.6~~ 150.5	5-28/0952
S1615-ED-1218-01	328.3	EERT 5-26-15	~~301.6~~ 288.8	5-26/1435	29.8	112.5	146.5	5-27/1512
S1615-GA-0001-01	48.5		44.9		3.2	20.8	20.4	5-22/0944
S1615-GA-0106-01	225.2		191.2	5-20/1322	58.8	85.8	46.2	5-20/1356
S1615-GA-0612-01	312.3		269.3	5-28/1329	44.6	131.8	90	5-28/1453
S1615-GA-1218-01	342.2		297.3	6-28/1231	55.7	143.4	96.8	5-28/1355
S1615-FY-0001-01	97.0		80.7	5-19/1445	8.7	36.2	35.8	5-19/1450
S1615-FY-0106-01	184.9		156.5	5-19/1408	34.7	109.3	53.0	5-19/1430
S1615-FY-0612-01	326.8		287.4	5-19/1410	77.0	130.0	79.5	5-19/1505
S1615-FY-1218-01	345.7		306.8	5-19/1455	67.2	130.7	107.2	5-19/1605
S1615-SY-0002-01	102.8		85.7	5-19/1450	20.8	42.4	22.1	5-19/1516

mass <60 17.8

* S1615-FY-0002 not 0001
0206 = 0106

VP 5/20/15

SAMPLE PREPARATION LOG

Property ID:	S1615

Initials/Date of Preparer:	JW

Sample ID	Pre-Drying Mass		Post-Drying Mass		Post-Sieving Masses			
	Total Mass (g)	Date/Time	Total Dry Mass (g)	Date/Time	Mass of fraction > 10-mesh (g)	Mass of fraction between 10-mesh and 60-mesh (g)	Mass of fraction < 60-mesh (g)	Date/Time
S1615-SY-0002-02	101.3	5-15-15 1530	86.2	1200	19.2	38.4	26.7	5-19/1511
S1615-SY-0002-03	167.5		88.6	5-19 1524	21.9	42.7	24.2	5.19/1618
S1615-FY-0001-02	100.3		83.5	5-19/1521	3.0	41.2	38.9	5/19/1545
S1615-FY-0106-02	178.4		1460.9	0915/5-20	29.7	63.0	52.8	5/20/1000
S1615-FY-0602-02	318.6		280.0	5-19/1525	71.7	123.7	89.3	5/19/1611
S1615-FY-1218-02	352.6		312.5	5-19/1111	89.7	117.6	104.9	5-19/1245
S1615-FY-0001-03	97.4		82.8	5-19/1124	12.5	37.3	32.5	5-19/1257
S1615-FY-0106-03	185.0		159.3	5-19/1345	34.5	70.9	52.6	5.19/1342
S1615-FY-0602-03	322.4		281.7	5-19/1327	160.1	123.4	92.5	5.19/1435
S1615-FY-1218-03	306.8		270.70	5-19/1538	58.9	120.0	92.8	5/19/1625
S1615-AP-0001-01	64.3		54	5-19/1302	5.8 VP	25.5	22.4	5-19/1329
S1615-AP-0106-01	182.0		158.3	5-19/1240	~~74.2~~ 29.9	74.2	53.8	5-19/1300
S1615-AP-0602-01	312.3		272.8	5-19/1309	59.2	119.9	93.2	5-19/1318
S1615-AP-1218-01	332.5		291	5-19/1311	85.8	119.7	83.7	1340/5-19
S1615-AP-0001-02	82.5		69.5	5-20/1245	10.1	31.0	28.0	5-20/1320
S1615-AP-0106-02	178.6		154	5-19/1600	32.2	69.0	52.8	5-19/1629
S1615-AP-0602-02	285.6		251.1	5-20/1050	59.1	114.4	77.8	5-20/1050
S1615-AP-1218-02	335.5		297.7	5-20/1040	88.7	127.6	79.5	5/19/1022
S1615-AP-0001-03	68.2		56.9	5-20/1034	8.6	25.9	22.4	5-20/1035
S1615-AP-0106-03	193.2		167.8	5-20/1007	27.9	79.8	60.3	5-20/1102
S1615-AP-0602-03	322.0		279.9	5-20/1006	52.9	137.6	88.6	5-20/1118
S1615-AP-1218-03	349.5		303.8	5-20/1045	82.4	125.5	98.6	5-20/1111

S1615-FY-0002 not S1615-FY-0001
" - " -0206 " - " -0106

VP 5/20/15

SAMPLE PREPARATION LOG

Property ID:	51654

Initials/Date of Preparer:	

Sample ID	Pre-Drying Mass		Post-Drying Mass		Post-Sieving Masses			
	Total Mass (g)	Date/Time	Total Dry Mass (g)	Date/Time	Mass of fraction > 10-mesh (g)	Mass of fraction between 10-mesh and 60-mesh (g)	Mass of fraction < 60-mesh (g)	Date/Time
51654-FY-0002-31	339.6	5/14 1607	255.4	5-21/0939	39.7	124.6	87.6	5-21/1065
-FY-0206-31	1740.8		1519.2	6-1/0951				
-FY-0002-32	428.2		342.8	6-1/1126	64.0	168.8	120.0	6-1/1234
-FY-0206-32	1964.0		1721.9	6-1/1257	521.8	730.7	468.0	6-1/1325
-FY-0002-33	439.9		356.3	6-1/1500	63.4	175.0	117.8	6-1/1529
-FY-0206-33	1733.0		1520.8	5-26/1502	508.2	671.0	337.5	1724/5-29
-FY-0002-01	81.0		65.8	5-20/1331	14.2	32.1	19.8	5-20-15/1351
FY-0206-01	200.1		178.3	5-22/0947	26.0	90.5	61.4	5-22/1155
FY-0612-01	304.4		269.6	5-31/1532	30.7	122.4	115.5	5-31/1600
FY-1218-01	327.5		286.7	6-1/0955	55.6	153.0	77.1	6-1/0930
FY-0002-02	86.6		74.3	6-1/0946	7.4	42.7	24.3	6-1/0905
FY-0206-02	182.7		159.4	6-1/0921	48.4	68.1	43.2	6-1/1004
FY-0612-02	303.3		270.5	5-31/1529	18.2	121.2	130.1	5-31/1553
FY-1218-02	355.7		311.9	6-1/0951	28.9	168.8	113.5	6-1/0910
FY-0002-03	68.1		53.8	6-1/1324	5.8	29.6	18.5	6-1/1405
FY-0206-03	163.2		145.6	6-1/1335	31.5	76.0	37.8	6-1/1406
FY-0612-03	295.9		261.0	6-1/1220	38.0	133.5	88.5	6-1/1557
FY-1218-03	298.0		263.2	6-1/0900	38.2	140.3	85.1	6-1/0902
BY-0002-01	64.4		49.7	5-21/1034	16.5	22.6	10.8	5-21/1200
BY-0206-01	172.0		146.4	5-22/0948	22.9	77.7	44.7	5-22/1330
BY-0612-01	313.4		263.7	5-31/1353	63.7	116.6	82.8	5-31/1430
BY-1218-01	364.6		309.4	5-31/1405	89.7	123.5	96.0	5-31/1500
BY-0002-02	109.9		90.7	6-1/1049	20.6	43.6	16.8	6-1/1104
BY-0206-02	177.7	6-1 1049	223.4/147.7	6-1/0931	16.6	86.7	44.7	6-1/1335
BY-0612-02	268.7		223.1	6-1/0931	38.4	106.5	78.3	6-1/0934
BY-1218-02	309.1		262.7	5-31/1530	42.0	116.1	104.3	5-31/1611
BY-0002-03	105.6		85.1	6-1/1345	15.9	50.6	18.3	6-1/1420
BY-0206-03	144.0		167.5	6-1/1055	24.5	86.6	35.0	6-1/1110
BY-0612-03	354.3		299.9	5-31/1526	48.2	137.8	113.3	5-31/1619
BY-1218-03	349.6		295.6	5-31/1357	66.0	127.9	101.9	5-31/1421
DZ-0001-01	158.1		119.2	1140	14.6	59.0	44.7	5-20/1243
DZ-0001-02	163.7		117.7	6-1/1216	10.8	60.7	46.0	6-1/1230

SAMPLE PREPARATION LOG

Property ID:	51654

Initials/Date of Preparer:	6/1/12

Sample ID	Pre-Drying Mass		Post-Drying Mass		Post-Sieving Masses			
	Total Mass (g)	Date/Time	Total Dry Mass (g)	Date/Time	Mass of fraction > 10-mesh (g)	Mass of fraction between 10-mesh and 60-mesh (g)	Mass of fraction < 60-mesh (g)	Date/Time
51654-DZ-0001-03	157.0	5/14 1615	109.8	6-1/12-19	7.0	57.8	44.8	6-1/1247
-GA-0001-01	59.2	↓	~~49.5~~ 50.0		9.6	28.5	14.2	5-22/1008
-GA-0106-01	149.6		115.2	6-1/1223	14.3	72.4	28.9	6-1/1352
-GA-0212-01	249.9		209.5	6-1/1355	36.8	122.2	50.5	6-1/1446
-GA-1218-01	369.3	↓	329.5	6-1/1220	103.3	145.8	19.3	6-1/1247

total mass fix log up

SAMPLE PREPARATION LOG

Property ID:	S1835

Initials/Date of Preparer:	

Sample ID	Pre-Drying Mass: Total Mass (g)	Pre-Drying Mass: Date/Time	Post-Drying Mass: Total Dry Mass (g)	Post-Drying Mass: Date/Time	Post-Sieving Masses: Mass of fraction > 10-mesh (g)	Post-Sieving Masses: Mass of fraction between 10-mesh and 60-mesh (g)	Post-Sieving Masses: Mass of fraction < 60-mesh (g)	Post-Sieving Masses: Date/Time
S1835-AP-0002-01	77.8	1709 5-20	53.2	5-21/1307	1.5	25.2	29.5	5-21/1400
0206-01	187.7	1710 5-20	149.9	6-1/1639	3.1	71.4	75.0	6-1/1659
0612-01	343.4	1710 5-20	291.7	6-2/0935	37.9	161.1	93.2	6-2 1010
1218-01	357.4		322.2	6-1/1455	64.2	149.2	108.2	6-1/1524
0002-02	70.9		5-21 50.6		0.9	19.5	32.9	5-21/1438
0206-02	167.8		136.5	6-1/1907	4.8	66.2	65.3	6-1/1538
0612-02	308.6		264.8	6-2/0845	24.6	147.4	91.8	6-2/1902
1218-02	311.4		281.9	6-1/1702	29.2	137.1	114.5	6-1/1725
0002-03	67.7		50.5	5-21/1130	0.4	20.2	27.5	5-21/1245
0206-03	188.2		153.2	5-29/1147	6.6	77.8	68.8	5-29/1218
0612-03	343.7		294.4	5-29/0905	37.7	157.5	97.8	5-29/0955
1218-03	389.2		367.4	5-22/1336	22.8	181.2	153.1	5-27/1445
S1835-BY-0002-01	81.4		63.8	5-21/1306	1.6	36.7	25.2	5-21/1600
0206-01	185.8 187.2		156.2	6-1/1500	7.4	79.8	67.3	6-1/1509
0612-01	289.2		242.4	6-1/1635	26.6	126.3	89.2	6-1/1710
1218-01	331.2		285.6	6-2/0849	43.5	141.3	101.0	6-2/0931
0002-02	84.4		66.9	5-21/	2.3	30.0	34.6	5-21/1352
0206-02	185.4		147.6	6-1/1725	10.1	78.8	58.7	6-2/848
0612-02	280.2		235.8	6-1/1720	18.6	123.3	93.3	6-1/1730
1218-02	290.5		250.5	6-2/0913	31.8	127.8	92.5	6-2/0955
0002-03	64.3		48.3		1.0	21.8	27.0	5-21/1343
0206-03	273.5		124.4		6.5	64.6	53.0	6-1/1515
0612-03	348.7		224.6	6-1/1440	40.6	111.8	72.5	6-1/1514
1218-03	156.0		305.4	6-1/1601	56.1	145.9	103.1	6-1/1631
S1835-FY-0002-01	77.7		60.9	5-21/1117	17.9	29.5	12.6	5-21/1159
0206-01	187.5		157.0	6-1/1557	22.0	87.5	48.1	6-1/1626
0612-01	354.1		310.1	6-1/1615	32.7	158.6	117.3	6-1/1643
1218-01	362.4		311.1	6-1/1735	46.1	166.5	98.8	6-2/0905
0002-02	77.9		64.8	5-21/1124	1.7	33.7	29.0	5-21/1334
0206-02	179.6		153.4	5-29/1152	12.8	86.9	53.2	5-29/1252
0612-02	340.5		293 293.3	5-22/1512	51.4	155.2	89.6	5-29/1400
1218-02	330.1		288.6	5-29/1154	28.9	155.2	102.5	5-29/1250

SAMPLE PREPARATION LOG

Property ID:	1835

Initials/Date of Preparer:	62/

Sample ID	Pre-Drying Mass		Post-Drying Mass		Post-Sieving Masses			
	Total Mass (g)	Date/Time	Total Dry Mass (g)	Date/Time	Mass of fraction > 10-mesh (g)	Mass of fraction between 10-mesh and 60-mesh (g)	Mass of fraction < 60-mesh (g)	Date/Time
51835-DZ-0002-01	114.3	1740 5-20	90.2	5-21/1133	3.2	45.6	39.9	5-21/1210
DZ-0002-02	100.9		75	5-21/1153	0.4	40.7	35.1	5-21/1224
DZ-0002-03	96.9		72.2	5-21/1256	1.7	31.2	40.8	5-21/1409
51835-FY-0002-08	79.2		63.4	5-21/1158	10.2	39.3	15.5	5-21/1240
FY-0206-03	189.4		159.3	5-31/1010	15.2	83.2	59.3	5-31/1050
FY-0612-03	342.1		297.5	5-29/0920	48.2	156.4	92.8	5-29/1009
FY-0218-03	332.2	↓	285.3	6-2/1527	24.6	156.2	104.5	6-2/1532

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The world leader in serving science

Rental Quotation

Thermo Scientific Portable Analytical Instruments
2 Radcliff Road
Tewksbury, MA 01876

Quote #	Quote Date	Exp Delivery Time	Page
6464	February 24, 2015		**1** of **8**
Payment Terms	**Quote valid until**	**Shipping Method**	**Inco Terms**
Net 30/Prepaid	March 24 2015	Fedex Overnight	
Sales Contact	KT Bolen		
Contact Phone	978-215-1396		

Vanessa Pineda
Tetra Tech Inc
216 16th St, suite 1500
Denver, CO 80206
Phone: 303.312.8812
Email: vanessa.pineda@tetratech.com

Dear Vanessa,

Thank you for your interest in handheld Thermo Scientific Niton x-ray fluorescence (XRF) analyzers and for giving us the opportunity to earn your business. Attached is the information you requested. We have worked hard to become the worldwide market leader in handheld XRF analysis, as well as one of the fastest growing business units within Thermo Fisher Scientific. Following are just a few of the many features and benefits that make our instrument the best value for reliability, versatility, and performance.

- **Outstanding Service and Support** keep the analyzer in optimal working order
- **Exceptional ergonomics –** superior balance of size and weight.
- **Easy-to-navigate software system** with large characters for error-free data input. Go from start-up to testing in three easy steps!
- **High-strength, rugged, environmentally sealed housing** protects internal components from unwanted dirt, dust, heat, moisture, etc.
- **Fastest throughput** of any handheld XRF analyzer on the market **–** typical time for routine positive grade identification is less than two seconds.
- **Unmatched battery use** time **–** 8-12 hours between charges!
- **Multiple safety features**, such as proximity buttons and count-rate proximity sensors.
- A **strong commitment to Research and Development** continues to drive greater reliability through technological innovation that smaller competitors cannot match.
- **Free Radiation Safety and Operational training** at any Thermo Scientific Niton analyzer class for the life of the analyzer.

I look forward to working with you and appreciate the opportunity to present our products. Please let me know if you have any questions or require additional information. Thank you again.

Sincerely,

KT Bancroft

For additional information or to place an order:

Call (toll free):	800-875-1578
Call (outside the US):	978-670-7460
Fax:	412-200-6477
eMail:	pai.rentals@thermo.com

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We are pleased to provide the following quotation requested in support of our Niton® XL3t 955 GOLDD Ultra Mining Analyzer with **G**eometrically **O**ptimized **L**arge area **D**rift **D**etector (GOLDD™) technology. This proposal is valid 30 days from the above date.

Product	Standard Features	Specitication
Thermo Scientific Niton® XL3t 955 GOLDD Ultra Mining Analyzer with Geometrically Optimized Large area Drift Detector (GOLDD™) technology  **50kV/200uA Ag Anode X-Ray Tube**	• Two rechargeable 6-cell battery packs • Battery charger; AC power supply • Carrying case • Shielded belt holster • SpectraView element scanner • Integrated flip touch screen with large intuitive color icons • "Virtual" keyboard for data entry • Password-protected set-up and operation with several other radiation safety features • NDT© software suite for easy data downloading and viewing, remote control and grade library modification • PC connection cable • Reference samples and/or certified reference material (s) • Bluetooth Wireless Connectivity • RFID technology for test stand recognition • Type Standardization • Integrated CCD camera	Calibrations: **(D) Soil Analysis** **(M) Mining Analysis** **TestAll Geo** **(D and M)** **Shipping & Handling** **$160/instrument only** **$80.00 each accessory**

Month	Rental Rate	Credit Towards Purchase*
1	$4500	100%
2-3	$3500	100%
4-6	$3500	50%
Weekly	$1500	100%

***Please apply applicable Taxes** – If tax exempt, please supply certificate with purchase order.

Calibration Mode	Standard Hardware	Standard Element Set
Soils Analysis Mode "D"	50kV/200uA Ag Anode X-Ray Tube	**Ba, Cs, Te, Sb, Sn, Cd, Ag, Pd, Zr, Mo, Sr, U, Rb, Th, Pb, Se, As, Hg, Zn, Au, W, Cu, Ni, Co, Fe, Mn, Cr, V, Ti, Sc, Ca, K, S**
Calibration Mode	**Standard Hardware**	**Standard Element Set**
Mining Analysis "M"	50kV/200uA Ag Anode X-Ray Tube	**Ba, Sb, Sn, Cd, Pd, Ag, Mo, Nb, Zr, Sr, Rb, Bi, Se, Au, As, Pb, W, Zn, Cu, Re, Ta, Hf, Ni, Co, Fe, Mn, Cr, V, Ti, Ca, K, S, Cl, P, Si, Al, Mg, Bal** **SPECIAL CALIBRATION: U & Th**

Sample Preparation Kits

Product	Specification
Bulk Sample Kit, Niton XL3 420-033	Sample collection, preparation and analysis accessories including sieves, 100 sample cup assemblies, Reference samples for calibration check, mortar & pestle set, cleaning brushes, sample collection tools and in-situ test guard.

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Niton XL3 ACCESSORIES

Product		Standard Features
Portable Test Stand, Niton XL3 420-017		Folds down for transport. Allows hands-free measurement of samples. Fully shielded to protect operator from primary or scattered radiation. Use with included Niton Data Transfer (NDT) software for "remote" control, data display and download via PC connection cable or optional Bluetooth connection. Pictured PC, samples, and analyzer not included.
Extend-a-pole™ and In-Situ Tripod, XL3 420-018		Ergonomically designed, extension handle for testing at a distance. Comes with one telescoping extension of ~3 to 4 ft, Flip down bipod feet for hands-free in-situ analysis.
Mobile Test Stand, Niton XL3 430-032		Works with Niton XL3t Series instruments. Allows hands-free measurement of samples. Fully shielded to protect operator from primary or scattered radiation. Use with included Niton Data Transfer (NDT) software for "remote" control, data display and download via PC connection cable or optional Bluetooth connection. Folds down for transport in included carrying case.

SHIPPING & HANDLING – FOB Origin (Please include on purchase order)

Fully Insured 2nd Day Federal Express delivery in U.S., Canada, and Puerto Rico	***Price***
Analyzer Shipping & Handling	**$160.00**
Test Stand & Kit Shipping & Handling Applies to test stands and sample kits	**$80.00/accessory**

- NOTES: A $5,000.00 fully refundable security deposit will be required for all rentals. Deposits must be made by credit card (American Express, MasterCard or Visa) or wire transfer, no other form of deposit shall be accepted other than these. Please be aware that your credit card will be charged for the full amount of deposit prior to shipment and your credit card information will be kept on file. At the completion of the rental period, the deposit will be refunded by check minus any charges for damages incurred to the equipment during the rental period. **WAIVED FOR NET 30 TERMS.**

Training and licensing requirements must be met for all rentals and a signed rental agreement must be on file.

Security Deposit (Please circle one): Credit card (MC, VISA or Amex) Waived

Payment (Please circle one): Credit card (MC/VISA/Amex) Apply for Net 30

Rental Period (Please circle one): Weekly (how many)_____ Monthly (how many) _____

Test Stand **Y** or **N** **Accessories**_____ **Date Requested on Site**: _____

Extend-a-pole™ and In-Situ Tripod, XL3 **Y** or **N**

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Terms: CIA (Cash in advance) or **Net 30.** Net 30 terms are **subject to credit approval**. Please fill out the attached credit application and fax it to **412-200-6477**, attention KT Bolen. **Please see attached Terms & Conditions for details.**

If you have any questions, or require additional information, please feel free to contact KT at (800)875-1578 ext 2101396. Thermo Scientific Niton Analyzers looks forward to providing the instruments specified above subject to the Terms and Conditions stated on the attached document. We look forward to working with you in the near future.

Sincerely,
KT Bolen

Please fill out the information below (email, phone and address):

Bill To & Accounting Contact:

_____

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Ship To:

_____

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Should we charge Sales Tax? ☐ Yes ☐ No If no, you must provide a copy of your Tax Exemption Certificate.

By signing below, you warrant that you are an authorized representative of your company and you agree that your company's Purchase Order will reference this Quote and be exclusively governed by the attached Terms & Conditions.

Recipient shall be solely responsible for obtaining any and all necessary licenses, registrations, certificates, permits, approvals or other authorizations required by federal, state or local statute, law or regulation pertaining to the use or possession of the products contemplated herein that include radioactive isotopes, or x-ray tubes if any.

_____ _____
Signature of authorized company representative Date

_____ _____
Print Name Title

_____ _____ _____
Model # Amount + S&H PO Number

PLEASE RETURN THE COMPLETED FORM TO FAX 412-200-6477

From: Steve H. Singer [ssinger@PWT.COM]
Sent: Thursday, May 28, 2015 11:47 AM
To: Tisdale, Rob
Subject: FW: Colorado Smelter - subsampling criteria
Attachments: XRF DU-Bag conc calculator (w Comp subsamples)-revise ranges 27May15.xlsx

FYI –looks like the email is responding to Charlie Partridge but you are identified in the discourse.

From: Crumbling, Deana [mailto:Crumbling.Deana@epa.gov]
Sent: Thursday, May 28, 2015 11:31 AM
To: Partridge, Charles
Cc: Steve H. Singer; Forrest, Sabrina
Subject: RE: Colorado Smelter - subsampling criteria

Recall that the purpose of setting these limits is so that we have 40 paired XRF-ICP results (and 9 XRF-bioavailability results) that maintain the intended numbers of samples in each concentration "bin" which is needed for a balanced regression analysis. Therefore the concentration of the tiny (subsample) bag must be reasonably close to the concentration of the original bag chosen to fill a spot in a "bin." What I didn't want was movement of the subsample from the original concentration bin to a different bin (unless that turns out to be helpful in filling a sparse bin—Rob, you know what I mean by that).

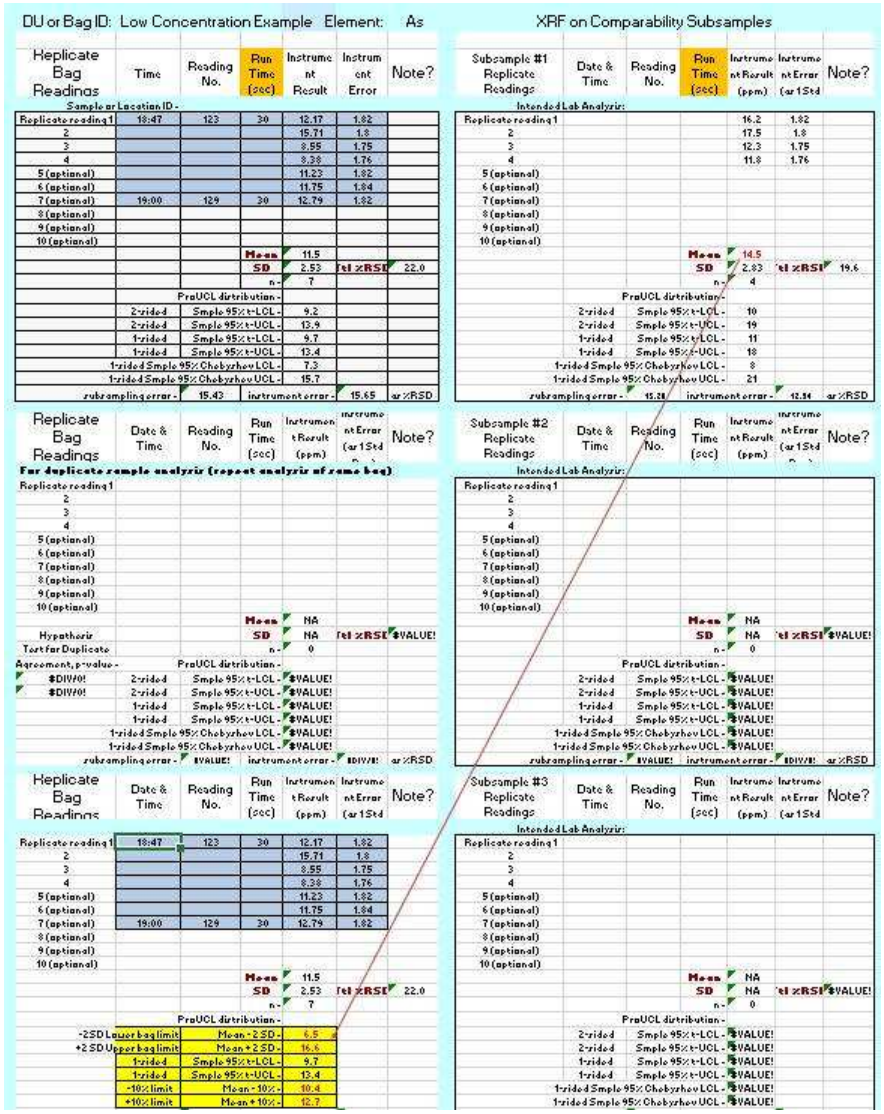
I did not take into account the very low RSDs we are seeing for Pb when selecting a way to place limits on the subsample concentrations. I think we can fix this problem by modifying the subsample bag acceptance criteria to a tiered system and by comparing the MEAN of the 4 tiny subsample bag shots to the acceptance range, and not compare each individual shot result.

The first tier is the (large) sample bag mean +/- 2SDs (i.e., no modifiers for confidence or the number of samples analyzed as in UCL/LCL calculations. This should widen the range enough to be practical for samples having low concentrations (for which +/- 10% would produce a tiny acceptance range).

The second tier is the (large) sample bag mean +/- 10%. This should widen the acceptance interval enough for samples having high concentrations (for which +/- 2 SDs would produce too narrow a range).

MODIFYING THE CONCENTRATION CALCULATOR
To make it as easy and fast as possible to integrate these ranges into the spreadsheet, I recommend the following ONLY for the 40 samples selected for ICP analysis:

Copy the (large) sample bag's original data (blue shading below) and paste into the third box down (see blue shading further down in figure; skips over the box for duplicate analysis of sample bags). From the attached Excel file (which is the source of this figure) copy the yellow shaded area (in 3rd box down) and paste into the current sample's spreadsheet, also in the 3rd box down and in the exact location shown. This will paste the calculations for the +/- 2SDs and +/- 10% ranges.



After reading a subsample bag 4 times, compare the MEAN to the 2 new ranges. If the subsample average is within one of the 2 ranges, the subsample is acceptable.

If subsample results are more different than this from the original bag, take more increments (perhaps as many of 10) from the (large) sample bag to make up the 2-gram (tiny) subsample bag. (Note, this is why we use as many as 30 increments when taking an analytical subsample when a slabcake is used.)

The attached Excel file also shows an example with a higher concentration (further down from the example in this figure).

Have them call me if they have questions. I'll see you on Monday.
--Deana

From: Partridge, Charles
Sent: Thursday, May 28, 2015 12:04 PM
To: Tisdale, Rob; Crumbling, Deana
Cc: Steve H. Singer (ssinger@PWT.COM); Forrest, Sabrina
Subject: Re: Colorado Smelter - subsampling criteria

My initial thoughts. Im am not sure #1 will work. Although I agree and would be fine with this, I believe the State would have a problem with this approach. #2 is preferable, but I am open to other options as well.

cp

From: Tisdale, Rob <rob.tisdale@tetratech.com>
Sent: Thursday, May 28, 2015 9:53 AM

To: Crumbling, Deana
Cc: Steve H. Singer (ssinger@PWT.COM); Forrest, Sabrina; Partridge, Charles
Subject: Colorado Smelter - subsampling criteria

Deana,

As we discussed yesterday, we are currently having difficulty meeting the criteria for subsampling our samples for analysis by the planned confirmatory methods of ICP, bioavailability, and speciation. I believe the reason for these difficulties is that the XRF data are extremely precise, leading to very tight windows on the criteria. Under most circumstances, I believe the subsampling data would be considered adequate for the purpose it is intended for.
Although you, Robin, Michelle, and I have all spent a total of 6-8 hours, we have as of now only obtained 3 subsamples that have met criteria out of 8 subsamples analyzed.

The current criterion for a passing subsample is that the mean of the analyses for the subsample must lie within a 2-sided 95% confidence interval around the mean of the original sample, for both lead and arsenic (if not, we repeat the subsampling). The basic problem is that there is a bias that results in the means for the subsamples being high relative to the mean of the original samples. This could be from subsampling bias, or analytical bias resulting from the small bags.

We have tried reanalyzing the larger bags to see if we get results closer to the smaller bags when the larger bag is run at close to the same time (which might indicate instrument drift as the cause), but results for reanalyzed large bags have been very consistent with prior runs for the larger bags in each case.

I believe that we should consider loosening the criteria, and I think this loosening can be justified. The tables below presents a summary of the subsamples collected so far to make the case for why we should loosen the criteria. All results are in ppm, and the confidence limits listed are the 2-sided 95% confidence limits based on a Student's t-statistic:

Arsenic results

Original Sample ID	Mean	RSD	LCL – UCL	Sub sample	Subsample mean (first 4 shots)	Decision	% RPD from original
S0423-SYE-0001-02	13.1	12.3%	10.6-15.7	1	12.6	Pass	3.9%
				2	11.7	Pass	11.3%
				3	10.8	Pass	19.2%
				4	11.9	Pass	9.6%
S0423-SYE-0612-33	8.7	21.5	5.8-11.71	1	6.6	Pass	27.5%
S0181-FY-0612-01	23.7	14.0%	18.4-28.9	1	28.4	Pass	18.0%
				2	27.7	Pass	15.6%
S0181-BY-1218-01	63.1	7.4%	55.6-70.5	1	67.2	Pass	6.3%

Lead Results

Original Sample ID	Mean	RSD	LCL – UCL	Sub sample	Subsample mean (first 4 shots)	Decision	% RPD from original
S0423-SYE-0001-02	97.9	4.3%	91.3-104.6	1	110.8	Fail	12.4%
				2	99.3	Pass	1.4%
				3	104.5	Pass	6.5%
				4	104.8	Fail	6.8%
S0423-SYE-0612-33	41.7	4.5%	38.6-44.7	1	46.0	Fail	9.8%
S0181-FY-0612-01	254.4	1.3%	249.0-258.8	1	270.5	Fail	6.1%
				2	267.4	Fail	5.0%
S0181-BY-1218-01	885.1	3.4%	837.0-933.1	1	932.3	Pass	5.2%

Note that all arsenic results passed after the first 4 shots on the XRF for each subsample. Continued analysis sometimes resulted in failures for arsenic, but only after more than 4 shots.

The lead results show that in almost every case, we are within 10% RPD of the mean for the original sample, but are not meeting the criteria. This is because the RSD for the original sample is so tight. Even though the RPDs for the lead are better than that for the arsenic, we are calling the subsample a failed subsample based on the lead. To me, this illustrates that we have a decision structure that is too demanding, primarily because the RSDs for lead are so good in the original data sets. 10% is a very good RPD for most soil samples, and even for water samples which are normally more homogeneous the soil samples.

My suggestions are as follows:

1. We set the criteria to either the 2-sided 95% confidence limit based on the Student's t statistic OR within 10% (or perhaps 15%) of the original sample mean, whichever is less stringent.

2. If that criteria is not sufficient, I suggest a 99% confidence limit rather than 95%. This should allow more samples to pass, but in some cases where the original sample RSD is very low (for example, S0181-FY-0612-01) in the above table, it will still cause problems.

3. If neither of these solutions is acceptable, I suggest that when you arrive on Monday, you demonstrate to us how to collect subsamples that will meet the criteria currently outlined in the SOP. With such tight RSDs on our lead data, I doubt that it is possible, but I am open to being convinced otherwise.

I suggest that we not analyze any further subsamples until we can make a determination of how to proceed (1, 2, or 3 above, or possibly an alternative I haven't thought of that you can suggest). I'm in transit today (currently at BWI), and getting back on a plane in about 45 minutes, but will get wifi on the plane so that I can see your response and forward it to the team. Thanks!

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